

C. W. FOSSLER.
Organ-Coupler Actions.

No. 156,146.

Patented Oct. 20, 1874.

Fig. 1.

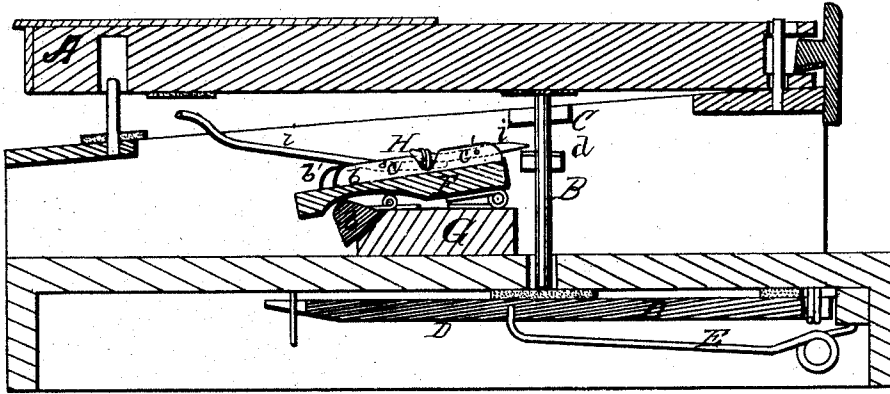
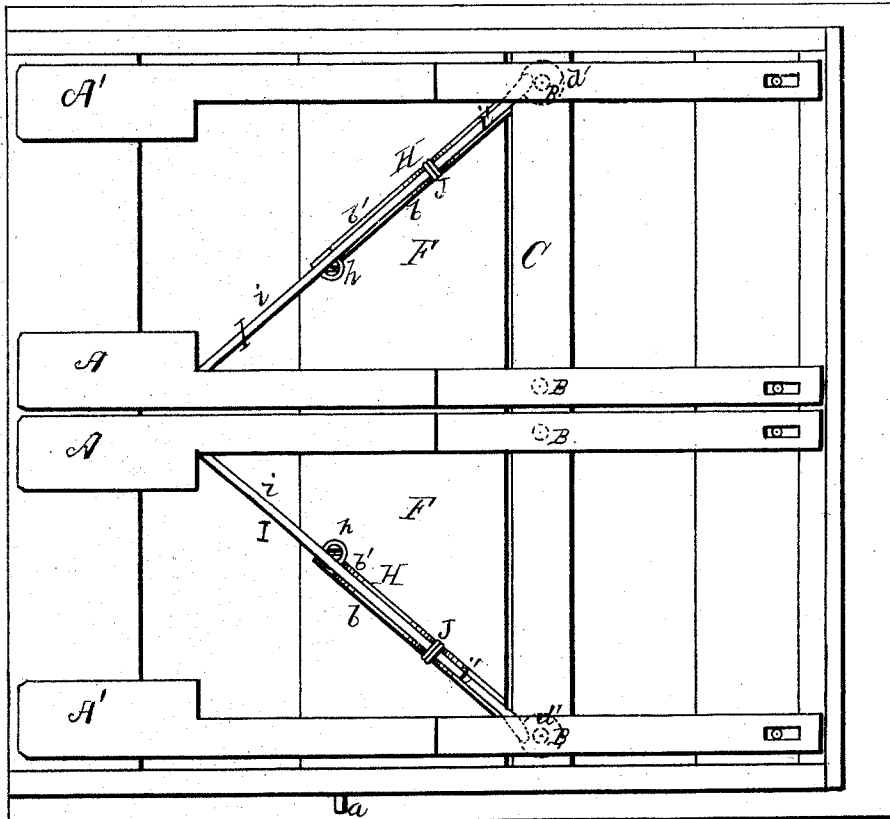


Fig. 2.



WITNESSES

E. H. Bates
Robert C. Smith

INVENTOR

Charles W. Fossler
Chipman Hooper & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES W. FOSSLER, OF DETROIT, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENT, TO AMZI SLAWSON, OF SAME PLACE.

IMPROVEMENT IN ORGAN-COUPLER ACTIONS.

Specification forming part of Letters Patent No. **156,146**, dated October 20, 1874; application filed September 17, 1874.

To all whom it may concern:

Be it known that I, CHARLES W. FOSSLER, of Detroit, in the county of Wayne and State of Michigan, have invented a new and valuable Improvement in Organ-Couplers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical sectional view of my organ-coupler. Fig. 2 is a plan view of the same.

This invention has relation to octave-couplers for organs, by means of which the keys of an octave above may be connected with those of one below in the treble, and those of an octave below may be connected with the keys of one above in the base, for the purpose of obtaining volume and harmony in the performance of music.

The nature of the invention consists in the novel construction and arrangement, in connection with a hinged vertically-vibrating platform, of the pivoted coupling-arms for operating the valve-rod of a key in an octave above or below, whereby an upward vibration of the said platform will bring the end of the said coupling-arm in contact with the under side of the keys, when a depression of one of them will cause not only its own valve to be opened, but also that in the corresponding note in the octave above or below, according as the key sounded is in the treble or in the base. It also consists in the combination with a sectional coupling-arm of a guard-standard, affording fulcrums therefor, whereby they are held at all times against lateral displacement and the not infrequent disarrangement of the coupling devices is effectually prevented. It furthermore consists in a sectional coupling-arm for each key in the octave, each section having a fulcrum in the guard-standards, and the rear end of the front section of the said coupling-arm being under the front end of the rear section thereof, whereby a depression of the front end of the front section will depress the rear end of the rear section, causing the valve to be

opened with great facility and with but little effort. It finally consists in an elastic or rubber band passed around the inner adjoining ends of the coupling-arm sections, whereby they are allowed to yield freely the one upon the other when actuated, and are yet prevented from vibrating or rattling, as will be hereinafter more fully explained.

In the annexed drawings, A designates the keys of an organ arranged upon a key-board in the usual well-known manner. B are rods connected therewith and passing thence downwardly, through perforations in a transverse brace, C, of the organ-frame, to the valves D, which are actuated by depressing the keys A and are returned to their former position upon releasing the keys of pressure by the action of the springs E. F designates a vertically-vibrating platform hinged to a brace, G, and raised or depressed by raising or depressing a metallic rod, *a*, rigidly secured to a strip, *b*, hinged to the brace G. This platform is situated just in front of the rods or pins B, and at a suitable distance below the under side of the keys, for a purpose hereinafter to be explained. H designates guard-standards, each consisting of a base having lugs *h* and two vertical sides, *b b'*, at such a distance apart as shall admit between them and there hold the coupling-arms, hereinafter to be explained. These guard-standards are rigidly secured, by means of the lugs *h*, to the upper surface of the platform F, and they are inclined to the left for the treble and to the right for the base, each in a line with a central point near the front end of the key with which it works and with a button upon one of the valve-rods of the corresponding key in an octave above or below. I designates a sectional coupling-arm consisting of two distinct parts, *i i'*, the former of which has its fulcrum at *c*, upon the guard-standard, at a suitable distance from the front end thereof to give power, and the latter at *c'*, near the rear end of the said guard-standard for a similar purpose, the inner end of the former being under the same end of the latter. The front end of the coupler-section *i* extends to a point just in rear of the key-board and under a key, A, while the rear end of the sec-

tion *i'* is of such length as to reach a button, *d*, upon a valve-rod, B, of a corresponding key, A', of an octave above or below.

Now, if the hinged platform F be raised the coupler-arms will also be raised, and the front end of the coupler-section *i* will be brought in contact with the under side of the key A, which, if it be now depressed, will cause the section *i* to depress the rear end of the section *i'*, which rests upon the button *d'* of the rod B', which is thus thrust down, causing its pipe to speak as though operated by its own key A'.

With a view to prevent rattling and vibration, I have caused the inner adjoining ends of each coupler-section to be secured together by means of an elastic rubber band, J, as shown in Fig. 1, by means of which the said ends are allowed to move freely the one upon the other, are held in contact, and are prevented from creating disagreeable sounds; and, in order that the said band may be conveniently arranged, attached, and detached from the said ends, I have made a notch, *n*, in the guard-standard H, by means of which I am allowed easy access thereto for the purpose.

I claim—

1. The combination, with a sectional coupling-arm, I, of the detachable guard-standard H, having flanges *b' b*, substantially as specified.

2. The coupling-arm I, consisting of distinct lever-arms *i i'*, arranged in the same right line as regards their length, substantially as specified.

3. The rubber band J, in combination with lever-arms *i i'* of the sectional coupling-arm I, substantially as specified.

4. The notch *n* of the guard H, in combination with the rubber band J and the ends of the coupler-arms *i i'*, substantially as and for the purpose specified.

5. The combination of the sectional and pivoted coupling-arms I, constructed as described, with the hinged platform F and keys A, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES W. FOSSLER.

Witnesses:

CHAS. J. HUNT,

JAMES H. MEACHAM.