

THE PSYCHIC STRUCTURES AT THE GOLIGHER CIRCLE

W. J. CRAWFORD, D.Sc.



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THE REALITY OF PSYCHIC PHENOMENA
EXPERIMENTS IN PSYCHICAL SCIENCE: LEVI-
TATION, CONTACT, AND THE DIRECT
VOICE.

HINTS AND OBSERVATIONS FOR THOSE
INVESTIGATING THE PHENOMENA OF
SPIRITUALISM.

E. P. DUTTON & COMPANY

The PSYCHIC STRUCTURES AT THE GOLIGHER CIRCLE

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The Work of Dr. W. J. Crawford

A Note by the Editor of "Light"

As the records contained in Dr Crawford's first book, *The Reality of Psychic Phenomena*, made their first appearance in *Light*, which led to my personal acquaintance with the author, who, just prior to his tragic death, desired that I should assist in preparing the present work for the Press, I may perhaps be allowed a few prefatory words.

In his last letter to me (received after his untimely death) he explained that his collapse was due entirely to overwork, and he wrote:

"My psychic work was all done before the collapse, and is the most perfect work I have done in my life. Everything connected with it is absolutely correct, and will bear every scrutiny. It was done when my brain was working perfectly, and it could not be responsible for what has occurred."

And in another part of his letter he said:

"I wish to reaffirm my belief that the grave does not finish all."

These two extracts from a long and affecting letter may be appropriately quoted here.

For the rest, I may pay a tribute to the careful,

courageous, and most valuable work of the departed scientist, in an obscure but tremendously important branch of scientific research. I could say much about the present book, with its remarkable elucidation of many problems connected with the physical phenomena of spiritualism, but I content myself with a reference to such experiments as those with the soft clay and the methylene blue, which finally clear away certain suspicions that have always attached to physical mediums in connection with materialisation phenomena, amongst uninstructed investigators. This is not the least valuable part of a valuable book.

DAVID GOW.

October 25, 1920.

ILLUSTRATIONS

FIG.		
1	.....	Page 2
2	.....	Page 2
3	.....	Page 3
4	.....	Page 3
5	.....	Page 5
6	.....	Page 5
7	.....	Facing Page 8
8	.....	Page 13
9	.....	Facing Page 16
10	.....	Facing Page 17
11	.....	Page 30
12	.....	Page 42
13	.....	Page 43
14	.....	Page 44
15	.....	Facing Page 43
16	.....	Facing Page 44
17	.....	Facing Page 45
18	.....	Page 47
19	.....	Page 48
20	.....	Page 49
21	.....	Page 52
22	.....	Facing Page 52
23	.....	Facing Page 53
24	.....	Facing Page 52
25	.....	Page 62
26	.....	Facing Page 62
27	.....	Facing Page 63
28	.....	Page 63
29	.....	Page 64
30	.....	Page 64

FIG.	
31	Facing Page 66
32	Facing Page 67
33	Page 68
34	Facing Page 75
35	Page 77
36	Page 77
37	Page 77
38	Facing Page 80
39-45	Between Pages 96-97
46-49	Between Pages 104-105
A-Z	Following Page 176

**THE PSYCHIC STRUCTURES AT
THE GOLIGHER CIRCLE**

The Psychic Structures at the Goligher Circle

IN my former books, *The Reality of Psychic Phenomena* and *Experiments in Psychical Science*, I have given reasons for supposing that the psychic structures which emanate from the medium's body and levitate the séance table, rap on the floor of the room, move the table about the room, and in general produce most of the phenomena of the Goligher circle, possess a variety of shapes and dimensions, and have various methods of action, depending chiefly upon the magnitude of the psychic forces applied. I showed that if a light table, for example, was to be levitated, the psychic structure employed was a cantilever firmly fixed to the medium's body at one end and gripping the undersurface or legs of the table with the free, or working, end. Fig. 1 gives a rough diagrammatic view of the structure, when M is the medium, T the levitated table, and S, S, S the psychic structure. It should be noted that the structure in this case does not touch the floor, and that consequently all the reaction due to the levitated table is upon the medium. If, however, the levitated body is a heavy one, the psychic structure

2 THE PSYCHIC STRUCTURES

employed is not a simple cantilever, as shown in fig. 1, but is so modified that the reaction, instead of being thrown on the medium, is applied to the floor of the room. Fig. 2 shows the method.

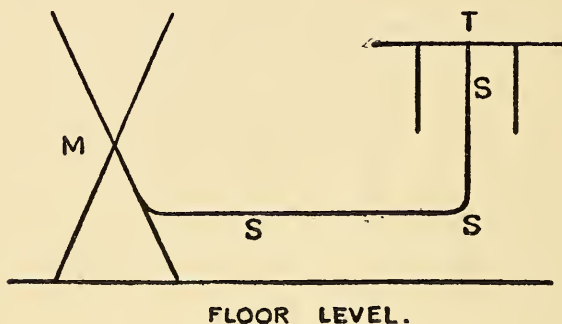


FIG. 1.

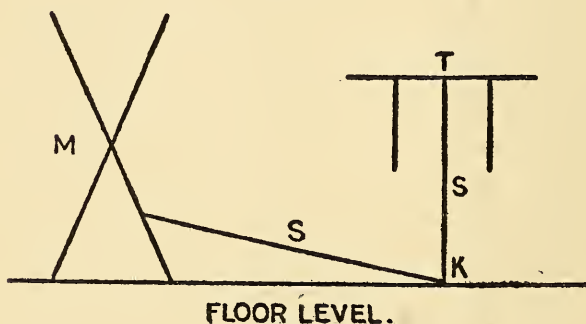


FIG. 2.

M is the medium, T the levitated table, S, S the structure. The latter rests on, or is fixed to, the floor at K, so that a kind of strut exists between the undersurface of the levitated table and the floor. This method is also used when an experimenter stands over the levitated table, grips its

sides and endeavours to depress it to the floor. The actual shape of the psychic structure may not be as shown in fig. 2. It may have a shape such as is shown diagrammatically in fig. 3, where

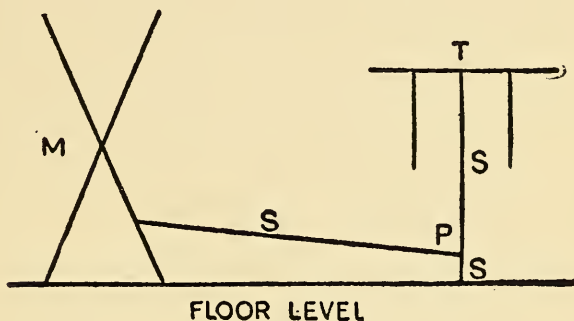


FIG. 3.

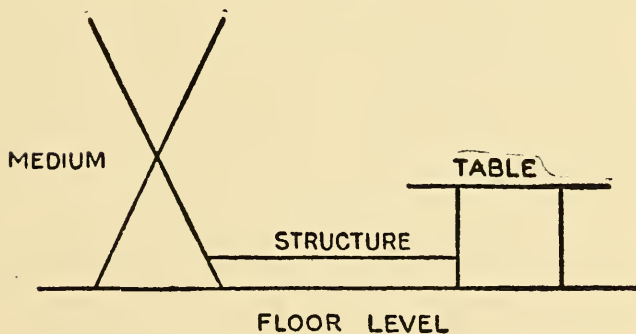


FIG. 4.

there is a point of juncture at P of two parts of the structure, with one vertical limb rising to the levitated table and another proceeding to the floor. The mechanical reaction would be the same in either case.

When the table rests upon the floor of the

4 THE PSYCHIC STRUCTURES

séance room and the experimenter stands behind it and endeavours to push it inwards towards the medium, the psychic structure used are of two kinds: (1) a pair of straight rods proceeding from the medium to the two nearest legs of the table, as shown in fig. 4; and (2) a pair of rods proceeding to the floor and thence to the legs of the table, as shown in fig. 5. (1) is used when the applied force is likely to be small, and (2) when it is likely to be large, with the consequent advisability of placing most of the reaction upon the floor instead of upon the medium.

When the medium and the chair upon which she is sitting are bodily moved about the floor of the séance room by the operators, the structure made use of is as shown in fig. 6.

A rigid psychic "bar" is fixed to the floor at K, and pushes on the front leg of the medium's chair at D. The "bar" is fed by an unstressed or but slightly stressed link proceeding from the ankle A of the medium. There are, of course, two such psychic "bars" in operation at one time.

The invariable rule with regard to these psychic structures is that they are as simple as possible consistent with the carrying out of phenomena. They can be divided into two distinct classes: (1) structures which do not touch the floor of the séance room (at any rate, beyond the immediate vicinity of the medium's feet) during action upon the experimental table; and (2) structures which touch the floor somewhere. Whenever possible, the structures used are of class (1).

The touching of a material body by these psychic

structures is a most important point in connection with them. Certain dispositions and operations seem to require to be gone through by the part of a structure which is intended to touch or adhere to a floor or table. The reader must not suppose

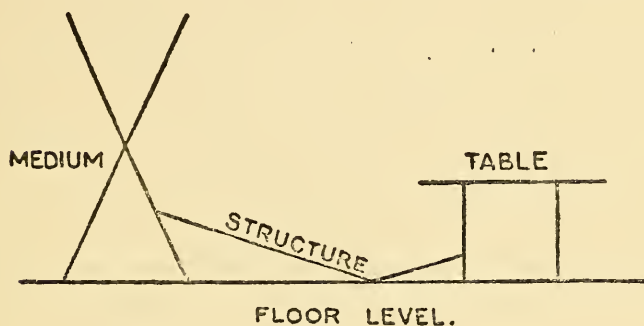


FIG. 5.

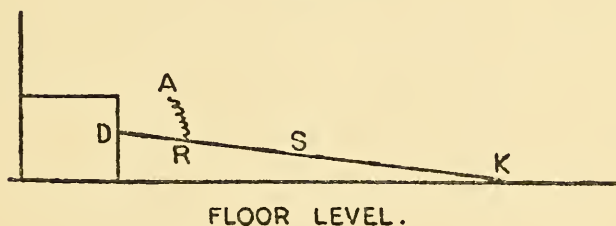


FIG. 6.

that a psychic rod structure resembles, say, the handle of a broom, which could be made to apply force to a material body anywhere over its length. The rule is that only that portion of the psychic structure which has undergone special preparation can grip a material body such as a chair or a table. In other words, the gripping part of the structure must have special labour expended on it before it is

able to perform its function. It must, of necessity, be a differentiated portion of the structure. It follows from the point of view of the saving of energy that the fewer the number of these differentiated portions the better. And this is the reason why, whenever possible, a psychic structure at the Goligher circle has only one gripping surface: in other words, that a cantilever, which grips with its free end and does not touch the floor anywhere over its length, is invariably used if the body to be acted upon is not too heavy, or in general if the psychic force to be exerted is not too great.

We may call a structure which has only one differentiated gripping area a single-ended structure (this is the case with the psychic cantilever), and a structure which possesses two differentiated gripping areas a double-ended structure (this is the case in which the table is levitated by the strut method shown in figs. 2 and 3).

It requires a considerable time, from one to five minutes, depending upon the change in dimensions as well as change in form, for a single-ended structure to be converted into a double-ended one. I have experimentally observed the process many times. For instance, I have asked the operators to levitate a fairly heavily weighted table alternately by the cantilever method and by the strut method, and I have verified their statement that it was so levitated in each case. I found that a minute or more was required to effect the necessary change in the levitating structure. And similarly with other varieties of phenomena. Several minutes were required to prepare the double-ended structure

employed to move the medium and her chair bodily along the floor (fig. 6). Time was also required to change the single-ended structure of fig. 4 into the double-ended one of fig. 5.

The reader will see that the psychic structures present in the séance room at the Goligher circle are, comparatively speaking, simple affairs, and in no wise comparable to the materialisation phenomena obtained with some mediums. Nevertheless I will show later on that there exist in these structures all the potentialities of materialisation phenomena, and that they are in reality but some stages further back in development and do not differ in essence. This is really what might have been expected, though the two classes of phenomena are themselves so far apart in point of actual result. There is a line of continuity about all the physical phenomena of the séance room which is more real than apparent.

What I have said about the general shape of the psychic structures at the Goligher circle has been deduced from a lengthy consideration of the mechanical actions due to the phenomena. Dozens of experiments carried out over a period of years could result in no other conclusions than those stated. Force-registering apparatus used in various ways and under different conditions determined the locality on which psychic pressure was exerted, whether that locality was part of the levitated table or part of the floor under or near the table. All the mechanical results *without exception* agreed with the mechanics of a beam fixed to the medium's body at one end and with the other end projecting

8 THE PSYCHIC STRUCTURES

into the séance room, this latter being supported or not by the floor as circumstances dictated. In short, these mechanical experiments showed that a rigid or semi-rigid structure, at all times connected to the medium and capable of being manipulated in various ways within the circle of space formed by the sitters, was present and accounted for all the phenomena. But though the general outline of these structures was thus ascertained, though the localities of pressure were discovered and the methods in which the psychic beam was manipulated were deduced, yet these particular experiments gave no definite information of the exact shape or composition of the structures. They established beyond all reasonable doubt where the pressures were applied by the structures and what kind of mechanisms must be employed to produce such pressure, but they did not go beyond that.

If we consider one of the simplest of these psychic structures, say an ordinary psychic rod used for rapping, or a cantilever used to levitate a light table, the following questions in connection with it naturally come to mind:—

- (a) What is its exact shape?
- (b) How does it grip the table or rap on the floor?
- (c) Is it of uniform composition throughout its length?
- (d) Is the gripping end different from the remainder of the structure?
- (e) Is any part of it tangible?
- (f) Is any part of it visible?

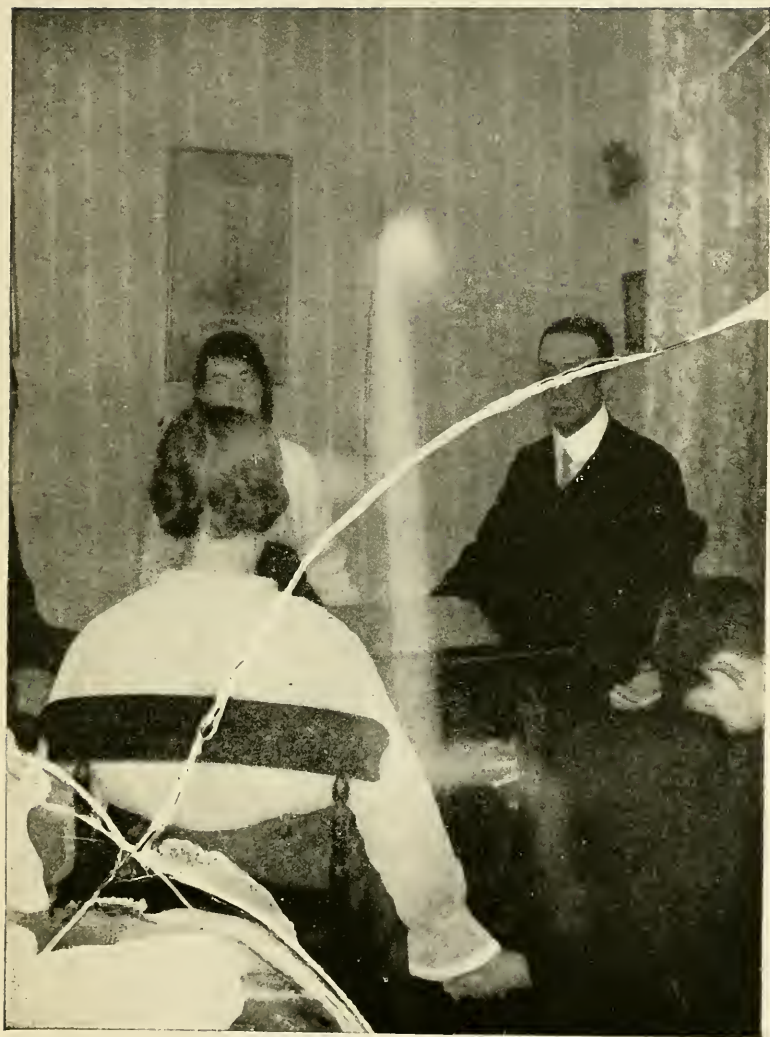


FIG. 7.

- (g) Is its composition simple or complex?
- (h) How does it get through the clothing of the medium?
- (i) From what part of the medium's body does it issue?
- (j) Is there any matter in it taken from the medium's body?

The greatest trouble experienced by the experimenter in tracing the outlines of these psychic structures at the Goligher circle lies in the fact that they are generally quite invisible under the ordinary conditions of the séance room. They are not always quite invisible, but usually so. The fact as to whether they, or some part of them, are visible or not depends on several factors. I have found that under the best conditions of sitting, *i.e.* when strangers were not present, and the members of the family were all in good health, that the structures were perfectly invisible in the red light. On several occasions under such conditions I have carefully experimented to see if I could detect any signs of visibility. I arranged matters so that a strong red light was falling upon the space below the levitated table, while another source of red light was shining from behind, so that the whole area between medium and levitated table was itself quite visible. The table remained levitated for several minutes, and I shifted my position into various parts of the circle, looking at the space below the table from different angles. But to all appearance the space was empty: that is, no part of the levitating structure reflected, refracted, or

10 THE PSYCHIC STRUCTURES

absorbed the light. On many similar occasions, under the very best conditions for observation with the red light, I have endeavoured to glimpse the structures, but always vainly, when only the members of the family were present in the room. On one such occasion I asked the operators specially to make the structures visible to me, which they said they tried to do, but vainly. There was nothing visible to me or to anyone else in the room below or round the levitated table.

When, however, there are a considerable number of spectators in the séance room looking at the phenomena, some of the structures have in part become visible. Also very lately there has been observed a tendency for portions of the smaller structures to become visible with only one or two persons besides the family present.

What are the factors which result in the outlines of these psychic mechanisms taking on such a form that they can be seen by the normal human eye? In my opinion they are two in number:—(1) When a considerable number of persons in good health are present in the séance room in addition to the regular members of the circle, a certain quantity of unstable psychic matter in excess of what is strictly required is at the disposal of the operators. This matter is drawn from the spectators, and it does not blend well with the psychic matter taken from the medium and members of the circle. It pollutes, as it were, the main body of the structure, while no doubt at the same time strengthening it, for the most powerful phenomena are obtained with

many spectators present. The structure changes like a usually clear stream which has become coloured and enlarged by a dirty tributary. (2) Of late months the operators have become more expert in thickening the materialised skin covering the ends of the structures (this process is referred to later), with the consequence that now and then such ends become faintly visible.

What I have said above with regard to visibility of the psychic structures refers only to observation in the ordinary red light of the séance room. Other means, which I shall describe in detail in the proper place, have been evolved whereby these structures can be rendered visible at will and their whole formation and modes of action examined at leisure.

In the meantime I wish to say something about a photograph which was obtained by flashlight at an early stage of the investigation at the Goligher circle. I have already briefly referred to it in *The Reality of Psychic Phenomena*, but in that book the actual photograph was not published, as I did not think at the time that it would reproduce well. I have since then come to the opinion that even though something of definition may be lost in the reproduction, it would be well to give the actual print here, and this I accordingly do (fig. 7). Unfortunately, the negative was accidentally dropped, and in consequence it was badly cracked, though luckily little of the actual picture of the structure was injured. I briefly describe under what conditions the photograph was taken, quoting from *The Reality of Psychic Phenomena*:—

"The circle had assembled with the object of obtaining flashlight photographs of the levitated table. During the whole of the day Miss Kathleen Goligher, the principal medium, had been suffering from a cold and a sore throat, and I thought of postponing the séance: but feeling a little better in the evening, she desired that it should be held. The circle sat in its usual order, with the medium at the top end of the room. The camera was placed in position near the bottom end and focussed upon the table. I decided to wait for the photograph until the latter half of the séance. In the meantime we had a display of rapping, levitation, etc. After half an hour or so of this, phenomena ceased, and I told the operators to rap when they were ready for the photograph. During the period of waiting the operators asked us various questions about the height we desired the table to be levitated, the method of procedure with the flashlight, and so on. Then after a time they levitated the table steadily and kept it in the air for several minutes, giving us the impression that they were practising. A further lull followed, and after a time a request from them that, although the table was not levitated, we should try the flashlight, with the object, as it seemed to me, of discovering what would happen to their psychic system of equilibrium when the powerful light should suddenly burst forth. We decided that it would be well to expose a plate during the flash, although we did not expect any result. The circle was widened a little at the bottom end, Master Goligher and Miss Lily Goligher moving a little apart, though

keeping their hands joined in the usual way. The flashlight exposure was made (the reader is to remember that the table was *not* levitated). Then after a little the operators told us that they could do no more that evening owing to the condition of the medium. I did not think there was the least likelihood of anything being on the exposed plate, but a surprise was in store when it was developed.

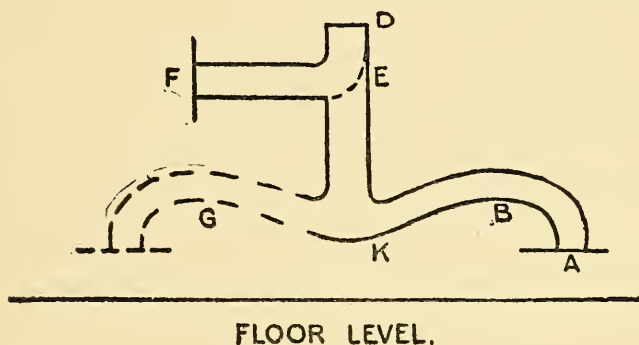


FIG. 8.

The matter is, in my opinion, worthy of being described in detail. . . . The following are my analysis and interpretation (fig. 8):—From about the centre of the left forearm (A) of Master S. Goligher, who is in trance, is seen issuing a vertical column of whitish translucent material, about 4 inches in diameter. It comes from his arm at right angles to it, rises about a foot into the air, gradually bending over in the form of an arch (B) and proceeding to K, which is just on the camera side of the table (standing on the floor in front of the

14 THE PSYCHIC STRUCTURES

medium), and about a foot above the floor. From K a column of about the same or a little greater diameter, and of the same whitish translucent colour, rises vertically into the air, and terminates at D, at a height of about 5 feet from the floor. Up to the point E the column is of uniform density throughout, and, though thin, has its boundaries well defined. The pattern of the wall paper is quite easily seen through it. From E upwards the column becomes denser and whiter, and at the summit D it becomes opaque, so that the wall paper can no longer be seen through it.

"At the top it can be seen to be bending over and backwards, and it descends behind the upward column to the point E. The opacity at the summit is perhaps due to the eye looking through a double thickness of column, the ascending and descending portions, and to the fact that the psychic stuff has exhausted its velocity at the top. In its descent its outline is no longer uniform, but sinuous, and its density not uniform, but patchy. The descending column is easily made out behind the ascending one owing to this patchy appearance and wavy outline. At E the descending column branches off horizontally to the left, and enters the top of the chest of the medium (F), Miss Kathleen Goligher.

"In the diagram I have drawn a dotted arch G from the medium's arm to the point K at the bottom of the column. This is not visible owing to the position of the sitters and to the table intervening, but I am assuming it is there. The very bottom part of the column K is also not visible

owing to an arm of one of the sitters being in the way; but the chances are, from the formation of the arch entering it, that it terminates well above the floor. Also from the point E of the column a very faint outline of about the column's diameter can be made out proceeding in the opposite direction to that of the medium, and presumably entering the chest of Miss Anna Goligher."

The above was written three years ago. I have a few further remarks to make, garnered from much recent experience of the phenomena at the circle; but I will first set down the opinion of a friend, who was present when the photograph was taken, regarding its authenticity and the unlikelihood of its being due to an accident of any kind. This friend has had considerable experience in photography:

"As far as I am able to judge, the abnormal markings are genuine psychic effects. I cannot trace any means whereby the 'flash' could have been reflected, as you will remember the 'flash' was placed on the camera and, as I should judge, about 9 inches behind the lens. If this position had been an error of judgment in placing the flash in position, viz. too near the lens, I should have expected to find a complete fog and over-exposure of the plate.

"We find a large column of light rising towards the ceiling to a height approximately the same height as the 'flash' would reach, but it also extends in a downward direction to the floor, throwing out, as it were, other arms, curved in shape. This, to my mind, destroys any theory of

16 THE PSYCHIC STRUCTURES

reflection; indeed, I cannot find any reflecting surface other than the polished surface of the table top.

"You will, I am sure, have noticed a short horizontal arm joining the medium to the main column of light, and also have noted the added brilliancy at the head of the column. I am inclined to think that the 'flash' would have its greatest brilliancy at its base, diminishing in actinic value at its crown.

"The markings are certainly not likely to be caused by chemical action during development."

The photograph was taken by flash powder and not by a piece of magnesium ribbon, hence none of the curved structures visible could have been due to reflection of such ribbon. I have submitted the photograph to a very experienced professional photographer who has done a great quantity of flashlight work, but he can suggest no means whereby the visible structure could, under the circumstances, have been produced accidentally.

Also the print has been sent to one of the most experienced psychic investigators in France, and this gentleman sees much resemblance in the whitish translucent appearance of the column and curved arms to the appearance presented in the initial stages of materialisation phenomena, which he has personally investigated.

Finally, I have no doubt in my own mind that the photograph shows genuine psychic structures, for the reason that to a large extent the picture verifies the work of a year, carried out with

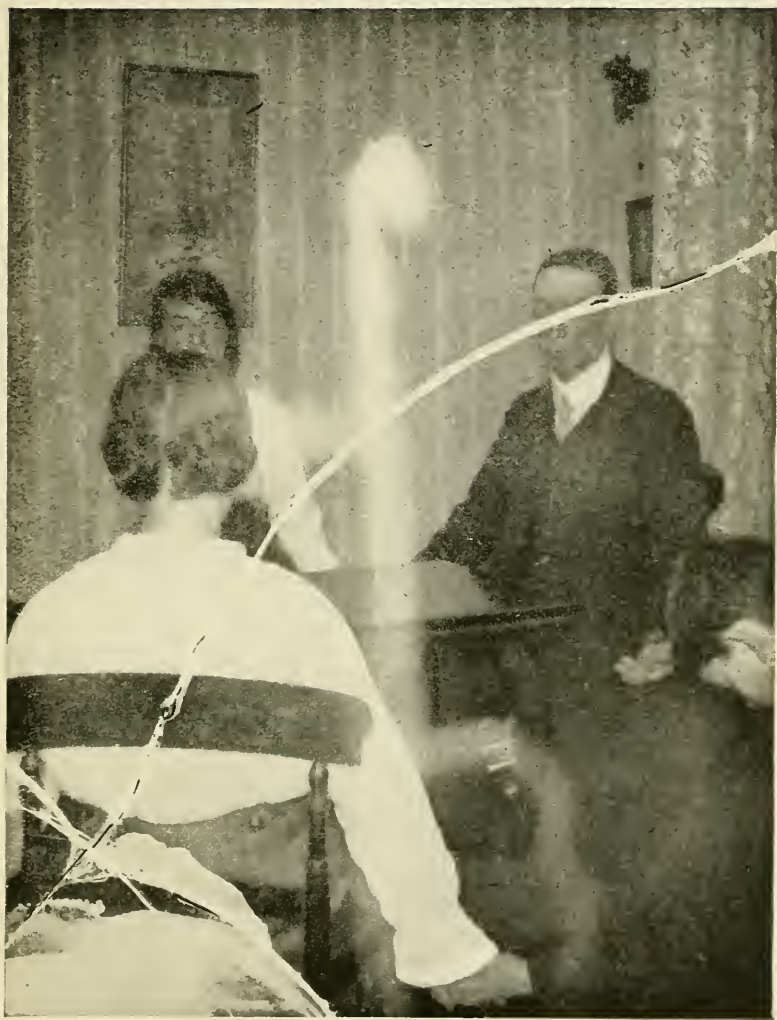


FIG. 9.

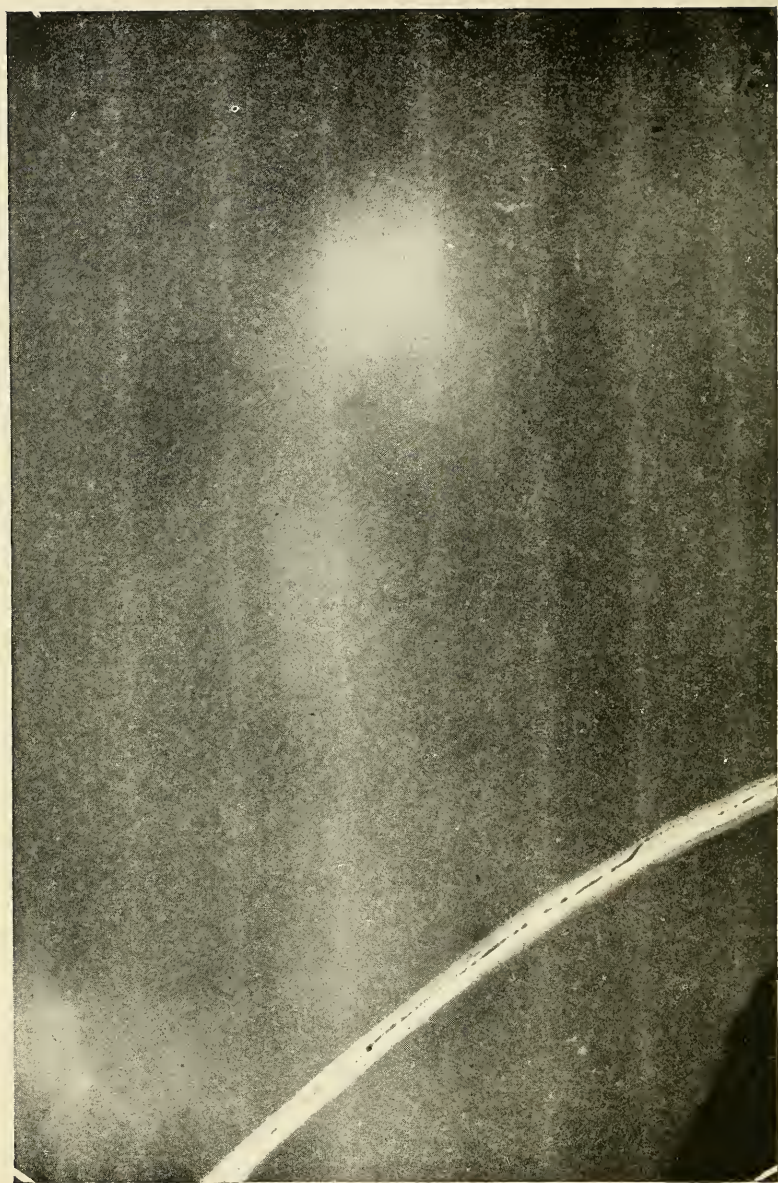


FIG. 10.

mechanical apparatus. The reader should clearly understand that I did not base my psychic beam theory on the results on this photograph, but that the photograph was taken after the theory was enunciated. Furthermore, the operators distinctly stated that they set up the structure so that the camera could take a picture of it which would help me to an understanding of it.

Fig. 9 shows an enlargement of the photograph.

Fig. 10 shows an enlargement of the head and a considerable portion of the column.

As I have no doubt whatever, as I have said, that the column and curved arm shown on the photograph are an attempt by the operators to render something of their structures visible to the eye of the camera, I think it well here to note some of the more important points about these structures which the photograph reveals. In the first place, with regard to this particular structure, I think there has been combined action between two mediums. The emanation of the structure has in this case not been due only to Miss Kathleen Goligher, but her brother, Master Samuel Goligher, has also been partly responsible. The latter was thought for some considerable time to possess the mediumistic faculty, and, lately, rappings occurring in his presence when alone have placed the supposition beyond all reasonable doubt. It is rather a strange fact that pronounced mediumistic tendencies should thus be confined to the two youngest members of the family.

The structure seen in the photograph appears to be of the nature of a beam of irregular shape sup-

ported at the two ends, viz. by Master Samuel and Miss Kathleen Goligher. It is visible practically all over its length, but it is obviously most opaque and dense at the summit of the vertical column. Now, if this were really a working structure, such as that which might get below a table and levitate it, instead of being, as it is, a structure specially prepared for the camera and of little inherent strength, we would find, as I shall show later, that the free end or working portion was different from the remainder or body of the structure. What I wish the reader to note, then, is that the head (or what would correspond to the tangible working end of the phenomenal structure) is on the photograph somewhat different from the column and curved arm part of the structure.

- (a) The head, or what corresponds to the working or gripping end of the structure, is denser and more opaque than the body.

The reader will also note that the head seems to be a differentiated portion of the structure, inasmuch as it is of quite different shape from the remainder and that there is a pronounced neck just before the head forms. This neck portion is best seen in figs. 9 and 10. Now, as I shall show later, this head part of the psychic structure is important, because it is capable of changing its shape and size, and even of sometimes bending round like a hook and gripping the legs of a table or chair.

In figs. 9 and 10 this hook-like shape can be observed.

- (b) The head appears as though it were bending round a narrowed portion or neck of the vertical column.

Fig. 10 shows a considerable portion of the column below the head. It will be noticed that the column here is not exactly rigid, but is sinuous in outline: that is to say, its boundary lines, though approximately parallel, are not straight. The fact that the boundary lines, though not straight, are parallel to each other, suggests that the column itself was originally cylindrical, but has become more or less twisted. The reader will also note that the part of the column near the bottom (where the curved arm enters it—figs. 7 and 9) is less twisted than the part near the top: also that the bottom part of the column is less dense than the top part. If we suppose that the white appearance of the structure is due to articles of some form of matter, then it would appear that the less dense this matter the straighter the boundary lines of the column. In other words,

- (c) The less the degree of materialisation of the column and curved arms, the more perfect in a geometrical sense their outlines.

I use the word materialisation to signify that some basic or underlying framework has been thickened with particles of matter: exactly in the sense that the word is used in psychic research generally.

There is no getting away from the fact that the photograph suggests an underlying invisible basic

20 THE PSYCHIC STRUCTURES

framework which has been rendered visible by particles of matter being projected into it. There is every appearance of a built-up framework about the whole thing. The curved arm, the column, the straight arm, the connection of the two ends with the mediums, are too many coincidences to be due to chance. Particularly should the reader note that—

- (d) It is possible that the structure as seen in the photograph consists of two parts: (1) an invisible part having the general outline shown, and (2) particles of white filling matter projected into the structure in order, in this case, to make it visible.

The reader should clearly bear in mind, while considering the results of this photograph and the conditions under which it was taken, that the structure shown is not under any stress except that due to its own weight. It was because of this that it was possible to take a photograph of it at all. The energy required to form it was therefore a minimum, and there was as little disturbance to the bodily functions of the principal medium, Miss Kathleen Goligher; nevertheless, when the flash occurred she trembled violently and her body jerked about spasmodically for ten minutes or longer. If the structure shown, or one like it, had been below the surface of the table levitating it, the structure would have been under considerable mechanical stress, much energy from the medium's body would have been required to organise it, and the resulting disturbance to the medium when the

flash occurred would have been much greater. For this reason the operators in the first years of the investigation never allowed us to take a flashlight photograph of the levitated table. The disturbance to the bodily organism of the medium would have been too great, and might possibly have been dangerous.

As this particular structure is therefore not under anything in the way of mechanical stress, it differs in detail from what it would be if it was under actual stress. For instance, the head of the column, or gripping end, would not appear soft and nebulous with indeterminate outline, but it would be firm and of sharp contour. Further, probably the only part of it which would be distinctly visible or "materialised" would be the head, or gripping end. The reader should note that this particular structure was erected simply to give us a general idea of the mechanism employed, and not to represent the exact shape and form of the structure under all conditions. An attempt has evidently been made to render as much of it as possible visible, by thinly materialising it; but it does not follow that an actual structure used to produce a powerful levitation would be similarly wholly visible to the eye of the camera.

I may say that I have compared the whitish, cloud-like appearance of the matter in the structure with photographs of materialisation phenomena in all stages obtained with many different mediums all over the world, and the conclusion I have come to is that this material very closely

22 THE PSYCHIC STRUCTURES

resembles, if it is not identical with, the material used in all such materialisation phenomena. In fact, it is not too much to say that this whitish, translucent, nebulous matter is the basis of all psychical phenomena of the physical order. Without it in some degree no physical phenomena are possible. It is what gives consistence to the structures of all kinds erected by the operators in the séance chamber; it is, when properly manipulated and applied, that which enables the structures to come into contact with the ordinary forms of matter with which we are acquainted, whether such structures are ones similar to those with which I am particularly dealing, or whether they are materialisations of bodily forms like hands or faces. Further, to me it appears likely that this matter will be found eventually to be the basis of the structures apparently erected for the manifestation of that peculiar form of phenomena known as the "direct voice," while the phenomena known as spirit photography appear also to have it as a basis.

- (e) The whitish substance appearing in the structure seems likely to be the stuff used in all physical phenomena to enable contact to be made with matter in the séance room, such as tables, chairs, etc.

It should be clearly noted that this matter is not the only component of a physical structure. It is the stuff with which the structure is mixed or manipulated to enable the basic part of the structure to act on ordinary matter. There is another component behind it in all cases, a component

which appears to be invisible, impalpable, and, generally speaking, outside the range of physical things altogether.

The elucidation of the mysteries of the psychic structures at the Goligher circle took several years to work out. The work was most difficult, troublesome, and laborious. Experiments had to be gone over again and again, the methods being slightly modified as circumstances required or as new knowledge was gained. The consequence was that, in reviewing the mass of data obtained, I found it almost impossible to set down the results of the research as a connected whole unless I could present a narrative which more or less described the experiments as they occurred in point of time, together with my contemporary observations. Accordingly, I have pretty closely followed this method in the present book. It will enable the reader to see just how the problem was tackled, and how knowledge was gained; how difficulties were met and countered; how wrong deductions were converted into correct ones; how experiments performed at intervals of years shed fresh light on old facts, and so on. The reader will remember that I had to feel my way bit by bit with nothing to guide me. There was not a single signpost on the road.

THE TANGIBILITY OF THE FREE OR WORKING END OF THE PSYCHIC ROD

The psychic rods which issue from the medium's body seem to vary in diameter at their extremities from about $\frac{1}{2}$ in. to 3 or 4 in., and the free end of

each rod seems able to assume various shapes and different degrees of hardness.

As an example of a rod in what I consider its simplest form, *i.e.* without its end encumbered with design or modified in any of the several ways in which it can be modified, I append the following notes from Mr. Arthur Hunter of Ballycastle, Co. Antrim. He describes what such a rod appears like from the sense of touch:—

“*Date*—Friday, 5th December 1917.

“*Circumstances of visit*.—Accidental in the main.

“*Room*.—The floor and table were examined by two friends who accompanied me. They also tested the strength of levitations and resistances offered.

“*Experiment 1*

“Towards the end of the séance I asked the ‘operators’ (having first obtained the permission of the leader of the circle) if they could place the end of the structure in one of my hands. On the reply ‘Yes,’ I went inside the circle, lay down on my right side on the floor alongside the table, and placed my gloved right hand between the two nearest legs of the table. Almost immediately I felt the impact of a nearly circular rod-like body about 2 in. in diameter on the palm of my hand, which was held palm upwards. (The back of my hand was towards the floor and at a distance of about 5 in. from it.) This circular rod-like body was flat at the end, *i.e.* as if the rod were sawn across. It maintained a steady pressure evenly

distributed over the area of impact, and was soft but firm to the sense of touch. I estimate the magnitude of pressure at from 4 to 6 oz. Without being requested to do so, the 'operators' moved this rod-like structure until I felt the clearly defined edges of the circular blunt end. This was accompanied by a sensation of roughness, as though the edge were serrated, such a feeling, I believe, as would be given by a substance similar to *very* fine emery paper.

"Then I inquired if the 'operators' could touch my fingers *separately* with the rod. The question was not quite completed when this began, viz. :—

"Little finger—gentle but very distinct pressure with a much smaller rod, or by a contraction of the larger one described above. The pressure was not over the entire breadth of the finger, but in length—from top towards base—was about an inch.

"Finger next little finger—pressure intensified, but otherwise as described above.

"Middle finger—pressure further intensified, but otherwise as described above.

"I detail and emphasize my position inside the circle, also that of my hand, for about $3\frac{1}{2}$ ft. distant was a fireplace (without a fire), over which (about $4\frac{1}{2}$ ft. from the floor) there was a mantel-piece upon which rested a gas jet lighted and encased in panels of red glass. Thus I could clearly see my hand and the space around and beyond the table legs, but I could not see the psychic rapping rod.

"The impacts were upon the more sensitive side

of my hand. When my fingers were being touched or pressed it seemed as if another finger were causing the sensation—a finger of very great strength. During this experiment of pressure on the fingers there was no sensation of roughness, such as occurred and is described with the larger rod when I felt the edge of the circular end. My sight is very keen.

“(Sgd.) ARTHUR HUNTER.”

The chief points I wish to emphasize about the above narrative are the following:—

- (1) The end of the large rod—the one pressing on the palm of the hand—was approximately circular in shape.
- (2) The end of this rod was flat, as though the rod were “sawn off.”
- (3) The circular edge was well defined and was rough and hard, and appeared to be finely serrated.
- (4) The area of the blunt end of the rod felt “soft but firm,” and the pressure seemed uniformly distributed.

Later on I will give photographs of impressions made on clay by the end of a rod such as described above, and the reader will see that these impressions agree most exactly with Mr Hunter’s sensations obtained by his sense of touch.

With regard to the rod or rods which pressed on his fingers, the important points are as follows:—

- (1) The rod was a much smaller one than that described above.

- (2) It was a different rod from the above one, or a *contraction of the original one*.
- (3) The sensation experienced by the rod pressing on the fingers was as though another finger—a finger of very great strength—were being used.
- (4) Neither the large rod nor the smaller ones were visible, although Mr Hunter's hand and the space round about it were quite visible.

I now give my own sensations of a rapping rod or rods acting on the sole of my boot. The text is from notes taken at the time.

Experiment 2.—Raps on the Sole of one's Boot

The operators can rap on the sole of one's boot if it is held upright within the circle. They can also cause the "ball" to "bounce" on it, and can hit it in various ways with the end of their rapping rod. This is a valuable experience, because the experimenter can thus learn directly by the sense of feeling something of the nature of the end of the rod.

All sorts of raps were given on my boot. These mostly felt as if they were struck by a softish knob—a knob of matter, which, though on the softish side, was yet dense.

I asked for "harder" raps, when harder and more metallic blows were struck, *i.e.*, the end of the rod became more rigid and lost some of its cushion or elastic aspects. A number of little hard raps were struck in succession, like blows from a tiny hammer. They were struck with

28 THE PSYCHIC STRUCTURES

great speed, showing that the operators have great command over the striking rod—as much command, in fact, as we have over our hands and arms. It is now no longer remarkable to me that quick dances, reels, etc., can be rapped out, for my experience of the rod playing on my boot shows me that the rod is responsive to the slightest will of the operator. I asked for the “bouncing ball” on my boot, when the end of the rod *immediately* became softer, and struck my boot so that the sounds just resembled a ball. The feeling was as though the striking object was a blobby, rounded mass.

I then asked that the operators should press all over the surface of the sole of my boot with the kind of pressure they use to levitate the table (*i.e.* with the rod end used for that phenomenon). Immediately the rod termination began to change—not instantaneously, but taking about half a minute—and a kind of plasma which was softish and elastic spread over the sole of my boot. It felt somewhat like a thick pancake. Then, when this plasm-like stuff was fairly over the area of the boot, a tremendous force was exerted upon it, a force so great that, do what I could, I was unable to prevent my foot being partly shoved back along the floor. During the great pressure exerted, the plasm-like ending of the rod did not become harder or more dense than it was at the beginning. To me there appeared to be something of the nature of a fluid pressing upon the plasm. As a rough analogy, the plasmic termination of the rod might be likened to the piston of a steam engine, and the

pressure exerted to the steam pressure behind the piston.

The important points about this experience are the following:—

- (1) The end of the rod can change very quickly from a soft, plasm-like state to a hard, metallic condition.
- (2) The operators have great command over the smaller rods, and can rap and strike at incredible speed.
- (3) The condition of the end of the rod as regards size and hardness is changed on demand.
- (4) The rod termination was actually felt to be increasing in size, its area enlarging at least three times: that is to say, the rod end has inherent powers of enlarging, and a separate and distinct rod is not necessary for each size of rod termination.
- (5) The larger-sized rod terminations are usually fairly soft to the feeling of touch, and it is only the comparatively small ones which become dense and hard. The large ones feel as though a skin containing a mobile dense fluid, such as mercury, were being used as rod termination.

As I have explained in my book *Experiments in Psychical Science*, the operators themselves, by means of a large number of questions and answers have given details of the shape and general characteristics of a cantilever structure used to levitate a table.

30 THE PSYCHIC STRUCTURES

According to the operators, the dimensions and shape of the levitating cantilever are much as shown in fig. 11.

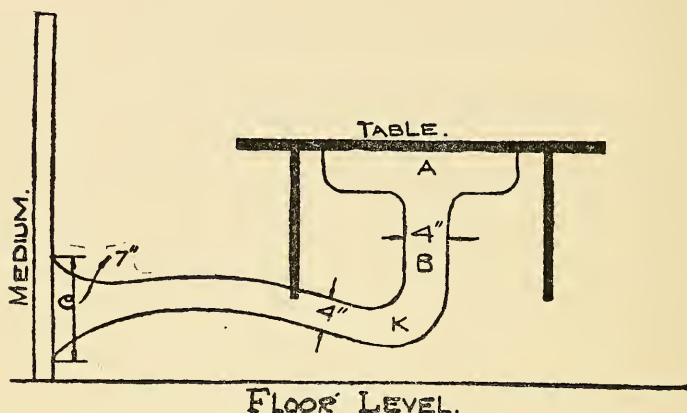


FIG. II.

- A. The top of the columnar part of the cantilever is spread out into a broad, flat surface of area approximating the undersurface of the table. In other words, the summit of the cantilever is shaped like a mushroom, and even bears some resemblance to the boy's plaything known as a "sucker." It grips the table by adhesion.
- B. A fairly uniform vertical column of diameter about 4 in. At K the direction changes from vertical to more or less horizontal. At K the structure is usually 3 or 4 in. above the floor.
- C. Just before entering the body of the medium the rod widens to a diameter of about 7 in.

Let us analyse this statement of the operators and see how far it agrees with actual experimental results. According to the operators:—

- (1) The top of the columnar part of the cantilever which grips the undersurface of the table spreads out into a broad, flat surface, something like a pancake or mushroom in shape.

Compare this statement with the sensation I experienced on the sole of my boot (p. 28) when I asked that the operators should press on it with the kind of rod end used to levitate the table. I have said that “the rod termination began to change—not instantaneously, but taking about half a minute—and a kind of plasma which was softish and elastic spread over the sole of my boot. It felt somewhat like a thick pancake.”

Thus practical experiment agrees with the statement of the operators.

- (2) The top of the column grips the table by a suction or adhesive process.

This absolutely agrees with experiment, as I shall show later.

- (3) The column itself is about 4 in. in diameter nearly over all its length, and is of practically uniform cross-section.

This agrees with the photographic result.

- (4) There is a change of direction of the cantilever from vertical to more or less horizontal at a few inches above the floor.

In the diagram this change is shown as more or less gradual, but I have some reason to suppose

that it is, in fact, sudden. For one thing, the photograph indicates this.

In *R.P.P.*, p. 194, I describe briefly the sensation experienced by touches with a small rod in which the end has been made very hard. I say that this psychic touch "feels exactly as though the rounded end of a material rod was pushed on one's arm, or foot, or other part of the body. The 'solidity' of the touching body is what impresses the experimenter, for, no matter how carefully or softly the operators apply the touch, one feels as though the blunted end of a hard something—a something even made of metal—were being used."

I wish to add that this is only one kind of touching effect. The end of such a rod can be made as hard as iron. Another kind of touch feels as soft as the flesh on a baby's arm, and there are all intermediate varieties.

The following is an extract from the account of a séance by Mr E. W. Oaten of Worrall, near Sheffield:—

"Experiment 3.

"I was next obliged—by request—with some raps under the table, and, placing my hand beneath it (palm downwards), the impacts came upon my finger tips, and at my request crept slowly up to my wrist. I turned my hand over (palm upwards) and the blows were repeated. I got the sensation of a semicircular body about 8 in. across striking my hand, and the thought of a large boot came to me. I asked if the size of the 'rod' could be modified, and successive touches showed

a progressive diminution in the size of the object, until it was less than 1 in. across. It seemed about the size and shape of a thumb, *but quite as solid as metal*. I did not notice any alteration of temperature, though the thought was in my mind. As the object rested in my palm I closed my fingers around it, and held it. It appeared to be a round rod which had been slightly flattened, and it was solid for about 2 in. from the extremity, when it became intangible. The rod was, however, rigid when I pushed and elastic when I pulled, and although I held it tightly there seemed to be no reaction upon the medium. I next put my foot under the table (heel on floor, toe in air) and asked that the sole be struck. Taps were heard which synchronised with the blows experienced on the sole of my boot, and these blows increased in strength until they approximated to well over 10 lb., and I gave up the experiment, for it commenced to be painful."

The important observations in connection with this narrative are as follows:—

- (1) The largest rod end seemed to be of a shape more or less semicircular.
- (2) The diameter of the rod decreased in a series of graduations.
- (3) The smallest rod end seemed about the size and shape of a thumb, but it felt *quite as solid and hard as metal*.
- (4) When the experimenter's fingers were closed round the rod, it appeared to be a round rod slightly flattened.

- (5) The rod was solid for about 2 in. from its end, when it appeared to vanish or to become intangible.

I now summarise and compare the sensations of myself and others with regard to the psychic rod terminations.

The rod end is sometimes quite flat, and its outline, especially with the larger sizes, is more or less circular. With the larger rod end the periphery appears to be hardened and finely serrated, though the ends themselves of these large rods are not hard, but appear to be softish and dense. The same rod end can greatly vary in diameter, and this changing in diameter can be felt while it is occurring, *i.e.* contraction and expansion can actually be felt taking place. The diameter of the rod end may vary from a maximum of 7 or 8 in. to a minimum of something less than 1 in. The termination of the smaller rods, *i.e.* rods up to about 3 in. in diameter, can be either hard or soft to the touch, and can be flat or convex at the end, according to the will of the operators.

The very small rods appear on the end often to be about the size and shape of a thumb, but they may be as rigid and hard as iron, or, on the other hand, as soft as the flesh of a baby. The body of the rod itself, when felt, appears to be more or less circular, and seems solid for a few inches from the end, and then becomes intangible, though it resists pushes and pulls. As a general thing nothing can be seen, though the conditions

of light sometimes allow of the hand and environs being plainly visible.

*Experiment 4.—Inherent Rigidity of the
Psychic Rod*

In an experiment previously referred to (Experiment 2) I held my boot still, and the operators hit it in various ways with the rod termination. At the conclusion of the test I asked that the process be reversed. I asked the operators to hold the rod still while I pushed the sole of my boot against its end. I was dubious if this could be done. However, I pushed inwards with my boot, and, sure enough, the rod was stationary a few inches up in the air and my boot came in contact with it. It felt softish but very dense. I kicked at it half a dozen times and always found it there.

This result is important, for it shows that *the rod can be held suspended in the air in a rigid condition*: that is, it can be kept rigid by its own inherent qualities, and does not require to be pressing on material bodies to become so.

Another example showing the self-rigidity of the rod is the following:—During one of the tests in which I was experimenting on the line of force between medium and table, I was poking about the floor in the medium's neighbourhood with a wooden rod when I accidentally came against the end of the psychic rod, which happened to be "out," and an inch or two up in the air. It was softish but dense, as described above, and offered much resistance to the force I was exerting in pushing

the wooden rod about the floor. But it vanished in a second or two. One cannot mistake the end of a large rod when one comes in contact with it. It has a "feel" all its own: soft, dense, plasmic, half solid, half liquid—impossible adequately to describe in words.

I have mentioned that the psychic rod grips the table by a suction process. This can be proved in various ways, but one of the most interesting verifications is afforded by the sense of hearing. The suckers can often, in effect, be heard slipping over the wood. In *Experiments in Psychological Science* I have given a case in point. I described how a table standing on the floor was first levitated upright in the usual way, and was then *turned over in the air*, bit by bit, and with jerks, until it finally remained levitated upside down. The whole phenomenon was accomplished without the table once touching the floor.

"While the table was inclined at about 45° in the air, the operators seemed to experience the greatest difficulty in carrying on this phenomenon. They seemed to have no trouble in levitating the table, and turning it over in the air to an angle of about 45° , but a halt always then occurred. Sometimes, even, the table dropped there, the completed phenomenon evidently being impossible despite the almost frantic efforts of the operators. At other times, after a brief halt and various shakings and jerkings in the air, the table was further turned over. At the critical point (angle 45° or thereabouts) sounds were often heard on

the surface and legs of the table, as though *suckers* were slipping over the wood or were being forced off or were taking new grips. There could be no mistaking these sounds, for they made quite an audible swish. On one or two occasions the table suddenly dropped 6 in. or so in the air, and simultaneously there was heard the swishing noise, the inference being that a sucker had been torn from its grip. The operators themselves say that during these abnormal levitations they have seen several psychic rods projecting from the medium simultaneously, and that they grip the surface, the legs, and the cross-bars (if the table possesses them) with the ends of these rods."

I may say also that often while the phenomenon mentioned above was going on (it sometimes took two or three minutes to complete) I stood right over the table. The light permissible while this phenomenon was occurring was very often quite strong (probably because the structures "out" were large and powerful), and all the floor space and the medium were quite visible. The medium was sitting quite calmly on her chair with feet on floor, while the table was tossing about in the air 3 ft. or so in front of her. It was a remarkable thing to hear the suckers gripping and sliding over the wood on the table, while absolutely nothing could be seen of the structures themselves. Yet, as I say, the whole floor space was under quite strong red illumination.

38 THE PSYCHIC STRUCTURES

STUDY OF THE WORKING END OF THE PSYCHIC STRUCTURE BY MEANS OF IMPRESSIONS MADE BY IT ON CLAY OR PUTTY

If a tin or box containing modeller's clay, or putty, be placed within the circle space the operators can, on request, make various marks on the clay, which marks are permanent and afford an indication of the shape and characteristics of the rod end which produces them. My purpose now is to make as complete a study as possible of these impressions so as to form a basis for deduction concerning the shape and form of the psychic rods. It has to be remembered that the structure itself is usually perfectly invisible all over its length in the red light, even at its termination, where it is palpable, although often one can see plainly all round its environs.

As the floor of some of the impressions seemed to be sometimes lined with marks which resembled stocking marks, and as others of the impressions were more or less like boot marks or shoe marks, and accordingly, there was the question to outsiders of conscious or unconscious fraud on the part of the medium or members of the circle, we decided that while investigating this matter the sitters should have their feet and legs so tied that no one could get within 18 in. of the clay while the impressions were being obtained. It is to be remembered that the medium and members of the circle were just as interested as I was, and that they readily assented to anything I proposed in

order to render the results as certain as possible and beyond any reasonable suspicion of doubt. Accordingly, when the medium had seated herself on her chair, I tied her ankles together very tightly with fine strong whipcord, using two or three separate pieces of cord; then I tied her ankles to the back bar under her chair. The consequence was that the medium could not get within 18 inches of the front of the vessel containing the clay. I always stood beside her, and her hands were tightly gripped by the sitters on either side of her during the whole séance. The strings and knots were always found intact at the end of the séance. Indeed, it usually took me five minutes or more to get her untied, and oftener than not the strings had to be cut. During the whole séance her chair did not move the fraction of an inch. Also, I tied the legs of the whole circle to their chairs with a strong rope, passing it round and round the legs of each member and round the legs of the chairs, so that any motion of the legs or feet of anyone was immediately evident by the pull on the end parts of the rope, which were tied to the chairs on either side of the medium. As, however, subsequent experiments showed, as was expected, that the whole of the phenomena was due to the medium only, it will readily be seen that the tying of the sitters was only a spectacular arrangement and of no consequence whatever. I always endeavour to let the phenomena prove themselves, as it were, by their own results. The general phenomena at the Goligher circle have for so long been subject to such close scru-

tiny by myself and others, and many of the experimental results are so impossible by fraud (see *R.P.P.* and *E.P.S.*) that it would have been quite unnecessary to take any means to prevent fraud, for no fraud has ever been attempted, and each phenomenon has been proved genuine over and over again to the smallest detail. But as the circle wished it in this instance, so the very rigorous system of tying above mentioned was carried out. As the reader will see later, in my development of the structure theory, I place no importance whatever on the tying. I let the phenomena speak for themselves, which is a method independent of any precautions of that sort. But just as an incidental fact, the reader should bear in mind that during many of the séances for these impression tests the medium could not, by any means whatever, even if she had wished it, get within 18 in. of the dish of clay with her feet while impressions were being made. At the beginning of each séance, after the tying, I allowed her by way of test to do her utmost with her feet, but she was incapable of doing anything; and at the end of each séance I also experimented to see what she could do, but I invariably found that she could do nothing, and that the cords were, as I have said, intact and as tight as ever. Under these circumstances, then, the immediate impressions detailed below were obtained.

In case it might be thought that the vessel containing the clay was moved over to the feet of the medium by one of the members of the circle, a large rectangular slab of wood was prepared, a

narrow wooden edge was fixed around it, and it was then filled with clay. The size of this box was made such that it just fitted in tightly on the floor within the four legs of the table—so tightly that it could only be removed with difficulty at the end of the séance, as the legs of the table had to be slightly sprung to get round it, thus locking it in position. Impressions were obtained on this with as great facility as with a loose box, showing that the clay remained exactly where it was placed during the whole séance. Moreover, at the instant some of the larger and deeper impressions were made the sound of the blow was distinctly audible, and the place of origin was clearly on the clay under the table.

I will later in this book examine, in connection with other experiments, impression marks obtained on clay while the medium's feet and legs were locked and screwed into a test box. The results were exactly similar to those I am now about to examine.

Generally speaking, the impressions obtained on the clay are of two types—(1) flat impressions, and (2) concave impressions. I will first deal with the former.

By flat impressions I mean that the floor of such impressions is perfectly flat, as though made with a smoothing iron. Such impressions vary greatly in size and considerably in shape, although there is a kind of sameness about the latter which seems to reveal, as it were, a common origin: that is to say, the variation in shape would not appear to be due to any great variation in the end of the im-

pressing rod, but to other causes which I shall specify later.

The following diagrams and photographs give the main details of various kinds of flat impressions:—

Fig. 12.—The extreme length was $5\frac{1}{4}$ in., and the extreme width 3 in. The impression was not

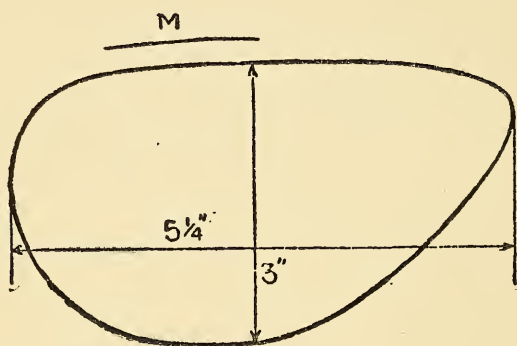


FIG. 12.

very deep and had no sharp edge, except along a small part of the periphery, where it was about $\frac{1}{16}$ in. deep. The whole was, however, slightly below the general level of the clay, and its outline could easily be made out, though, owing to the small depth of the impression, it would not photograph well.

Fig. 13.—The extreme length was $3\frac{1}{8}$ in., and extreme breadth $2\frac{3}{4}$ in. While this impression was being obtained the table was levitated above the box of clay, and the impression was due to the



FIG. 15.

bottom end of the cantilever column resting on the clay while the top end of the same column was attached to the undersurface of the table and was levitating it. Consequently here and there the outline was somewhat smudged over, owing to the suction marks (which I will explain later) overlapping occasionally the margin.

Fig. 14.—Extreme length $3\frac{1}{4}$ in.; extreme width $2\frac{3}{8}$ in. In some places the outline was very sharp and clear (S and K), and at others not so well defined (P), the pressure evidently not being quite uniform over the entire area.

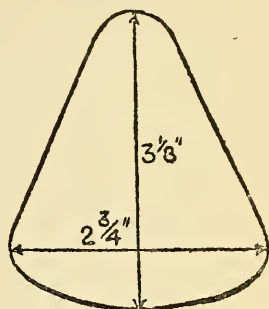


FIG. 13.

Fig. 15.—The top impression in the photograph is a typical “flat” one. Its maximum length was about 4 in., and its maximum breadth about $2\frac{3}{4}$ in. It was not more than about $\frac{1}{16}$ in. deep, and was a little deeper in some places than in others. The floor of the impression was nearly level and appeared quite clean and plain.

Fig. 16.—The larger mark was a “flat” one, and was obtained while the séance table was levitated immediately above the clay. The photograph was taken from the clay. The levitation lasted for about a minute.

The smaller impression (a set of three, resembling finger or toe marks) was given in response to a request to the operators to give three impressions

with one rod close together, in order to show difference in size of rod terminations.

Fig. 17.—This was a large flat impression obtained in response to a request to the operators for an impression on clay made by a visitor to the

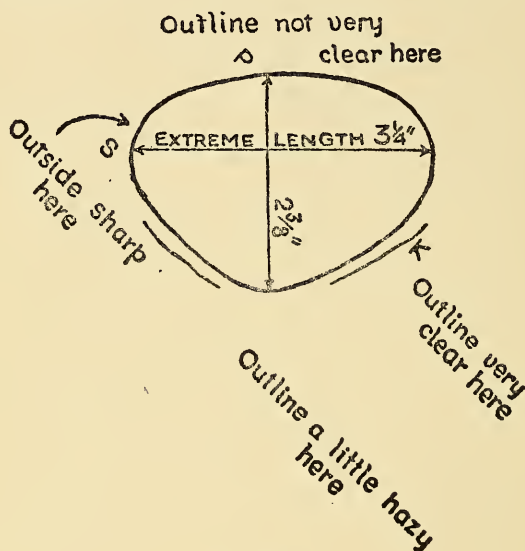


FIG. 14.

séance while the circle was in Glasgow. The photograph was taken from a plaster cast of the impression.

Suction Marks on some of the Flat Impressions

On flat impressions where there has been considerable force applied, such as where the séance table has been levitated immediately above the clay and where the clay was moderately soft, the marks show signs that the end of the structure has been gripping the clay by means of suction, just as



FIG. 16.



FIG. 17.

a boy's sucker grips an object, for the suction marks are quite obvious where the structure end has been lifted from the clay. An example of this is seen in the large impression of fig. 16. Moreover, the type of suction marks shows that the suction end of the rod termination must be a fine, thin membranous kind of skin, because the clay has not been raised in large lumps, but has been lifted in small, crater-like pieces. It is quite impossible to obtain such a mass of finely partitioned suction marks by means of any part of the bare foot being pressed into the clay and then raised, as the reader can easily discover by practical experiment.

I had known for a long time that the ends of some types of the rod grip by suction, for the "swish" of the rods could be distinctly heard as they gripped various parts of the table, or as they were forced from their grip on the floor if the force applied to them were too great (see p. 36).

Many such suction marks would appear to show conclusively, when taken in conjunction with other suction effects noted during the general course of the experiments (see *E.P.S.* and *R.P.P.*), that:

- (1) When the free end of the psychic rod is flat it can press on material substances and grip them by adhesion.
- (2) The gripping action is a true suction one, being due to a difference of air pressure, the air being squeezed out from the space between the flat end of the rod and the body on which it is contacting.

- (3) In order to produce this suction effect, the end of the rod is covered with what appears to be a thin, pliable, skin. As a matter of fact the end of one of these large flat-ended rods often feels soft and plasm-like to the touch (see p. 36). The very finely divided, crater-like appearance of most of the suction marks also shows decisively that the suction end of such rods must possess a soft, pliable surface.

ELASTIC DISTORTIONS OF THE ROD END

It is obvious from the diagrams and photographs given on other pages that there is a considerable variation in shape of the free end of the large flat-ended rods. Generally speaking the shape is more or less oval, at least in an unstrained condition of the rod end. But where any part of the flat end is subjected to a greater stress than another part, the boundary curve may considerably change. In impressions made on clay it was very seldom that the mechanical pressure was evenly applied all over the area of such impressions. Much oftener than not one edge of such impressions is somewhat deeper than the opposite edge, showing that the impressing force was not applied evenly over the area of contact, or that the applied force was not quite normal to the surface of the clay. I always asked the operators to press as evenly and uniformly on the clay as they could, but, as I say, there was nearly always some slight variation, so that the floor of the impressions was really not quite horizontal, but inclined a little or varied a little in depth.

If the reader will examine the diagrams and photographs on this point, the matter will become clearer to him. In fig. 12, p. 42, there are signs of a slight ridge along the periphery at M, and at just about this portion of the boundary the curve becomes nearly a straight line. That is to say, the applied stress along the lower part of the surface is greater than upon the higher part, with

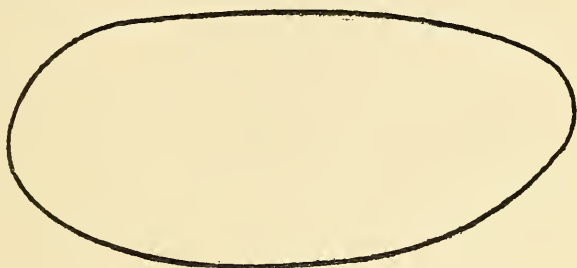


FIG. 18.

the consequence that the boundary near M has suffered some distortion. Probably had the force been applied evenly over the whole area the boundary would have taken a form somewhat similar to that given in fig. 18.

In fig. 13, p. 43, the two bounding lines towards the top have become practically straight, owing probably to the pressure being greater over the higher part of the area than the lower. If the pressure had been uniform the tapered end would probably have given place to a more oval form.

In fig. 14, p. 44, the outline is very clear round parts of the periphery at S and K. This means that near these places the pressure was greater than at other parts of the area of contact, with the con-

48 THE PSYCHIC STRUCTURES

sequence that the boundary in the neighbourhood of P was pulled in, and instead of being more or less curved became nearly straight.

In the Glasgow impression (fig. 17), one side of the boundary is almost straight and even a little concave, and on this side the impression is considerably deeper than on the opposite side. The mechanical pressure over the area near the straight

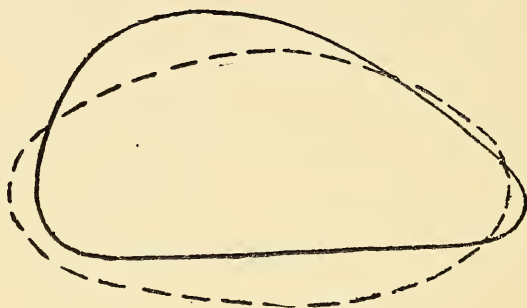


FIG. 19.

edge was therefore considerably greater than the pressure over the more remote parts of the area. The consequence is that the boundary has become straight (and even slightly concave) there, so as to take up the position automatically to resist the greater stress. The dotted part of fig. 19 shows approximately what would have been the shape of this impression for uniform distribution of load.

On some of the large flat impressions there are two or more superimposed impressions, the boundaries clearly altering in shape with the slight variations in pressure over the area.

I have examined many of these flat impressions and there can be no doubt that if the rod termina

tion is applied quite normally to the clay and with a uniform pressure all over its area, the shape of the boundary is much as shown in fig. 20. In other words, the normal unstrained boundary is somewhat egg-shaped, with one end blunter than the other. The size may considerably vary, but in the unstrained condition the outline is symmetrical. It follows from the fact that the boundary line can alter its curvature under the action of uneven and non-uniform stress that it must be elastic. If it were perfectly rigid it could not alter its shape in the least. It is therefore an elastic curve, and can be distorted to suit variation of stress over the area. Summarising the results obtained from varying shapes assumed by the boundaries of the larger "flat" impressions, we have—

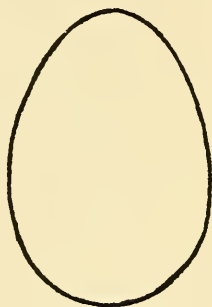


FIG. 20.

- (1) The normal boundary of the rod termination is in shape very similar to the longitudinal cross-section of an egg, the opposite ends having different radii of curvature.
- (2) If the pressure of the rod termination on the clay is not uniform over the area, or if the pressure is applied normally to the clay over some parts of the area and more or less inclined to the clay over other parts of the area, the normal boundary suffers distortion, and parts of it may become straight, or even slightly concave, or on the rounded

portions the radii of curvature may increase or diminish, with the consequence that the normal unstrained, egg-shape periphery is more or less departed from.

- (3) Although the normal unstrained boundary appears to be of practically *constant* shape, the area enclosed by that boundary may greatly vary from about 4 sq. in. to 10 or 12 sq. in., according to the size of the rod termination.
- (4) The flat area of the rod is bounded by an elastic curve.

THE CHARACTERISTICS OF THE ELASTIC CURVE WHICH FORMS THE BOUNDARY OF THE LARGER FLAT-ENDED PSYCHIC RODS

If the reader will refer to p. 24, he will find recorded the sensation produced on the sense of touch by the boundary of the flat-ended rod. Mr Hunter says: "Without being requested to do so, the 'operators' moved this rod-like structure until I felt the clearly defined edges of the circular blunt end. This was accompanied by a sensation of roughness, as though the edge were serrated: such a feeling, I believe, as would be given by a substance similar to *very* fine emery paper."

It follows, if the boundary line of the rod end produces this sensation of roughness and of being serrated to the sense of feeling, that the flat impressions produced on clay should also indicate this quality. And we find that it is so. On many of the clay impressions on the edge and in the

neighbourhood of the edge the serration marks are clearly seen. These marks are in general fine (in agreement with Mr Hunter's analysis), and although quite apparent on the clay, especially with the aid of a magnifying glass, do not show very well on photographs.

The Flat Impression obtained at Glasgow

This is an exceedingly interesting impression owing to its strength. There were many spectators present in the séance room on the occasion upon which it was obtained, and doubtless the operators had a greater and more varied amount of psychic stuff than usual upon which to draw. The experimenter placed a shallow circular tin vessel (similar to the ones I use), filled with putty (not clay), with its surface quite smooth and about 7 in. in diameter, under the séance table, while he himself stood within the circle on the side of the table remote from the medium, who on this occasion was not tied, but was free to place her foot in the putty if she had so desired.

Fig. 17 shows a photograph of a plaster cast taken from the putty mould. The impression is really due to the end of one of the largest rods thrown out from the medium's body, but to a careless eye, or to an eye which has not seen any other impressions taken at the circle, looks more or less like the mark of the sole of a lady's shoe. It will be observed that the left-hand edge of the photograph of the impression is almost a straight line, and that near the bottom left-hand end there are

a series of little holes somewhat resembling the stitch marks on a shoe sole. And again, the original impression had grit marks on the bottom of it (*i.e.* it was covered with particles of grit), more or less as though the sole of a boot had actually made the mark. The depth of the impression was about $\frac{5}{16}$ in. on its deepest side (the straight line side),

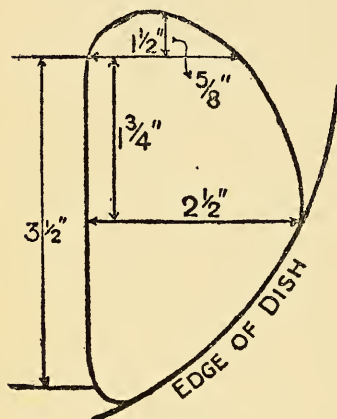


FIG. 21.

and about $\frac{1}{32}$ in. on the other side. The "toe" part was not so deep as the rest. The plaster cast shows the dimensions given on fig. 23 (it is to be remembered that a certain amount of contraction has to be allowed for, perhaps 10 per cent., if the mould was allowed to dry before the cast was taken).

Naturally, at a first glance this looks as though the medium or one of the circle had managed to put a foot in the putty with the intention of fraudulently making the impression. But such a supposition is nevertheless entirely wrong, and it shows the danger of coming to a conclusion from insufficient data. Fig. 22 shows a photograph from a plaster cast of one of the actual shoes worn by the medium on the occasion of the séances at Glasgow. These shoes were bought in Belfast before the visit, and were worn at all the séances.

The reader will see at once that the shape of



FIG. 22.

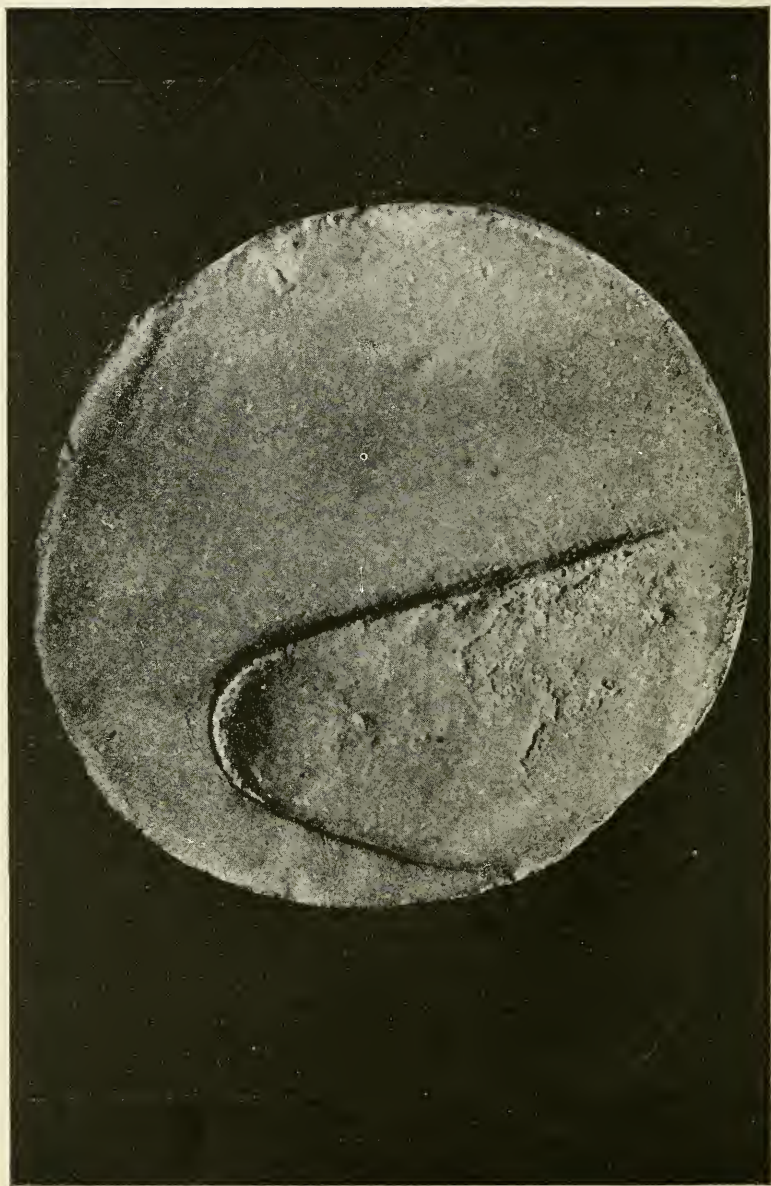


FIG. 23.



FIG. 24.

the medium's shoes is entirely different from that of the impression. On the real shoe there is no straight portion; the radius of curvature at the toe is much greater than that of the impression, and the shoe is altogether larger, even allowing for contraction. The stitch holes in the real shoe are seen plainly all round, and are entirely different from the small holes seen in the impression. In the impression the holes are proportionately nearer the edge than the stitch marks in the shoe, while in the impression "stitch" marks only occur perceptibly at one place and do not go completely round. It is not necessary to labour the point, as the general difference between the impression and shoe are obvious to everyone. Besides the medium's shoe I also took impressions of all the shoes worn at the séance, and not one of them resembles in any detail the impression. The resemblance is only superficial, but sufficiently near to deceive anyone who only casually glanced at the impression. Later on I will show that the impression is the blunt end of one of the largest of the rapping rods.

Fig. 23 gives a view of the impression taken from a slightly different angle than fig. 19.

Fig. 24 shows an enlarged view.

Let us analyse the series of six or seven little holes visible near the bottom of the right-hand boundary line of the impression. These are seen under different aspects in figs. 17, 23, and 24. In the smaller photographs they look like separate and distinct holes evenly spaced, but an examina-

tion of the actual plaster cast taken from the putty and of fig. 24 indicates something very different. At the edge where the marks appear there is a series of little ridges going right across the edge (which is here very sharp), consisting of little hillocks and little hollows alternately. The ridge portions stand up between the hollows, and they do not show up very well in the photograph. What we have here is a thick and not very elastic skin stretched over a more or less elastic frame. At the position where the holes occur the depth is relatively great (about $\frac{5}{16}$ in.), and it is obvious that the skin has been under considerable pull (though not to the point of rupture). The consequence is that the skin has in that vicinity been stretched beyond its elastic limit, so to speak, so that the little holes really represent tiny bits of skin under less stress than the skin immediately round about. Over the edge of the framework, which is itself not quite smooth, the skin has been pulled into a state of "set," and the grooves between the serration marks are places where the natural elasticity of the skin has enabled it to take up positions in conformity with the state of particular stress round about them. In other words, all along the margin here the skin has local spots where it is stretched tightly and contiguous spots where it is not so tightly stretched, these spots occurring alternately, the net result being to give the appearance of little holes as shown in figs. 17, 23, and 24.

Although the photographs do not show them

plainly, the whole edge right down to the "toe" is thus serrated, but much more finely than the discernible serration at the bottom.

The reader should also note that in the neighbourhood of the holes the elastic boundary line has become straight, and *even a little concave*, due to the resisting pressure of the putty.

In fig. 24 it will be observed on the straight line side of the impression that the series of little marks near the edge, which at first are a little distance from the edge, gradually approach the edge and ultimately work into it. The reason for this is that where the marks are plainly visible the stress, as I have said, on the film covering the rod termination is large, and that this stress gradually becomes less as we proceed toward the "toe" of the impression. In this photograph the character of the elastic ridge which forms the boundary of the impression is clearly seen, and especially at the "toe" it is very plain, because at this point the whole covering film has completely broken away from the boundary ridge there. In the clay at this point the serrations can be seen extending downwards on the inside of the curved ridge for a considerable distance.

The reader should also note on the left side of the impression how very plain and sharp the ridge is. There the stress has not been sufficient to cause the film to break away from the enveloping ridge. But the reader should note how, *as soon as the curvature begins to increase—all round the "toe"—the film has completely broken away*. This

is an absolute proof, if such were needed, that nothing in the nature of a boot sole has made the impression, for in that case it is a physical impossibility to have a thin ridge standing isolated at the toe with a sharp depression on either side of it. The facts observable on the impression, on the other hand, are exactly compatible with a thick and more or less elastic film, stretched over a thin, somewhat serrated, elastic frame. The laws of stress on such a stretched film are exactly worked out.

The reader should examine the boundary curve shown in this photograph very carefully. The elastic serrated frame can be plainly seen under, and in some places separated from, the covering film. At the bottom, where the film is not ruptured, the small serrations can be plainly made out. Just at the commencement of the curved portion of the "toe" on the left, where the skin first begins to break away, a series of fine lines is seen where the film is being pulled over the sharp edge.

*The Character of the Surface of the
Flat Impressions*

Sometimes the surface of the flat impressions was perfectly clean; sometimes it had dirt marks upon it; sometimes it had little pieces and flakes of what looked like coal dust upon it.

Many of the flat impressions had little particles of black grit upon them; very tiny particles for the most part, but by reason of their colour very

noticeable. There was no coal dust on the floor as far as could be discerned, and there was nothing resembling the black gritty particles on the sole of the medium's boots or shoes. Even when she wore special experimental shoes with the soles absolutely clean—as I took care to well ascertain beforehand,—on some of the flat marks these mysterious black particles appeared. I at length traced them down to small pieces of the black lacquering on the *inside* of the shoes near the top. The shoes were cloth ones, but round the top on the inside there was a band of cloth which was covered with black lacquer. Now here and there this was scraped away, and little pieces from it were found embedded on the flat marks. Needless to say the thing could not be done fraudulently. Supposing that the medium were desirous of making a mark with the sole of her soles on the clay and in some mysterious manner got her feet loose and applied the shoe to the impression, it would still have been impossible to leave the black gritty specks upon the impression, because the soles of her shoes had none of these specks on them, and to get them the lacquer from the inside of the shoe would have to be scraped hard and the tiny bits placed on the sole, which is impossible. It is little things like these which give the lie to superficial judgments of the more delicate aspects of psychic phenomena. Physical phenomena of the type I am considering are closely connected in their origin with various parts of the human body, and the utmost care is needed in

scrupulously and fairly dealing with them. Above all, no hasty generalisation may be assumed from immature data.

The place of origin of these black grit marks having thus been ascertained, the place of origin in the body of the medium of rods whose terminations left the pieces of grit in the surface of the impressions was strongly inferred. In brief, some of the rods have their origin round about the feet of the medium: or rather the end film of such rods has its origin there; the film, which is a fairly tough kind of psychic skin, issues from the feet, and in its passage upwards between the stocking and inside of the shoe scrapes off tiny flakes of black lacquer which adhere to it and are deposited in the impressions.

The reader should remember that the ends of these psychic rods, which look more or less like shoe marks, are usually fairly soft to the touch (not at all like leather), and that they are bounded by a hardish periphery. Neither the human foot nor a shoe sole is soft on the inside with a hard boundary round it. Neither conforms to both conditions.

I will not say anything further as to the place of origin of these psychic rods here, as I will have to go into the matter in detail later on.

Occasionally in the flat impressions small particles of dust were left. In such cases the flat rod termination had, previously to making the impression, been scraping on the floor or levitating the table by upward pressure on its undersurface, or

had twisted round a leg of the table in order to move it about, and had in consequence caused any dirt or dust particles to adhere lightly to its surface film. For the reader must remember that although the rod termination is generally quite invisible even in fairly good red light, it is nevertheless for all intents and purposes quite solid and like any ordinary material structure. In the language of the spiritualists, the end portion of the psychic rod is for the moment "materialised."

I have noticed that when the surface of the impression is quite clean, as it sometimes is, the impression has usually been made before other phenomena have occurred, *i.e.* before the particular rod used has had time to get dirty by contact with the dusty floor or table.

So far as could be seen by the naked eye, none of the flat impressions were covered by any kind of imprint. They appeared in most cases perfectly level and without design. All, or nearly all, the concave impressions were covered with what looked like marks such as would be made by a stocking pressing in the clay. For a long time this lack of design on the floor of the flat impressions was extremely puzzling, and much thought and many sances were devoted to trying to evolve a reason for it, because by the time these experiments were well under way, I had come to certain conclusions with regard to the formation and shape of the psychic structure, and these conclusions did not accord with the apparent fact that the flat impressions were plain and unencumbered with

design. But, like most difficulties when strenuously tackled, this particular one surrendered before the attacks made upon it, as I will show in the proper place.

Summarising for the sake of clearness the results obtained:—

- (1) The boundary line of the rod terminations causing the “flat” impressions is much harder than the contained surface.
- (2) This boundary line is made of elastic material, and this material is finely serrated.
- (3) The flat end of the rod consists of a film or skin of matter stretched over the elastic boundary ridge.
- (4) The skin is more or less elastic, but its elasticity is strictly limited, for if subjected to too much stress it ruptures and leaves the serrated enveloping frame standing alone.
- (5) The character of the skin or film covering the rod end is such that small particles of grit and dirt adhere to it, if it has been in contact with such.
- (6) The place of origin of some of the flat-ended rods in the body of the medium is indicated by little flakes of black lacquer left in some of the impressions. These flakes adhere to the skin or film, as it is issuing from the foot of the medium, through the space between her stocking and the inside of her shoe. As it issues it touches and rubs against the black lacquer on the inside of the shoe, and some of this sticks to it.

- (7) The floor of the flat marks is apparently covered by no kind of pattern, such as is the case with the concave impressions.

The Concave Impressions

I have now to deal with the second type of the impressions which have been obtained in clay. These are what I call the *concave* ones, to distinguish them from those with which I have already dealt, the *flat* ones.

The size of these marks varies from the size of a mark one could make with one's little finger to a size of 4 or 5 sq. in. The largest of them is less than half the size of the largest flat marks. The rod terminations responsible for them are sometimes quite soft to the touch and sometimes extremely hard, as hard as iron, for instance.

Nearly all these marks are covered with the imprint of stocking fabric.

If the operators are asked to give such an impression without proviso as to the nature of the imprint upon it, the floor of the cavity is usually lined with stocking marks. But it is not necessary that the floor should be so lined. On request to the operator, it can be made without the stocking marks lining. As I will show later, this lining of the impression with imprints from the stockings of the medium is an automatic process due to the issuing of certain types of psychic rods from various parts of the feet and legs of the medium, and affords a valuable contribution to our knowledge of the

structure of such rods, their place of origin in the medium and their general method of operation.

The Shape of the Concave Impressions

There is every reason to believe that the standard shape, if I may so put it, of the concave impressions is the same as the non-distorted shape of the flat impressions, *i.e.* more or less oval. But as with the flat impressions, the boundary may be distorted in various ways, the chief cause of distortion, however, appearing to be brought about by great variation of pressure normal to the rod end. That is to say, in order to obtain the various kinds of

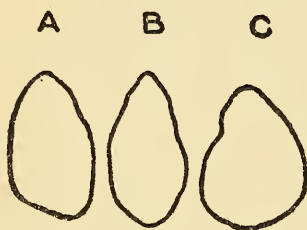


FIG. 25.

cavities desired, the end film has to be pressed out with different degrees of pressure over its area: a greater pressure near the centre parts, for instance, than near the edges, with the consequence that the boundary is often *pulled in*, and the whole impression often becomes narrower the deeper the concavity. The following are some of the approximate shapes obtained with concave impressions (fig. 25):—

- A. Normal shape.
- B. Boundaries pulled in owing to specially deep concavity.
- C. Distorted shape owing to the pressure being non-uniformly distributed.

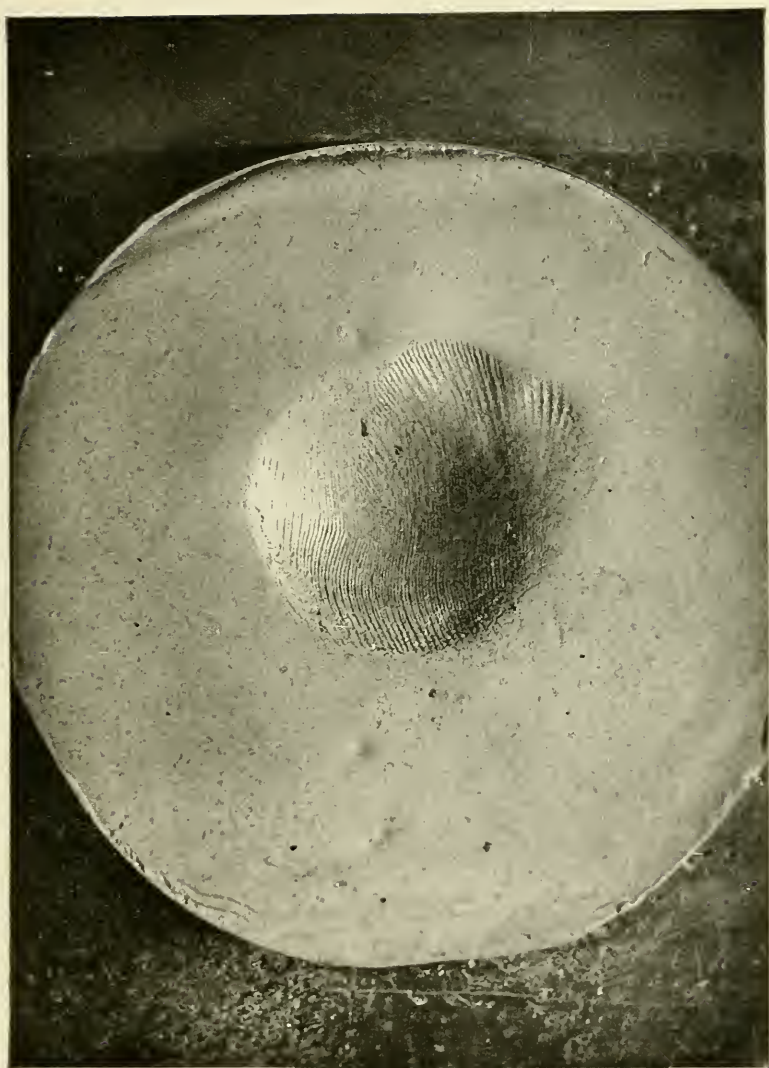


FIG. 26.



FIG. 27.

Fig. 26 shows a concave impression obtained in Glasgow (at the same séance at which the flat impression, already referred to, was obtained). It is pretty nearly circular, and superimposed on it are two other smaller marks. The stocking imprint is plainly visible.

Fig. 15 shows two impressions taken on the same piece of clay. The top one is flat and has already been described. The lower one is concave and lined with stocking marks.

Fig. 27 shows three concave marks (obtained on one dish of clay) of different shapes and depths, all lined with stocking marks.

The following are sketches of concave impressions with data concerning them:—

Fig. 28.—The gusset mark of stocking is seen near the top of the impression.

Fig. 29.—Impressions of a small stocking-lined mark, only very slightly indented (about $\frac{1}{16}$ in.), near A.

Fig. 30.—A concave impression lined with stocking marks. Along the periphery at A there seemed to be a slipping of the film. The blow was evidently a slanting one (left to right in the figure). The elastic framework at A has been dug into the clay further

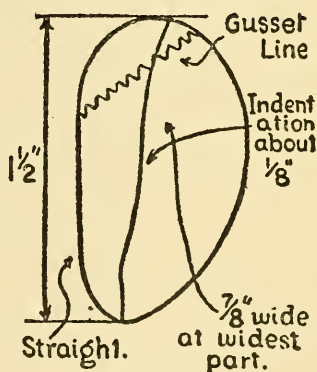


FIG. 28.

than the covering film could stand, so that the latter has evidently ruptured. The stocking

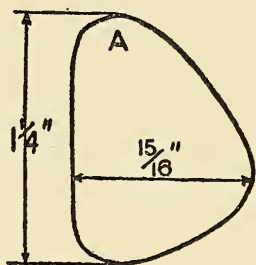


FIG. 29.

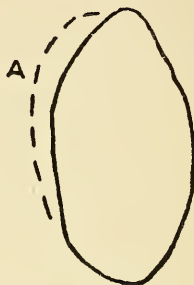


FIG. 30.

marks are seen going *over and beyond the elastic framework*.

STUDY OF THE MARKINGS ON THE FLOOR OF THE CONCAVE IMPRESSIONS

As has already been mentioned, most of the concave impressions were found to be lined with what looked like stocking marks. The first matter that suggested itself, of course, was to make quite sure that the markings really were stocking marks and were not something that only looked like them. Accordingly stockings similar to those the medium was wearing were pressed into the clay, and the markings thus produced were found very similar to those obtained at the séances. Finally, the actual stockings worn at a séance by the medium were thus experimented with after the séance,—after a séance at which many such impressions were obtained—and it was

established beyond all doubt that the floor of the psychic impressions bore the imprint of a texture at first sight identical with the texture of the medium's stockings.

In spite of all that could be done in the way of tying up the feet and legs of the medium so that it was quite impossible for such parts of her anatomy to get within a couple of feet of the dish of clay, or for the dish of clay to be moved from its position under the table, these stocking-lined marks were obtained in great abundance. The thud of the rod which made the larger ones on the clay could be distinctly heard as it impacted the clay in the centre of the circle space, during which time I watched the springs under the medium's chair to see if they moved, and the ropes which bound the legs of the sitters to their chairs. But nothing moved, and, as I have already said, the tying was always found intact at the end of the experiments. The matter was as mysterious to the medium and sitters as to myself, and we sat night after night, varying the systems of tying, but to no purpose. The marks were obtained on demand. The medium and sitters were only too willing to try anything I desired in an endeavour to probe the mystery, and they allowed me to tie the medium's legs and feet in any way I chose, submitting with a reasonable spirit and good humour to nights of trouble and inconvenience. I hereby thank them for the trouble they went to, and for their hearty co-operation in a part of a psychic problem which, if it had remained unsolved, might have

placed the totally false stigma of fraud upon the medium—at least in the estimation of persons who fail to understand the close connection between the body of the medium and physical phenomena in general.

I have said that I soon established that the floor linings of the psychic impressions bore imprints apparently similar to various parts of the stockings worn by the medium. The next thing to find out was whether the imprint was a direct or reserved one, *i.e.* whether it was a mark such as would be made by pressing a part of the ordinary outside of the stocking directly upon the clay, or whether it was one obtained by pressing the inside of the stocking upon the clay. It did not take long to discover that the former was the case and that the floor of the *psychic concave impressions was lined with stocking marks almost exactly in the manner it would be lined if the ordinary outside of the stocking were pushed into the clay.*

There is, however, one extremely important point of difference which will be explained in the proper place.

SOLUTION OF THE PROBLEM AS TO WHY THE
FLOOR OF THE FLAT IMPRESSIONS IS APPAR-
ENTLY UNLINED WITH STOCKING MARKS AND
THE CONCAVE IMPRESSIONS ARE NEARLY
ALWAYS SO LINED

As I have already said, when the floor of the flat impressions was examined by the unaided eye



FIG. 32.



FIG. 31.

or even by the help of a magnifying glass, no pattern of any kind appeared on it. Nothing resembling stocking marks was to be seen. It unfortunately happened that I had gathered together a collection of all kinds of psychic marks and that I spent weeks in examining them without resorting to photography. Having failed to reach a solution, I had all the impressions photographed. It is well known that photography will show up faint processes which are invisible to the eye, and in this way I obtained a hint as to the solution. Then I had some of the photographs of the flat impressions enlarged, when immediately all difficulties vanished.

Fig. 31 is an enlargement of the flat impression shown in fig. 15. The reader will notice on many places on the floor of the impression that the stocking marks are visible. Especially is this so at the lower end. A careful inspection will show that the marks are visible all over the floor, but that in most places the regular systematic arrangement of the stocking imprint has been distorted and partly covered over. The markings, instead of running in parallel lines everywhere, only do so here and there. They have been twisted, distorted, and thickened, and the interstices between the threads have been more or less filled in. But for all that, the stocking markings are there, which is the main point. To the eye the floor of this impression appeared quite smooth.

Fig. 32 is an enlargement of part of another apparently smooth flat impression. Here, also,

especially at the bottom and on the right-hand side, the form of the stocking markings can be seen, but, as in fig. 31, the regular formation of these markings has become distorted. The individual threads have become twisted and thickened, and many of the interstices between them have been filled or partly filled in. Nevertheless there is no doubt that the stocking fabric is there but has suffered modification.



FIG. 33.

An examination of every impression, concave or flat, was made by the unaided eye, by magnifying glasses and by photography, and the result is as follows:—

First Generalisation

When the medium wears stockings nearly every psychic impression is lined with stocking marks.

Points of Detail

Many of the concave marks are lined with such perfection that at a first glance it would appear that the actual stocking had been in the clay. But the stocking marks can be greatly modified. The delicate pattern and tracery of the cotton threads can be distorted, thickened, partly covered over, or broken, but nevertheless in all such cases enough of the pattern is left to make it certain that the stocking pattern is present in nearly every kind of impression.

There remains the question: Why should the

impression on the clay sometimes have very clear stocking imprint and sometimes have the stocking imprint partly covered over or broken up? The reason is that the actual psychic structure is covered by a film of matter, which film is formed of psychic matter oozing round about the little holes in the stocking fabric. It is at first in a semi-liquid state, and it collects and partly sets on the outer covering of the stocking. It is of a glutinous, fibrous nature, and takes almost the exact form of the stocking fabric. It is pulled off the stocking by the operators, and is then built round the end of the psychic structure, which, when placed in a dish of clay, naturally leaves an imprint similar to a stocking. In a large flat impression the skin as it leaves the stocking of the medium would be too thin to withstand the heavy pulls and pushes it would be subjected to over such a large area, and accordingly it is thickened and strengthened by the operators applying more materialising matter to it. This additional psychic matter oozes round the regular imprint, distorts it, partly covers it, and twists the regular formation out of parallelism. Sometimes, for a very deep impression on the clay, such as the flat Glasgow one, the film has to be made so thick that nearly all the original skin bearing the stocking imprint is covered over so that only here and there can traces of the original imprint be seen. Nevertheless, as I have already said, the stocking fabric, clear or distorted, is apparent on nearly every impression, if at the time of the séance the medium is wearing stockings.

I have said that though the imprint of the stock-

ing fabric on the clay is at first sight very similar to that which would be made by the medium's actual stocking impressing the clay, there is one important point of difference. It is as follows:—

The psychic impression is altogether *sharper* than that which can be made by a stockinged foot. Any part of the latter, when pressed into the clay, leaves a good enough outline of the stocking fabric, but it is a dull, blunt outline owing to the solid foot behind the stocking exerting a squeezing effect, no matter how lightly it may be applied. The psychic impression, on the other hand, has little raised edges projecting upwards from the impression left by each thread, which effect, as many experiments have proved, it is quite impossible to obtain with the actual stocking. In short, a thorough series of tests shows that with a soft stocking no amount of juggling can get the actual sharp effect obtained by the real psychic structure. This effect, however, could be exactly obtained if a fine viscous material were to cover the stocking fabric and were then to harden or “set” on it somewhat, and the mould being pulled off were then to be pressed in the clay. This, indeed, is what actually happens. The mould after it has “set” is not nearly so pliable as the actual stocking fabric, with the consequence that when it is pressed into the clay it leaves a sharp, clear impression which cannot be obtained with the actual fabric. Thus, while the psychic rod end and the stockinged foot both leave in the clay an outline of the stocking fabric, the quality of the one is distinct from that of the other.

I am now going to describe an experiment which was carried out to see if I could get any information showing in what part of the medium's body the psychic rods had their origin. It was fairly obvious, of course, that some of these rods issued from the neighbourhood of the feet and ankles of the medium, for the character of the stockinged lining of the floor of many of the concave impressions showed that to be the case. Moreover, during rapping I have intercepted with my bare hand the space in front of the ankles and feet of the medium, and I have distinctly felt a cold kind of breeze issuing from the neighbourhood of her ankles and region just above her shoes: a kind of breeze which appeared to be caused by material particles of a cold, disagreeable, spore-like matter. There was no solid body whatever beyond her ankle where I intercepted the flow of these particles, but nevertheless they were an integral part of the rapping rod, for immediately I intercepted them the rapping ceased and could not be resumed for quite a long period of time (see *R.P.P.*, p. 225). As a matter of fact, I shall show later, what I was really doing was to cut across the psychic structure close to the body of the medium: the part of the structure which was not heavily materialised, as the end is, but which nevertheless appeared to contain within it and in motion outwards from the ankles of the medium material particles of some kind.

In order to render the purpose of the series of experiments about to be described intelligible to the reader, it is necessary that I should summarise

what was already known and what was conjectured about the psychic rods which issued from the body of the medium, and which were the instruments employed to produce the phenomena. In the first place, each psychic rod in the neighbourhood of its extremity was solid, *i.e.* built up of matter solid to the touch, and therefore presumably of matter with which we are ordinarily familiar. At a few inches or less from its extremity this appearance of solidity vanished and nothing could be felt but a flow of what appeared to be material particles, if the line of the structure were intercepted by the hand of the experimenter. That is to say, from a distance only a few inches from its extremity right up to the body of the medium all appearance of solidity vanished, and nothing could be felt in the line of the structure but a flow of cold, spore-like particles. In other words, the solidity seemed to change to something resembling a gaseous state. Nevertheless—and let this be well marked and digested—the whole rod, apparently made up of a solid end and a gaseous body, operated exactly as if it were wholly solid from the body of medium outwards. It resisted pull, push, and shear stress of large magnitude. And in this sort of thing resides the chief mystery connected with the physical phenomena of spiritualism.

Each psychic rod structure is then to all intents and purposes a solid body at its free end (the end furthest from the medium). Also, the part of the rod connecting the body of medium to the solid end of the rod contains within it what appear to be solid material particles in a state of motion from

the medium outwards. So that each rod contains *matter* throughout which is cognisable by our senses. The question arises as to how and where, with reference to the body of the medium, the materialisation or solidity of the rod termination is effected. The rod moves straight into and out of the medium's body. Is the end materialised immediately it leaves her body, or is the structure first fully ejected and then materialised at the extremity afterwards? And when a developed rod, after producing phenomena, is pulled back into her body, is it pulled in integrally, or is the solid or materialised end first dematerialised; and if the latter is the case, is the dematerialisation effected far from her body, or just when the solid end reaches her body? As the free end is, for all practical purposes and for the time being, an ordinary solid body, and as it has been shown to possess adhesive and suction qualities, it is reasonable to assume that, if the opportunity were presented, particles of suitable substance would adhere to it if such were placed in contact with it. And furthermore, if, when the rod was pulled into the body of the medium, dematerialisation really occurred just before entering the body, that such foreign matter, adhering to the solid end of the rod, would, on dematerialisation, be deposited at the spot where it occurred, and give important data as to the point of issue of the rod.

The above was the method of reasoning upon which I proceeded to carry out the tests about to be described.

I bought a special pair of stockings for the

medium's use. In these I cut a series of small holes, on the left-hand side of each, round the heels, at the lower part of the ankles, and at the toes. The medium put on the pair of shoes used at Glasgow, and I saw that they were tightly laced and the laces tied in three knots. Then she placed her feet together on the floor, and I tied her ankles tightly together with three separate pieces of whipcord, and then tied the whipcord round her ankles to the back rail of the chair underneath it. I let her see what she could do in the way of getting her feet or her shoes loose, but she could do nothing. At the end of the séance her ankles were as tightly tied as at the beginning, and likewise the laces of her shoes.

I placed a box of clay under the table, and by direct measurement found that with the extreme amount of stretch the medium could not get her toes within 18 in. of the front of it.

Then I took a tin dish some 12 in. in diameter, filled with extremely soft clay, so soft that it was in a plastic condition and placed it under the table. The surface of this was approximately smooth at the commencement of the test. I asked the operators to make any marks on this they wished, to do, in fact, anything they liked with it so long as they did things that would be helpful to me in solving the problem of the rods. I asked them to give three raps when they were finished with their experiments. The operators worked at the clay in this dish for ten minutes or so, evidently finding its soft state to their liking. However, at the end of that time the three raps were given, and I

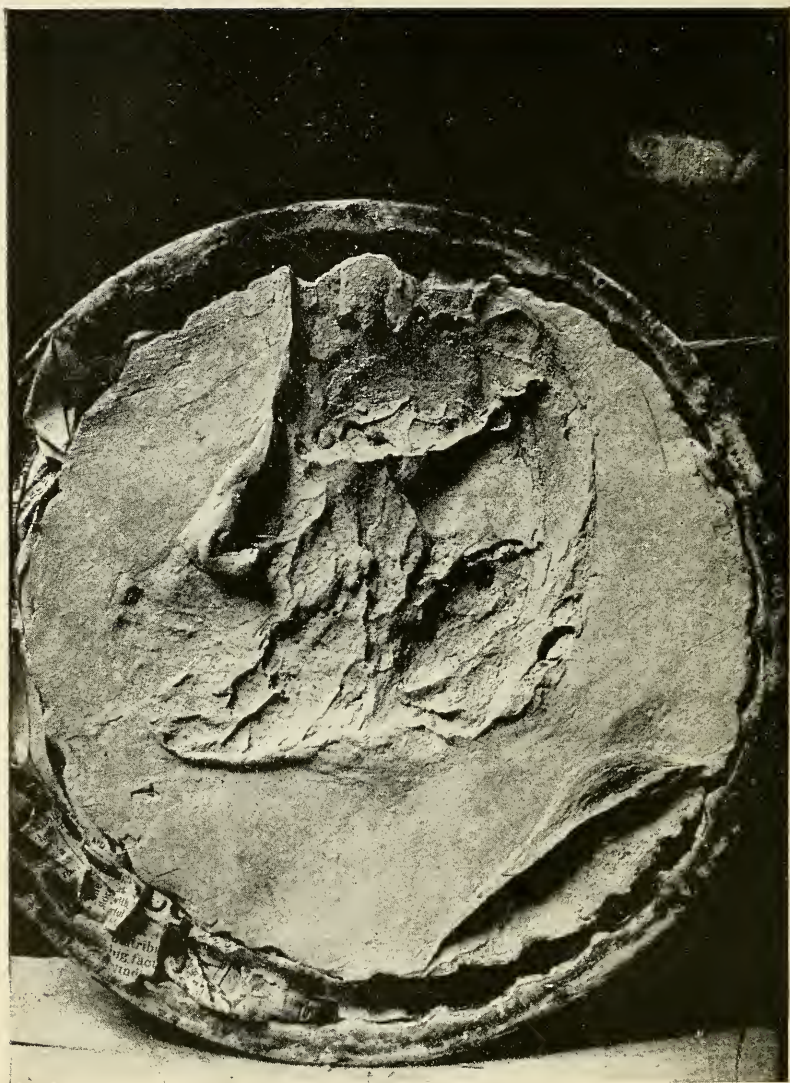


FIG. 34.

proceeded to examine minutely the scene of their operations.

Before, however, the three little raps were heard indicative of the fact that the operators had finished and were ready for me to examine the clay, Mrs Morrison had called out that she felt herself touched just below the ankle at the front of her foot on her stocking, exactly in the space left between the buckle of her shoe and the shoe proper. Mr Morrison also said that he felt himself being touched on the boot.

We examined the place on Mrs Morrison's stocking where she had felt the psychic touch, and on the spot indicated there was left a small mark covered with firm white granules in clay whose shape and size are approximately that shown in fig. 33. Mr Morrison says the touch felt very soft, just as though it was caused by something covered with flesh as soft as a baby's.

There was also found a small clay mark on Mr Morrison's boot at the place where he had felt himself touched.

Fig. 34 shows the state of the clay in the tin dish after the operators had finished with it. As the photograph clearly indicates, it had been pushed about and hacked in a variety of ways. Some of the holes were nearly an inch deep, and it was evident that the operators had not desired to make definite impressions so much as to use the semi-liquid clay to convey information to me with regard to the state of solidity, adhesive powers, and other data concerning the psychic arms. At the right-hand bottom edge of the clay there was a

long sharp-edged piece completely removed from the clay, as though cut out with a sharp knife. The sharpness of the edge of some of these concave impressions is extraordinary, and I shall have occasion to refer to it again. There were a great number of clay marks on the floor between the medium and the dish, and on either side of the dish. There were also marks on the undersurface and sides and legs of the table. On the floor at the side of the dish, remote from the medium, a little, almost spherical ball of clay was found.

There was a considerable amount of clay found on certain parts of both shoes of the medium, on her stockings, and on the whipcord with which her ankles were tied together.

The following is a summary—for convenience of reference—of the clay marks found on the medium's shoes and stockings. (The latter were carefully removed immediately after the séance, and submitted to most careful and prolonged examination. I will deal in detail with them later on.)

Right Shoe

- (a) No clay on the sole or on the heel.
- (b) On right-hand side, along the joint between the sole and the cloth upper, for a distance of about 4 in., a thick layer of clay pushed into the seam as far as it could go (fig. 35).
- (c) On the undersurface, at the arch between heel and sole, a considerable amount of clay, striated, as though produced by something covered with stocking marks. These striated bands crossed the leather at about 45° (fig. 36).

These striated marks in the clay come from under the instep at A (fig. 37) and go up the outside

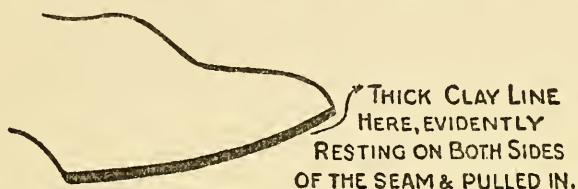
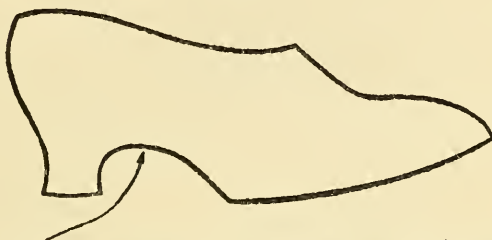


FIG. 35.



On the undersurface here, much clay with parallel structure marks crossing the leather at about 45°. Markings similar to stocking marks quite plain on some of it

FIG. 36.

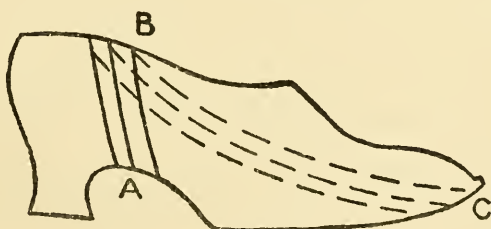


FIG. 37.

of the cloth to B, at top of shoe (there are traces of the path AB, but not very plain ones), and then down from B along the cloth on the inside of the

shoe to C, near the toe. (The path BC is shown dotted on the diagram.) The whole of this striated path is very similar to the path that would be traced out by an actual toe covered with clay, which came from the region between the shoes of the medium, crossed the instep at about 45° in contact with the leather to A, moved up to B, in contact with the outside of the cloth, and then downwards from B to C, in contact with the cloth, but on the inside of the shoe. Needless to say, supposing the medium had been able to put her stockinged toe in the dish of clay, she could not have traced the very definite line along and underneath the instep and neatly up the side of the shoe. It is evident that the psychic rod which made the mark retired into the body of the medium from between her shoes, through the space at the instep, up the side of the shoe, down the inside and thence to the foot: *i.e.*, it took the shortest line consistent with the fact of emerging and returning to the medium's foot. For instance, it did not go along the floor under the instep, but "hugged" the leather all the way.

- (d) On the toe of shoe, on the outside of the cloth, several particles and marks of clay surrounding an empty space.
- (e) On the bow of the laces several particles of clay.
- (f) On the *inside* of the holes for the laces, on the tongue, circular marks of clay, and also marks on the *tongue* between the lace crossings. No clay on the *outside* of lace holes or on the cloth in the vicinity.

- (g) Inside the shoe, over the sole and heel, fine clay sticking to the leather, except in positions where parts of the medium's foot were pressing strongly on the leather. In other words, wherever the contact between her feet and the leather was not very close, *i.e.* wherever there was the slightest space, however minute, the inside of sole and heel was covered with fine particles of clay. Where the space was greater, *i.e.* in those parts of the shoe where the medium's foot was not pressing very tightly, there were flakes of clay adhering to the leather.

Right Stocking

- (h) Clay in flakes adhering to the stocking round heel on the outside, but none where the flat of the heel rests on shoe.
- (i) Some clay on the stocking at the toes, not very thick, but all over the top of toes, *i.e.* no clay marks on the stocking where the under-surface of the toes would press, but only on the top and front.
- (j) All the rest of the sole of stocking, and up as far as the ankle, clean.

At the heel and toe, the marks of the clay were slightly perceptible on the inside of the stocking fabric, *i.e.* particles of the clay had gone through the interstices of the fabric.

Left Shoe

There was not nearly so much clay deposited as on the right shoe.

- (*k*) On the right-hand side, on the seam between the leather sole and the cloth upper, for a distance of about 3 in., there was some clay heaped up round the seam and evidently tending to be drawn into the seam, as was also the case on the right shoe.

In neither case does the clay along the seam extend as far as the curve at the toe.

- (*l*) Flat of sole and of heel absolutely clean.
 (*m*) On the cloth on the right-hand side near the heel some patches of clay slanting upwards, as though proceeding to the stocking in the neighbourhood of the ankle above the heel.
 (*n*) The shoe was completely clean inside.

Left Stocking

- (*o*) A large mass of clay on the right-hand side of the stocking on the ankle above the heel.

The psychic rod to which the above mark is due touched the stocking at the ankle.

- (*p*) The whipcord which bound the medium's ankles together had a lot of clay on it at the front.

Every part of both shoes and stockings was photographed, and I hold a complete record of



FIG. 38.

the results. As, however, similar but more definite effects were obtained when the clay into which the psychic structures dipped was mixed with a larger proportion of water and was thus made much more fluid than in the present test, and as so many photographs have to appear in this book, I content myself with reproducing in this place fig. 38.

This shows an enlargement of the bottom of the medium's right shoe, at the instep. The striation marks on the clay are plainly seen, as though a film of matter having a stocking imprint on them and covered with clay had rubbed the leather here (see (c), p. 76).

Complete Analysis of the Results of this Experiment

The part of the medium's shoes which rested on the floor and which were in contact with it, *i.e.* part of the sole and flat of the heel, had not a particle of clay upon them. I examined them scrupulously with a magnifying glass, but there was no clay on them. Here and there over them were fine particles of mud which adhered to them from the street. These particles were very light and small and had certainly not been disturbed during the séance. A very slight rubbing sufficed to remove them. It is therefore certain that the medium's shoes at their base, *i.e.* on sole and heel had not been in contact with the clay either in the dish or on the floor, for the clay was in such a semi-fluid state that the least pressure of the shoe on it would have undoubtedly left traces. Also

the floor all round the medium's shoes was covered with patches of clay *right up to her shoes*. Where her feet rested on the floor was practically the only complete clean patch of floor between her and the clay dish a couple of feet away. And this shows, beyond cavil or dispute, that during the whole period of time this crucial experiment was in operation, say about fifteen minutes, the base of her shoes never left the floor, *i.e.* that her shoes remained planted on the floor exactly where I had placed them at the beginning. If she had moved them even an inch or two in a forward direction, even if she had slid them along the floor without raising them, there would certainly have been some white marks of clay visible on sole or heel; but, as I have said, even the light dirt marks from the street were undisturbed, and there was absolutely not a particle of clay upon them. So that, even if the medium's feet had not been bound to her chair, as they were, this one fact is sufficient evidence to show that the bottom of her shoes had not for an instant during the experiment been in contact with the clay.

A fact which is also significant is that round the edge of the sole of the shoe—and more especially the right shoe—where it curves upwards a little at the periphery from the flat of the sole, there were clay marks which extended a little way under the sole in an irregular manner for about $\frac{1}{8}$ in. or so from the edge line. That is to say, the part of the leather of the sole which was in actual contact with the floor was perfectly clean, but particles of clay had been drawn into the narrow

space round the edge of the sole, which, owing to its curvature, was not quite touching the floor when the medium's shoes rested flat upon it. In other words, this is obvious proof that the medium's shoes had not moved during the whole time of the experiment, for the disposition of the narrow band of clay underneath the edge of the sole and its irregular outline correspond exactly, as is evidenced by actual trial, with the available space between under edge of sole and the floor when the shoe is placed firmly on the floor in its normal position. The psychic structure, covered with clay at its outer extremity, in being withdrawn into the feet of the medium, had been pulled along the floor and had deposited the clay all along the bottom of the boot on every available space. This clay coming in contact with the edges of the medium's shoes on the floor had been deposited on the edge of the sole and in the slight clear space between edge of sole and floor, but had not been able to penetrate further, because the rest of the sole was in actual contact with the floor. This kind of result is what I mean when I say that I prefer to allow physical phenomena to prove themselves to any elaborate tying up of the medium, though, in the present case, the medium was actually firmly tied.

The Marks on the Tongue of the Right Shoe

There were four lace holes on each side of the shoe, and the two halves were tightly laced together during the experiment. The lace holes were

therefore not filled by the laces, and there was a considerable part of the circular space empty. The tongue of the shoe lay immediately behind. *On the tongue, behind the lace holes*, little nearly circular marks of clay were found—circular marks of fine clay dust deposited on the tongue.

There were no clay marks or deposits of any kind on the two front parts of the cloth covering the tongue: that is, the exterior portion of the shoe in this neighbourhood was clean, but on the tongue, or on the interior of the shoe here, marks had been left.

Now, to anybody who takes the trouble to think, this is proof positive of two things: (1) That the medium's shoe in this neighbourhood had not been in direct contact with the clay, for, if it had, all the outside portion would have been covered, or at the minimum some marks would undoubtedly have been left on it; and (2) that the marks on the tongue had been really deposited by something covered with clay being withdrawn into the medium's foot apparently *through the lace holes*. In no other way then (2) could these marks have been produced under the conditions of the séance. Even if the medium had had her feet quite free and had been given full liberty to make the marks as best she could, she could not have produced them without much trouble and preparation. For, in order to make them artificially, it would have been necessary to possess an implement like a narrow cylinder of wood of the exact shape and size of the holes, to have covered the end of this cylinder with clay, and then to have introduced it

exceedingly neatly into the lace holes, and to have pressed it into the tongue behind. Furthermore, a part of each hole was occupied by the lace, so that the available space was in truth not quite circular, its boundary being irregular on the inside. So that the shape of the end of the hypothetical implement would not be so simple as a circle, but would have to present an appearance in which one edge is circular and the other irregular, owing to the lace being in the way, for the lace itself there was quite clean.

The laces, of course, crossed the two halves of the cloth front of the shoe. The consequence was that between the two halves, along the dividing line, there were places *on the tongue* not covered by the laces, and in these places light powdery clay had been deposited. The laces themselves, where they crossed the dividing line, were not touched by clay, only the spaces on the tongue behind.

The above is clear evidence that some part of the psychic structure had withdrawn into the feet of the medium through the lace holes and through the vacant spaces between the laces, along the dividing line of the two halves laced together. This structure (say a thin rod) had issued in the easiest way it could from the foot of the medium, and its path was approximately as follows:—From the neighbourhood of the toes of medium, then either straight through the soft cloth tongue of shoe, or round the edge of the tongue, and then through the lace hole to the outside. The rod had at the conclusion of the experiment come back via

the same route. No other theory whatever will satisfy the conditions. The rod being materialised or solid at its free end was covered with clay there, from its contact with the clay in the dish, and on its retreat through the lace hole had deposited the clay on the first substance with which it came into contact, viz. the material of the tongue of the shoe.

Likewise, this drawing in or suction effect is palpable from the facts I have previously related, where the clay was drawn in and deposited on the narrow irregular space of the sole of the shoe, which stood a slight distance above the floor when the sole as a whole was resting firmly on the floor.

The clay marks left on the left stocking of the medium, where clay patches were deposited round a more or less clean oval space (see *o*), are just such as would be produced by a rod of oval cross-section, about an inch thick, solid at the end, extruding from the ankle of the medium. If we suppose the curved surface of this rod, where it was solidified, had been manipulating the soft clay in the dish, and had therefore a coating of clay adhering to it, and that at the conclusion of the experiment the rod had been pulled back into the ankle of the medium, where its material had been re-absorbed, and that at the point of dematerialisation of the psychic stuff, just before entering the body of the medium, *i.e.* at the nearest point to the medium's skin, on the stocking, the clay had been deposited, we will have a close picture of what actually occurred. The path of this particular rod as it moved inwards to the ankle of the medium is

also plain. It evidently did not remain suspended in the air as it was pulled inwards, but part of its journey was evidently accomplished on the floor, for the mark of its passage is very plain up the side of the shoe of the medium. That is, the rod was pulled into the ankle of the medium from the neighbourhood of the floor, slantwise up the cloth of the outside of the shoe, and up a portion of the stocking fabric. When Mrs Morrison was touched during this experiment the mark left on her stocking at the place where she felt herself touched was very similar in size to the oval clear space on the stocking of the medium, although the shape of the impression is a little different. It is just possible that the rod we are considering made both marks. It touched Mrs Morrison's stocking with its end and left the impression described, and afterwards, in its retreat into ankle of medium, left the clear oval impression on medium's stocking surrounded by the deposited clay adhering to the cylindrical portion of the rod. The slight difference in the shapes of the two marks may be due to the curvature of the stockings on the feet and ankles of the two persons concerned.

I have already described the path of the rod which entered the region of the right toe of the medium. Its path is perfectly plain from the floor between her shoes, along the leather of the instep of shoe underneath, where it took the shortest path from between the shoes to the outside of her right shoe, up the side of the shoe, and thence down the inside of shoe to the region of the toe of the medium. Along the whole path stocking marks

were more or less visible: on the underneath portion of the shoe; on the outside and on the inside.

It is a very noticeable fact that practically the whole of the inside of the flat of the right shoe was covered with fine particles of clay *wherever parts of the foot of the medium were not pressing tightly on the leather*. The reader can easily experiment for himself and find that if he puts his foot in a shoe and sits on a chair and rests the foot on the floor the whole of his foot will not be in uniform and close contact with the bottom of the shoe. There will be places where the contact will be fairly light, other places where the contact will be weak, and again other places where there is not contact at all. And if he makes the experiment he will see something of what underlies my statement when I say that only on those places where there was *no or poor contact* was the clay deposited. In other words, this is corroborative testimony, if such were needed, that the medium had not moved her feet during the whole experiment. The contact at the spots of contact had been uniform all the time, for otherwise the clay would not have been reserved to those places where the contact was naturally bad. Furthermore, if the sole of the stocking had touched the clay it would naturally have left traces of the clay at the very places where the contact was a maximum. But the exact reverse was the case. And, in addition, the soles of the *stockings* of both feet was absolutely clean, not a speck of clay being on them. Where the clay was not deposited in powdery form it was *adhering in small*

flakes to the leather of the sole. The whole result is corroborative of what I have already shown with regard to this test, namely, that the clay found a path wherever there was a space in which it could be deposited, and that it was only in such spaces that it was deposited.

The same thing is seen with regard to the flakes of clay adhering to the top of the heel of the right stocking. This clay was deposited on the stocking well above the flat of the heel, in the space between cloth of heel of shoe and stocking. Wherever, in this neighbourhood, there was vigorous contact between the heel and the inside of the shoe, there was absence of the clay. In other words, wherever there were interstices the clay had been deposited. Of course, if the medium's stockinged heel had been used *per se*, the whole of the heel would have been covered, and not just the limited portion I have mentioned. This would have been unavoidable, as anyone can try for himself.

Also, with regard to the slight clay marks in the regions of the toes of the right stocking of the medium, the marks are not on the undersurface of the toes, but mostly on the top. On some of the small holes I had cut in the fabric of the stocking at the toes, particles of clay had evidently gone right through, for flakes were adhering to the interior edges of these holes.

The left shoe and stocking were not nearly so much affected as the right. It would seem that the psychic structures had chiefly extruded from various parts of the right *foot* of the medium, and possibly her left *leg*.

The chief results from the above experiments are as follows:—

- (1) There is abundant internal evidence that the medium did not move (*a*) either of her shoes from the floor where they were originally placed; (*b*) either of her feet from the soles of her shoes, during the course of the experiment.
- (2) The psychic rods issue from various parts of the feet and legs of the medium: (*a*) from the region of her toes; (*b*) from the region of her heel; (*c*) from the flat of the sole (this I will prove later); (*d*) from the ankle.
- (3) Dematerialisation of the rod occurs as close to the body of the medium as is possible. That is, the end—solid—portion of the rod is not dematerialised until that portion reaches the stocking or skin of the medium on the whole rod being withdrawn into the body of the medium. Likewise, as I shall show later, when the rod issues from the body of the medium, materialisation of the free end occurs very close to the body of the medium. An intangible rod is not first extruded for a distance of some feet, and then the end solidified. It seems absolutely necessary that the solidification of the terminal must be effected immediately it issues from the medium's body, and that desolidification must also occur at that place.

- (4) The rods which are absorbed into various parts of the feet of the medium are able to take indirect paths. They do not project outwards in absolutely straight lines from any one part of the foot. For instance, the rod which issued from the region of the right toes of the medium moved in a very circuitous path. It slanted upwards along the inside of shoe, down the outside, underneath the shoe, and then outwards into the circle space.
- (5) There is evidence that some of the structures do not issue *entire* from the foot of the medium, but come out separately the best way they can. Thus it seems that several parts of one rod have issued through the lace holes: at any rate there is strong evidence that they have returned to the foot of the medium through the lace holes, *i.e.* they have avoided the more solid parts of the shoe and have got into her feet the easiest way they could. Perhaps such parts of a rod reunite as soon as they have got free from the environs of the shoe and form one composite rod.
- (6) It seems necessary for best effects that all rods, from whatever portion of the feet and ankles they issue, shall first come into the space between the medium's feet. If necessary they have to take a turn under her boots to reach that neighbourhood.
- (7) All the rods come from the medium only. No other member of the circle is affected. For

there were *no* clay marks on the feet or legs of anybody but the medium, except on the stocking of Mrs Morrison and the boot of Mr Morrison, where they had felt themselves touched, as already described.

Marks of Clay on the Table.

As already mentioned, there were clay marks on the front, sides, legs, and undersurface of the séance table, which stood in the centre of the circle space, and under which on the floor rested the dish of semi-liquid clay.

Foreign Matter found in the Impression Marks

In addition to the tiny scale-like pieces of black substance which I have already mentioned as being sometimes (not always) found on the flat impressions, which matter I have explained was identified as having its origin in the lacquer covering the *inside* of the medium's shoe, pieces of wool, hairs, and fluff were sometimes found in the concave impressions. These small pieces of matter were identified as coming (a) from the medium's stocking; (b) from the furry lining inside the tongue of her shoes; (c) from the laces of her shoes. On one occasion I bound the ankles of the medium together with black silk bands, and she had on a new pair of brown stockings specially provided for her. Many black bits of hairs were found in the markings, and one long brown one. This showed that most of the stuff found in the markings was from the edge of the silk binding round the medium's ankles—stuff which might be fairly

easily detached by the passage of the psychic structure through or over it, for the binding was cut from an old silk blouse, and there were many loose pieces of thread on its edge. The one long brown thread, however, that was found was not a loose one: the stockings were new, and it could only have been detached from the medium's stocking by a considerable force. The long brown thread was found embedded in the floor of the impression, cutting a sharp but wavy line through the stocking marks. This thread began and ended exactly at opposite sides of the impression. It was too long to go straight across, and it was curled and twisted round the bottom of the cavity. The thread found in this instance would have required much force to detach from the stocking, as it was several inches long and was part of the woven fabric of the stocking. It is obvious that the passage of the psychic stuff over the stocking had removed it. No more pressing of the stocking in the clay would have left it where it was found. The structure had actually wrenched it from the fabric.

Pieces of white fluff from the inside of the tongue of the medium's shoe were sometimes found in the impressions. As I have explained, some of the psychic stuff, in issuing from various parts of the neighbourhood of the medium's feet, traversed this region and undoubtedly picked anything up it met in its path that was not firmly fixed.

Peculiar Fussling Noises near Medium's Ankles and Feet

Sometimes peculiar fussling noises were heard in the neighbourhood of the medium's feet and ankles just prior to phenomena. These noises occurred in spasms, and were probably due to psychic stuff being sent in fluxes down the material of the stocking. Many of these noises suggested the stocking being violently rubbed with something. Sometimes also during the preparatory work of the séance flapping noises were heard on the floor in conjunction with rubbing noises on the stockings. This would suggest that the psychic stuff was being removed from the medium's body in fluxes (see the weight experiments in connection with raps and decrease in weight of the medium, *R.P.P.*). The noise is caused by the friction of the psychic particles on the fabric of the stocking. The flapping noises heard just after the friction noises were probably due to the condensed psychic stuff striking the floor in the neighbourhood of the medium's feet.

It will perhaps be well to summarise now the more important of the results obtained, so that the reader may have clearly before him the facts as they were elucidated at this stage of the research.

- (1) The working end of the psychic structure has different shapes and sizes: it can be felt by the sense of touch to increase or decrease in size at the will of the operators; it can change from a very hard state to a very

soft one in a short time; it is tangible and therefore material.

- (2) The working end of the psychic structure is often covered with marks which are very similar to the fabric of the medium's stockings. In many cases of impressions on the clay where the stocking marks are not at once apparent, they can be made out underlying the impressions, *i.e.* they are usually present, but more or less covered over and modified.
- (3) At the conclusion of the séances various marks are left by the clay on the medium's stockings and shoes.
- (4) The medium, in spite of having her feet tied up or otherwise restrained, manages to get them free, and by placing them in the clay makes the marks described.

This last is ruled out by the facts that (*a*) many of the marks on the clay are of such shape and size that they cannot be made by the human foot; (*b*) the imprint of the stocking fabric, while bearing superficially a very close appearance to the imprint made by the actual stocking, has one important point of difference (already explained); (*c*) the medium's feet and legs can be felt in position while the raps and other phenomena are in operation; (*d*) when levitation or other phenomena are in operation the experimenter can cross the space between medium's feet and legs and the table with his hand, and he feels no solid body whatever: all he does feel is a flow of material par-

ticles from the medium's ankles and legs, these particles being cold and disagreeable to the sense of touch.

FURTHER EXPERIMENT ON CLAY MARKS FOUND
ON THE MEDIUM'S STOCKINGS AND SHOES
AND ON THE FLOOR OF THE SÉANCE ROOM.
(The medium's feet were free).

I placed a tin vessel containing very soft clay on the floor within the circle. The medium wore a pair of stockings of a different design on each leg. I asked the operators to place the end of a psychic rod in the clay, draw it over the floor, over the medium's boots and into the medium's legs, so that a visible trail would be left. They took about ten minutes to do this, and informed me by raps when the operation was finished.

The impression shown in fig. 39 was thus obtained. This impression consists of two marks, the large central one, and a much smaller one near the edge of the dish. It should be noted that as this vessel of clay was the only one available, all the marks found on the floor and on the stockings and shoes of the medium must have been derived from the clay adhering to the end of the structures which made them, *i.e.* all the marks were due to two rod ends, at the most, being stuck each once into the dish. The marks were both lined with stocking print. The large one was about 1 in. deep at its deepest part, and about $2\frac{1}{2}$ in. long. The small one was about 2 in. long and very shallow.

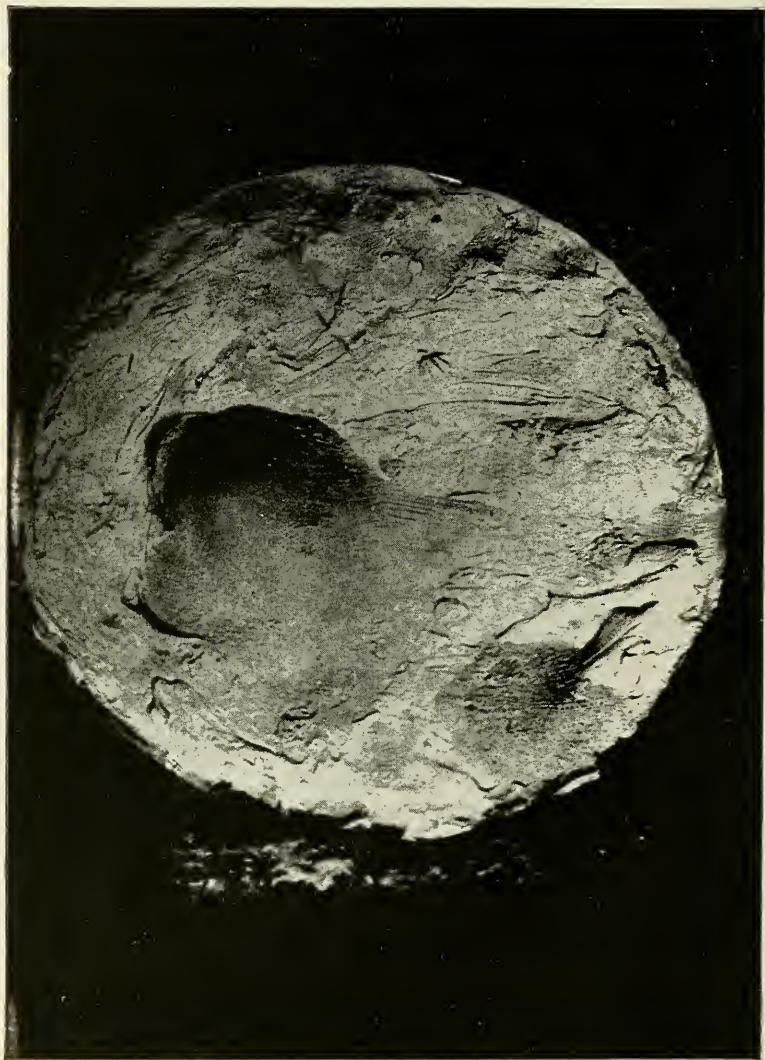


FIG. 39.



FIG. 40.

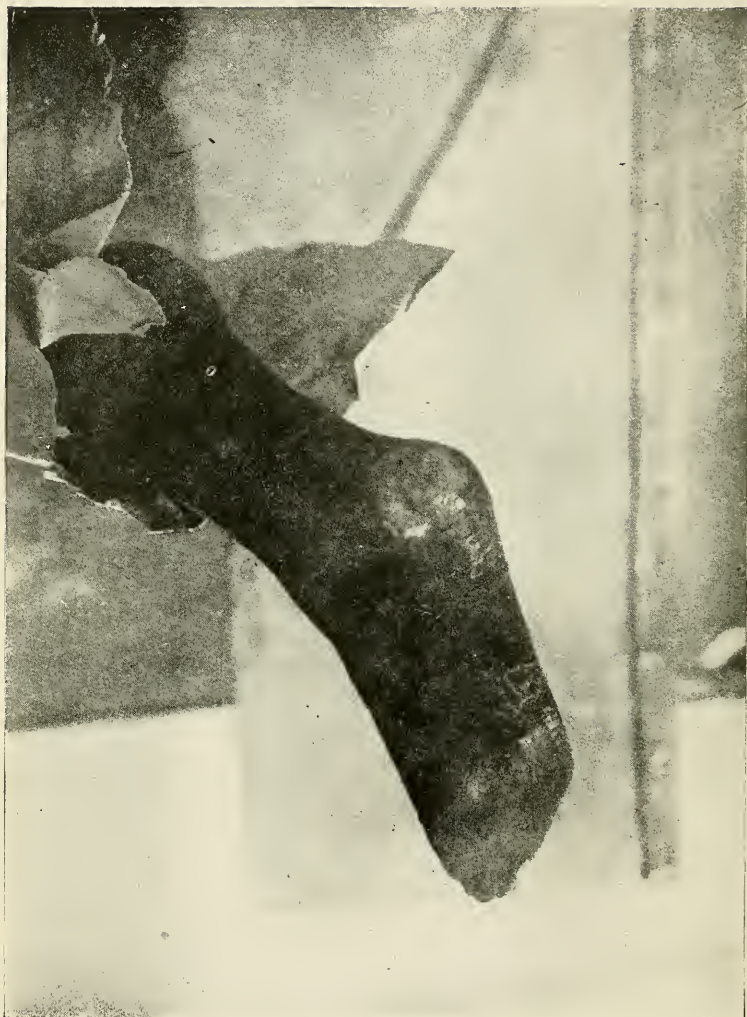


FIG. 41.



FIG. 42.

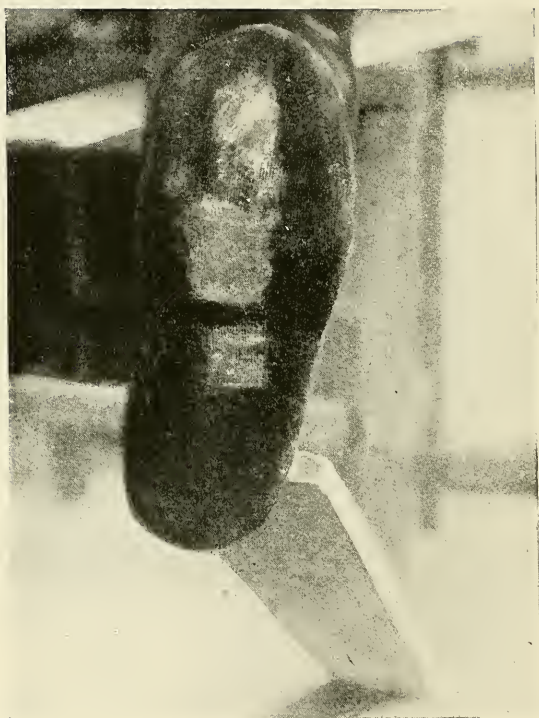


FIG. 45.

Both toes of the medium's shoes and both heels were touched in places by the clay (the photographs are, however, omitted in order to save space for more typical results to follow).

It appears as though something covered with clay had been drawn in between the toes and had then been pulled upwards, just touching the left shoe and advancing over the laces of the right one. The pulling and drawing actions are very perceptible when the actual shoes are inspected. It would seem that everything projecting, such as laces and rounded parts of the shoes, was caught by the advancing clay-covered substance, and accordingly had clay deposited on it.

The soles of both shoes were perfectly clear of clay.

The Right Stocking

Figs. 40, 41 and 42 show the clay marks on the right stocking.

It will be noticed on fig. 40 that there is a slanting mark just above the position where the shoe would come to, and this is evidently a prolongation of the mark which went up the front of the right shoe and over the laces. On the heel there is a large mark, a small mark under the toe, and a large diffused marking on the sole.

The left stocking shows a remarkable series of marks. Some of these are seen in figs. 43 and 44. As will be observed in fig. 43, the marks extend from halfway up the leg, right down to the toe, and after that they proceed under the sole for a distance of more than half the length of the foot.

Careful examination of this stocking shows:—

- (1) That the clay marks on the leg above the ankle (shown more clearly on fig. 44) are due to something covered with clay touching or being pulled over the stocking and catching on the little raised lurks of the stocking. On these lurks the clay has been thickly deposited, while on the flatter portions of the stocking there has only been a small amount of deposit, although a careful inspection shows that the whole front of the stocking has been more or less rubbed.
- (2) That the peculiar zig-zag marks on the top of the foot of the stocking (figs. 43 and 44) were caused in this wise:—The thin clay-covered film of psychic matter endeavours to move down between the stocking and the inside of the shoe, and as the fit is fairly tight, it drags the stocking fabric along with it, forming a crease, the underside of which is not in contact with the film and hence with the clay. A little further on a new crease is formed, and so on.
- (3) That the heavy clay marks at the toes are *between* the toes and not *on* the toes, which shows that the clay-covered film had taken, as far as possible, the path of least resistance. In other words, wherever there was a loose space between the stocking and the shoe, the film had taken that path.

Fig. 45 shows the sole of the stocking. This marking is evidently a continuation of the mark-

ings shown on figs. 43 and 44. When the film had got as far as the toes, most of the clay covering it had been removed by contact, and consequently there was little left to mark the sole of the foot. In fact, only where the contact was very tight would the remnants of clay on the film be deposited. Accordingly, while it is evident that the *whole* front of the sole of the stocking to nearly the heel has been rubbed by the film, yet the clay has only been left on the central part where the contact between stocking and shoe was fairly tight. A close inspection of the toe part of the sole will show that the fluff of the wool fabric has been completely sheared off for a considerable distance down and over practically the whole width of the sole. In several places in fig. 45, the zig-zag marking is again perceptible, where the pulling action of the film on the stocking fabric had resulted in a crease. Although the marking does not visibly extend right to the heel, yet there can be little doubt that it does so extend, but that by this time no clay remains on the film and its path is not visible.

FURTHER EXPERIMENT ON CLAY MARKS ON MEDIUM'S STOCKINGS AND OTHER TESTS TO LEARN SOMETHING OF THE NATURE OF THE PSYCHIC ROD

Two vessels containing very soft clay were placed on the floor within the circle, and the operators were asked to place one of their rods in the clay, and then to lay the rod upon a flat piece of wood, in order that data might be obtained of the *shape* of the end of the rod. As well as the vessels

containing the clay, a piece of smoked glass, a photographic plate, and several clean wooden boards were placed within the circle space, which was covered with clean oilcloth.

The operators, without being asked, finished with the photographic plate and the smoked glass first, and told me to remove them from the circle, *i.e.* they did not dip a rod into the clay, and *then* lay it on the plate or glass, but of their own volition finished first with the articles not requiring clay.

In this experiment the medium had her feet free.

At a corner of the smoked glass (an old half-plate negative covered with turpentine soot) there were the impressions of the ends of two small rods (I had asked the operators to make these particular rods small.) One was pointed, and the other a flat-ended impression. Their outline is determined by the fact that where the rods had lain on the glass, the soot had been removed.

The long sides of the square-ended impression were almost exactly parallel, and its end was exactly at right angles to the sides. (The clay impression of a rod of this shape was obtained a year ago on the ledge of the séance table.) The operators then made a large, nearly oval impression in one of the vessels of clay. This mark was lined with stocking imprint, and on a small portion of it, near one end, there was a space about the size of a shilling, which was covered with soot. From this it would appear that a portion of the covering of the rod used for this large impression had been used to make one of the small marks on the smoked glass, for no soot could have been obtained elsewhere.

The operators next endeavoured to make a mark on a piece of flat board with the end of the rod which had made the large stocking-lined impression mentioned above. This mark, however, was very faint.

The operators then made a large impression in the second tin of clay, and this impression was also lined with the stocking imprint. With the end of this impressing rod various marks were then made on the floor, and on the flat board.

At the edge of a piece of clean board there was a fine, thickly clay-covered mark made by what appears to have been one shape of the end of the rod. It was a blunt, taper-ended impression.

The medium wore a pair of special brown stockings, and she also had on soft rubber slippers. The front of both slippers, at the conclusion of the séance, were found covered with clay.

On the floor various marks were left. There were several more or less circular ones, which, judging by the size, were evidently made by the end of the rod which made the impression on the clay in the second tin.

On this occasion my wife formed one of the circle, and she was sitting nearly opposite the medium, some 6 ft. distant from her. As she told me afterwards, she *mentally* asked that her dress should be touched by one of the rapping rods. Several clay marks were found on her skirt, and it was rather suggestive that she was the only person touched.

FURTHER EXPERIMENT TO OBTAIN DATA CONCERNING THE CLAY ON MEDIUM'S STOCKINGS, ETC.

In order to make quite sure that the medium was so fixed that she could not use her feet, the box arrangement shown in fig. 46 was employed. This box had a hinged leaf open at the front. The medium placed her feet in it, the wooden bar was placed in position across her ankles and was locked on the outside, and then the piece of wood shown on the top of the box was tightly fitted round the tops of her ankles and was then screwed into the top of the box. The consequence was, that her feet were absolutely locked in position, and could neither be moved up or down, nor to and fro. In addition, every now and then throughout the test I felt to see if her feet were in position, and I always found that this was the case.

The operators were asked to bring out a rod through the front of the box, and to levitate the table with it.

After some time the operators were successful, and the table was fairly easily levitated. I entered the circle, felt and saw the levitated table, and put my hand below the levitated surface, but, as usual, encountered nothing. The light was good (a red electric light in position right above the circle space was employed), and I could plainly see the test box during the whole time of the phenomena. But there was no visible structure. A tin dish filled with the clay and water mixed with methylene blue was placed on the floor within the circle about 3 ft. from the test box. This clay was really noth-

ing but water thickened slightly with clay, and was the most fluid substance I have employed in these tests. The methylene blue was to render the traces of the clay more visible than they otherwise would have been, on the floor, stockings of medium, etc. The operators were asked to dip the end of a structure in the clay and leave marks on the floor and on the test box, etc. They were not long in doing this, for the structure could be *heard* dipping into the watery clay. The sound was exactly similar to the noise made by a cat in lapping up milk. When more clay was required, the structure returned and dipped into the clay again, doing this three or four times.

MARKS ON THE HINGED LEAF OF THE TEST-BOX
AND ON THE BOTTOM OF THE TEST-BOX.
(All these marks were coloured a vivid blue,
but have photographed white.)

On the hinged leaf on the front of the test-box there are two clear marks more or less indeterminate in outline, and evidently caused by the psychic structure slipping over the wood. (The photograph, fig. 46, does not show them well owing to the wood of the hinged leaf being of a light colour.)

Marks on the Bottom of the Test-box.

There is a large mark on the bottom of the test-box (seen in fig. 46). It is more or less oval in outline. This mark seems a continuation of the large mark on the hinged leaf. On the ledge between the hinged leaf and the bottom of the box the

clay has been deposited (see fig. 46) as though it had been scraped off as the structure advanced over the sharp edge. There is a considerable amount of clay on the locking rod (fig. 46) for a distance of about 4 in. over the left boot of the medium.

There was a blot of clay on the top of the box at the left-hand front corner, and also blots of clay on the inside right wall.

At the back of the box there were some marks, including a very peculiar straight one. It was perfectly straight, made an angle of about 35° to the horizontal top edge of the box, and was about 3 in. long and $\frac{1}{4}$ in. wide.

Medium's Shoes and Stockings

Fig. 47 shows the front of the medium's shoes, from which it will be seen that there is a large clay mark extending over the toes and up between the shoes. There was no clay on any other portion of the shoes.

The Medium's Stockings

The whole sole from in front of the toe to near the heel of one stocking (fig. 48) was saturated with blue, watery clay. There were even traces of it extending to over the heel. The wool of the sole has evidently been violently rubbed, because little threads have been torn out and *rolled over*, as it were. The wool of the darned portions has also been greatly frayed.

Fig. 49 shows the other stocking. There is practically no clay on the sole, but much clay over

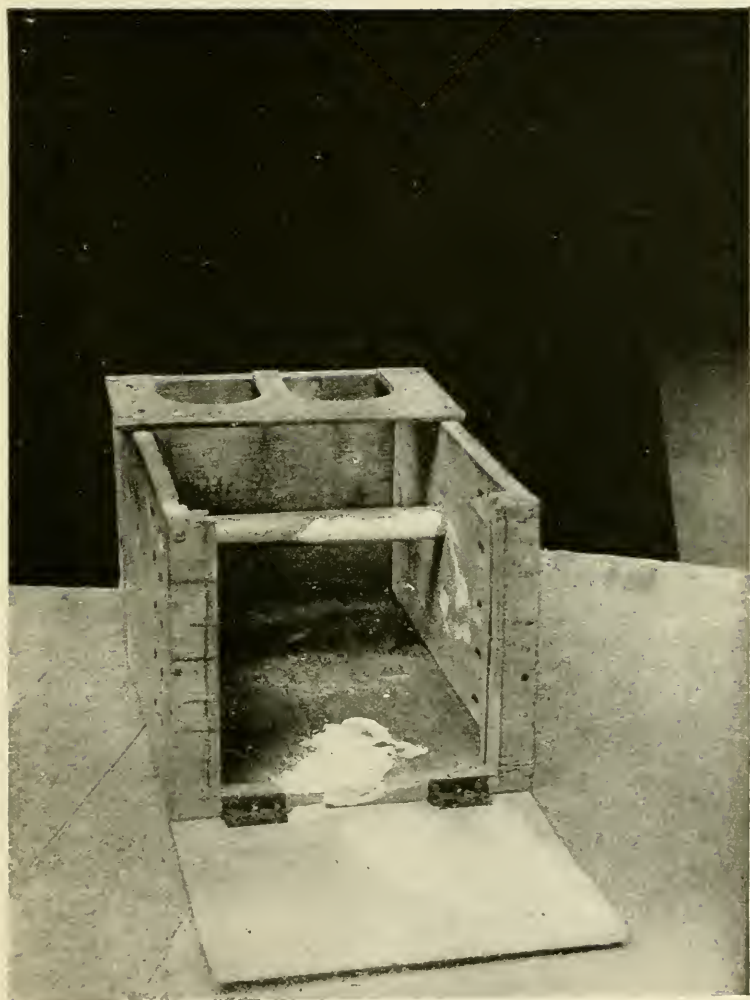


FIG. 46.

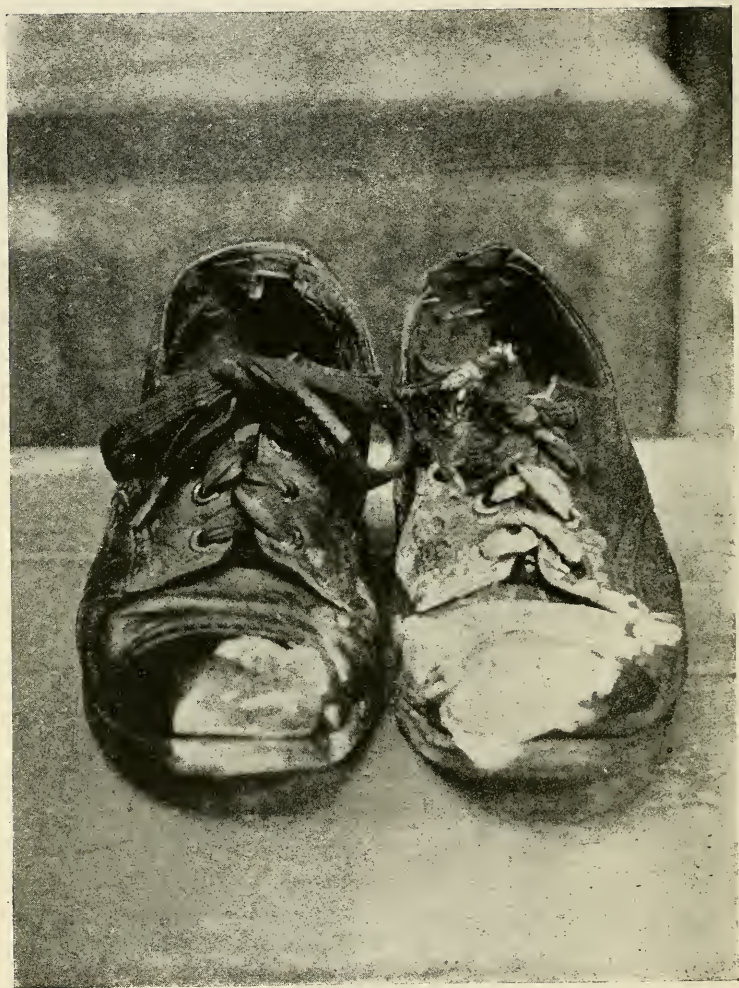


FIG. 47.



FIG. 48.



FIG. 49.

and round the toe and up the front. There was also a little in the vicinity of the heel.

Loose pieces of the brown wool used in the darns were found sticking in the stocking at various places.

Analysis of Results

- (1) The marks made on the soft clay are often covered with the imprint of the stocking when the medium wears stockings.
- (2) The imprint on some of these marks is modified by having the pattern twisted, thickened, or partly covered over, but nevertheless in many cases the stocking fabric is visible.
- (3) The marks made on the clay resemble (a) toe marks, (b) heel marks, (c) sole marks, and (d) marks which do not resemble any portion of a foot.
- (4) Although the marks often resemble heel marks, etc., these marks are often too small and too geometrically exact to have been made by the actual stockinged heel of the medium. Experiment shows that it is quite impossible for the medium to duplicate many of the actual "heel" marks, etc.
- (5) The imprint of the stocking marks found in impressions has one important point of difference from the marks that are made by an actual stockinged foot impressing the clay.
- (6) Clay is always deposited on the medium's shoes—usually (a) between the toes and up over the front, and (b) at the back of the two heels.

- (7) Clay is always deposited on the medium's stockings; the sole of one or both feet is often covered; the front of the foot from ankle to toes is sometimes covered; the space round the heel is often covered.
- (8) The clay bands on medium's shoes and stockings in all cases suggest a strong drawing action, as though a film of thin material covered with clay were drawn up the shoe and then down between the shoes and the stockings to various parts of the medium's feet.
- (9) On considering how such a film as that mentioned in (8) would act, it is necessary to consider the variation of contact between shoes and stockings. Generally speaking, unless the shoes are tightly laced, there is ample space for a thin film to get down to the underside of the foot of the medium either at the side of the shoe or *via* the front behind the tongue. The chief points of contact of the stockinged foot with the leather of the shoes are at the toes, at the front of the sole, and at the heel. All the remainder of the foot is in loose contact or not in contact at all.

We find (*a*) that if the stocking is pressing fairly tightly on the leather of the shoe, the film as it pulls its way past leaves traces of the clay; (*b*) that where there is no contact between stocking and leather, the film does not touch the stocking at all, as in the middle part of the sole: that when the film

is very heavily charged with wet clay, only a few portions of the stocking are untouched by it, these portions being where there is quite a comparatively large space between stocking and leather: that every projecting piece of the stocking is heavily marked: and that where there is actual contact between stocking and shoe the rubbing action is apparent; (c) that *surrounding* the place where there is strong contact between stocking and shoe, the clay is usually fairly heavily deposited.

- (10) An examination of much data suggests that the *whole* of the base of the medium's foot, together with a portion of the heel region and the front of the foot about half way up to the ankle, is involved in the psychic action. The clay marks may not always cover all this space, but this is due to the causes already enumerated—(a) the clay on the film becomes used up as it advances; (b) the film often does not touch a portion of the stocking where there is not actual contact between stocking and leather.

EFFECT OF ENCASING THE MEDIUM'S FEET IN HIGH-LEGGED BOOTS, AND OTHER TESTS OF A LIKE NATURE

Experiment A.

The medium's feet were laced into tightly fitting boots reaching half way up to her knees. Her feet were then placed on the test-box (fig. 46) and the

oval part fixed round her ankles and screwed down. Her feet were so tightly wedged as to be absolutely immovable. Nevertheless, on several occasions, hard, soft, and various intermediate qualities of raps were given on the floor well behind the box.

Unknown to anyone present I had covered the undersurface of the table with soot from a turpentine flame. In spite of the control applied to the medium the operators made a couple of good-sized marks on the soot (the table was standing in the middle of the circle).

Each of these marks is seen on close inspection to be made up of series of fine lines, and examination with the magnifying glass shows the well-known stocking fabric effect. Thus, notwithstanding that the medium's feet were tightly laced into high-legged boots and her feet wedged into the test-box, the usual stocking effect was obtained on the psychic mark made on the undersurface of the table.

Experiment B.

The medium wore a very high pair of boots which were laced tightly, and her feet were locked up in the test-box as in Experiment A. The oval piece on the top of the box was on this occasion moved forward a little and an end piece of wood was screwed to the rear of it, so that the size of the holes was exactly the same as in the previous test. It was absolutely impossible for the medium to get a foot out of the box, but the new arrangement prevented her feet being wedged together and allowed them to move a little inside the box.

For about an hour there were periodical commo-

tions within and around the box, and it was evident that the operators were trying hard to overcome the severe conditions.

In the end practically all the usual phenomena were produced, with the exception that their magnitude was less than when the medium's feet were free. The medium was under considerable stress, as was evident to me, who was beside her all the time. Marks were made on the soot on the undersurface of the table (none of the sitters knew the soot was there). Mr Morrison and I both heard the structure lapping itself round a near leg of the table.

Mrs Morrison said that she felt a hook-like structure brush round her knee (her knee was near a leg of the table, and she felt the hook twist itself round the leg: she said it appeared to be about $\frac{1}{2}$ -in. diameter and felt quite rough).

Experiment C.

The medium wore a special pair of grey stockings which I had provided, her feet were laced into high boots which fitted like a glove, and her feet were then locked in the test-box as in Experiments A and B.

At the conclusion of the séance I examined the stockings. Although no clay was used at this sitting, a series of marks was found on one of the stockings. Patches of a darker colour than the ordinary grey of the stocking were visible here and there: (1) on the sole, (2) under the toes, and (3) up the centre of the front, especially at the curve of the ankles. These marks were not due to wetness or dirt, but to the surface of the fabric

being scraped or burred at these places. At the curve of the ankle the fabric was distended and scraped and little holes were left as though something had forced its way between the stocking and the leather and had damaged and permanently distended the fabric. In several places where the fit was very tight, the interstices between the stocking threads had been permanently enlarged, as though a glutinous fluid had entered them as it pushed its way out of the boot.

On the bottom of the sole of the stocking the maker's name had been fixed to the wool in gilt lettering. After the séance small particles of this gilt were found on the scraped portions of the stocking right up to the place corresponding to near the top of the boot, suggesting that the psychic matter in its passage from the sole of the foot, over the toes, and up the front of the boot had detached these particles, which had then been deposited here and there on the stocking fabric, where the fit between stocking and boot was close.

Experiment D.

The medium wore a special pair of blue stockings I had provided, and her feet were tightly laced up in high boots. On this occasion, in order to vary the tests, her feet were *not* placed in the test-box.

Raps were given of all varieties; the "bouncing ball" was very perfect. The quality of the phenomena was as usual, but the magnitude somewhat less than when her feet were encased in shoes.

I placed two tins of soft clay on the floor within the circle space and asked the operators to make

marks on the clay. I wished to see the character of these marks, *i.e.* if they were stocking-lined and if any clay would be deposited on the stocking of the medium well inside the boots, despite the fact that she had on long-legged boots which were tightly laced.

The operators duly made an impression on the clay in each tin.

On both impressions, by the aid of a magnifying glass, the stocking marks, distorted, irregular, and flattened, could be plainly made out, showing conclusively that the film of psychic matter, in traversing the tight places between boot and stocking on its way to the open air, had had the pattern of the stocking flattened. This is exactly what one would expect. One sees, therefore, that in order to obtain good stocking marks on the clay there must be little rubbing of the psychic film as it emerges from the foot of the medium, and hence that the best marks are obtained when the medium's feet are encased in loose shoes or are not encased at all.

The Effects on the Medium's Stockings

At the conclusion of the séance, the medium's tightly-laced long-legged boots were unlaced, when it was found that both stockings for a considerable distance down the front, inside the boot, were marked with clay. One stocking, over the curve of the ankle and nearly to the toe, was impregnated with fine particles of wet clay. The other stocking had not so much clay on it, but was quite wet over the curve of the ankle. Small clay particles were even found on the inside of the stockings at the toes.

The water on the stockings was evidently due to wet clay-covered particles of psychic matter being drawn in between boots and stockings right down the front of the foot: the very close contact had scraped off most of the clay or had pulverised it into very fine powder, leaving the moisture on the stockings. In addition, the fabric of one stocking was badly ruffled and distended as though it had been severely mauled by the transit of the psychic matter through the extremely narrow passage between boot and stocking. The psychic path in the case of each stocking seemed to be from the region of the sole, over the toes, and up the front of the foot until the top of the boot was reached. Under the toes of one stocking there were decided discoloured marks where the wool fabric had been sheared. Most of the moisture and clay particles were left at the curve of the ankles, where contact between boot and stocking was most close, and accordingly where the psychic film must be dragged in with considerable force. At the ankle bends more particles of clay were found on the inside of the stocking than on the outside, indicating that the pressure had been so great there that the clay had been forced through the interstices of the stocking.

On the sole of both stockings the wool fabric had been actually ripped and torn, and in some places strands of wool had been pulled out. There were clay marks on the boots right up to the top, exactly as in the case where shoes were worn.

Needless to say, it was quite impossible for the medium to get her feet out of the boots. Her hands were held and were visible all the time, and the

boots were tied and laced at the end of the séance exactly as they were at the beginning.

On the sole of one of the stockings I had carefully rubbed some brown pastel chalk. At the conclusion of the séance small particles of this chalk were found embedded in the fabric of the stocking along the path taken by the psychic stuff, *i.e.* over and above the toes and up the front of the stocking. This test was made on the assumption that, if the incoming clay-covered psychic stuff deposited the clay along its path, the outgoing stuff would also drag particles of a foreign matter along with it if placed in its track.

Experiment E.

The medium sat in long-legged boots, with the laces doubly knotted at the top. Her feet were placed on an electrical test apparatus. If she raised either foot a bell would ring. She wore a pair of new silk stockings. On the sole of one stocking, near the toe, I carefully rubbed yellow crayon, and on the sole of the other green crayon, in order to see if there would be any disturbance of this at the end of the séance.

Result—On one stocking especially the path of the outgoing psychic stuff is plainly seen. The coloured crayon particles were pulled right over the toe, deposited there, and up the front of the stocking, over the curve of the ankle to the top of the boot, and even some way above the boot. Not a few, but numerous, particles were left bedded in the stocking fabric; also, in this case, backwards along the sole, up and over the heel, and up the

back of the stocking to the top of the boot there were many particles, indicating a path both along sole, over toe, and up the front of the stocking, and also a path along sole, under and up over heel, and thence out of the boot.

The other stocking was not so plainly marked, but there was still a well-defined track of coloured particles under and over the toes, up the front of the stocking, and out. There were no particles on the heel of this stocking.

Both stockings had their fabric severely stressed and extended along the path of the psychic stuff.

Experiment F.

The medium sat in long-legged boots, with the test electrical apparatus. She had on a pair of new brown stockings. On the inside sole of each shoe I had carefully rubbed a little oil paint, red on the left shoe and blue on the right. This paint did not extend as far as the toe, and the medium did not know it was there when she put on the shoes.

Result.—At the conclusion of the séance it was found that the red paint from the sole of the left shoe had been drawn up the inside of the front of the shoe and was adhering in small patches to the edge of the tongue at the top. Also it had been drawn up over the top of toe of stocking and was adhering there. Ordinary manipulation of the foot could not have caused the paint to be deposited in the spots in which it was actually found to be deposited.

The blue paint on the other shoe had not been affected.

A few small particles of the red paint were found

on an object placed under the table, an object which was psychically touched during this séance.

Experiments A to F clinch the question as to the place and manner of ejection and injection of the psychic stuff or plasma. Its place of origin is undoubtedly somewhere about the medium's foot. The plasma carries with it as it proceeds outwards particles of matter placed in its path and leaves many of these particles bedded in the stocking fabric along its path. Likewise, when the plasma returns to the foot of the medium it deposits along its path where there is friction any foreign matter adhering to it, such as water or clay. Thus both the outward and inward paths of the plasma can be traced.

So often did I carry out such tests as are detailed in Experiments A to F, and so uniform were the results, that the matter was placed beyond all dispute. The test by repetition became so simple and certain that results could be obtained at any sitting. Experiments showing the path of the plasma always succeeded, because no phenomena were possible unless the plasma was liberated from the medium, and phenomena of one sort or another occurred at every sitting. I intended to say nothing in this place about the quality of the matter which can force its way up the foot and leg of the medium between her stocking and a tightly laced long-legged boot, and which can likewise force its way back along the same path, leaving a well-defined trace of moisture and pulverised clay in its track right to the toe of the stocking. I wish only to point out to the reader that the experiments de-

tailed above show that this is actually the case, and that one of the most troublesome problems in the whole research is thus solved satisfactorily. Moreover, experiments such as I have described and others of a similar nature can be repeated with this medium at any time.

EVOLUTION OF THE PLASMA AT THE COMMENCEMENT OF THE SÉANCE, AND THE PHENOMENA CONNECTED THEREWITH

Many persons interested in psychic matters have written to me proposing various test arrangements for the medium's feet. Most of these correspondents have assumed—I do not understand for what reason—that the evolution of the plasma is a quiet and tranquil process causing no disturbance to the medium, and being imperceptible to everybody concerned in the circle. These armchair critics imagine, for some unexplained reason, that the great and powerful structures which produce the phenomena at the Goligher circle appear magically from nowhere, and that their advent is unheralded by anything in the nature of labour. But experiment shows that nothing could be wider of the mark. As I have already explained in my earlier books, the muscles of the medium's feet and ankles are, during the occurrence of phenomena, in a state of much stress: they seem to be squirming. There is no bodily movement of the foot, but there is a whirlpool of internal muscular movement round foot and ankle and lower part of the calf.

If the reader thinks for a moment, he will see

that the evolution of the plasma in the way I have described must be accompanied by much friction between stocking and leather of shoe or boot. As a matter of fact, *at nearly all séances* the noise accompanying the birth pangs of the plasma is distinctly audible. Even when the medium sits without shoes in her stocking soles, the rubbing of the plasma along the stocking fabric is distinctly heard. With thin silk stockings this sound is accentuated; the friction of plasma on the threads as it disengages itself is unmistakable. If the medium's feet are encased in shoes the preliminary noise is usually greater, as the plasma finds a path for itself from the sole of the foot to the open air; while if her legs are laced up in tight boots the preliminary noises may be quite prolonged, as is easily understandable. Nothing can be wider of the mark than to suppose that this initial process at the commencement of every séance—the bringing away of the plasma—is a silent, unforceful operation, analogous, say, to steam rising from the surface of boiling water. It is, on the contrary, as a little consideration will show, of necessity a most energetic process, and great forces are involved. I am now going to describe a series of experiments which will make the matter clearer and help to bring home the facts as they are really represented in nature, and not as they might be supposed from *a priori* considerations.

I often employed an electrical apparatus to make sure that the medium did not lift her feet. It consists essentially of two long boards or foot-rests hinged at their back ends to an underboard, and separated by a dividing piece of wood more than

sufficiently high to prevent the medium placing one foot across both rests. Each of these foot-rests is separately connected to an electric bell circuit. There is a spring between the underboard and each foot-rest sufficiently strong to keep the electrical contacts together, so that if there is no weight upon the rest the bell rings. When the medium's feet are upon the rests the contacts are opened and the bell does not ring. But if either foot is lifted for an instant the bell rings. The springs under the rests can be adjusted for various degrees of pressure. The apparatus is so constructed that no amount of juggling with the feet will allow the latter to be raised from the rests without the bell vigorously ringing. The apparatus was tested at the beginning and end of each séance, and often during the course of the séance.

The experiments in which the medium's feet were totally enclosed in a box were quite satisfactory and conclusive, but it was thought that with the present arrangement there would be more room for reaction upon her feet and legs, and more freedom from cramping of the muscles, which are in a state of intense motion, and hence greater resulting magnitude of phenomena.

Experiment G.

Medium on electrical apparatus. *Medium's chair screwed* to floor. There were great creaking noises in the neighbourhood of the medium's feet for a long time after the séance opened. These fluxes of noise came in spasms. No ringing of the bell. These fluxes of noises, I wish to emphasise, were

intermittent, as though the operators made a great effort for a minute or two, and had then to rest for several minutes. After a long time there were faint raps on the foot-rests, and later fairly good raps of all kinds well out on the oilcloth of the floor, the bell not ringing during the phenomena. Many peculiar flopping noises were heard. The table, placed in the centre of circle, did not move.

Note.—I had long established the fact that when any new conditions were presented to the operators, the latter required time to overcome them. I have many times watched them experimenting.

Experiment H.

The electrical apparatus was altered a little. Upright pieces of wood were screwed to the out-sides of the foot-rests, so as to prevent the medium putting the toe of her shoe over the side, while at the same time keeping the heel on the apparatus. These new boards were much too far apart to allow the medium's shoe to be placed over both simultaneously. The apparatus was not designed strictly against the production of spurious raps, but against spurious movements and levitations of the table, and of action generally well beyond the confines of the test apparatus.

The shoes worn by the medium at all these experiments (the séances were all held in my own residence) were kept in my house, and the medium put them on when she arrived, together with special stockings I provided.

The medium's chair was screwed to floor. The bell did not once ring during the whole séance.

After ten minutes or so there was considerable *creaking* of the boards of the electrical apparatus. The noises came in spasms, with considerable intervals between, as though the operators were resting. The dividing board between the rests seemed to be the chief difficulty to the operators. It would seem to get in the way of the materialising stuff as it was drawn from the medium's feet. On the top of this dividing piece of wood, for a length of about 6 in., there was found at the conclusion of the séance faint red paint marks, and similar markings were also found on various sharp edges of the apparatus. (I had painted a little red oil paint on the inside of the sole of one of medium's shoes, and the markings were due to the plasma detaching portions of this in its path upwards and outwards from the medium's foot. It was noticeable in this and other similar tests that the sharp edges of the apparatus in the region of the medium's feet were often abraded, suggesting that a film of matter was pulled energetically outwards from the medium's feet, and that this film was dragged over the edges and therefore abraded them.)

A small letter balance was placed on the floor with its nearest edge about 14 in. from the end of the electrical apparatus—much beyond the distance the foot of the medium could be pushed over the front of the test boards, and at the same time keep contact with them with the heel. The idea was that when the operators had overcome the initial difficulties and had got the structure "out," they would push the pan of the balance up and

down and the noise would let me know they were ready for experimenting. After the preliminary spasmodic noises round the medium's feet—due to the disengaging of the structure from her feet—were over, there ensued a period of silence lasting a minute or two, and then the pan of the balance was pushed up and down smartly. It is noteworthy that after the conclusion of the initial noises—due, as I say to the disengaging of plasma and to the building up of the psychic structures—there *always* followed a period of a few moments of quietness before phenomena commenced, to be compared, perhaps, to the noises accompanying the building of some piece of mechanism, such as an engine, and the calm following the completion of its erection before it is put to its destined use. The undersurface of the table had been covered with soot from the turpentine-filled lamp.

After a time the table began to move about and then levitated splendidly, keeping in the air for about a minute. It moved up and down in the air to a hymn sung by the members of the circle. During this time I examined the medium. I found she was sitting quite still, as usual, with her hands held, and the bell was not ringing.

During the levitation of the table, soot must have adhered to the end of the psychic structure causing the levitation. I therefore looked for traces of this soot on the medium's stocking, and found it, as I expected, thickly deposited over, round, and under the toe part of one stocking. A peculiar and significant thing about this deposit

was a series of *inclined* soot marks on the upper part of the stocking above the toes.

These inclined marks were evidently due to the soot returning to the neighbourhood of the toes, and going in *between* the toes, as far as possible, *i.e.* where there was space, and where the medium's toes were not pressing hard upon the leather of the shoe. The inclination of the marks, about 30° , was evidently due to an inclined pull inwards as the plasma returned to the foot, and there is little doubt that the high dividing board between the medium's feet was the cause of this. That is to say, this board was in the way of the structure as it returned to the medium, and its dematerialisation was hindered thereby. This board was always under much stress at the commencement of the séances, as the creaking noises amply testified. Its presence hindered the operations in the building up of the structures. During this séance there was an attempt made to write rough letters on the soot on the undersurface of the table, for several capital letters were afterwards plainly discernible.

I had also sooted the undersurface of the foot-rests. Small psychic marks were made on them in a position where it was impossible even to insert a finger. The medium did not know the soot was there. These small marks had the usual stocking configuration upon them.

The electrical apparatus was in perfect order at the conclusion of the séance.

Experiment I.

Medium on electrical apparatus and her chair screwed to floor. In order to obtain more data concerning the initial processes of disengagement of plasma from the foot of the medium, the springs under the foot-rests of the electrical apparatus were strengthened, so that it took a weight of 6 lb. at the extreme end of each rest to prevent electrical contact, and hence the bell from ringing. (The medium's shoes together weighed only $1\frac{1}{4}$ lb.) The consequence was that the medium had actually to press down slightly on the rests with her feet in order to keep the contacts open.

For about an hour the operators kept working at the feet of the medium; but they worked lightly, evidently fearing to put any upward pull on her feet, and hence cause the bell to ring. (The operators, of course knew that they must endeavour to disengage the psychic structure without ringing the bell.) There were the usual intermittent creaks of the wood of the foot-rests, but these noises were modified on this occasion for the reasons stated. But as time went on it became evident that the operators were unable to get the plasma free by these feeble methods, so finally I told them to be more vigorous, and to get the structure out irrespective of the bell ringing. No sooner had I spoken than the creaking and scrubbing noises in the vicinity of the medium's feet greatly increased in intensity, and coincident with them the bell rang intermittently and jerkily over a period of about five minutes. The very smallest spasmodic movement of the medium's feet would

in this case cause the bell to ring, as the strength of the upward push of the springs below the foot-rests was so great that the medium, as I have said, had actually to press down on the rests with her feet to prevent the bell ringing. At the end of the time mentioned the noises ceased for a few minutes, and then the small letter-balance away out on the floor was pushed up and down, the bell *not* ringing.

Then I asked for levitation, which was easily accomplished, the levitation lasting fully half a minute, and the bell not ringing at all. Another levitation a little later was also accomplished without the bell ringing.

Experiment J.

The springs under the foot-rests were weakened and adjusted so that it took a weight of $\frac{1}{2}$ lb. greater than that of the two shoes ($1\frac{1}{4}$ lbs.) at the extreme edge of the rests to open the electrical circuit and hence prevent the bell ringing.

I found that if I demanded that the operators should get the structure "out" and produce phenomena without the bell ringing at all, they could do so, only in this case they had to work on the medium very gently, and the resulting preliminary creaking and swishing noises in the neighbourhood of her feet were correspondingly weak, and it took a long time, perhaps three-quarters of an hour, before phenomena started. But if I gave them the necessary time they could succeed. As soon, however, as I understood the process, I always told them to get the structure out as

quickly as possible irrespective of the bell ringing. Actual phenomena, of course, such as levitation, had to occur without the bell ringing.

Without the bell ringing the operators levitated the table, and made a good impression on a plate of clay placed 18 in. or so in front of the test apparatus. This impression on the clay was lined with stocking marks similar to the marks already described. An electroscope was also discharged. I several times examined the medium's feet, and always found them at rest on the apparatus.

Clay marks were, at the conclusion of the séance, found on the medium's shoes and stockings as usual. On one stocking there was a clay mark on the heel and a small mark on the underside of toes, the latter being in the space between the toes and traceable for a good distance along the sole. The thickest deposit of clay on the heel was where the medium's heel was *not* pressing tightly on the leather of the boot, and the very fine deposit where it was pressing tightly. This is exactly what always happened in the tests already described.

On the other stocking, in the neighbourhood of the ankle, there was a clay mark going downwards in a slanting direction to the shoe. There was decided evidence of tearing action on the wool of both stockings.

Experiment K.

The electrical apparatus was adjusted so that a weight of just over 2 lb. was required at the extreme edge of each foot-rest to open the circuit.

126 THE PSYCHIC STRUCTURES

The medium's shoes together weighed $11\frac{1}{4}$ lb. The apparatus was tested at the end of the séance and found correct.

The usual shuffling, tearing, and pulling actions occurred near the medium's feet, and these increased in intensity as time went on. The bell only rang a few times, and then only for half a second or so. The structure was ejected and built up fairly easily. The table, placed well beyond the reach of the medium, was soon moving about without the bell ringing, and three fine levitations quickly occurred under the same conditions. One of these levitations was a high one. I looked right through the space below the table, but could see nothing.

The operators were practising all kinds of raps upon the floor well beyond the test apparatus. They were very successful. The magnitude of the rapping was not quite so great as when the medium's feet were not confined in a test apparatus, but it was very good nevertheless.

Once when the operators were scraping on the undersurface of the table, the boards of the foot apparatus were simultaneously creaking (although the bell was not ringing), showing there was connection between the two ends of the structure.

An examination of the data from the experiments described and other similar ones which were carried out shows:—

- (1) The first process is the ejection of the psychic stuff from the feet of the medium. This occupies a considerable time and is not a continuous action, but occurs in spasms,

which begin weakly, but gradually increase in intensity. Towards the period of completion of this operation the process is normally quite vigorous, and during its occurrence the medium's feet and legs are involuntarily slightly moving.

- (2) The structure is "out," and it can act *statically*, such as on a levitated table, without the medium's feet moving. It can also act kinetically, without her feet perceptibly moving, as in making raps, but this process is more difficult. Sometimes big kinetic movements would cause the bell to ring momentarily, as where the table was suddenly jerked along the floor. But the operators soon learned to avoid great accelerations of large bodies.
- (3) There is a period of time between (1) and (2) during which the psychic stuff or plasma is probably being moulded.
- (4) On the withdrawal of the structure after the occurrence of a burst of phenomena the medium's feet and legs are slightly affected; for after a levitation and similar phenomena the bell would ring slightly as the plasma was withdrawn into the feet of the medium, and the boards would slightly creak, and before phenomena could be obtained again process (1) went on as before, though not so vigorously, owing to the greater ease with which the structures could be ejected on second and subsequent occasions.

VISUAL EXAMINATION OF THE PSYCHIC
STRUCTURES

Fitful glimpses of the structures had been obtained off and on in the ordinary red light of the séance room, but this light was insufficient to enable them to be examined at leisure, as they were more or less transparent to the light, or there was some other condition connected with the structures themselves which usually prevented them from being seen. The reader will find at pp. 9 and 10 some remarks regarding the visibility of the structures at ordinary séances in the red light, and I do not intend to say anything more about this aspect of the subject here. Many years of experimental work had shown me that the psychic structures are acutely sensitive to light—a result which has also been arrived at in thousands of circles held with many mediums in many parts of the world.

On Saturday, 8th March 1919, I had the opportunity for the first time of examining one of these structures at the Goligher circle by means of the eye: the method adopted was simple. A sheet of cardboard about 1 ft. square was painted with luminous paint, exposed to sunlight for some hours, and then placed on the floor of the séance room within the circle space. I had tried this method in a haphazard fashion some years previously without any pronounced success, and I did not expect any great results on the present occasion. But either the phenomena had become more powerful and stable in the interim, or the operators had by practice improved their methods,

for the results obtained on the present occasion were unexpectedly good, and the use of phosphorescent paint in various forms placed a powerful instrument of research in my hands. In the dark séance room the luminous sheets of cardboard shone quite strongly.

Experiment L.

During the last half hour of the séance a sheet of luminous cardboard about 1 ft. square was placed on the floor within the circle space, just beyond the hinged leaf of the box apparatus (fig. 46).

The medium had her feet and ankles locked in the box. It was absolutely impossible for her to get her feet out. The operators were asked to bring out the structure from the box and to hold it over the phosphorescent sheet. I stood at the side of the medium looking down on the cardboard sheet.

In a short time a curved body somewhat like the toe of a boot advanced over the inner edge of the cardboard and then retired. It did this two or three times, as though the operators were testing the effect of the phosphorescent light. Evidently this light had little or no effect, for in a very short time the whole of the end of the structure was quite easily moved above the cardboard, to and fro, or forwards, as I desired.

THE WORKING END OF THE STRUCTURE

Generally speaking, it resembles the toe part of a human foot in shape, without the heel. This

130 THE PSYCHIC STRUCTURES

seems the normal unstrained shape of the structure. But, unlike the human foot, it is capable of extraordinary changes of form, which changes could be made on request. The operators made the structure end into many shapes for my edification, and I watched these changes occurring. The toe part could lengthen until the whole thing resembled a thin, pointed, straight rod. I watched the end portion contract, and then gradually lengthen, until the pointed shape was reached.

After the pointed stage was reached the pointed end would sometimes curl round into a hook. This hook-like end could evidently grip things, such as a table leg. It twisted and untwisted before my eyes. Or the structure could contract and spread out sideways until it resembled a mushroom or a cabbage leaf, the edges being somewhat irregular. Or one side would remain normal as regards shape and the other would bulge out.

The end portion of the rod, which could undergo the changes noted, seemed to be differentiated from the remainder or body of the structure. For one thing it appeared to be of a different degree of visibility, and seemed to consist of a long, absolutely straight portion proceeding into the mouth of the test-box. I asked that the tapered end be pointed straight up in the air and then straight downwards, and this was done; also the whole end was turned upside down on request. The flexibility was marvellous.

During the singing of the last hymn the

operators thrust a square-ended rod over the edge of the cardboard two or three times.

With regard to the power of the end of the structure to form itself into a hook with which to grip things, the reader will be interested to hear of an incident that occurred at a séance some little time before. At this séance no clay of any kind had been provided. The medium was on the test apparatus, her feet being locked in the test-box (fig. 46). Just before they levitated the table the operators kept rapping on it. Asked if they had a message to give us, they answered in the negative. All sorts of questions were then asked them by the sitters and myself, in an endeavour to get at what they wanted, but in vain; and as it was too laborious to spell out by raps, we let the matter rest.

After the séance was over I soon found out the meaning of the mysterious raps. They were given so that I should particularly examine the legs of the table. As no clay had been provided I had no intention of doing so, as I did not anticipate that any marks would be left. Nevertheless, when I looked at the front legs of the table I was surprised to see them lightly marked with clay. About a foot from the floor each leg was marked with white clay right round the four sides of the legs (the legs were of square section): that is to say, the operators had levitated the table in this particular case by gripping each leg by a structure made into a hook-like form, a hook which had embraced the four sides of the table leg, thus forming a circle right round it. The mystery as

to where the operators had obtained the clay was cleared up when it was discovered that there were some small lumps of clay adhering to the floor from a previous séance. Before levitating the table the operators evidently rubbed their two structures on this clay, then rapped on the legs of the table to draw my attention to the legs, and then levitated the table by the legs with the hook-like form of the structure.

Mrs Morrison says that at one séance in the ordinary red light she saw two structures proceed outwards from the feet of the medium, and pass right under the table as far as the *back* legs, *i.e.* the legs remote from the medium. The end of each structure then twisted itself completely round a back leg, and the two structures moved upwards like a couple of arms and levitated the table. The body of each structure was a long straight rod about the thickness of the human wrist.

Experiment M.

The medium's feet were in the test-box. This experiment was carried out at the commencement of the séance, when the luminosity of the cardboard sheet was at a maximum (Experiment L was done at the end of the séance). Conditions were the same as in Experiment L, with the exception that the medium wore light grey stockings instead of black ones, in order to see if the colour of the structures would be affected.

The first appearance of a structure from the mouth of the test-box was as in the previous experiment, and the size was about the same as the

toe part of a human foot. The structure then advanced over the cardboard until a much larger part of it was seen. This was the working end of the structure, and it turned upside down on request. It seemed to be jointed about 6 in. from its termination.

On several occasions the working end was flattened out into a circular form, this being jointed to a thin, straight arm.

Sometimes this circular end spread out at the periphery until it became heart-shaped.

Once the structure lengthened out into a very pointed form.

On several occasions two psychic structures projected themselves simultaneously and placed themselves together over the cardboard. All the structures were projected over the cardboard at a height of 3 or 4 inches.

Besides issuing over the cardboard straight out from the medium, a structure several times placed itself at right angles to her, *i.e.*, parallel to the front of the test-box. On these occasions 5 or 6 m. of the rod portion could be seen.

All the structures appeared of even density this evening, and did not seem so flexible as at the previous séance. As viewed from above, they appeared black. Several times, however, I saw them from the front by the reflected light of the luminous paint, and on these occasions they appeared white. The colour of the medium's stockings seemed to have no effect on the colour of the structures.

A peculiar thing about the structures when the

two came out simultaneously was that the ends of both were exactly together—in contact—from the time they appeared to the time they were withdrawn into the medium. This phenomenon occurred at least six times, and always exactly the same thing happened. The structure ends, as they came from the mouth of the box, always kept exactly together in line and in contact, there never being any variation in the arrangement. They always came out exactly over the top of the test-box, and they exactly occupied the width of the test-box. Only on one occasion did any motion take place when this pair was out, and that was only a movement onwards of the two ends towards each other—a stiff and seemingly difficult motion. On all other occasions the pair of structures was perfectly rigid and always in the same relative position. They seemed to be structures prepared inside the test-box, and thickly covered over with materialising substance in order to withstand the light — armour-plated, as it were, beforehand. Their rigidity and incapability of movement was owing to the great thickness and density of their materialised covering. Owing to the great area of structure presented to the influence of the light (due to the two structures being out together), the degree of materialisation had to be made especially intense in order that the dismembering effects of the light should be inhibited.

I had subjected the phosphorescent cardboard to several days' exposure to daylight before this séance was held, and accordingly the intensity of the light from the cardboard was much greater

than at the previous séance. Moreover, larger sheets of cardboard were used. I expect that the effects of light on these psychic structures vary with the second or higher power of the light intensity, and therefore at this séance a much higher degree of materialisation was necessary. Hence, as this covering of the structure was in all cases thicker than at the previous séance, the structure was stiffer and less flexible. The case is analogous to that of a man who puts on gloves of varying thickness. With thin gloves his hand is quite flexible, but as the thickness of the gloves increases the flexibility diminishes until at a certain thickness the hand becomes perfectly rigid. This last corresponds to the case in which the pair of structures came out of the box simultaneously.

On one occasion at this séance, while a single structure was out, I asked the operators to touch the phosphorescent cardboard with the structure. Very slowly and gingerly the end of the structure lowered itself and gently scraped the surface of the cardboard. I was wondering why such evident care was taken, and did not remember that as the structure got close to the cardboard there would be the stronger disintegrating effect due to the light.

Experiment N.

In order to vary the tests the medium sat in shoes with her feet quite free. A large sheet of luminous cardboard was placed upright against a box outside the circle on the left of the medium, between her and her father, so that the light shone

into the circle space. I crouched below the table on the side remote from the medium in order to observe the structures.

The phenomena commenced with raps, which, as usual, gradually increased in intensity. After some time a couple of structures rose from the vicinity of the medium's feet to the undersurface of the table. They seemed about the thickness of one's wrist, and appeared to rise in an arc from about the medium's knees. They remained a few seconds, and then descended as though trying if they were capable of making the motions desired. During the time they emerged, the medium's skirts moved.

On one occasion I saw the pointed end of the structure push against a table leg and move the table about.

During the levitation of the table, although the light was good, I could see nothing, which may have been due to the structure end being immediately below the ledge.

I saw the end of the structure moving about on the sooted undersurface of the table, as though it was trying to write something. On examination afterwards W O R D was found roughly scrawled on the soot.

Towards the close of the séance, the structure was seen to push its pointed end several times over a sheet of luminous cardboard placed on the floor, while another sheet was placed upright against the legs of Mr Goligher. The structure end on this occasion was much larger than usual, and it seemed to change in size considerably. It kept dodging

in and out to the medium, as though the light affected it, and as though it had to keep returning to her for "power."

Experiment O.

The medium was sitting in shoes on the electrical foot-rest, with the adjustments as described in previous experiments. I placed a large sheet of luminous cardboard on the floor within the circle, $1\frac{3}{4}$ shoe lengths at its nearest edge from the outside edge of the test apparatus. It was quite impossible for the medium to get her feet near it without causing the bell to ring. Yet the structure many times put its pointed end over the inner edge of the cardboard. On one occasion it went fully 4 in. over the edge, and on no occasion did the bell ring. As usual, the structure came and went quickly. It appeared, as viewed from the top, quite black and solid. It seemed too stiff and heavily materialised to move its parts about much.

Experiment P.

Medium on electrical apparatus. The nearest edge of the luminous cardboard was 14 in. from the extreme edge of the electrical apparatus.

The structure was repeatedly put over the cardboard without the bell ringing.

On this occasion two structures came out alternately. A structure would swing over from the left of the cardboard, would then retire, and then another structure would swing over from the right. It was quite obvious that these structures

were from each leg of the medium. Both appeared similar in form, with an irregularly pointed end, roughly moulded.

When the left structure first emerged, it made a dive across the cardboard and back with tremendous rapidity, as though testing the effects of the light.

I made a careful examination of the height of the structures above the floor, and found that it varied from about 8 in. to a foot.

The test apparatus was found perfect at end of séance.

Experiment Q.

This was an experiment carried out to try to photograph the structure as it rested over the phosphorescent cardboard. The medium was on the electrical apparatus. The cardboard was placed on the floor with its nearest edge 14 in. from the extreme edge of the test apparatus. The camera was focussed on the cardboard. Panchromatic plates were used in the camera, as it was thought these would be more sensitive to the phosphorescent light. I explained to the operators that it would be necessary to hold the structures for a considerable time over the cardboard.

The first structure came out and placed itself over the cardboard, and remained there about half a minute. It was of the usual broadly pointed shape. It placed itself in the most advantageous position for being photographed, for the camera was on the left of the medium, and the structure placed itself exactly between the cardboard and

the lens. Mr Stoupe, the photographer, says it was really remarkable how, without being asked, the structure placed itself in the direct line of sight.

I was sitting on the right of the medium, and when the structure returned to her, she gave an involuntary convulsive shudder.

I asked that for the second photograph a pointed structure should be used. Accordingly the structure emerged in a narrow pointed shape like a large carrot. Mr Stoupe *mentally* asked that it should remain in position for a minute, and he ticked over the seconds mentally. He says that exactly at the sixtieth second the structure disappeared. This second structure again placed itself in the line of sight of the camera. The medium shivered most violently when it returned to her.

The violent momentary shivering of the medium as the structures were withdrawn was evidently due to the structures being held for such a comparatively long time over the luminous card-board. In ordinary cases the structures are fugitive, coming and going quickly, a condition of things evidently necessary to prevent undue strain on the medium. Unfortunately, it was found that the exposures were not sufficiently long to affect the plates. The apparatus, as usual, was tested at the end of the séance and found correct.

In order that the student of psychic subjects may have at hand all the data possible, I give below a brief account of experiments in which the plasma carried to and from the feet of the medium various substances. These experiments

were usually done in conjunction with others, of which they only formed a small part; but I think it more satisfactory to summarise all the results belonging to one class of test in one place than to spread them through the book haphazardly.

Experiment R.

The medium wore her séance shoes and a pair of new stockings, on the sole of which was imprinted in white particles the maker's trade mark:—

“Best Silk finish. Made in England.”

After the séance it was found that the trade mark was practically obliterated, and that the white particles which made it up had been drawn all along the length of the foot, up and over the toes and up the front of the foot.

The feet of both stockings, all along their length, were covered with little silvery hairs from the tongues of the shoes.

Experiment S.

Some ordinary quarter plates as used in photography were, after they had been soaked in water, placed near the feet of the medium. After the séance it was found that on one stocking, about 1 ft. from the ground, many yellow particles from the film were sticking. There were also some of the yellow particles down the front of the foot, and even one or two under the toes. Also on the left of right shoe (corresponding to this stocking) yellow particles of film were sticking. The operators had been asked to touch the wet plates

with their psychic structures. There were also a few particles on the undersurface of the shoe near the toe, where there was no contact with the ground.

The path of the plasma was evidently up the shoe to the middle of the foot, then up the leg about 6 in.

Experiment T.

Large blobs of brown oil paint were placed on the sole of the inside of each of the medium's shoes near the toe. At the end of the séance it was found that while there were practically no paint marks on one stocking, the other was heavily affected. On the sole there were traces of brown paint from the toes right to the heel. Also a well-defined mark started from near the toes and went up the front and side of the stocking halfway to the knee, the mark broadening out the higher it got.

The Shoes—On the left side of right shoe, at the top of the leather, was a brown mark evidently left by the psychic stuff as it emerged from the shoe. The whole top of the tongue of the left shoe was rubbed with brown paint, as though the plasma had issued in this shoe from the front, whereas in the right shoe it seemed to issue from the side.

Experiment U.

The medium had on a new pair of stockings with the maker's mark—"Cashmere finish"—written on one side of sole of each in gilt. At

the conclusion of the séance it was found that only one stocking seemed to have been much affected. The base of the sole of this was dirty, and the mark—"Cashmere finish"—had been badly rubbed. The heel also showed signs of much rubbing, while the stocking fabric up the front from the toe was much ruffled.

Experiment V.

A new pair of *boots* was bought for the medium. These went well above her ankles and were tightly laced. Eye hooks were screwed into the toes, strings attached to them and to hooks on the floor. This arrangement gave the medium's feet a little play, while at the same time no obstructions were on the floor. The legs of the medium's chair were screwed to the floor and her hands were held.

A letter balance was placed on the floor 8 in. beyond the reach of her toes as they were controlled by the strings.

Result.—The balance was moved up and down several times by the psychic structure.

A tin of soft clay was placed on the floor 12 in. beyond the reach of the medium's toes. The operators made a mark on the near side of the clay; they also lifted the heavy tin and thumped it about the floor several times. Immediately afterwards I examined the medium's feet. I found that the clay had gone up the front of the boots and on to the stockings in the usual way.

The Stockings.—A large, more or less circular mark on the left of right stocking towards the back, extending for a length of about 4 in. above

the boot. Both stockings were turned inside out and minutely examined. On the inside of both, right up the leg, there were many hairs and pieces of fluff evidently coming from the hairy soft sole of the boots. Also many very small particles of white clay were fixed to the fabric right up to the top. These chiefly commenced where the large clay mark was made on the stocking just above the boot, and went straight up the inside, being most conspicuous on the back seam. On one stocking there were a few clay particles on the inside of the toe. It is interesting to note that the mark made on the soft clay was in this case coloured a kind of indigo blue. Now this was the colour of the cloth uppers of the medium's boot (an indigo dye was evidently used in their manufacture). The plasma had rubbed over the uppers of the boots in its passage to the circle space, and the dye had adhered to it and had to some extent been left in the mould on the clay. This is another example of the viscous, adhering nature of the plasma.

Experiment W.

The medium wore the boots of the last experiment, which were fixed to the floor in a similar way. I filled a shallow tin dish with soft clay covered with methylene blue and fixed it to the floor well beyond the radius of action of the medium's feet. I poured some eucalyptus oil into the tin.

Marks were made in the clay by the psychic structure in the usual way. There was a smell of

eucalyptus oil on the cloth uppers of the boots near the top. Also there was a very small blue mark on the cloth at the toe.

Experiment X.

The medium wore the boots of the last experiment, with the toes tied to the floor. There was a tin filled with clay coloured with methylene blue fixed to the floor beyond the radius of action of her feet. Marks were made on the clay in the usual way.

The blue clay made a huge mark on the boots and went above them to the stockings in each case. All down the heel of one stocking and right along the sole and even up the front of the stockings, there were hundreds of tiny blue pieces of clay, too small to be seen by the eye and requiring a magnifying glass for their detection. These show that the psychic matter had been drawn down into the stocking at the heel and spread over the foot at the sole. Also, up the leg as far as the knee there were many tiny pieces of blue clay caught in the fabric, and some of these pieces went to the very top of stockings. Just at the point of the toe of one of the stockings there were many blue particles which had gone through to the inside. On the other stocking there were not nearly so many particles on heel and sole.

Experiment Y.

Medium had the séance boots on, and her feet were placed inside the test-box, which was tied at the back to hooks in the floor. The sole and toe

part of the medium's boots were carefully covered with powdered carmine. The bottom of the test-box was covered with powdered burnt cork. Experiment showed that it was quite impossible for the medium to get her feet out of the box. The medium wore new white stockings.

At the end of the séance the medium's boots and stockings were carefully examined. It was found that there had been a tremendous disturbance of the carmine placed in the front part of the sole and toes of the boots. The whole of the soles, to the very extremity of the heel, was covered and pressed in with carmine, *i.e.* the carmine had worked its way from the toe portion of the boots right along the soles to the heels.

The Left Boot.—There were carmine particles on the outside of boot right down the outside of the tongue and down the seam on to the toe; also on the outside of the heel down to the base. The paths by which the carmine-covered plasma left the foot were quite apparent by the tracks left on the inside and outside of the boot. The most prominent path was from the middle of the sole slanting up the inside of the boot to the top to the space between the feet. There was also a strong path up the heel of the boot. At the top of the heel the carmine had been caught as it issued, leaving thick deposits. The corresponding places on the stockings were also heavily coloured with carmine.

On one stocking a coloured track of the carmine could be seen going right up the back to the top of the stocking. It was not continuous, but

was as though something covered with carmine had been drawn up the leg and had left its mark on the stocking wherever it had touched it. On the other stocking the carmine path could be plainly seen to well above the knees.

There was much evidence of tearing action on the stocking fabric, especially in the paths up the leg. The magnifying glass showed that all round the region of the toe on the outside of the right boot was impregnated with carmine particles. On the outside of the heel of this boot there was also a big drag down of carmine particles, for the path was quite plain, and the glass showed hundreds of particles impregnating the cloth of the boots from the top right down to the heel along the path; especially were any little projecting parts of the boot affected.

The medium's boots were resting on a bed of burned cork powder inside the test-box. Above the boots on the stockings there were large black marks from this cork extending halfway to the knees.

NOTE ON THE USE OF CARMINE IN TRACING THE
PATHS OF THE PLASMA TO AND FROM THE
MEDIUM'S BODY. (From *Light*, March 6,
1920.)

"I wish to draw the attention of those engaged in psychic investigation to a method of research which I have found useful. I may call it the 'staining' method. It consists in the use of various coloured materials in the form of powder.

The material I have found most useful is powdered carmine.

“Whenever phenomena of the physical order occur, this method can be employed with advantage. In all such phenomena, a substance which we may call ‘plasma’ issues from the body of the medium. The quantity may be large, as in materialisation phenomena, or small, as in telekinetic phenomena, but whether large or small, my experiments show that there is always some of it present. Of course, plasma is not the only component (so to speak) of a psychic instrument, but it is that part of the structure which has obviously material form.

“A problem such as the following might arise: From what part of the medium’s body does the plasma issue, and does it return by the same or another route?

“Now, I have discovered that plasma has the property of adhering strongly to a substance such as powdered carmine, and that if the carmine is placed in its path it will leave a coloured track. For example, slightly damp carmine may be placed on any part of the medium’s clothing in the vicinity of the place of her body whence the plasma is thought to issue, and the carmined path of the plasma, as it issues, will be left.

“Arrangements can also be made to let the plasma rub over carmine on the floor of the séance chamber, and the track can be followed, as the plasma returns to the body of the medium, by the trace left on the clothing.

“I have found this method a valuable instru-

ment of research. It can be employed in a great variety of ways.

"I have used methylene blue, soot, and many other substances, but I find carmine the best."

Experiment Z.

The medium had her feet on a specially modified electrical apparatus. She had her feet in the séance shoes and wore white stockings. The operators could be heard working away at the legs of the medium. After about twenty minutes they said they wished to deliver a message. This was taken by means of the alphabet and was to the effect that the white colour of the medium's stockings was affecting the plasma, and that it would be necessary for her to change into black ones. This was done, and phenomena soon commenced. A dish containing flour was placed well beyond the reach of the medium on the floor, and the operators pushed their psychic structures into it. At the end of the séance the shoes and stockings were examined.

Result—Only the right shoe and stocking were affected by the flour. On this stocking there was a large flour mark right across the interior side, just above the shoe, and there were marks and smudges on the stocking below the level of the shoe to the sole. The magnifying glass showed that the whole sole was covered with flour particles from end to end, and there were particles at the toes.

There was flour all up the front and over the laces of the right shoe, as though the plasma had retreated along the floor, up the front of shoe to

the ankle of the medium on the interior side, and then down between the stocking and the shoe to the sole of the foot. Also there were small particles of flour right to the top of the stocking.

Experiment AA.

Medium sat in her séance boots, with her feet on the electrical apparatus. Carmine powder was placed in the soles of the boots. At the end of the séance, on one stocking, there was clearly marked the path of the carmine up to just below the knee. That is, although the foot was tightly encased in a boot, the carmine had worked its way up from the sole, between the leather and the stocking, and up the stocking nearly to the knee.

Experiment BB.

Medium sat in her séance shoes. I had very carefully painted the inside sole portion of each shoe with gold paint. This was heavy stuff and dried easily, so that there was not so much chance of the particles being carried along as with the lighter materials.

Result.—At the end of the séance it was found that gold particles had been carried all up the front to just above the top of the shoe, while there were also particles carried along the sole to the heel and up the heel. On the other stocking some particles were pulled along the sole to the heel and also to the toes, and up the front to the top of the shoe. On the outside of right shoe (on the interior side) there was a well-defined path of gold particles sloping downward.

Experiment C C.

Medium had on shoes treated with gold paint, as in the previous séance. At the end many gold particles were found on one stocking along the sole to the heel and up over the heel. Also many particles were found on the stocking fabric to the very top of the stocking. A close inspection showed that there was a regular stream of gold particles right up both stockings to the top, this stream being most prominent about the region of the knees.

Experiment D D.

Just before the séance I rubbed a ring of (a) red, and (b) yellow crayon into the fabric of the medium's stockings a few inches from the top. A little carmine was placed in the toes of the medium's shoes.

At the end of the séance the carmine from the toe of each shoe had been drawn right along the sole and up the heel of each stocking. On the shoes the carmine had been drawn along both soles on the inside. The interior surface of one heel was very much affected, while there were many spots and patches on the outside of both shoes. There were many carmine particles on the floor in the neighbourhood of medium's feet.

The crayon rings round the top of the stockings were affected. These coloured crayon particles were found rubbed into the stocking fabric well above the original rings, and from 6 in. to 8 in. below them. There was evidence of strong rubbing action. The magnifying glass showed that

hundreds of tiny carmine particles were embedded in the fabric right to the top of both stockings, all the way up.

The distribution of the carmine inside the shoes is indicative of the manner of evolution of the plasma. It seems that the plasma clings chiefly to the stocking fabric, for very little carmine was left on the leather sole inside the shoe (its surface was smooth and polished) where the foot rested, but was heaped up round the edges of the sole on the inside of the shoe, right round to the heel; but wherever there was a little depression in the leather sole, such as a nail hole or a small crack, carmine had been deposited.

A careful inspection of each stocking showed that the whole sole was affected by the carmine particles from the toe to the heel and above the heel, but that the carmine had chiefly collected in places where contact between the foot and the shoe was not close, *i.e.* the carmine had gone chiefly to the side of the foot. The place where the heel rested was quite clean, but round the heel, wherever there was less close contact, it had collected.

It was now becoming apparent to me that, besides issuing from the medium's foot inside her shoe, there were plasma paths up and down the leg, because when any considerable quantity of carmine was put into the toes of the shoes, patches and particles of the dye were nearly always found on the stockings right to the top. Moreover, the crayon particles placed round the tops of the stockings had been considerably moved up and down.

Experiment E E.

Very carefully into the toe of each shoe was placed about half a teaspoonful of violet powder. The medium put on and took off her shoes in the séance room under my directions, and there was no movement of the powder along the shoes before the séance commenced or after it finished.

Result.—On one stocking the powder had gone all along the sole nearly to the heel and then up the side of the stocking. There were marks here and there on the stocking nearly up to the knee. Long horizontal powder marks were left just above the ankle, the powder-covered plasma having evidently caught in the stocking creases which always form in that neighbourhood.

On the other stocking the powder had been drawn along to heel and up above it, and a large white mark had been formed above the shoe on the inside of the ankle. This mark, while plainest on the inside of the ankle, went nearly round it, though on the outside the powder was not nearly so thickly deposited.

On the *inside* of the soles of each stocking I had, before the séance, brushed some gold paint. At the end it was found that particles of this paint were embedded in the fabric of both stockings right to the top. Round and above the heel of one stocking innumerable particles were deposited.

Experiment F F.

I carefully placed *large* quantities of carmine in the toes of the medium's shoes—none anywhere else. The medium carefully put on her shoes

under my direction at the beginning of the séance, and likewise so removed them at the end. The usual transference of carmine was found to have taken place all along the sole to heel and up the heel. Both stockings were carmine-covered more or less to above the knees.

The Stockings: Distribution of Carmine.—Along the sole, over the edges of the sole, and up the sides; along and over the heel and some inches above the ankle where it spread right round the stocking. The intensity of the carmine became less farther up, but plainly visible marks were left up to the knee. At the ball of the leg very intense carmine marks were left which went through the stocking and coloured the skin of the leg. Near the knee there were straight lines or narrow bands of carmine going completely round the stocking, slightly inclining downwards towards the front. On the other stocking there were broad belts of carmine completely encircling the leg near the knee, but lower down, near the ankle, not so much of the dye had been deposited. It would appear that as the plasma issues from the medium's foot it naturally comes into contact with her leg near the ankle, and, as it goes upwards, misses parts of the stocking and touches others.

Experiment G G.

Large quantities of carmine were placed before the séance in the toes of the medium's shoes. After the séance it was found that the stockings were carmine-smeared to the top, one more so than

the other. Just above the shoes the dye was rubbed into the fabric as though there had been strong abrasing action.

The data given above concerning the movement of powdered substances, such as carmine or flour, from the interior of the shoes of the medium up the sides of her shoes and up her stockings can only lead to one conclusion. The plasma must get into the medium's shoes in some manner or other. It either originates in her feet and makes its way to the outside by coming up between her shoes and her stockings, or it goes into her shoes first, accomplishes some process there, and then comes out again. It usually issues round the sides of the shoes, up from the middle of the sole of the foot, where the contact between shoe and stocking is slight, although usually there is also a considerable movement up the back of the heel. As I have already indicated, this outward and inward movement of the plasma occurs even if the medium's feet are laced up in long boots.

In many of the experiments already described, as well as a well-defined carmine path from the feet, there were visible distinct traces of carmine up the stockings as far as the knees, and even up to the top of the stockings. Usually these carmine paths were thickest and most plainly visible round about the ball of the calves at the back, and usually there was more carmine on the stockings between the legs than on the outside. The question then arose as to whether there was a flow of plasma from the medium's body down the legs, as well as

the flow from the feet upwards, or, indeed, whether the whole of the plasma did not come from the trunk of the medium, flow down the legs and then, in some peculiar manner and for some particular reason connect with the building up of the psychic structures, enter her shoes and fill up the space between stocking and leather. For, after all, it has to be remembered that our feet and legs are only pieces of apparatus to enable us to move about, analogous to the wheels of a cart, and that the great centres of nervous energy and reproductive activity are within the body proper.

In order, then, to properly trace the plasma paths up the legs of the medium, and to discover whereabouts in her body they originated, special arrangements were made.

Experiment H H.

The medium put on white calico knickers under my wife's supervision. Carmine powder was placed in her shoes. At the end of the séance it was found that there were carmine paths up to the top of both stockings and then *inside* the legs of the knickers to the join of the legs. The carmine was mostly up the front towards the inside of the legs, and left coloured bands 2 or 3 in. broad.

Thus, as I had suspected for some considerable time, it was abundantly clear that plasma issued from and returned to the body of the medium by way of the trunk.

The plasma had in the ordinary way got into the shoes, became coloured with the carmine, and had

left the track of its return path to the medium's body.

Experiment II.

The medium had on a pair of white knickers as in the last experiment. Plenty of carmine was placed in the toes of her shoes.

Result.—As in the last case, carmine was found on the inside of the legs of the knickers, in broad bands several inches long, curving in to the join of the legs.

Some of the carmine bands were as much as $4\frac{1}{2}$ in. long, evidently due to the plasma encountering creases in the cloth as it advanced upwards. The carmine paths to the top of both stockings were very plain.

Experiment JJ.

The medium sat under test in clean white knickers and with carmine powder in her shoes. At the end of the séance, the medium's feet and legs were washed in order to remove the carmine on her skin which had come through from the stockings. Clean stockings were put on her, and then her knickers were removed. The knickers were found to be heavily marked with carmine up the inside of both legs as before.

Experiment KK.

The medium sat in clean calico knickers and clean stockings. Carmine was placed in her shoes as before.

At the end of the séance it was found that the inside of the legs of the knickers were marked with carmine as far as the join of the legs. Further, the results showed that the withdrawal of plasma up the legs of the medium must be a real physical action, because all round the edge of the knickers, on the inside, threads of cotton had been pulled out of the fabric. There was a raised band of embroidery just inside the legs of the knickers, and the plasma in its ascent had rubbed upon and pulled out the threads of this wherever it had touched.

The above results show beyond the shadow of a doubt that the plasma, after being used in the production of phenomena, returns to the medium's body *via* the trunk. The questions which then required solution were as follows:—

- (1) Does the plasma also issue from the lower part of the trunk as well as return by it?
- (2) Is the trunk the only place from which the plasma issues and by which it returns, or does the plasma also issue from the feet and return to the feet?
- (3) Does the plasma, descending from the trunk, go into the shoe, disturb the carmine there, and carry it with it as it comes out of the shoe and deposit it on the stocking as it moves upward, or does plasma originate in the foot, carry the carmine in the shoe with it as it ascends and deposit it on the stocking? If the latter were the case, the plasma

descending from the trunk would come into contact with the carmine deposited on the stocking by the plasma from the foot.

Experiment L L.

To see if plasma issues from the lower part of the trunk as well as returns by it.

The experiments already recorded show conclusively that plasma returns by the trunk, but do not show that it issues thereby.

A little slightly damp carmine was carefully rubbed on the inside of the legs of the knickers some inches up, and the medium put the knickers on very carefully. At the end of the séance it was found that the carmine had traced paths right down the legs of the knickers, had spread out round the embroidery at the edge, had gone on to the stockings, made paths right down the stockings, mostly along the ball of the leg, and had even gone into the shoes, which were clean ones.

Therefore it is certain that plasma issues from the trunk as well as returns thereby.

The quantity of plasma must be considerable, for the carmine had spread round the medium's legs right to the posterior, and in between the legs to the base of the back-bone: *i.e.* the plasma had at one time or another during the séance occupied practically all the space which did not make close contact with her chair. This result suggests that during interruptions in phenomena, or when a light is temporarily lit during a séance, the plasma conceals itself round about the top of the medium's

legs under her clothing, and does not necessarily all return to her body. If it always went back into her body, a considerable time would have to elapse between each burst of phenomena, but this does not usually occur. So long as the plasma is away from the temporary disturbing influence, such as rays of light, the purpose of the operators is served.

Experiment M M.

The medium wore clean knickers, clean black stockings, and clean shoes. On the ball of the leg of each stocking damp carmine was rubbed, beginning about 6 in. above the heel, for a distance upwards of about 4 in. Thus the only place on the medium where there was carmine was on the stockings at the ball of the leg.

Results at End of Séance.—No carmine on the outside of the knickers. On the inside of both legs, between the legs, there were the usual carmine marks indicating the course of the plasma as it was making for the trunk. The breadth round the bottom of the knickers affected by the carmine was about 6 in. Traces of the dye were apparent right to the join of the legs. On the carmine path over the embroidery near the bottom of the knickers numerous cotton threads had been pulled out of the fabric, and there was much fraying, showing that the plasma has a considerable rubbing action as it moves upwards. As before, the small projecting parts of the embroidery were most heavily marked.

Traces and tinges of carmine could be seen going right to the top of both stockings.

The whole foot of each stocking was affected by the dye. Carmine had gone in at the heel and sides of the shoes, then under the heel and along the sole and up over the toes. There were well-defined traces up the front of the foot inside the shoe. The parts of the foot most affected were the places where it was pressing most tightly on the shoe, such as the ball of the heel and the bearing surface near the toes.

The whole of both stockings looked as though they had been scraped by something adhering tightly to them, moving up and down, pressing into the wool and tearing little ridges in the wool. The deductions from this experiment are as follows:—

- (1) The plasma comes from the trunk, goes down the stocking, adhering closely to it and scraping it along its length.
- (2) The plasma enters the shoe and goes right round the foot of the medium.
- (3) It is possible that no plasma originates in the foot, but that it all comes downwards into the shoe from the trunk.
- (4) The plasma must have considerable consistency, for it has a strong tearing action on the stockings and knickers.

It should be noted that, in the above test, the carmine, as it moved downwards and struck the

region of stocking at the edge of the shoe, was thickly deposited on the fabric there, but that sufficient got inside the shoe to suggest that the action was a continuous one from leg, down stocking, and then in between the shoe and the stocking to the foot.

Experiment NN.

Medium wore clean white knickers, black stockings, and clean shoes.

A solution of methylene blue was rubbed on the inside of the legs of the knickers. Damp carmine was rubbed on the front of the stockings some 6 in. above the shoes.

Results.—At the end of the séance it was found that the methylene blue had been drawn downwards towards the foot of the knickers, and had also gone up nearly to the join of the legs. On the inside of the back of the knickers the blue dye had gone up between the legs as far as the base of the spine, and it had also gone between the buttocks and had spread under them to some extent and over the seat of the knickers.

The carmine was put on the front of the stockings to see if the plasma would go down between the front of shoes and stockings to the medium's toes. After the séance the carmine could be traced right down to the toes of both stockings: there was only a *scuff* of the dye in each case, as the shoes the medium had on were good tight ones. Thus from this and previous experiments it seems most likely that the plasma proceeds down the legs,

from the trunk, and enters the shoes at the front, back, and sides: *i.e.* it seems to surround the foot on all sides within the shoe. Probably, also, no plasma originates in the foot, and all the disturbance within the shoes is due to plasma entering from above.

Experiment O O.

The medium had on clean knickers, stockings, and shoes. Carmine was rubbed into the inside of legs of knickers. It was made damper than usual. At the end of the séance the customary result was obtained. The carmine had spread up and down the legs of the knickers and round the buttocks. There was in this case little on the stockings except at the top, probably because the carmine had been made too damp, and thus did not draw well.

Experiment P P.

The medium wore clean knickers and stockings. Carmine was put in the toes of the shoes. At the end of the séance much the usual result was obtained. There were smudges of carmine up both stockings to the top, and also up the inside of the right leg of the knickers. In this particular case there was no carmine on the left leg.

Experiment Q Q.

The medium wore clean knickers and stockings. Carmine was placed in the toes of the shoes, and also some on the inside of the seat of the knickers. As usual at the end of the séance, the knickers were

marked with carmine up the inside of both legs to the join. The stockings were also both marked. There seemed to be a chief carmine track from the shoes between the feet, up the ankles, and then round to the ball of the leg at the back.

In these tests I always found that at a spot about half-way between the ankle and the knee, the *heavy* carmine coloration always ceased, and only smudges and lighter marks were left up the remainder of the stockings and knickers. It would appear that the operators use the calves of the legs as a *backing* from which to operate their structures.

There was evidence of considerable up-and-down movement of the carmine placed in the seat of the knickers, round about the join of the legs.

RESPIRATION, PULSE, AND TEMPERATURE OF THE MEDIUM DURING LEVITATION AND OTHER PHENOMENA.

For the purpose of carrying out these and other experiments, a new test device was arranged. A wooden frame was placed round the medium's legs, so that fraudulent levitation of the table was impossible. The cross-bar at the top prevented her raising her knees, while side pieces prevented the feet being spread out. The whole apparatus was screwed to the floor right up against the front of her chair. A large rectangular hole was cut in the table top, stretching right across the width of the table.

I thoroughly tested this apparatus before use.

For fully half an hour I tried in every way I could to levitate the table, taking my seat for that purpose in the medium's chair, but I did not succeed in raising the table the fraction of an inch from the floor. I got many other people to try, but not one of them could get the table into the air, even after the most frantic efforts to do so. Yet in a few minutes after the medium took her seat, the table levitated quite easily.

A medical friend assisted in these tests. He stood by the medium taking her pulse, etc., while I entered the circle and attended to the levitations. The doctor used a red flash lamp, while in addition the red electric light was shining above the circle space.

Just before the séance—

Medium's pulse—72.

Medium's temperature—98.0.

Medium's respiration—normal.

The Séance

The table levitated splendidly between twenty and thirty times. The longest levitation was for about one and a half minutes, dead level, and about 6 in. high. The table usually first of all moved over the floor close to the medium, and the psychic structures seemed then to grasp it; it then moved straight out along the floor and levitated. During the levitations I saw that all was in order and that no part of the bodies of the sitters was in contact with any part of the table. The medium's hands

were quite visible. Sometimes the doctor took the medium's pulse from the wrist and sometimes from the neck artery. For respiration he put his ear to her chest.

The following is a *résumé* of events as they occurred:—

Levitation—medium's pulse very rapid, went up to 90.

Levitation—pulse went up to 110.

After the levitation the pulse fell slowly.

During the levitation it rose steadily.

Two minutes after the last levitation the pulse was 84.

Five minutes after the levitation the pulse was steady at 80.

Levitation—pulse 126.

Levitation (shorter duration)—pulse 100.

Respiration (just after this levitation)—normal.

The respiration was then taken during the course of five or six levitations. It was always normal.

The temperature was then taken during a series of levitations—98.4.

After a rest of ten minutes the pulse was taken—90

Then during another levitation—pulse 120.

During several levitations it was found that the pulse averaged 120.

The palm of the medium's hand was moist to the touch but not cold.

A levitation lasting a minute—a little more moisture in the palm of the hand.

During a series of levitations the pulses of all the sitters were taken—all normal.

A sheet of luminous cardboard was placed on the floor and the operators placed their psychic structures over it—medium's pulse rose to 100.

Preparations were made for flash-light photography. Pulse 84. Just before the flash, pulse rose to 120, and after the flash the medium shivered and her pulse went gradually back to normal. The reason for the rise to 120 before the flash was because the operators were endeavouring to exteriorise a psychic structure to be photographed.

Just after the séance—

Medium's pulse—72.

Medium's temperature—99.0.

Medium's respiration—normal.

Medium in good health—arteries firm.

The general result is that during all phenomena the pulse of the medium rises considerably, the palms of her hands get a little moist and the fingers a little cold. Neither the respiration nor the temperature seem to be affected to any degree. It is not only while doing external work, such as levitating the table, that the medium's pulse rises, it rises also while the operators are extending the structures from her body, and forming them, without any phenomena resulting.

DIFFERENT KINDS OF MARKS OBTAINED ON VARIOUS SUBSTANCES DUE TO THE APPLICA- TION OF THE PSYCHIC STRUCTURES

When the medium had carmine in her boots or shoes, particles or small patches of the dye were often found on the table legs, on the floor, or on articles touched by the structures. As a rule the amount of the carmine so deposited was slight and not comparable to the quantities on her stockings.

In order to obtain data concerning the shape of the ends of the structures and also of their methods of gripping the table, I often covered the undersurface and legs of the table with soot obtained from a turpentine lamp. In this way, wherever the structures touched, marks were left on the soot. It was soon found that there were two chief methods of levitating the table, viz. from the undersurface and by the legs.

Marks resembling Fingers

Finger-like marks were often obtained. The undersurface of the table which had the large rectangular hole in it was on several occasions covered with soot. The medium being in a test apparatus, levitations of the table were given by the operators. On examination afterwards, the edges of the hole were found marked as though with fingers.

Needless to say, neither the medium nor members of the circle had their hands near the table. Never more than four of these "finger" marks

were ever obtained on soot, and usually three was the number.

Impressions of the "finger" were also obtained on ordinary photographic plates, due to the operators placing these "psychic" fingers upon the plate. These impressions show that the "fingers" are not really fingers in the strict sense of the word, but are temporary psychic projections which can assume various shapes and forms, more or less resembling fingers.

The legs of the séance table were often covered with soot. After levitations, marks were often found on the soot which indicated that the legs had been gripped for the purpose of levitation. These marks were usually on the legs of the table nearest the medium, and were often low down near the floor, though the grip was sometimes taken halfway or more up. Moreover, the marks showed that the gripping substance in most cases went right round the legs, just as though some kind of a tentacle had wrapped itself right round.

CONDITION OF THE MEDIUM DURING PHENOMENA

The medium was sitting on a chair placed on the platform weighing machine. I asked the operators to take psychic matter from her in the ordinary way. I put my hand on the lower part of her back just above the buttocks. The rise and fall of her flesh was very apparent, as psychic matter was supposed to be taken from her and put back. I put my hand on her haunches just above the seat of her chair. The flesh seemed to become soft

and cave in. The medium did not seem to move bodily, but her flesh seemed to fall in. It could be distinctly felt filling out as the psychic stuff apparently returned to her.

To see if there was any volumetric decrease in the medium's legs during the psychic action, a string was fixed to one side of the seat of the medium's chair. It went over the seat, through an eye-hook fixed on the other side of the seat, and then up to a spring balance hanging from the roof.

The medium sat back in her chair, extended her legs straight out, with her legs and feet as close together as possible. The string was then tightened over the thighs of the medium and fixed to the balance, so that there was a tension of 4 lb. indicated. The medium did not know the purpose of the experiment. I asked her to remain perfectly still, which she did. I then asked the operators to take out psychic matter from the medium and put it on the floor.

Result.—The tension on the string decreased to 1 lb. as indicated on the balance. I felt the string and found it quite slack. Then the tension increased gradually until it reached the normal of 4 lb. as the operators returned the plasma to the medium. This occurred seven or eight times. On each occasion the tension always relaxed to almost exactly the 1 lb. mark as the plasma was removed, and always returned to the 4 lb. mark as it was put back. Moreover, both processes were gradual, and never sudden.

It should be noted that with this arrangement any normal involuntary movement of the medium's legs would have *increased* the tension on the string.

Thus it would appear that there was a *decrease in volume* of the upper parts of the medium's legs when psychic matter was removed from her body.

I then placed my hand across the medium's thighs as she remained in the position just described. I asked the operators to remove and return psychic matter from her body. When this process was going on I could feel a distinct fall and rise of the flesh in the thighs.

While the medium was sitting on her chair in the ordinary way, I placed my hands on the outside of her haunches. While psychic action was going on, parts of the flesh seemed to cave in. As the psychic stuff came back, little round lumps could be felt filling in on the backs of the thighs. This also is the case on the interior of the thighs.

I felt the medium's breasts during the occurrence of psychic action. They became very hard and full.

Generally speaking, it can be said that the evolution of plasma from the body of the medium is accompanied by strong muscular movements all over the body, and that there is strong evidence of decrease in volume of the fleshy parts of her body, especially from the waist downwards, while the plasma is extruded.

THE POSITION OF THE MEDIUM DURING LEVITATION

In addition to the electric light hanging above the circle space, a strong gas light enclosed in a red glass lantern was placed close to the medium, so that she could be thoroughly observed during phenomena.

I had often noticed the upright stiffness of the medium's body while phenomena were occurring, but I now made particular notes. Just before a levitation occurs she may be leaning comfortably back on her chair, but a minute or so before the actual phenomena takes place she sits vertically upright, her trunk even sometimes rises an inch or two, and her feet and legs go close together immediately below the chair. Sometimes during high levitations the upper part of her trunk swings forward towards the circle space. Needless to say, it is perfectly impossible for anyone sitting vertically upright in a chair to levitate a table normally. This can only be done (in a stilted kind of way) by leaning back on the chair, and taking a purchase on the sides with hands or elbows.

FLASHLIGHT PHOTOGRAPHY OF THE "PLASMA" AND PSYCHIC STRUCTURES

Only within the last six months or so has it been found possible to photograph the stuff which issues from the medium's body (I call it "plasma" for want of any better word), and from which the psychic structures are built up that produce the

phenomena of raps, levitations, touchings, etc. For about a year I took a photograph each séance night in the hope that success might ultimately be obtained. The operators informed me by raps that success would finally come if I would be persistent enough.

The chief difficulty seemed to be in preventing injury to the medium. The operators said it was necessary gradually to work her up to withstand the shock of the flashlight upon the plasma; nor is this to be much wondered at when it is considered the plasma is part of her body exteriorised in space.

I tried all sorts of arrangements to obtain the desired result. One of these was to hang a black cloth in front of the lower part of her body and to get the operators to bulge the cloth out by structures acting from behind, when they would be considerably protected from the flash. This method was successful so far as it went.

After innumerable attempts, however, very small patches of plasma were obtained in full view between the medium's ankles. As time went on these increased in size and variety until great quantities of this psychic stuff could be exteriorised and photographed. Then the operators began to manipulate it in various ways, building it up into columns, or forming into single or double arms, moulding it into the different shapes with which I had been long familiar in a general way from previous investigation. Not only did they do this, but they showed unmistakably, by means of set photo-

graphs, from what part of the medium's body the plasma issued, and by means of ingenious arrangements devised by themselves brought out many of its properties.

By auxiliary experiments carried out chiefly by the aid of carmine dye (already described), I, by a totally distinct line of investigation, discovered the parts of the medium's body whence the plasma issued. I do not intend to say anything more about this here, except to remind the reader that the plasma has the property of adhering to various substances when it comes into contact with them. If it touches powdered carmine a distinct crimson trace is left upon the clothing and skin, as the plasma retires into the body of the medium.

The medium and members of the circle are open to any tests. I have gone to most elaborate precautions to make sure the results are genuine, and amongst others have called to my aid men and women of medicine. In order to prevent subconscious action affecting the moulding of the plasma, I withheld the photographs from the medium until the present series was obtained. When I at length showed them to her, she was vastly astonished and diffident about my publishing some of them.

The photographic results are not yet complete. They are complete in so far as the plasma in an *unstressed* state is concerned. The shock to the medium, evidenced by involuntary trembling and shivering which endures for a considerable time, is very much greater when the flashlight impinges on

the plasma under stress than on the unstressed stuff. For this reason no photograph of the completely levitated table has yet been obtained, though partial levitations have occurred and small rapping rods fairly rigid have been secured. The operators are gradually working up to *full* levitation.

Description of the Photographs

- A—A photograph showing a peculiar exteriorisation (resembling a leg) from the body of the medium. The black cloth round the body of the medium was placed there at the operators' request.
- B—A plasmic column under the table. This method is used when very powerful levitations are required.
- C—Another form of the column.
- D—Still another form of the column.
- E—A side view of the column.
- F—A column placed on top of a spring balance. [The small piece of black cloth on the balance weighs about an ounce, and as the balance reads a little over a pound, presumably that part of the column resting on the balance weighs about a pound.
- G—The cantilever method of levitation. A rough cantilever in position.
- H—Another form of cantilever.
- I—Plasma collected near the feet of the medium forms into a lump and advances along the floor. From this lump the columns rise.

- J—Or the plasma, after collecting at the medium's feet, begins to divide into two portions.
- K—These separate portions elongate and finally form two long arms which grip the table legs.
- L—Two psychic arms tied to the table legs by bands of plasma. A separate moulded lump of plasma on the floor.
- M—Another view of a pair of plasmic arms.
- N—Sometimes the plasma collects round the feet of the medium and forms two arms on the floor.
- O—A heavy lump of plasma on the floor.
- P—Plasma inside the medium's shoe.
- Q—Plasma moulded round the leg of the medium.
- R—A small rapping rod projecting.
- S—Plasma collected at the feet of the medium.
- T—Plasma exuding from medium's chest.
- U—Another view of plasma exuding from medium's chest.
- V—Table tilted and held in position by a braced cantilever constructed of plasma.
- W—Side view of V.
- X—Black and white plasma.
- Y—Near view of the plasma.
- Z—Near view of the plasma.

In addition to the photographs shown, I have many others which are scarcely suitable for publication in a popular book. They all indicate the

fact that once the plasma is extruded from the body of the medium, the operators can mould it into the various shapes and forms required to produce the phenomena.

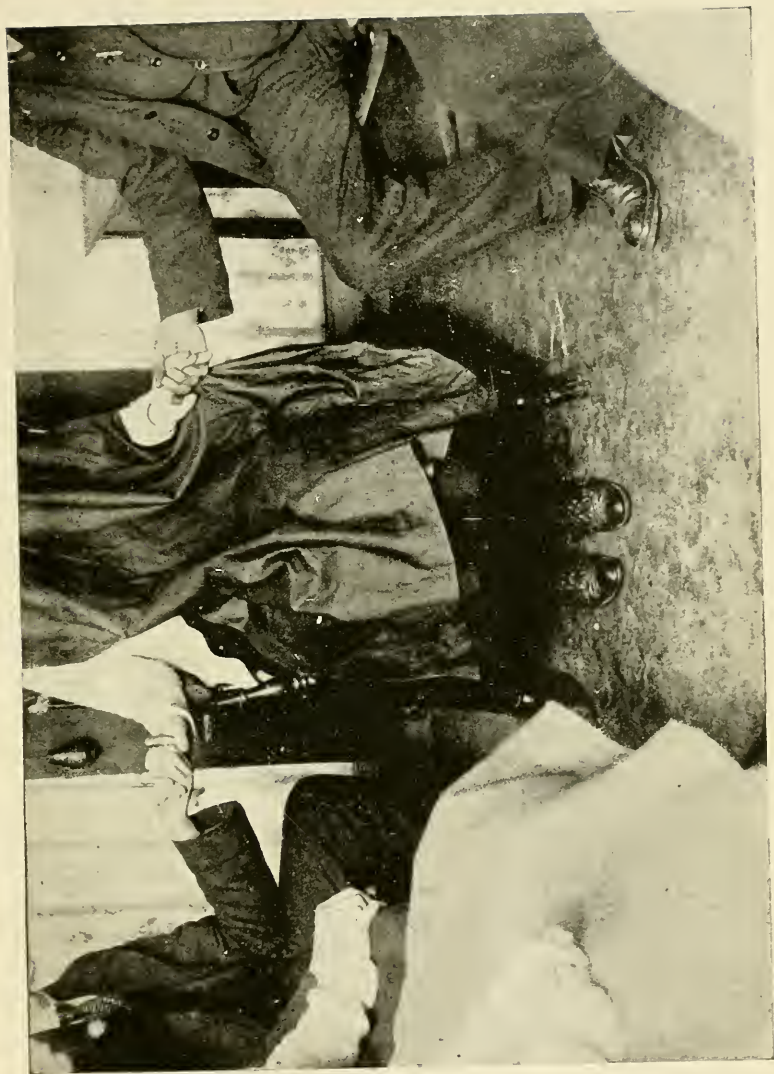


FIG. A.

FIG. C.

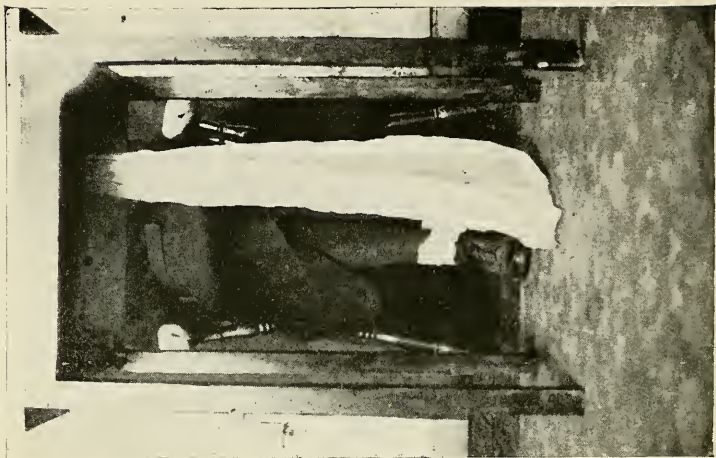
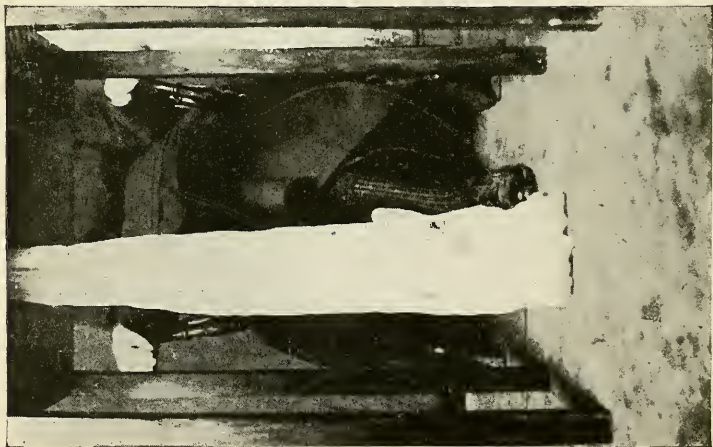


FIG. B.



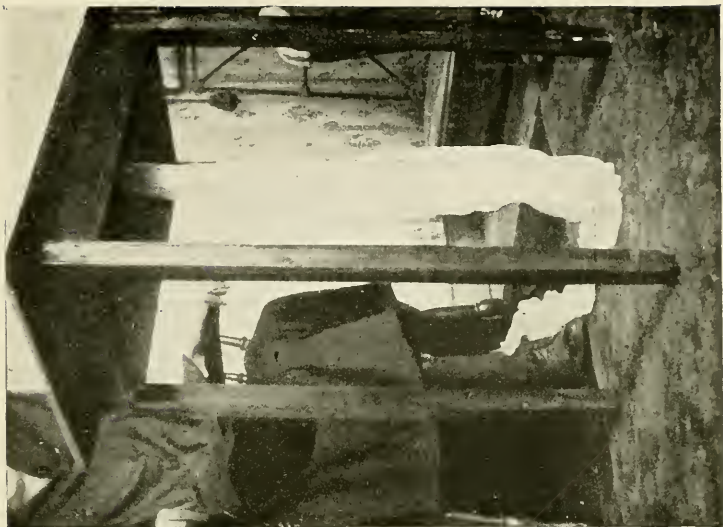


FIG. E.



FIG. D.

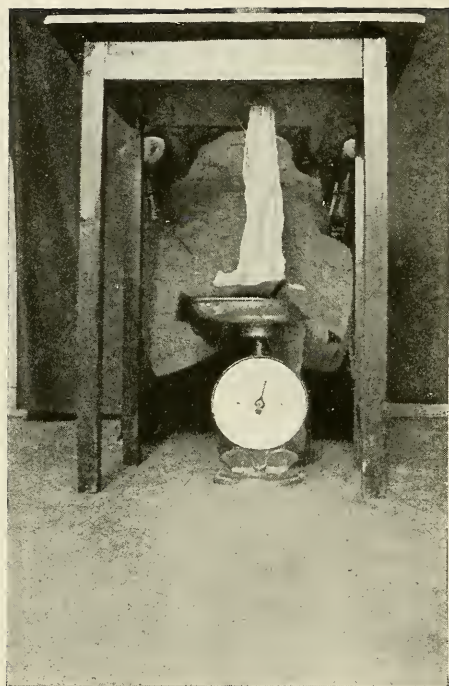


FIG. F.



FIG. 6.

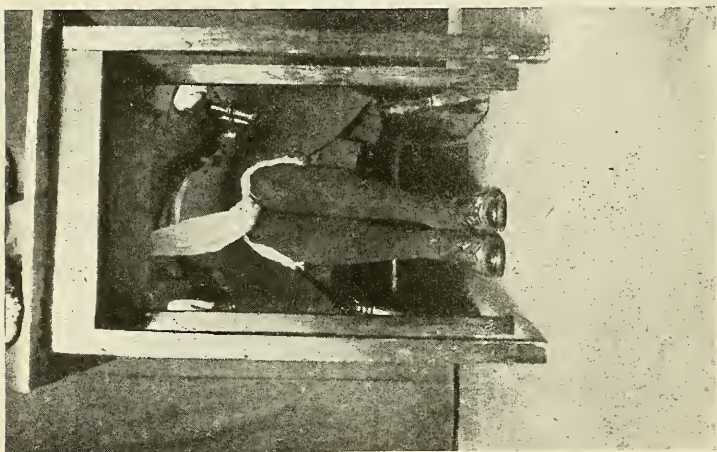


FIG. H.



FIG. I.

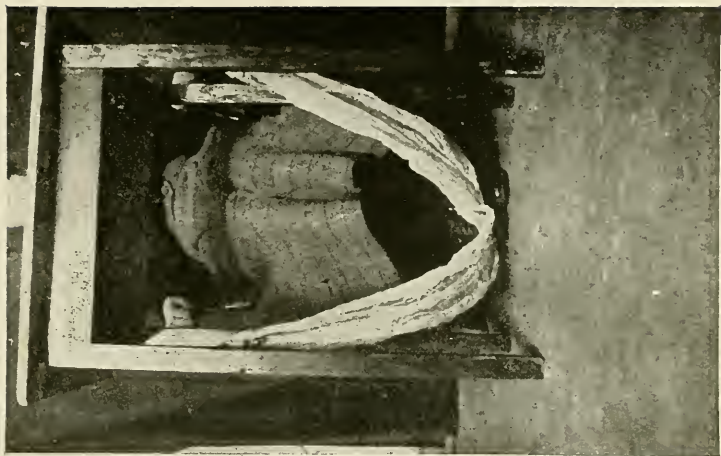


FIG. K.



FIG. J.

FIG. M.

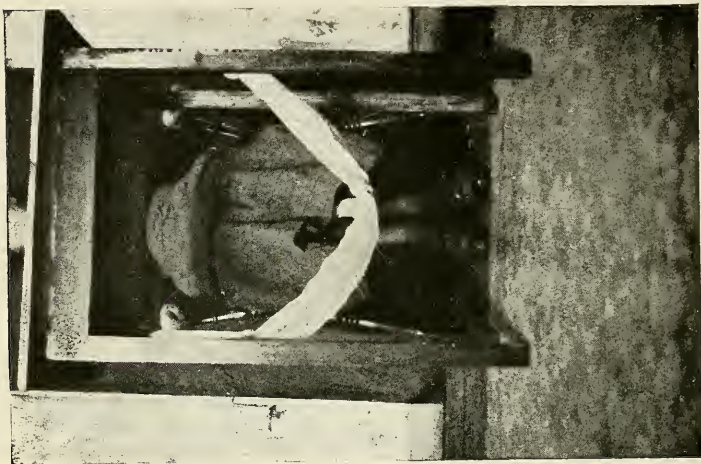


FIG. L.

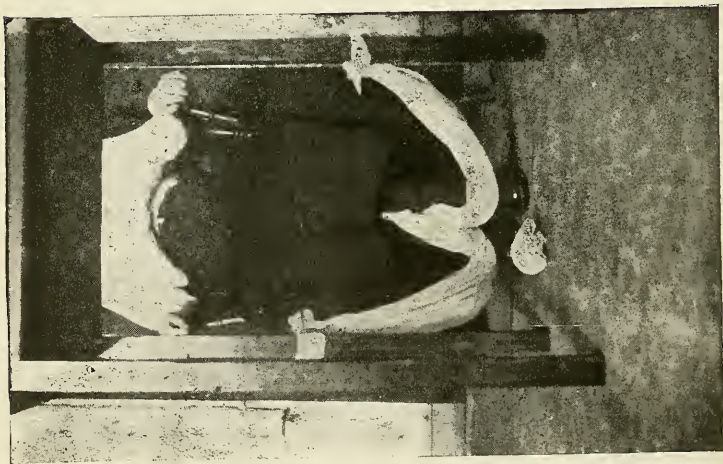




FIG. N.



FIG. O.



FIG. P.

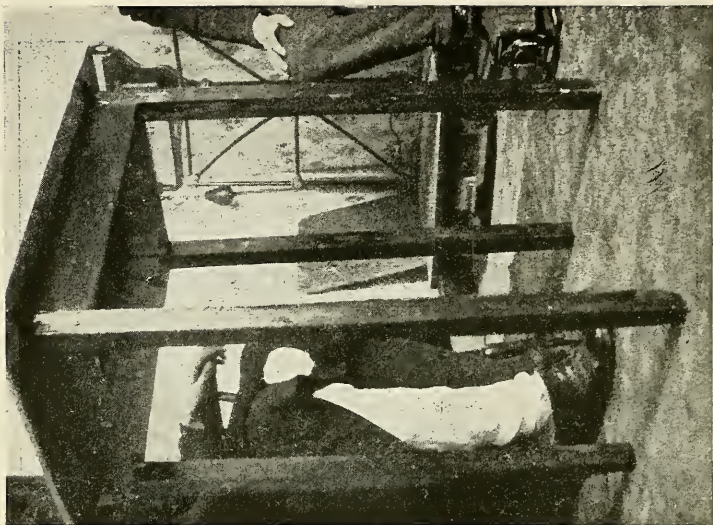


FIG. Q.



FIG. R.



FIG. S.



FIG. T.

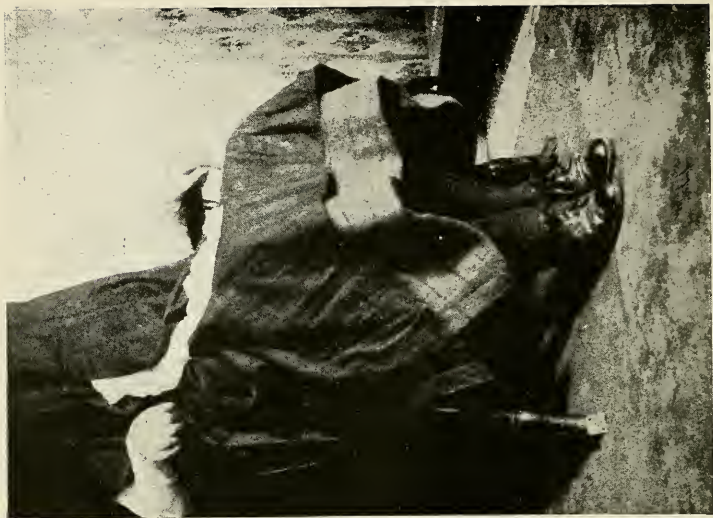


FIG. U.



FIG. V.

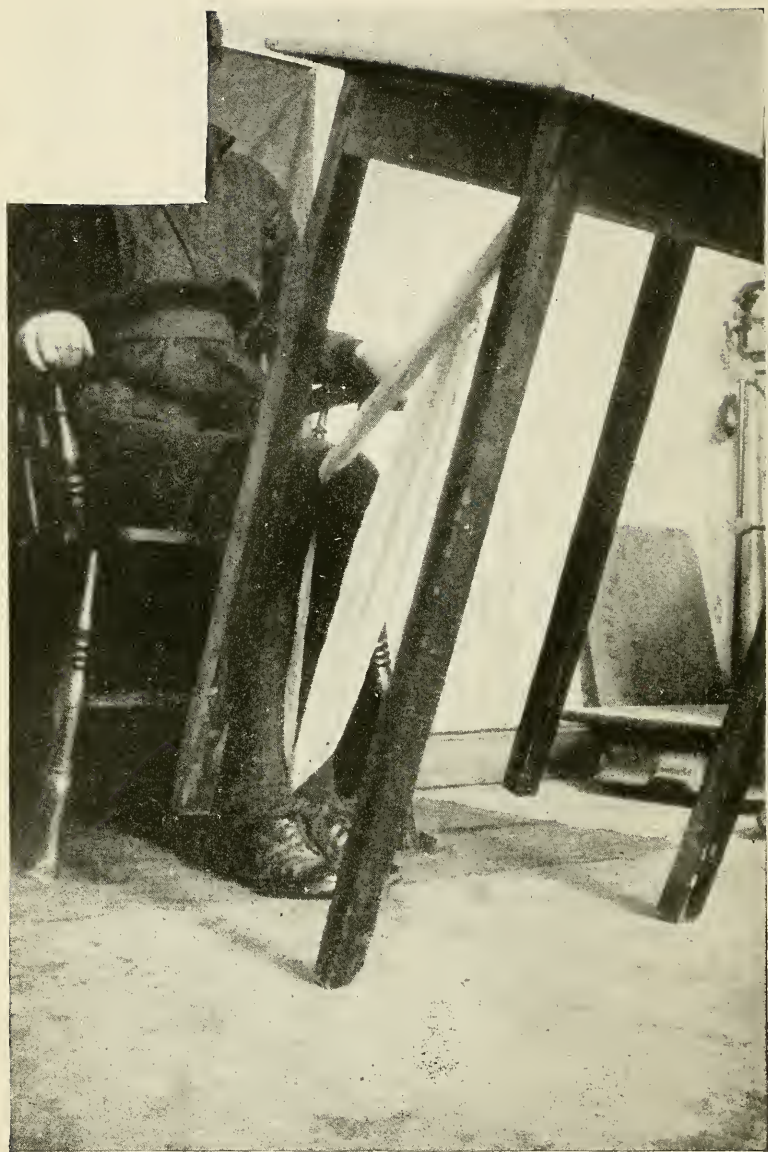


FIG. W.



FIG. Y.



FIG. X.



FIG. Z.

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