

No. 871,535.

PATENTED NOV. 19, 1907.

F. B. THATCHER.  
ELECTRIC WIRE CONNECTION..  
APPLICATION FILED JAN. 31, 1907.

Fig. 1.

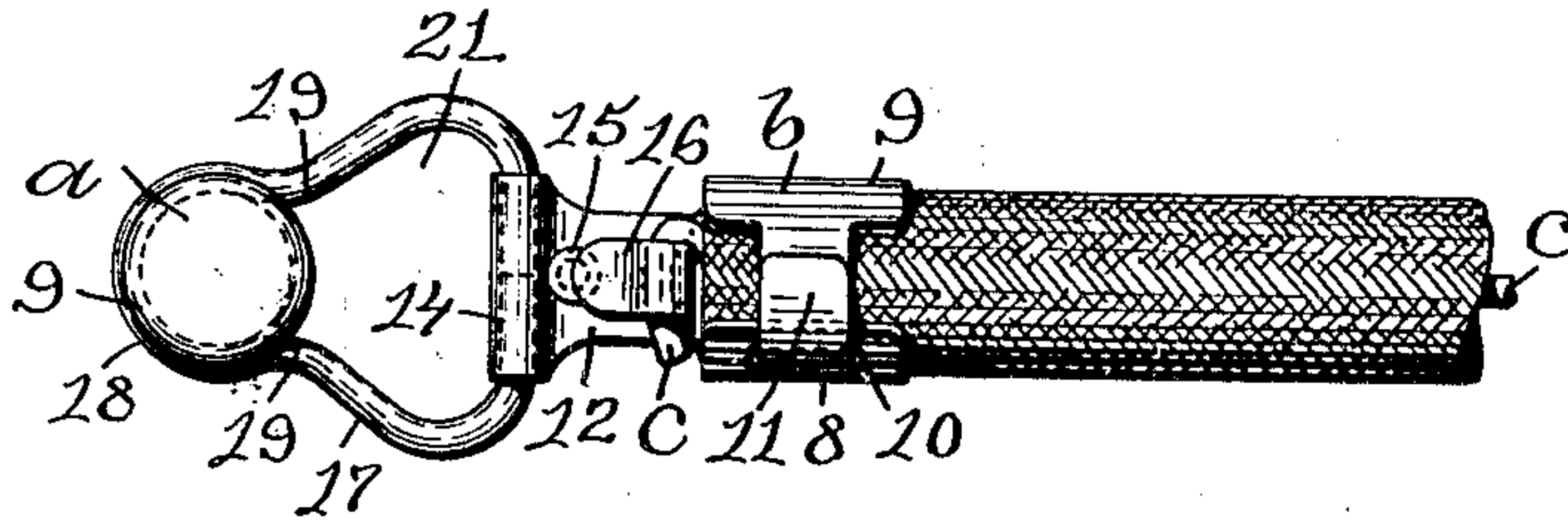


Fig. 2.

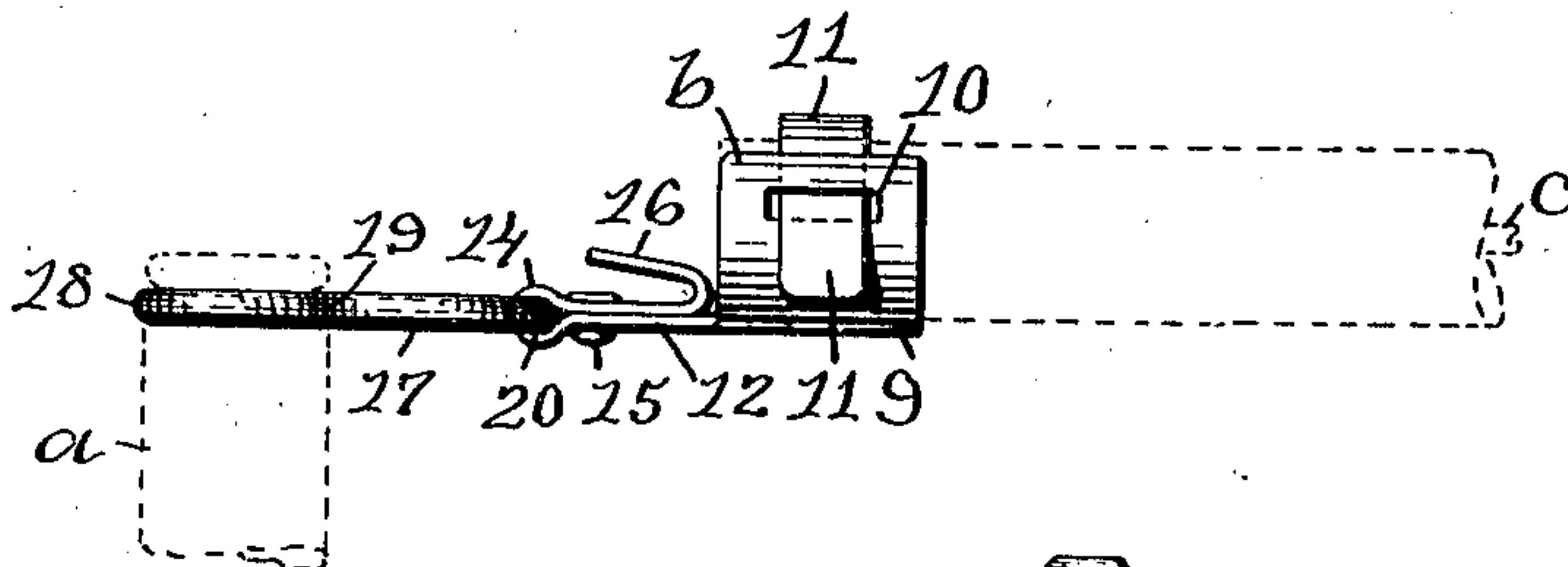


Fig. 3.

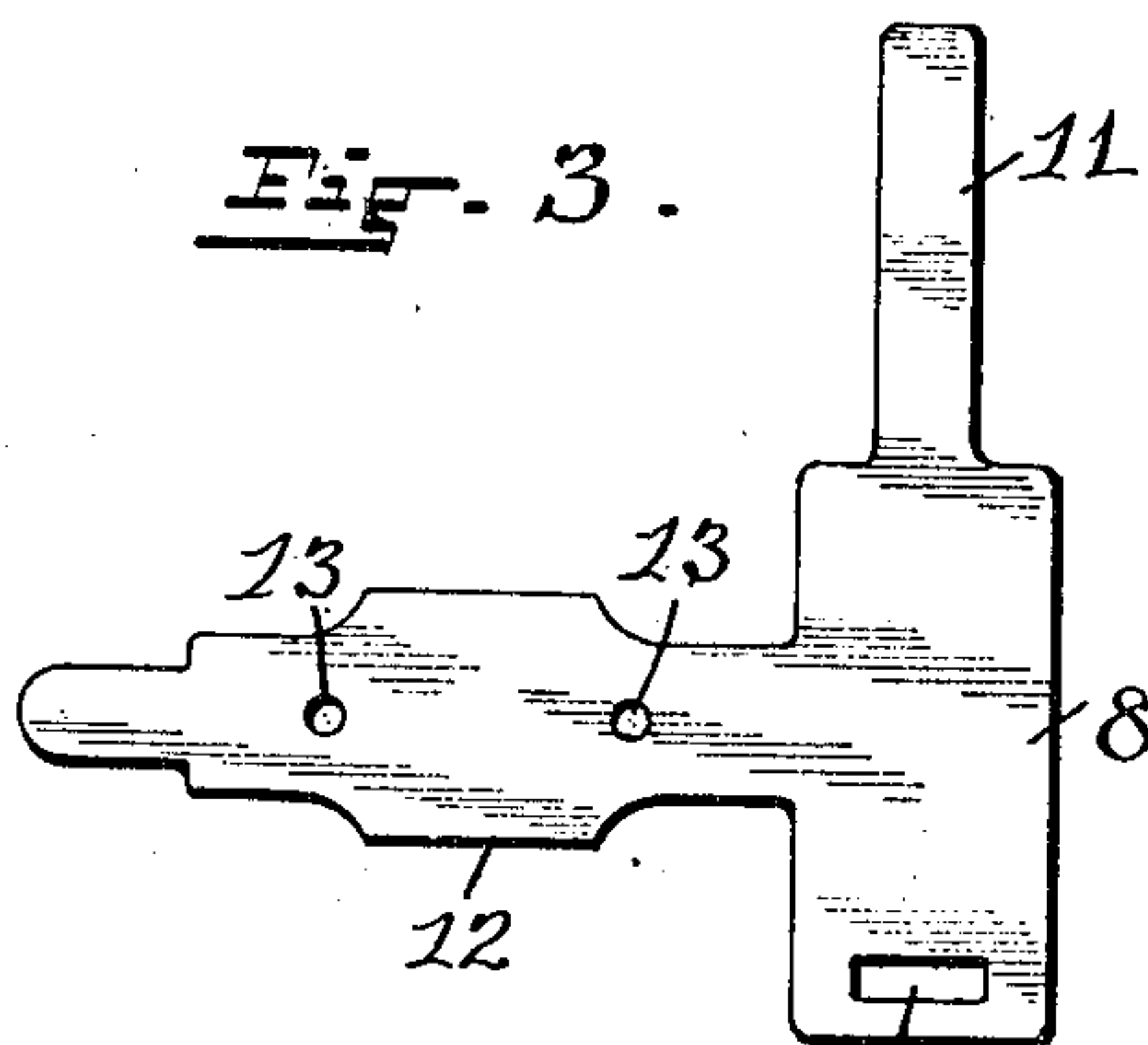


Fig. 4.

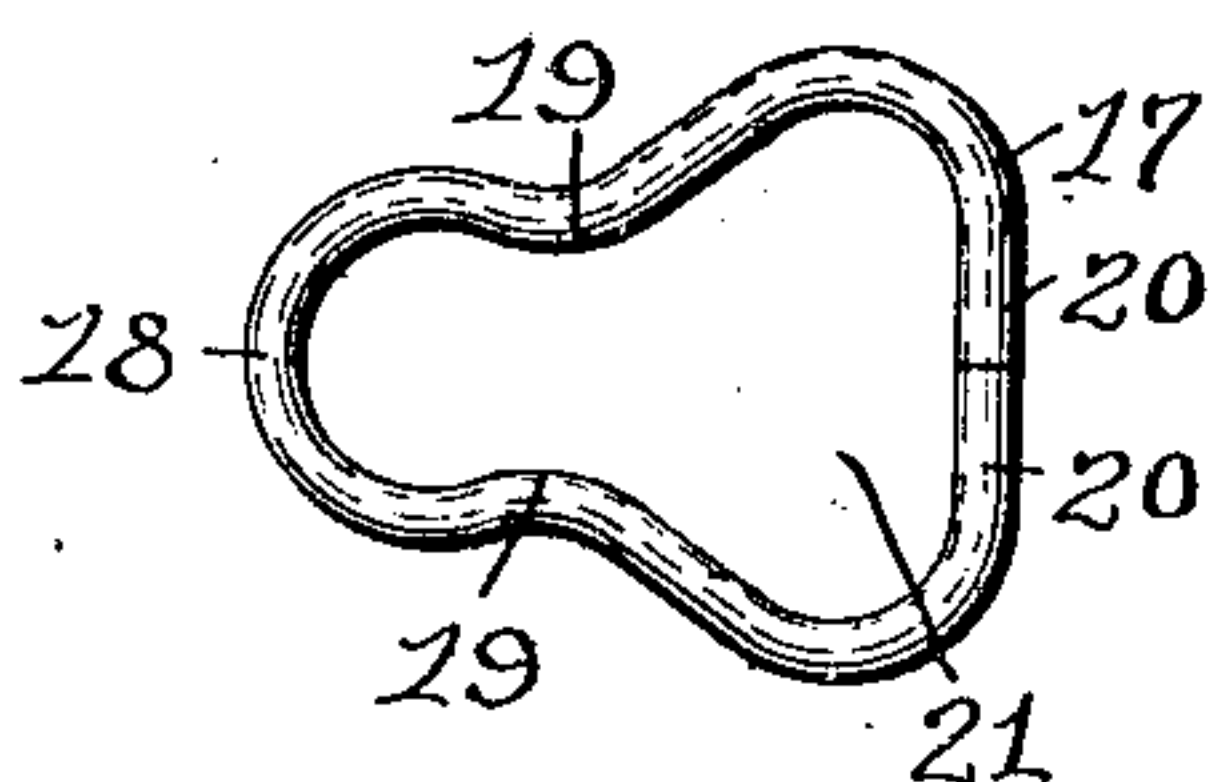
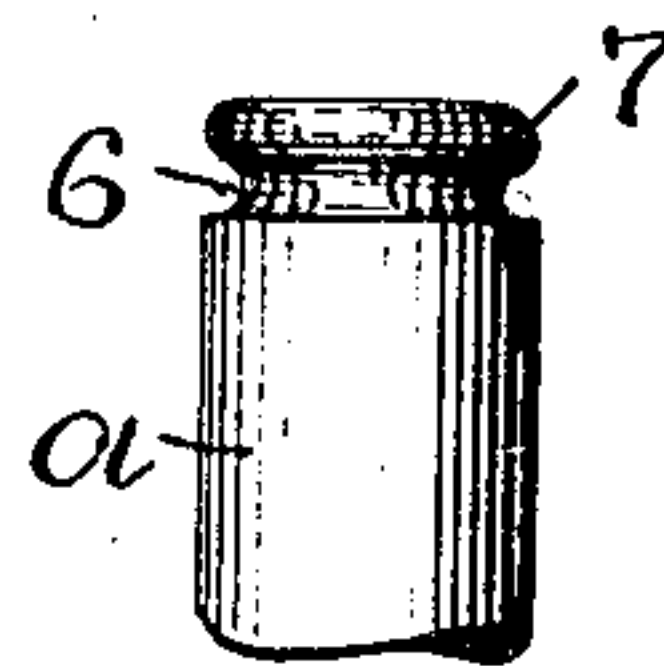


Fig. 5.



WITNESSES:

Chas. H. Luther  
Ada C. Fagerty.

INVENTOR:

Frederick B. Thatcher  
Joseph A. Miller

ATTORNEY:



# UNITED STATES PATENT OFFICE.

FREDERICK B. THATCHER, OF PROVIDENCE, RHODE ISLAND.

## ELECTRIC-WIRE CONNECTION.

No. 871,535.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed January 31, 1907. Serial No. 355,036.

*To all whom it may concern:*

Be it known that I, FREDERICK B. THATCHER, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Electric-Wire Connections, of which the following is a specification.

This invention has reference to an improvement in electric wire connections used for connecting electric wires to spark plugs, electric bells, batteries or other electric appliances.

In the use of a variety of electric appliances, including spark plugs, having electric wire connections, it is essential at times to quickly remove the wire from the same to facilitate the detachment of the appliance or spark plug for cleaning or other purposes.

The object of my invention is to improve the construction of electric wire connections for spark plugs or other electric appliances, whereby the operations of attaching or detaching the wire to the same are facilitated and the wire firmly secured to the appliance without the use of nuts or similar devices.

My invention consists in the peculiar and novel construction of electric wire connections adapted to facilitate the connecting of electric wires to spark plugs, binding posts or similar devices and having details of construction, as will be more fully set forth hereinafter and claimed.

Figure 1 is a top view of my improved electric wire connection, showing the same in the connected position and electrically connected to an electric wire. Fig. 2 is a side view of the wire terminal member with the wire and upper end of the binding post connection shown in broken lines. Fig. 3 is a face view of the blank forming the body of the wire terminal member. Fig. 4 is a face view of the spring wire loop of the wire terminal member, and Fig. 5 is a vertical side view of the upper end of the binding post connection.

In the drawings, *a* indicates an electric binding post connection, *b* an electric wire terminal connection, and *c* an electric wire covered with the usual insulating material.

The binding post connection *a* has an annular semi-circular groove 6 merging into an annular rounded lip 7 on the end of the connection, as shown in Figs. 1 and 5, otherwise the connection may be constructed to form a part of or be secured to a spark plug, battery or other electrical appliance.

The terminal connection *b* consists of a member 8 constructed from a blank, shown in Fig. 3, stamped from sheet metal and bent to form the semi-cylindrical portion 9 in one side of which is a slot 10, and from the other side of which extends a strap 11 adapted to pass through the slot 10, a tongue 12 extending outward from the end of the portion 9 and having the holes 13 13 and bent or doubled centrally on itself to form the transverse tubular end 14 and to bring the holes 13 13 into a position to coincide, a rivet 15 in the holes 13 13 for securing the doubled-over parts of the tongue together and a hook-shaped portion 16 formed on the end of the tongue 12 by bending the end of the tongue back toward the cylindrical end 14 and a loop member 17 constructed of spring wire of a predetermined length bent centrally to form a semi-circular end 18 adapted to fit in the groove 6 in the binding post connection *a*, then toward each other and outward at an angle to form the rounded shoulders 19 19, the distance across from which is somewhat less than the inner diameter of the end 18, then inward toward each other to bring the ends together and form the straight portions 20 20 and the opening 21, as shown in Fig. 4, through which the end of the binding post connection *a* is inserted in making the connection.

The ends 20 20 of the loop member 17 are held in the transverse tubular end 14 of the member 8, as shown in Figs. 1 and 2, and the member 8 secured to the end of the wire *c* by placing the wire adjacent the end in the cylindrical portion 9, passing the tongue 12 through the slot 10 and bending it back on itself, bending the end of the wire around the hook-shaped portion 16 and forcing the hook-shaped portion 16 down over the end of the wire against the tongue, as shown in Fig. 1.

In the use of my improved electric wire connections a wire is quickly and firmly secured to a binding post connection *a* by placing the loop 17 over the connection *a* in a position for the end of the connection *a* to extend through the opening 21 in the loop and by a pull on the terminal connection *b* force the shoulders 14 14 on the loop apart against the spring tension of the loop and allow the semi-circular end 18 of the loop to snap into the groove 6 in the connection *a*, as shown in Fig. 1. By reversing the operation the wire is quickly released from



the connection *a* and when this connection forms a part of a spark plug, the operation of removing the plug for cleaning or other purposes is greatly facilitated.

- 5 It is evident that one end 20 of the loop 17 could be rigidly secured in the end 14 of the member 8 by forcing a portion of the member 8 into the end 20 of the loop by the use of a prick punch or other suitable tool, without  
10 materially affecting the spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent;—

- 15 1. An electric wire terminal consisting of a member constructed of sheet metal and shaped to have a semi-cylindrical portion in one side of which is a slot and from the other side of which extends a strap passing through  
20 the slot, a tongue extending outward from the semi-cylindrical portion and shaped to have a transverse tubular end and a hook-shaped portion, and a loop member constructed of spring wire bent to form a semi-  
25 circular end, a contracted portion adjacent the semi-circular end, an opening for inserting a binding post connection through the

loop and adapted to be secured in the tubular end of the terminal member.

2. An electric wire terminal *b* consisting 30 of a member 8 constructed from a sheet metal blank shaped and bent to form a semi-cylindrical portion 9 in one side of which is a slot 10 and from the other side of which extends a strap 11, a tongue 12 doubled on itself 35 and shaped to form a transverse tubular end 14, a rivet 15 securing the doubled-over parts of the tongue together, a hook-shaped portion 15 formed on the end of the tongue, and a loop member 17 constructed of spring 40 wire bent centrally to form a semi-circular end 18, then outward at an angle to form the contracted rounded shoulders 19 19, then inwards toward each other to form the straight portions 20 20 adapted to be held in 45 the tubular end 14 of the member 8 and forming an opening 21, as described.

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

FREDERICK B. THATCHER.

Witnesses:

ADA E. HAGERTY,  
J. A. MILLER.