

(No Model.)

C. L. W. BISCHOFF.
CONTROLLER HANDLE.

No. 541,419.

Patented June 18, 1895.

Fig. 1.

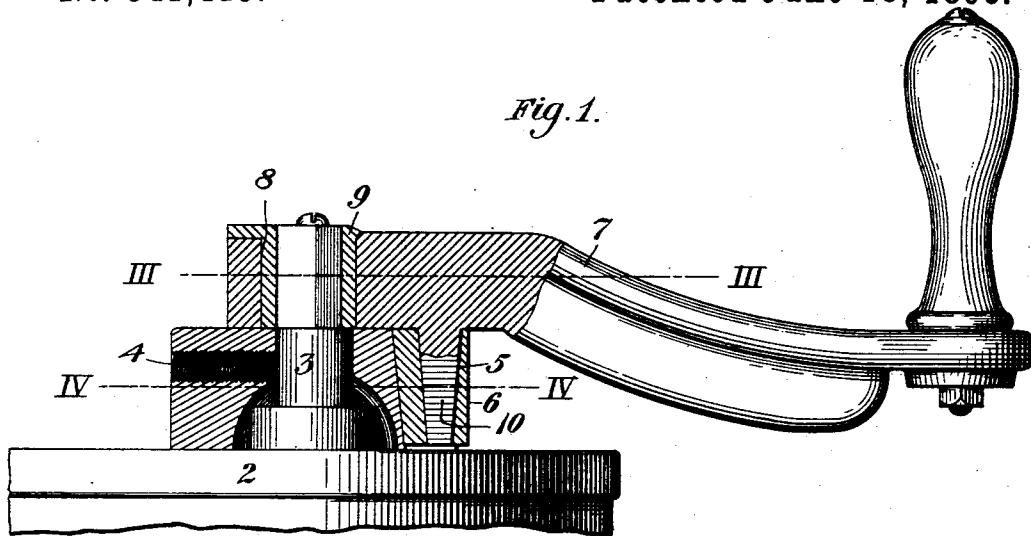


Fig. 2.

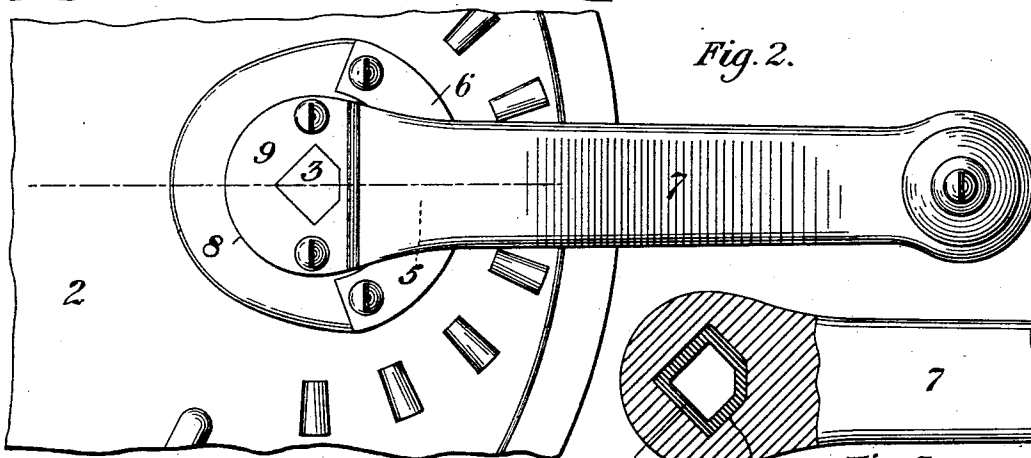


Fig. 3.

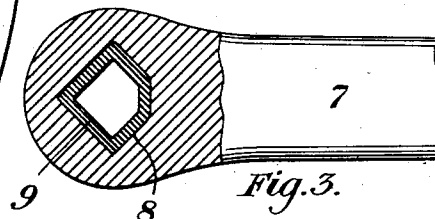


Fig. 4.

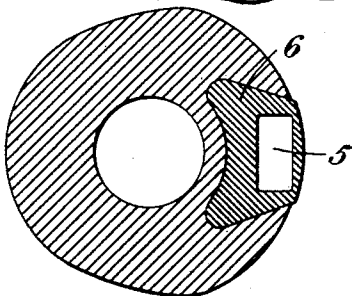


Fig. 5.

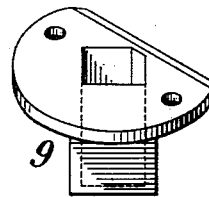
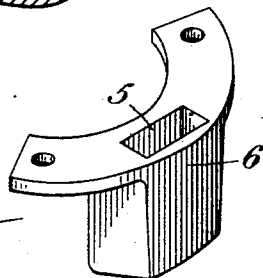


Fig. 6.



WITNESSES

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CHARLES L. W. BISCHOFF, OF PITTSBURG, PENNSYLVANIA.

CONTROLLER-HANDLE.

SPECIFICATION forming part of Letters Patent No. 541,419, dated June 18, 1895.

Application filed December 23, 1894. Serial No. 533,150. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. W. BISCHOFF, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Controller-Handles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, partly in section, of my improved handle. Fig. 2 is a plan view of the same. Fig. 3 is a horizontal sectional view on the line III III of Fig. 1. Fig. 4 is a like view on the line IV IV of Fig. 1. Fig. 5 is a detached view of the bushing in the handle-socket, and Fig. 6 is a like view of the bushing in the sleeve.

Heretofore, in handles for electric motors, great trouble has been experienced owing to the wear of the socket, also from the fact that the handle is necessarily loose, and as it has to be easily removable, by bearing down on the handle it is frequently thrown off the shaft of the controlling box, leaving the motor without control.

The object of my invention is to provide a handle which is easily fitted on the controlling-box shaft, easily removable therefrom, and at the same time is rigid and securely fixed in position, so that it is impossible to throw it off the shaft by accident.

In the drawings, 2 represents the top of the controlling box; 3, the shaft of the same. Fitting over this shaft and resting on the top of the controlling box, is a metallic collar, which is keyed to the shaft by a screw-key fitting in the threaded socket 4. The collar may be otherwise secured to the shaft or made integral therewith, in either case it becoming a part of and moving with the shaft proper. Formed in this collar is the vertical locking key socket 5, which is preferably formed in a bushing 6, which is inserted in the collar, the purpose of which is to avoid the destruction of the whole collar by the wear on the socket, it being readily understood that when the socket becomes worn a new bushing may be inserted in place of the old one.

The handle 7, which is designed to be easily removable from the shaft 3, is provided with

a socket 8 of a shape to conform to the angular shape of the shaft. This socket is also provided with a bushing 9, so that when the socket becomes worn a new bushing may be inserted.

Extending from the lower face of the handle is a key or lug 10, which fits in the socket 5 in the bushing 6, the effect of which is to effectually connect the handle with the collar, and to prevent the rear portion of the handle from being thrown off the shaft by pressure on the forward part.

The advantages of my invention will be appreciated by those skilled in the art.

The collar and handle being securely attached to each other, and there being a double securing device in the socket 8 of the collar and the actuating socket 5 of the handle, not only is the danger of the accidental detachment of the handle entirely obviated, but all loose motion is taken up, and thereby the motor is completely under the control of the motorman, so that the danger of burning out the motor is greatly lessened.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a controller-shaft having a part provided with a socket extending substantially parallel with the shaft, of a handle having a socket operatively connecting it to the shaft and provided with a lug entering the first mentioned socket, whereby a double fastening is provided; substantially as described.

2. The combination with a controller-shaft having a collar provided with a socket extending substantially parallel with the shaft, of a handle having a socket operatively connecting it to the shaft and provided with a lug entering the collar-socket, whereby a double fastening is provided; substantially as described.

3. The combination with a controller-shaft having a part provided with a socket extending substantially parallel with the shaft, of a removable bushing for said socket, and a handle arranged to fit over the shaft and having a lug entering the socket; substantially as described.

4. A handle for the controller-shaft of electric motors in combination with a collar fastened to the controlling-shaft and provided with a socket, a removable bushing secured
5 to said collar and fitting in said socket, a projecting lug on the handle adapted to engage with the bushing in the collar, and another removable bushing in the handle-socket

adapted to fit on the controlling-shaft, substantially as described. 10

In testimony whereof I have hereunto set my hand.

CHARLES L. W. BISCHOFF.

Witnesses:

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H. M. CORWIN.