

No. 663,750.

Patented Dec. 11, 1900.

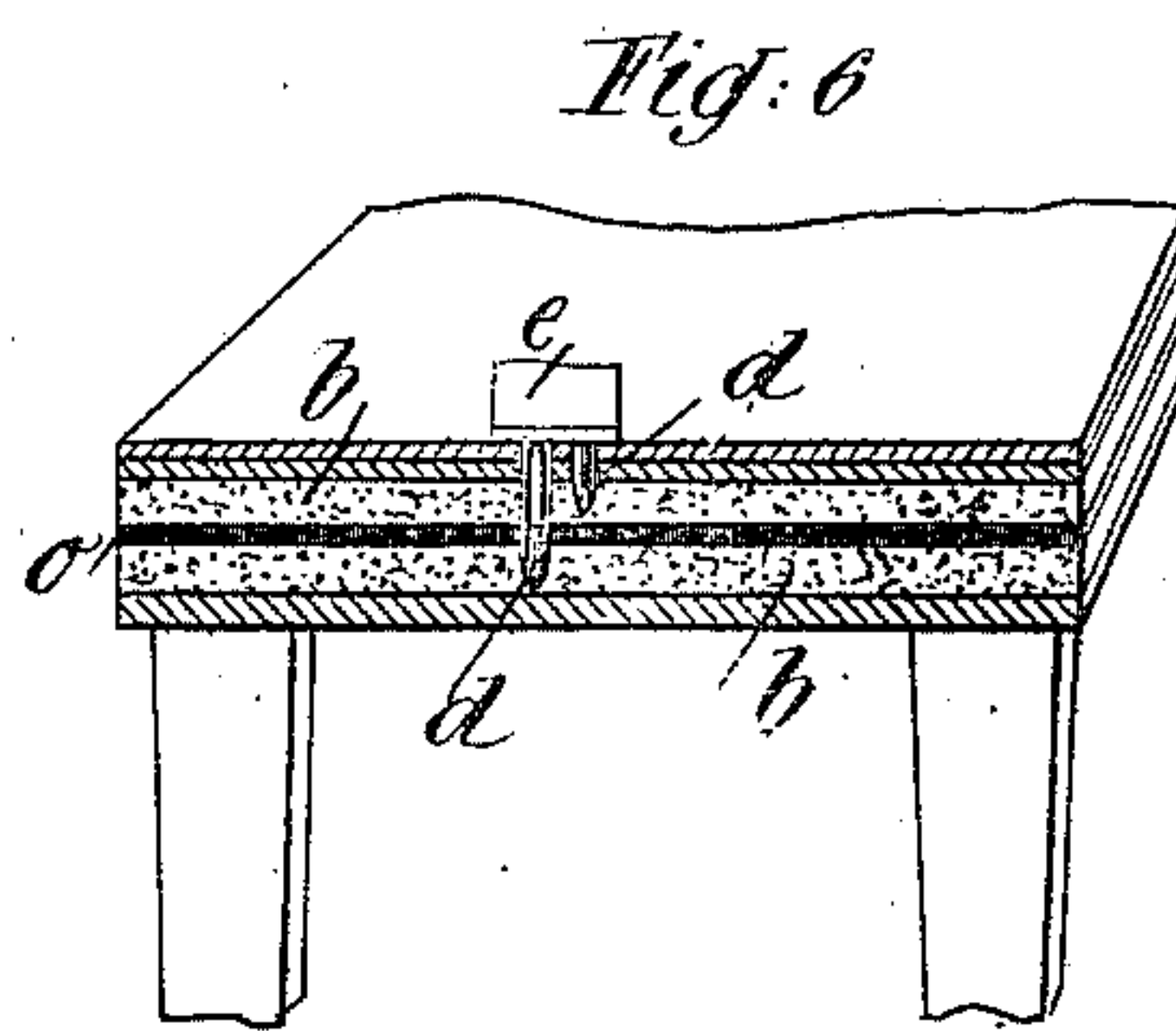
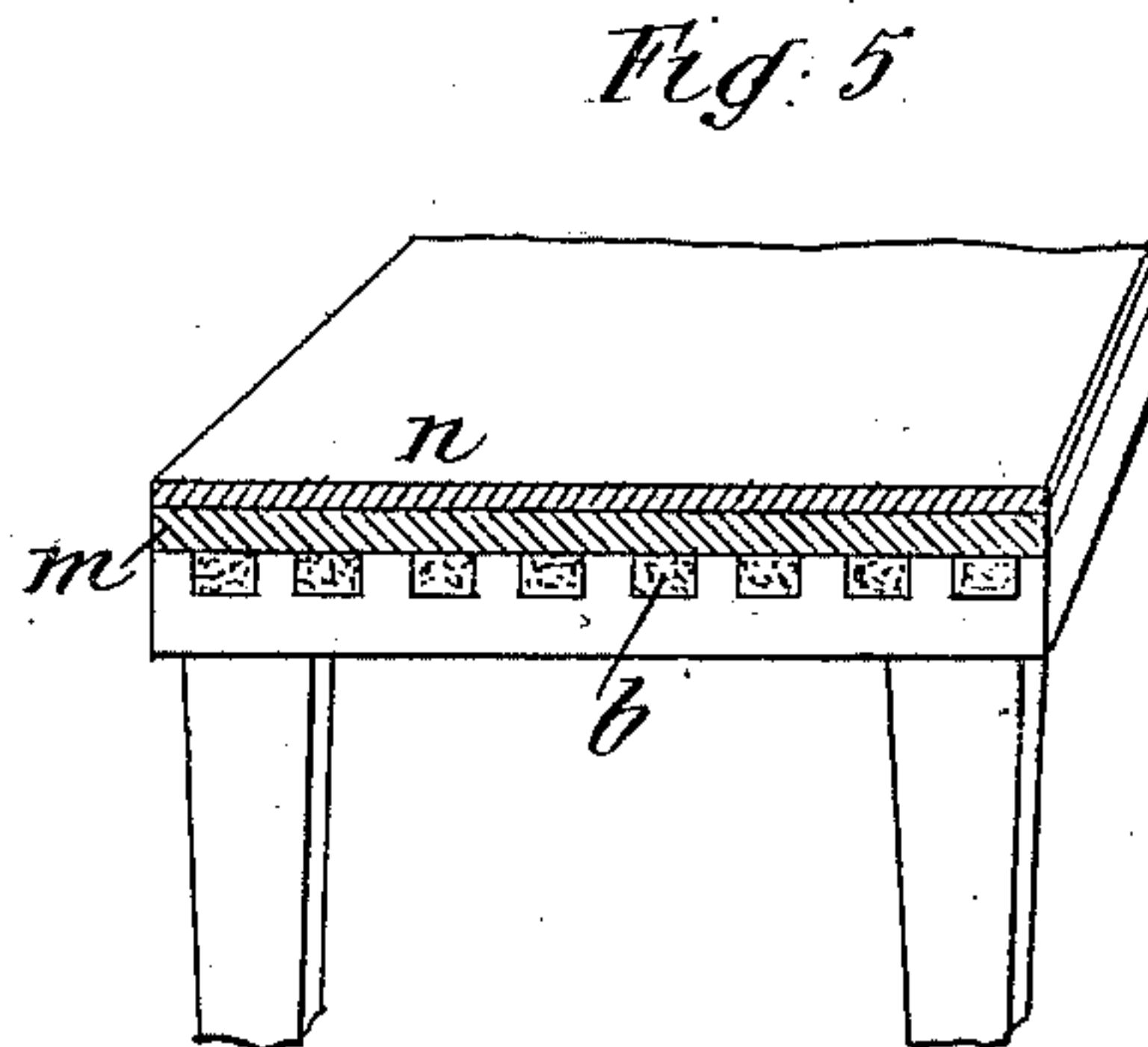
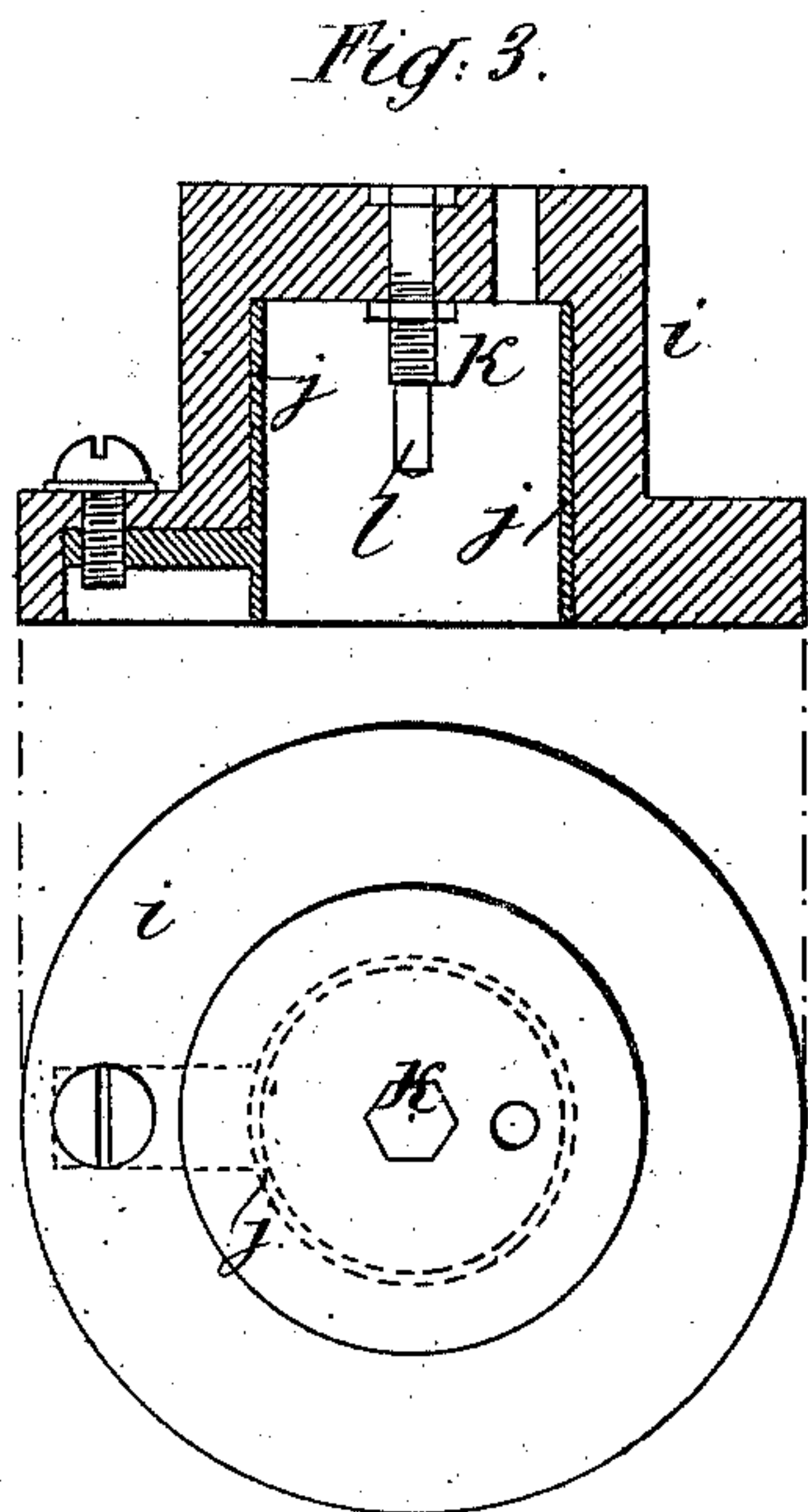
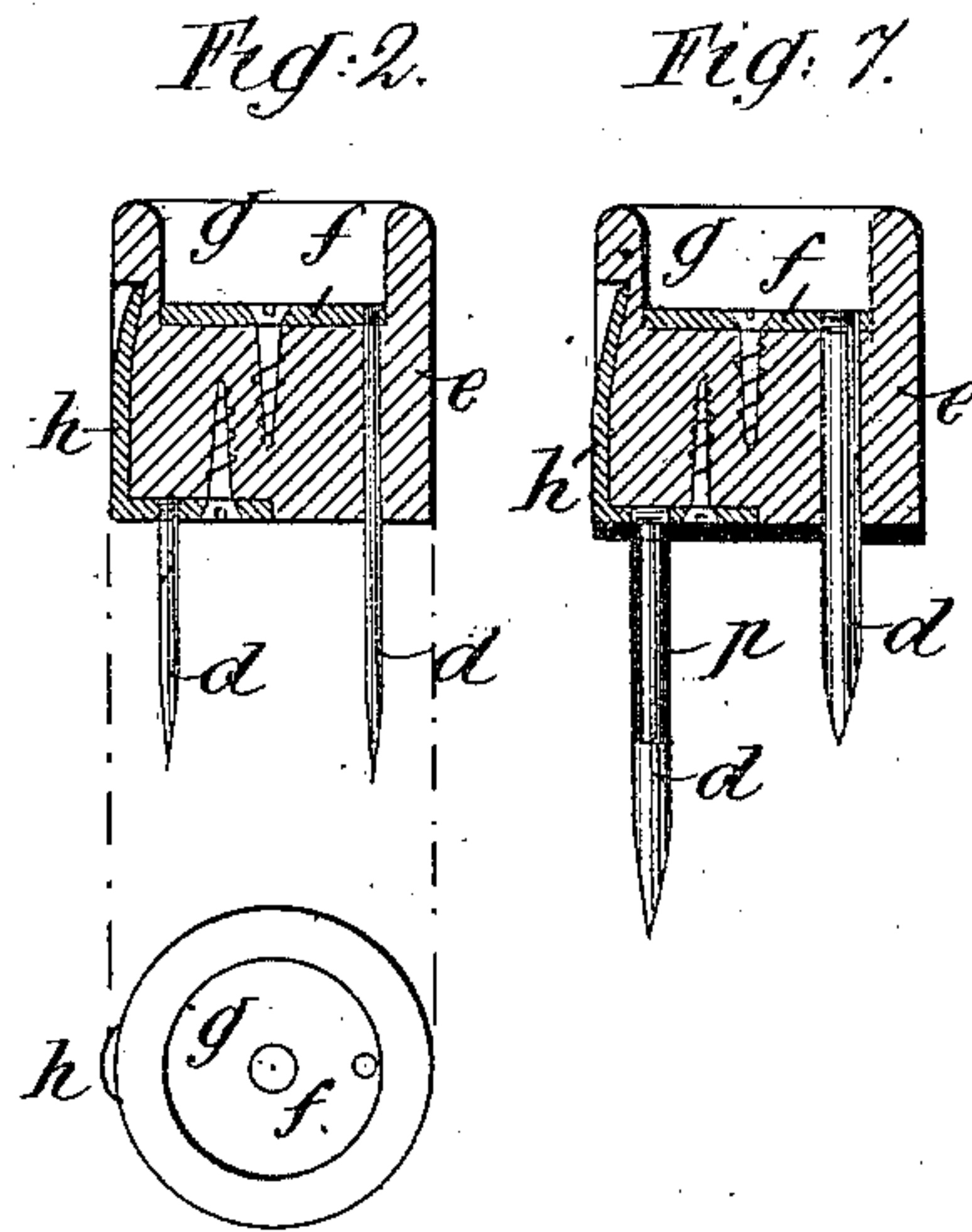
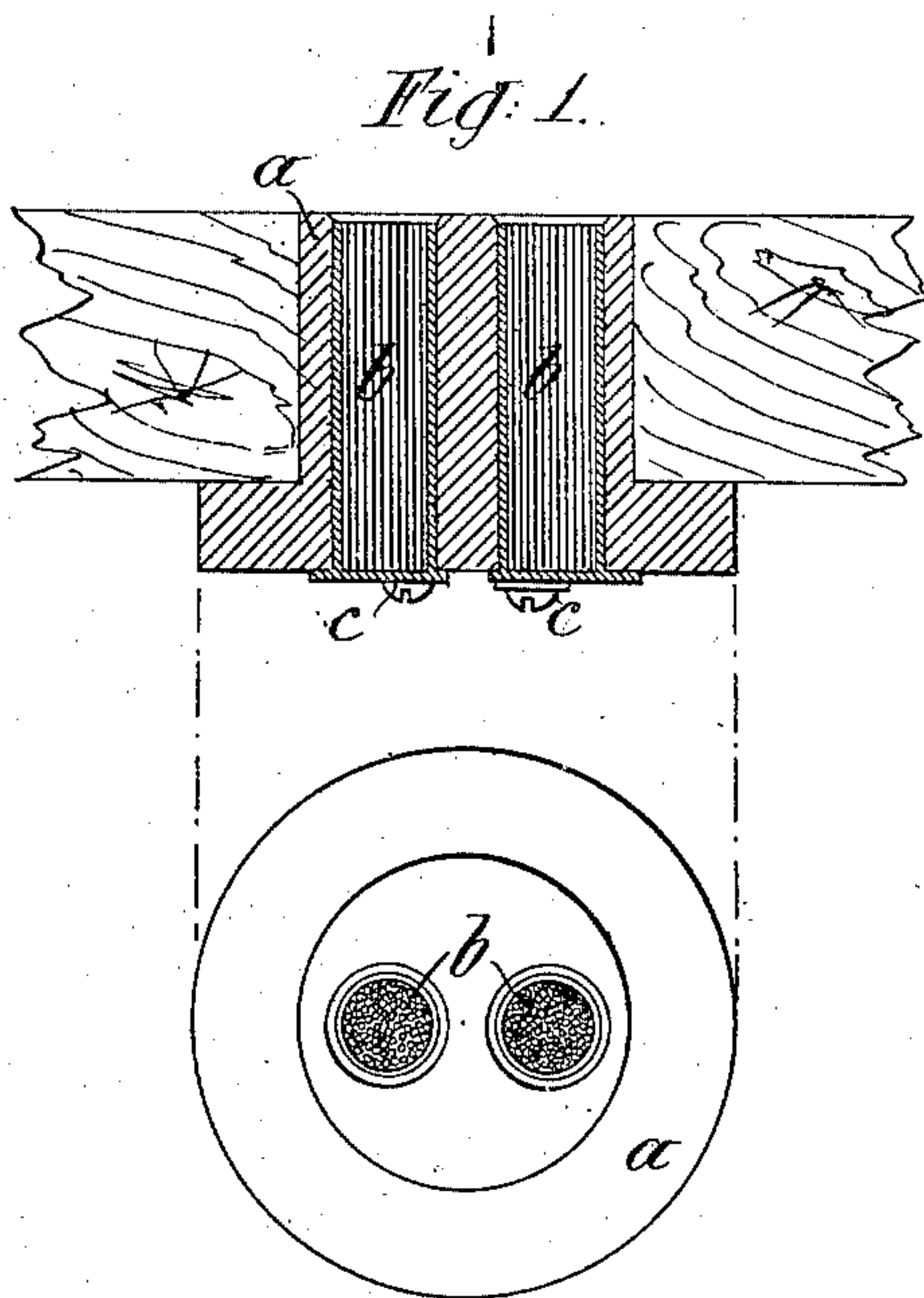
E. GREIL & E. AUDIGER.

ELECTRIC CONTACT OR CURRENT TAKING DEVICE.

(Application filed Jan. 10, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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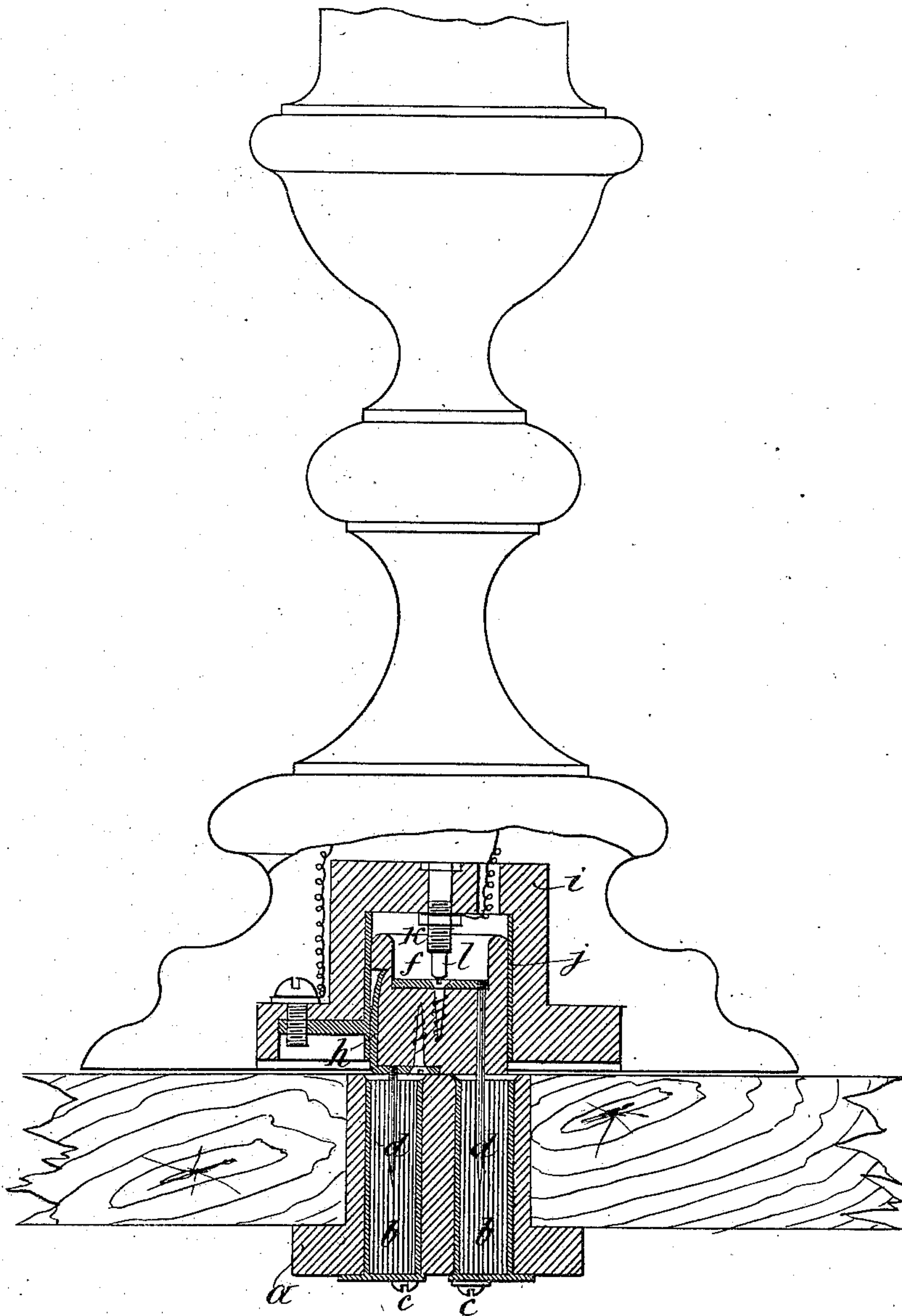
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2 Sheets—Sheet 2.

*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

ERNEST GREIL AND EMILE AUDIGER, OF PARIS, FRANCE, ASSIGNORS TO  
THE ELECTRIC LIGHTING BOARDS, LIMITED, OF LONDON, ENGLAND.

## ELECTRIC CONTACT OR CURRENT-TAKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 663,750, dated December 11, 1900.

Application filed January 10, 1900. Serial No. 979. (No model.)

*To all whom it may concern:*

Be it known that we, ERNEST GREIL and EMILE AUDIGER, electricians, citizens of the Republic of France, and residents of 138 Faubourg St. Honoré, Paris, France, have invented certain Improvements in or Relating to Electric Contacts or Current-Taking Devices, of which the following is a specification.

This invention relates to electric contacts or current-taking devices for electric appliances, and more especially those intended for illuminating purposes.

If we consider, for example, the case of appliances of the form of candlesticks or candleabra placed upon a table, it has hitherto been necessary with the means usually employed for taking the electric current to conduct to the foot of the appliance a small cable, which is frequently the cause of much inconvenience, as it encumbers the piece of furniture upon which the appliance rests and renders this latter liable to be upset. Our invention serves to obviate this defect. In accordance therewith we connect the electric conductor not with the illuminating device, but with the piece of furniture itself, and we adapt in one or more positions upon such piece of furniture contacts or current-taking devices in accordance with our invention. We will now describe the said current-taking device, which possesses the advantage of not presenting either a projection or a cavity when arranged in position.

In the accompanying drawings, Figure 1 represents in cross-section and in plan a portion of a table upon which is mounted the fixed part of our device. Fig. 2 shows in section and in external elevation the intermediate movable part, which is arranged between the said fixed part and a third piece which forms part of the illuminating device. Fig. 3 represents the third part in plan and in section. Fig. 4 shows in section the whole of the various parts when the appliance is arranged in an operative condition. Fig. 5 represents a table arranged in accordance with our invention having adjacent conducting masses in parallel strips or bands. Fig. 6 represents a table with superposed conducting masses. Fig. 7 shows in section a current-taking de-

vice intended to be employed with superposed conducting masses.

The fixed part, Fig. 1, rigidly attached to the table or other piece of furniture, consists of a block *a* of insulating material—such as wood, ebönite, or the like—in which are embedded two conducting pieces or masses *b b*, constituted, in the manner of the brushes employed in electrical apparatus, by means of a large number of metallic wires arranged in juxtaposition. This block is embedded in the piece of furniture in such a manner as to be flush with the upper surface thereof, as are also the masses or conducting pieces *b b*. These latter are connected by their lower portions at *c c* with the electric conductors by means of flexible wires. The piece thus constituted is and remains embedded in the piece of furniture and may be concealed by a cloth or cover placed upon this latter. In the two masses or brushes *b b* two points *d d*, which are rigidly connected with a small cylinder *e*, of insulating material, are adapted to enter. One of these points is in metallic connection with a strip of metal *f*, arranged at the bottom of a cavity *g*, formed in the base of the cylinder opposite to that in which the points are situated. The other point communicates with a band of metal *h*, arranged upon the cylindrical surface of the block. When this cylinder is placed upon the block *a*, the said points *d d* being engaged in the brushes, it projects from the table, and it is upon it that the base of the appliance is engaged. In this base is fitted the part which forms the third piece of our device above referred to. This latter is formed of a block *i*, comprising a recess supplied with a metallic partition *j* and in which the cylinder *e* may be maintained by friction. At the bottom of this recess is provided a projecting metallic part *k*, one portion of which, *l*, is adapted to enter within the other and is acted upon by a spring. The metal partition *j* is in communication by means of a conductor with one of the poles of the lamp, while the said projecting metallic part *k* is connected with the other pole.

When it is desired to render the apparatus operative, the cylinder *e* is placed upon the



fixed part *a*, the points *d d* being engaged in the metallic masses *b b*. Then upon this cylinder is engaged the foot of the apparatus provided with the part *i*, in whose recess the cylinder is adapted to enter, as already explained.

The current passes from the masses *b b* to the points *d d*, and from these latter it passes, on the one hand, to the partition *j* along a band *h* and, on the other hand, to the projecting metallic part *k* by way of the metallic part *f* and then proceeds to the lamp through the conductors of the apparatus. This method entirely obviates the necessity for the presence of conducting-wires upon the furniture, and to all appearance the illuminating appliance is merely placed thereon. Of course several such devices may be provided upon the same piece of furniture for the purpose of enabling several appliances to be arranged upon it or of enabling the position of the said appliances to be changed.

We would point out that we do not in any way confine ourselves to the device described. For example, we may make the masses *b b* of various shapes. Thus, for instance, they may consist of two parallel bands of a certain length, of two concentric circles, &c., thus enabling the appliance to be arranged upon any point in the length of the bands or concentric circles. It should be remarked that in certain cases the points *d d* may form part of the lamp-base itself.

A table arranged in such a manner as to permit of a lamp or the like being placed upon any point of the same has formed in its surface grooves, within which are lodged metallic cubes *b* or else bands of conducting metal, as above stated. Upon the surface of the table thus provided are arranged a sheet of asbestos *m* and a sheet of india-rubber *n*. The connections with the cables or bands *b* are effected in any suitable manner. It will of course be understood that at the extremities of the table the section of the conducting-bands are covered with an insulating-sheet. We are thus able to arrange the conducting masses *b b* in the form of superposed bands or sheets separated by an insulating-layer *o*, Fig. 6. In this case the points *d d* would be of unequal lengths, and the longer point should be covered by an insulating-sheath *p* at that portion of it which is in the thickness of the first conducting-sheet. This arrangement may be applied to partitions, floors, or the like, and covers may be made which may merely be placed upon the table if it is desired that this latter should remain intact.

We would point out that the points *d d* might be adapted directly to the base of the incandescent lamp which it is desired to place in circuit and form an integral portion of its socket, as this might be advantageous under certain conditions—for example, in order to rapidly form a luminous sign.

Our invention is also applicable to the es-

tablishment of luminous letters or signs, especially for advertising purposes. We also reserve the right to constitute the metallic masses intended for the reception of the points in various manners, enabling electrical communication with the points and their penetration. They may consist of metallic wires, thin metal sheets, lead shot, sheet-tin, plum-bago, &c. The points need not necessarily be fixed to a separate part *e*, but may be adapted directly to the appliance. In certain cases this would constitute a simplification of the device.

In certain circumstances the invention may be simplified by mounting the lamp directly upon a socket which is rigidly connected with a suitable part. This extremely simple arrangement may be useful in certain applications of our invention where decorative effect is not an object.

What we claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of a plurality of electric parallel conducting-bands laid in the grooves of a table or other support and connected alternately to the positive and negative poles of an electric generator, an insulating-block, a pair of conducting projections secured thereto and each of which is adapted to penetrate one of the contacts, and a separate contact-plate suitably connected to each of said projections.

2. The combination with a plurality of electric contacts connected respectively with the positive and negative poles of an electric generator, and mounted in a table or other suitable support, of an insulating-block having conducting projections thereon adapted to penetrate the bands, contact-plates connected respectively to said projections and mounted on separated portions of said block, a socket-piece in the base of a translating device adapted to receive said block and contacts on said socket-piece adapted to engage said plates and connected to the conductors leading to said translating device.

3. The combination with a plurality of electric contacts connected respectively with the positive and negative poles of an electric generator, and mounted in a table or other suitable support, of an insulating-block having conducting projections thereon adapted to penetrate said contacts, contact-plates, one embracing said block and the other seated in a recess in the upper end thereof, a socket-piece in the base of a translating device adapted to receive said block, an annular contact on said socket-piece connected with one of the conductors leading to said translating device and adapted to engage the contact-plate embracing said block, and a yieldingly-mounted contact on said socket-piece connected with the other conductor leading to said translating device and adapted to engage the contact-plate seated in the recess in said block.

4. The combination with a plurality of elec-



tric contacts connected respectively with the positive and negative poles of an electric generator, mounted one above the other in a table or other support and separated by a layer  
5 of insulating material, and a layer of easily-penetrable insulating material on the top of said table or support above said contacts, of a circuit-closing device having projections thereon terminating at different levels, and  
10 adapted to be inserted through said layer of penetrable insulating material to respectively

engage said contacts, and insulating material on one of said projections, as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ERNEST GREIL.  
EMILE AUDIGER.

Witnesses:

GUSTAVE DUMONT,  
EDWARD P. MACLEAN.