

(No Model.)

G. W. RIBBLE.
ELECTRIC SWITCHBOARD.

No. 592,123.

Patented Oct. 19, 1897.

Fig. 1.

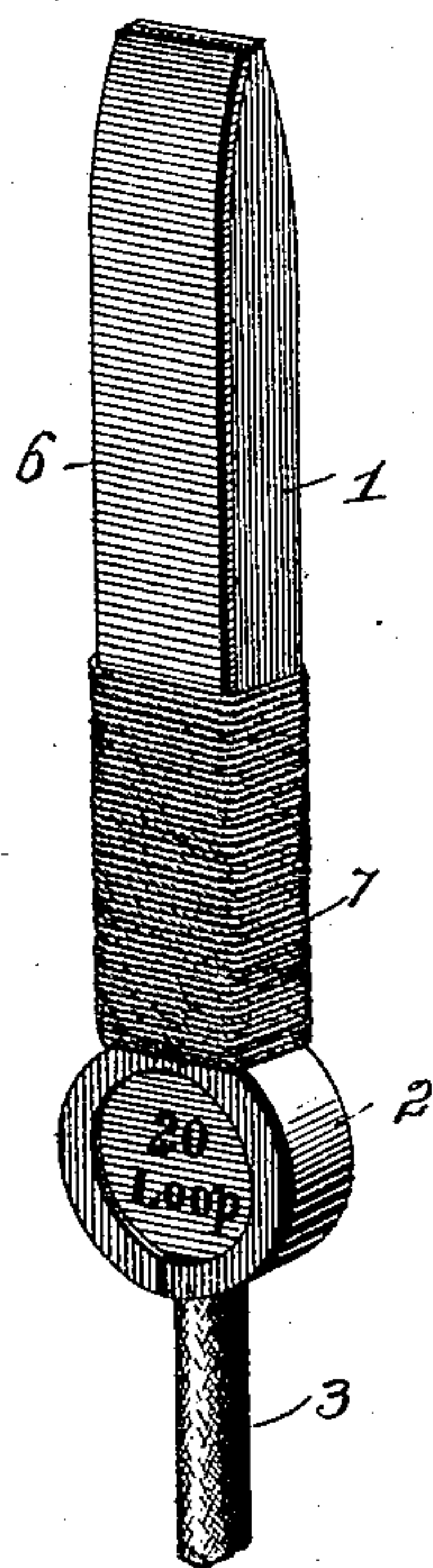


Fig. 2.

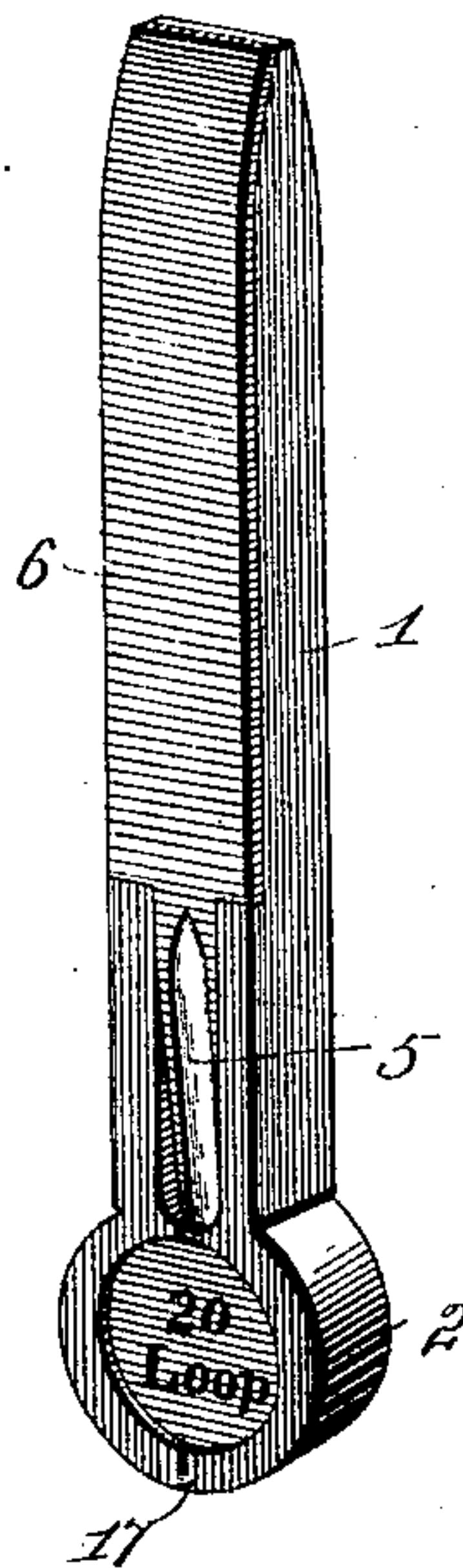


Fig. 3.

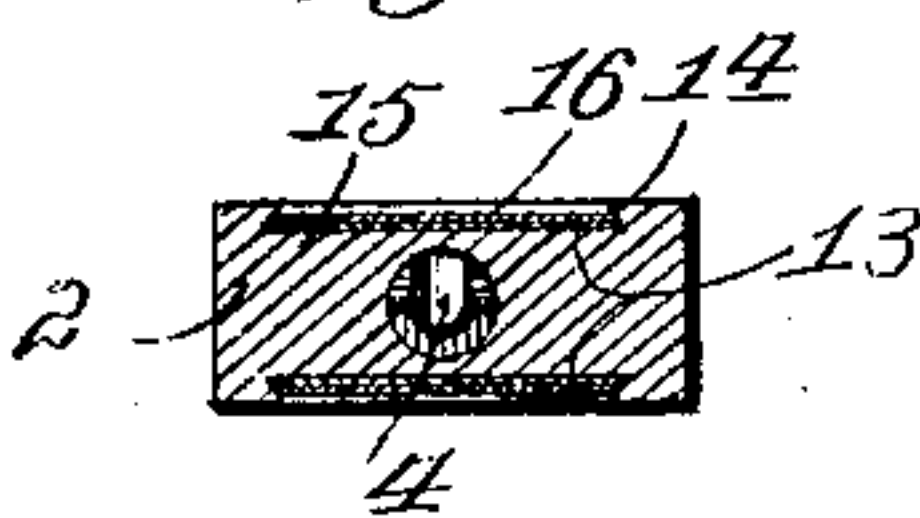


Fig. 6.

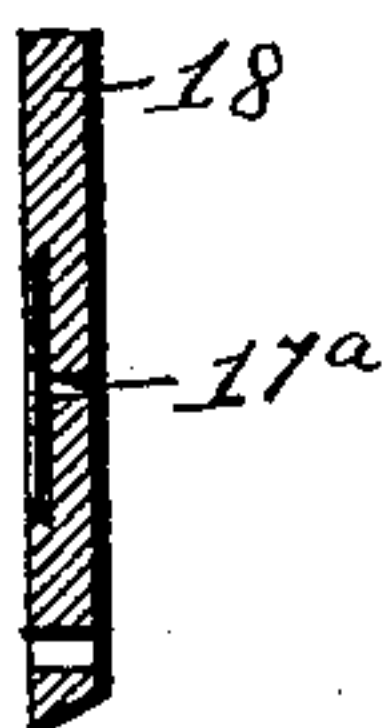


Fig. 4.

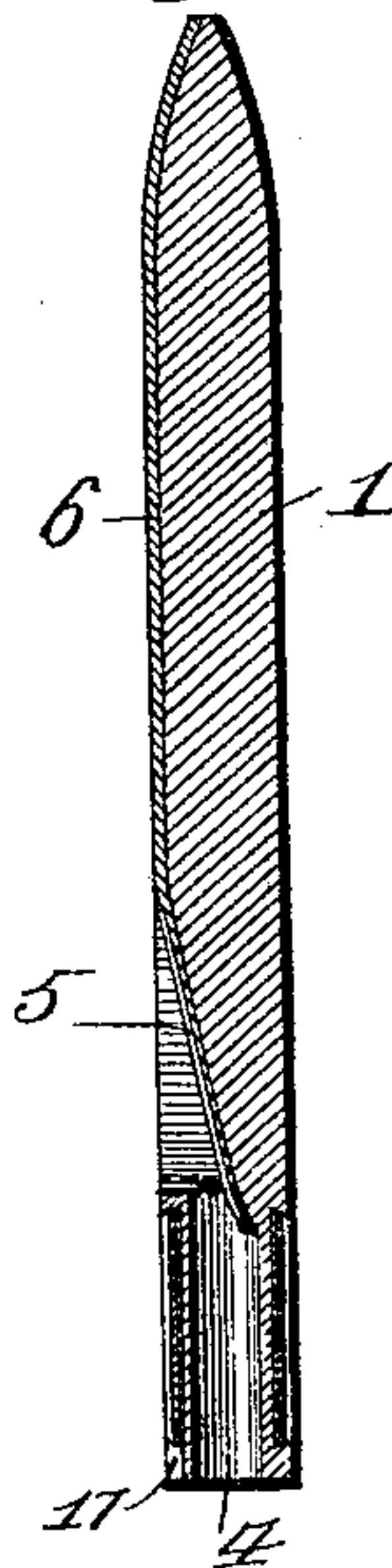
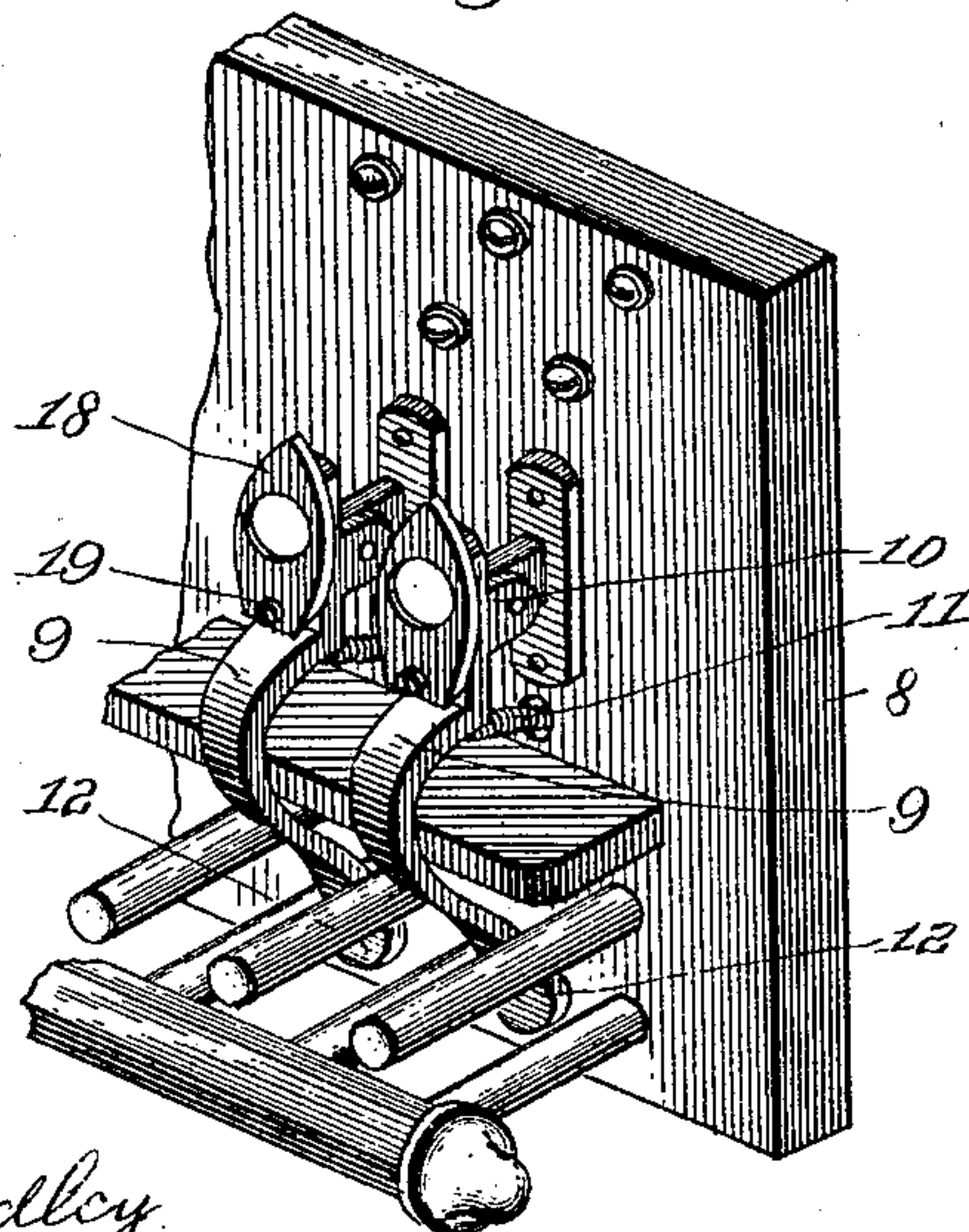


Fig. 5.



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ELECTRIC SWITCHBOARD.

SPECIFICATION forming part of Letters Patent No. 592,123, dated October 19, 1897.

Application filed August 19, 1897. Serial No. 648,794. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. RIBBLE, a citizen of the United States, and a resident of Hyattsville, in the county of Prince George and State of Maryland, have invented certain new and useful Improvements in Electric Switchboards, of which the following is a specification.

My invention relates to switchboards of the exchange type employed for the purpose of electrically combining or connecting any two of a large number of outlying conductors, or for combining or connecting said conductors with the different instruments in a station.

The arrangement of such switchboards now generally in use, entails considerable confusion unless the different terminals employed for making the electrical connections are suitably marked. The parts are not adapted to receive anything more than mere arbitrary signs to distinguish them, so that they can be operated only by those who have familiarized themselves with the particular markings of each switchboard. Moreover, there has been no satisfactory way of applying marks to them in a durable manner unless the parts be engraved or otherwise permanently inscribed. This method is undesirable for the reason that the parts are subject to wear and require frequent repair, and when removed for this purpose they are customarily shipped from a large number of places to a general repair-shop and are seldom returned to the same place in which they were last in use, so that any markings which they may have had are thereafter inappropriate.

It is the object of my present invention to devise means whereby the parts of the switchboard system herein referred to, or analogous apparatus, may be labeled with any desired specific inscription in a manner which will be permanent until intentionally removed and at the same time removable or changeable at will. To accomplish this object, I form in or upon some parts of the terminals to be brought together, or some parts associated with them, depressions or recesses which will receive disks or plates upon which any desired inscription may be placed, the sides of the depression or recesses being undercut or over-

hanging in such a way as to engage the inserted disk or plate and hold it securely against accidental displacement.

The disk or plate may be of some flexible or yielding material which will adapt it to spring past and then expand beneath the overhanging edge of the depression or recess, or the material in which the depression or recess is formed may be of a sufficiently resilient nature that its walls or sides will yield upon the introduction of the disk or plate.

According to one method of carrying out my invention I employ a paper disk or plate upon which is written, printed, or otherwise applied any desired descriptive matter, and which may be readily introduced into the depression or cavity; and I preferably apply over said disk or plate a disk of celluloid, horn, or other transparent and flexible material.

According to another plan I may employ a glass disk and depend upon expansion of the side of the depression or recess to permit the edge of the glass to catch beneath the overhanging edge of said depression or cavity.

A further feature of my improved construction consists in providing an opening leading into the cavity beneath the disk or disks inserted therein, in such a manner that a small instrument, such as a pin, may be introduced and made to engage beneath the removable portions to displace them at will.

My invention will be fully understood upon reference to the accompanying drawings, in which I have shown for the purpose of illustration a common form of jack, wedge, and conducting-cord, such as are employed in telegraphic and other switchboards.

In said drawings, Figures 1 and 2 are perspective views showing a wedge with and without the conducting-cord with which it is customarily provided. Fig. 3 is a transverse section through the end of said wedge. Fig. 4 is a longitudinal section of the wedge. Fig. 5 is a perspective view of a portion of a series of jacks beneath which the wedges are introduced when it is desired to make an electrical connection. Fig. 6 is a transverse section through a marking-plate.

It will be understood that in practice a large number of wedges 1 are employed, having an

attaching-head 2 for the conducting-cord 3, which passes up through an end opening 4 and soldered upon the attaching end 5 of the conducting-strip 6. The soldered connection 5 and lower portion of the strip 6 are thereafter wrapped with binding 7. Each conducting-cord has connection with one of the series of electrical devices or conductors to be connected. A corresponding number of jacks 10 are provided, mounted on a suitable base 8, and each comprising a jaw 9, pivoted at 10, and having springs 11, which hold the outer contact ends 12 upon the conducting-strips 6 of the wedges. When the latter are inserted 15 beneath them, these jacks are in electrical connection with other conductors or instruments to be thrown into circuit. Various combinations of circuits and connections are made by selecting various wedges and introducing them beneath the jaws of appropriate 20 jacks.

With the necessity of quick work and avoidance of mistakes the desirability of having the jacks and the wedges plainly marked will 25 be appreciated. In order to mark these parts, I form in each of them an undercut depression or recess 13, beneath the overhanging walls 14 of which are held a marking-disk 15, upon which may be written any desired inscription, and a transparent covering-disk 16. 30 These disks are preferably of flexible material, which permits their being forced into the opening and permitted thereafter to expand beneath the walls, so that they will be held against displacement for any length of 35 time. In the wedges I prefer to form such a cavity or depression on either side of the head 2. In order to remove the disk, it is simply necessary to introduce a pin into the channel 40 17 (shown in Figs. 1, 2, and 4) until the point comes beneath the disks, when they may be lifted out with ease. In marking the jacks the marking-plates 18 are formed with the same undercut depressions or cavities 13, into 45 which are introduced the same disks described with reference to the wedge. In these parts, however, the disks are preferably removed by introducing an instrument through an opening 17^a, formed in the backs of the marking-plates 18. To provide for marking and 50 removing the plates 18, they are secured to the jaws by screws 19, so that they may be readily removed for manipulation.

While I have described the use of a paper 55 disk with a transparent covering to be secured in the depressions or recesses, I desire it understood that it will not be departing from the spirit of my invention if the transparent disk is omitted or if the inscription is placed directly upon the outer disk and the 60 paper disk omitted. In the latter case the outer disk need not be transparent, but may be of a common form of opaque celluloid, or

the inscription may be written on the under side of a disk of transparent celluloid. 65

My invention is not restricted to any precise details, but consists in the general plan described whereby parts of electric switchboards or other like structures may be labeled 70 by disks held removably in recesses or depressions formed in the parts to be labeled or in some parts associated with them.

A system of marking as above described is cheap, convenient, effective, and durable, besides being changeable at will, and offers a 75 complete offset for the difficulties which have heretofore been encountered in manipulating apparatus of the kind to which the invention applies.

Having thus described my invention, the 80 following is what I claim as new and desire to secure by Letters Patent:

1. In an electric switchboard or other like structure, a terminal or circuit-closing part 85 formed with a depression or recess having undercut or overhanging sides, and a marking disk or plate fitting in said depression or recess, engaging beneath the sides and removably held thereby, as explained.

2. In an electric switchboard or other like 90 structure, a terminal or circuit-closing part formed with an undercut depression or recess, and a disk or plate fitting beneath the overhanging edge of the depression or recess, made of flexible material to adapt it to be sprung 95 into and out of the depression or recess past the overhanging edge, and adapted to receive a designating inscription, substantially as herein set forth.

3. In an electric switchboard or other like 100 structure, a terminal or circuit-closing part formed with an undercut depression or recess, adapted to receive and retain a marking disk or plate, and with a pin opening or channel 105 through which an instrument may be introduced beneath the disk or plate for removing it, as explained.

4. In an electric switchboard or other like structure, a terminal or circuit-closing wedge 110 having an enlarged head, through which the conducting-cord is introduced; said head being formed on its faces with undercut depressions or recesses in which are secured marking-disks of flexible material; substantially 115 as herein described.

5. In an electric switchboard, the combination with the jack beneath which the wedge is introduced, and the removable marking-plate having an undercut depression therein 120 and a flexible marking-disk in said depression; said plate having a pin-opening through the back into said depression, as explained.

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