No. 668,300. Patented Feb. 19, 1901.

H. E. WAITE.

INSULATING SUPPORT FOR ELECTRICAL CONDUCTORS.

(Application filed Nov. 16, 1900.)

(No Model.)

Fig. 1.

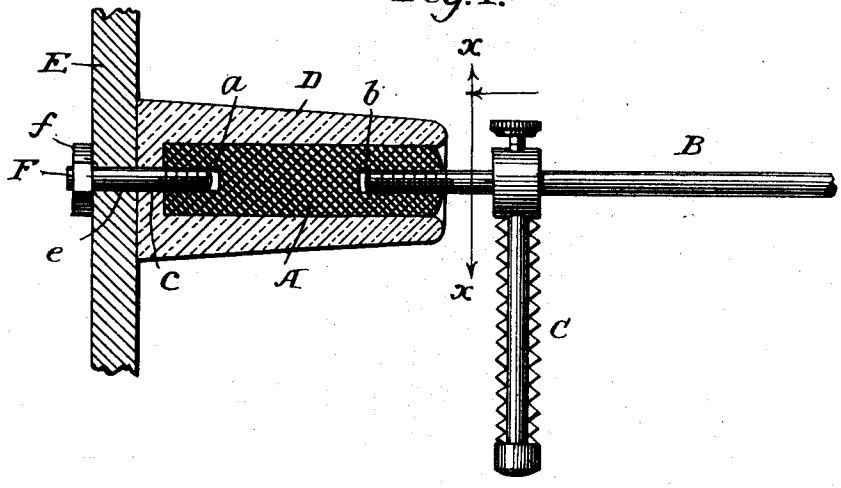


Fig. 2.

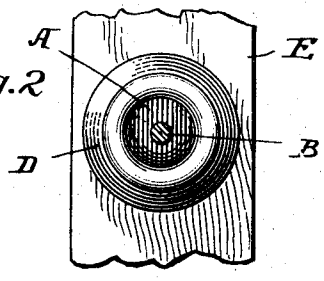
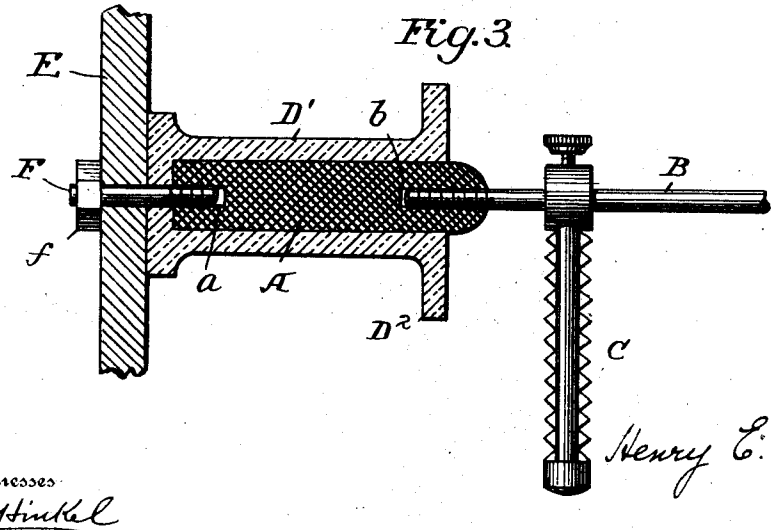


Fig. 3.



Witnesses

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HENRY E. WAITE, OF SAN FRANCISCO, CALIFORNIA.

INSULATING-SUPPORT FOR ELECTRICAL CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 668,300, dated February 19, 1901.

Application filed November 16, 1900. Serial No. 36,767. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WAITE, a citizen of the United States, residing in the city and county of San Francisco, in the State of California, have invented certain new and useful Improvements in Insulating-Supports for Electrical Conductors, of which the following is a specification.

My invention relates to insulating-supports for electrical conductors, but more particularly to an insulating-support for the collectors or combs of influence-machines.

Heretofore the collectors of influence-machines have been horizontally supported from the machine-casing by means of hard-rubber insulators, as illustrated in the United States patent granted to me May 9, 1893, No. 497,226. These rubber insulators, however, tend to soften and bend or become distorted by the weight of the collector and its holder upon a rising of the temperature within the air-tight casing of the machine, the combs thus being allowed to rub against the revolving plates, interfering with the action of the machine and in some cases destroying the plates. To remedy this difficulty, I have devised a collector-support of simple construction which combines the advantages of hard rubber as an insulator with the stiffness when exposed to heat necessary to prevent the collectors from touching the revolving plates in an influence-machine and obviate the necessity for continually adjusting the collector. While this is one use to which my insulator may be put, it is obvious that its use is not confined to influence-machines, but it may be applied in other cases where an insulating-support of hard rubber or other like material is required to retain its rigidity under heat.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of the insulating-support and a collector, while Fig. 2 is an end view on the line *x x* of Fig. 1. Fig. 3 is a section of another form of support.

In the drawings, A represents a piece or plug of insulating material, as hard rubber or the like, being a material which softens or becomes distorted under heat and pressure, with screw-threaded recesses *a* and *b* in its ends, in one of which recesses *b* a supporting-rod B for the collector or comb C of an influence-machine is adapted to screw.

D is an insulating-socket, preferably of glass, but any suitable insulating material, as porcelain or wood, of the required rigidity which preserves its stiffness under a slight excess of heat may be used. In the center of the bottom of socket D a bolt-hole *c* is pierced, which is adapted to register with recess *a* in one end of the hard-rubber piece A when the latter is snugly fitted or embedded within socket D, which supports it.

In my construction, as will be seen, no screw-threads are necessary between the rubber piece or plug A and socket D, the plug merely fitting tightly within the socket.

E represents part of the casing of an influence-machine or any other piece or block to which my support may be fastened. As shown, a bolt F is passed through the socket and engages with the threads in recess *a* of plug A. The shank of the bolt is passed through a hole *e* in the casing E, and a nut *f* on the end of the bolt secures the whole support to the casing, and by this means also the hard-rubber plug is securely held within its socket without the aid of screw-threads.

In the form shown in Fig. 3 the insulating-socket D′ is shown as provided with a laterally-extending flange D^2, which aids in insulating the supporting-rod B as it increases the insulating distance between the rod and the sides of the case, so that the current is not likely to jump from the rod to the case when the collectors are highly charged.

Without limiting myself to the precise details as shown in the drawings, I claim as my invention—

1. An insulating-support for electrical conductors, consisting of a plug of hard rubber to which the conductor is removably fastened, the said plug being embedded within and supported by a socket of insulating material which prevents the plug from becoming distorted by heat and by the weight of the conductor, substantially as described.

2. An insulating-support for the collectors of influence-machines, consisting of a plug of

hard rubber tightly fitting within a rigid insulating-socket, the said plug having screw-threaded recesses in its ends, one being adapted to receive and hold a collector and the other to hold a bolt which passes through the socket for fastening the support to a casing, substantially as described.

3. An insulating-support for electrical conductors, comprising a plug of hard rubber, a collector-supporting rod mounted therein, and a rigid insulating-socket having a lateral flange, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY E. WAITE.

Witnesses:
G. A. W. FOLKERS,
GEO. A. YOUNG.