

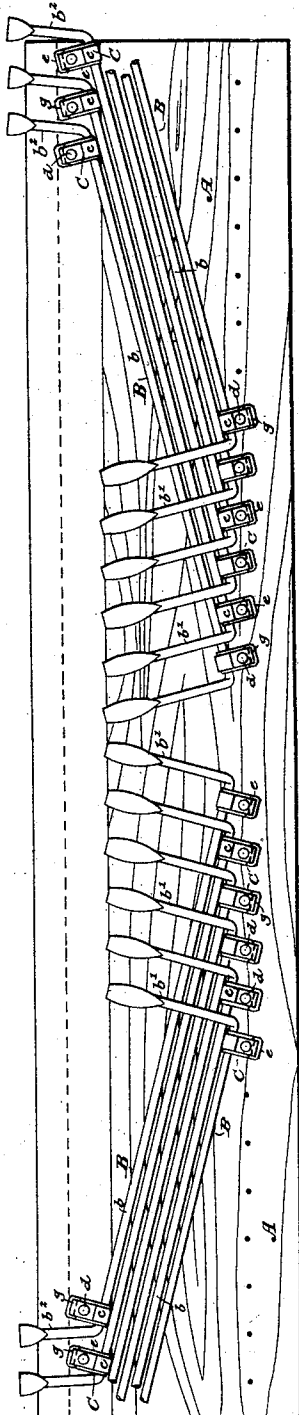
(No Model.)

L. K. FULLER.
OCTAVE COUPLER.

No. 367,902.

Patented Aug. 9, 1887.

Fig. 1-



WITNESSES:

E. B. Bolton
J. H. Sappington

Fig. 5-

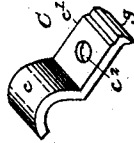


Fig. 4-

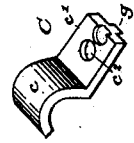


Fig. 3-

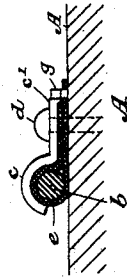
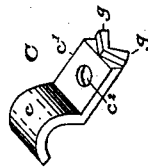


Fig. 2-



INVENTOR:

L. K. Fuller

By

Henry Combs
Attorney.

UNITED STATES PATENT OFFICE.

LEVI K. FULLER, OF BRATTLEBOROUGH, VERMONT, ASSIGNOR TO THE
ESTEY ORGAN COMPANY.

OCTAVE-COUPLER.

SPECIFICATION forming part of Letters Patent No. 367,902, dated August 9, 1887.

Application filed May 21, 1887. Serial No. 239,301. (No model.)

To all whom it may concern:

Be it known that I, LEVI K. FULLER, a citizen of the United States, and a resident of Brattleborough, in the county of Windham and State of Vermont, have invented certain improvements in Octave-Couplers, of which the following is a specification.

My invention relates to means employed for securing the coupling-wires to the coupling-board of the instrument. The coupling-wire in this class of couplers has usually a straight body with arms on its ends bent at an angle to said body, and the body is mounted in bearings on the coupling-board in such a manner that it may rock or partially rotate in said bearings.

The object of my invention is to provide a new form of clip to take over the body of the coupling-wire and hold it down to the board, the clip forming a keeper and binder to prevent the wire from escaping.

Another feature of the invention consists in means for securing the clips to the coupler-board, so as to prevent them from turning on their attaching pins or screws.

My invention will be fully described hereinafter and its novel features carefully defined in the claims.

In the drawings which serve to illustrate my invention, Figure 1 is a plan of a part of the coupling-board and some of the coupling-wires mounted thereon, the same embodying my invention. Fig. 2 is a perspective view, on an exaggerated scale, of one of the clips for holding down the coupling-wire. Fig. 3 is a side elevation of the clip seen in Fig. 2. This view also illustrates the manner in which the clip embraces the coupling-wire. Figs. 4 and 5 illustrate slightly-modified forms of the clip. These views are on the same scale as Figs. 2 and 3.

A is the coupling-board, and B B the coupling-wires mounted thereon in their proper positions.

b represents the body portion of the coupling-wire, and *b' b'* the arms at the ends of same, formed integrally with the body and bent so as to stand at about the angles seen in Fig. 1. As in their operation the bodies *b* of the wire are pressed upward and tend to

force up the holding-clip, the ordinary mode of applying said clips allows them to lose their hold after a time on the wires, and the latter are thus apt to become loose and disarranged.

My mode of constructing and applying the clips provides a support for the rear or back end of the clip, which bites into the coupling-board and prevents rocking on the attaching-pin, and at the same time furnishes a fulcrum or fulcrum-support back of said pin, whereby the wire cannot raise the clip without bodily drawing out the attaching-pin.

I will now describe my clip and the manner of securing it to the board.

C is a clip, which I usually stamp out from a piece of sheet metal. This clip has a curved lip, *c*, as usual, to take over or embrace the coupling-wire, and a straight or flat tang, *c'*, provided with a hole, *c''*, to receive an attaching pin, screw, or tack, *d*. In applying my clips C, I place one at each end of the obliquely-arranged body portion *b* of the coupling-wire and just inside of the arms *b' b'*, respectively. It will be seen that the clips next the arms *b'* find room between said arms for attachment to the board A, these clips being turned so as to stand or face in an opposite direction from those at the other ends of the wires. The wire under the clip is embraced by the usual felting or soft material, *e*, the curved lip of the clip taking over said felting and forming a binder. As the clip C has but one attaching pin or screw, *d*, in order to prevent it from turning on said pin, and thus causing the wire to bind in its rocking bearings, I provide the tang *c'* of the clip with a spur or spurs at its end to bite into the wood of the board A, so that the clip will, when attached, have at least two bearing-points on the board. I produce this spur or spurs by swaging down a part of the metal of the tang. In Fig. 2, where these spurs are clearly illustrated, I have shown two spurs, *g g*, formed by swaging down the corners of the flat tang, and this is perhaps the best form. In Fig. 4 I have shown the spur *g* as formed by swaging down a part of the metal of the tang with a punch. In Fig. 5 I have shown the end of the tang bent down across its entire width to

form a broad spur, *g*. The object may doubtless be attained by still other similar methods. As the felt *e* is soft, the clip raised upon it about the attaching-point *d* would be apt to rock on said pin when upward pressure was brought to bear on it, if it were not for the spur or spurs *g* bearing on the wood. Thus by inspection of Fig. 3 it will be readily seen that any upward pressure of the wire *b* on the curved end of the clip would be resisted by the downward pressure of the spurs at the back end of the tang or plate *e'* on the board A, and the clip could not be moved upward without bodily drawing out pin or screw *d*. At the same time, if desired, the clip may be readily removed by first removing said pin or screw.

It will be readily seen that my construction enables each coupling-wire to be conveniently removed and replaced without interfering at all with the other wires, and that the two clips will hold the wire firmly and steadily, while allowing it to rock freely in its bearings. I usually employ a headed pin, *d*, made from brass wire and slightly barbed, for attaching the clips C; but other fastening devices may be employed.

I may say that I do not claim, broadly, independent curved clips for holding the wire in place, but my special form of clip adapted for attachment in the manner described.

Having thus described my invention, I claim—

1. As a means of holding the coupling-wire in place on the coupling-board, a clip having a curved lip to take over the wire, and a tang provided with a hole to receive an attaching pin or screw, said tang projecting back beyond said hole to form a fulcrum-support, substantially as set forth.

2. As a means for holding the coupling-wire in place on the coupling-board, a clip having a curved lip to take over the wire, a tang provided with a hole to receive the attaching pin or screw, and a spur or spurs formed on the said tang back of the attaching-point to bear on the board, substantially as set forth.

3. The combination, with the coupling-board, of the coupling-wire, an attaching-clip having a curved lip, *e*, to take over the wire, and a tang, *e'*, provided with a hole, *e''*, to receive the attaching pin or screw, and a depressed spur, *g*, at its back end, the felt *e*, and the said attaching-pin *d*, whereby the clip is secured to the board between its lip *e* and the said spur, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI K. FULLER.

Witnesses:

WALTER H. CHILDS,
J. EDWARD HALL.