

(No Model.)

H. J. SAVORY.

MACHINE FOR CONNECTING ELECTRIC CONDUCTORS.

No. 551,790.

Patented Dec. 24, 1895.

Fig. 3.

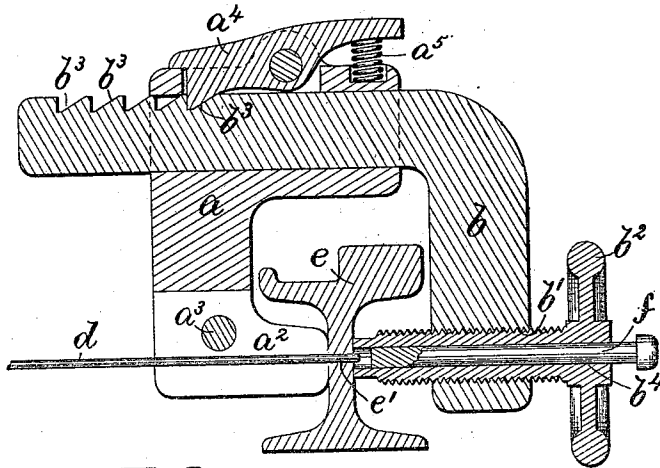


Fig. 1.

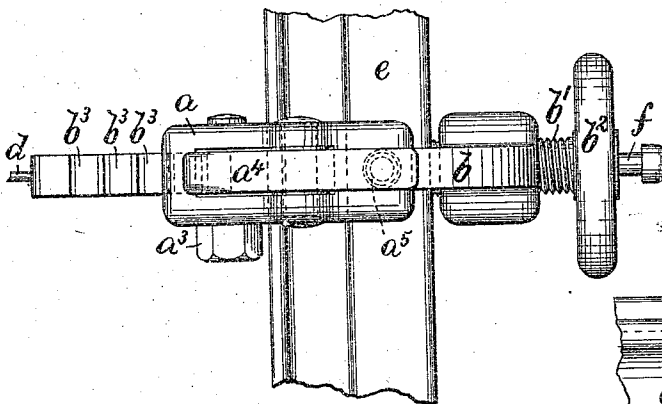


Fig. 2.

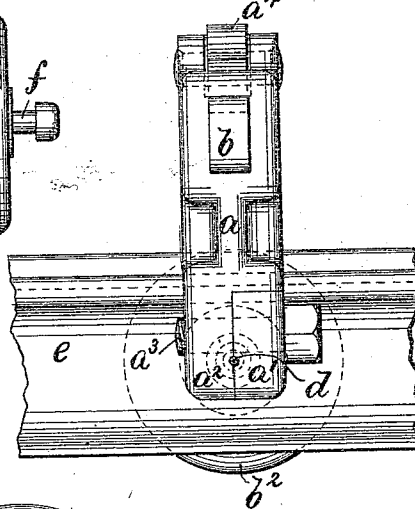
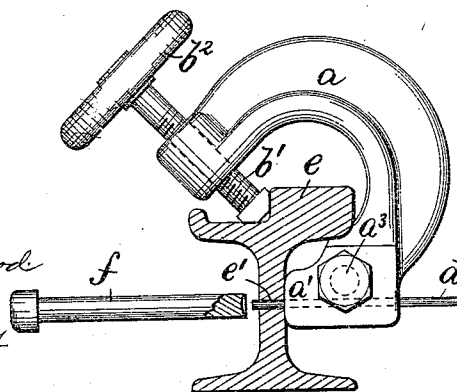


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

HARLIE J. SAVORY, OF SOMERVILLE, MASSACHUSETTS.

MACHINE FOR CONNECTING ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 551,790, dated December 24, 1895.

Application filed April 17, 1893. Serial No. 470,752. (No model.)

To all whom it may concern:

Be it known that I, HARLIE J. SAVORY, a citizen of the United States, residing at Somerville, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Machines for Connecting Electric Conductors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in machines for connecting a small electric conductor to a larger one, and more especially in connecting a wire within a perforation or hole in a railroad-track, and it has for its object to provide means whereby the wire is clamped and held firmly in its proper position to be connected to the rail, as will be fully set forth hereinafter.

The invention is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a plan view of the machine placed upon the rail of a railway-track in position to attach a wire to said rail. Fig. 2 represents an end elevation of the same. Fig. 3 represents a longitudinal section of the machine placed in position upon the rail. Fig. 4 represents a front elevation of a modified form of the machine, showing the same upon the rail in position to connect the wire to the rail.

Similar letters refer to similar parts on the different parts of the drawings.

The frame of the machine is preferably made in two pieces *a b*, which pieces are made adjustable in relation to each other, so as to adapt them to the variations in the form or size of the larger conductor to which the frame is to be clamped and allow it to be quickly removed from the said conductor.

The piece *a* is provided with a loose clamping-jaw *a'*, which, in combination with the fixed jaw *a''* formed on the lower end of the piece *a*, form clamping-jaws, between which the smaller conductor *d* is clamped by means of the screw-bolt *a'''*, which conductor is shown on the drawings as a wire.

The piece *b* is provided with the screw *b'*, which is screwed into a screw-threaded perforation in the lower part of said piece, in order to clamp the large conductor *e*, which conductor is shown on the drawings as a rail of a railroad-track, and said screw is provided with the hand-wheel *b''*, substantially as shown. The piece *b* is preferably made in L form, one arm of which receives the screw *b'* and the other is provided with the teeth *b''' b'''* and is guided back and forward within a perforation in the piece *a*. This allows the two pieces to be adjusted in relation to each other, so as to clamp various sizes and forms of large conductors *e*.

The piece *a* is provided with the pawl *a''*, which engages the teeth *b''' b'''* and holds the pieces of the frame in their adjusted relations against the strain caused by the screw *b'* in clamping the rail *e*. This pawl is automatically held in engagement with the teeth on the piece *b* by means of the spring *a'''*, but is released from said teeth by a downward pressure being exerted on the tail of the pawl. The screw *b'* is provided with a perforation *b''* from end to end of the same, within which the hand-set *f* is guided. This perforation is in a line with the wire *d* held within the clamping-jaws, so that the set *f* will come into contact with the wire when said set is driven through the perforation in the screw.

The operation of connecting the wire *d* to the rail *e* with my machine is as follows: The pieces *a* and *b* of the frame are spread apart so as to leave sufficient space between them to easily place the frame upon the rail. The wire *d* is inserted within the clamping-jaws in such a manner as to leave the end of said wire projecting beyond the face of the jaws a little more than the length of the perforation *e'* in the rail. The frame is then placed in such a position upon the rail as to allow the projecting portion of the wire *d* to enter the perforation in the rail. The two pieces of the frame are then pushed together as much as possible and the frame firmly clamped to the rail by means of the screw *b'*. The wire is then connected to the rail by upsetting it in the perforation with the hand-set *f*, which is driven through and guided in the perforation in the screw *b'*. The clamping-jaws prevent the wire from being driven back in the

perforation by means of the hand-set. This makes a very close and strong connection between the wire and the rail, and prevents all moisture from coming between their meeting surfaces, which is very essential in making connection between the wire and the rail in an electric-railway system.

It is not essential to make the frame in two pieces, as it may be made in one piece and the screw *b'* be increased in length so as to compensate for the variations in the size of the larger conductor. Neither is it essential to the working of my invention to have the hand-set guided by the machine while it is upsetting the wire, as it may be held in the hand of the operator, and the frame used simply to clamp and hold the wire in its proper place, substantially as is shown in Fig. 4.

I do not wish to confine myself to the particular form of frame nor wire-clamping device nor to the particular manner of clamping the frame to the rail, as shown in the drawings, as the same may be changed at will within the scope of mechanical skill without departing from the spirit of my invention.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. In a machine for connecting a small electric conductor to a larger one, a frame, provided with a clamping device to clamp it upon the larger conductor, and a clamping device to clamp the small conductor to the frame,

combined with a hand set to upset the small conductor within a perforation within the larger, substantially as set forth.

2. In a machine for connecting a small electric conductor to a larger one, a frame made in two pieces adjustable one upon the other to compensate for variations in the form and size of the larger conductor, to which the frame is to be clamped, a clamping device on one of the pieces adapted to clamp the frame to the larger conductor, and a clamping device on the other piece adapted to clamp the smaller conductor to the frame, combined with a hand set to upset the smaller conductor within a perforation in the larger conductor, for the purpose set forth.

3. In a machine for connecting a small electric conductor to a larger conductor, a frame provided with a clamping device to clamp the frame to the larger conductor and a clamping device to clamp the smaller conductor to the frame, combined with a hand set guided within guides on the frame and adapted to upset the smaller conductor within a perforation in the larger conductor, for the purpose set forth.

In testimony whereof I hereunto set my hand in the presence of two subscribing witnesses.

HARLIE J. SAVORY.

In presence of—

HENRY CHADBURN,
ANNA M. DOLLOFF.