

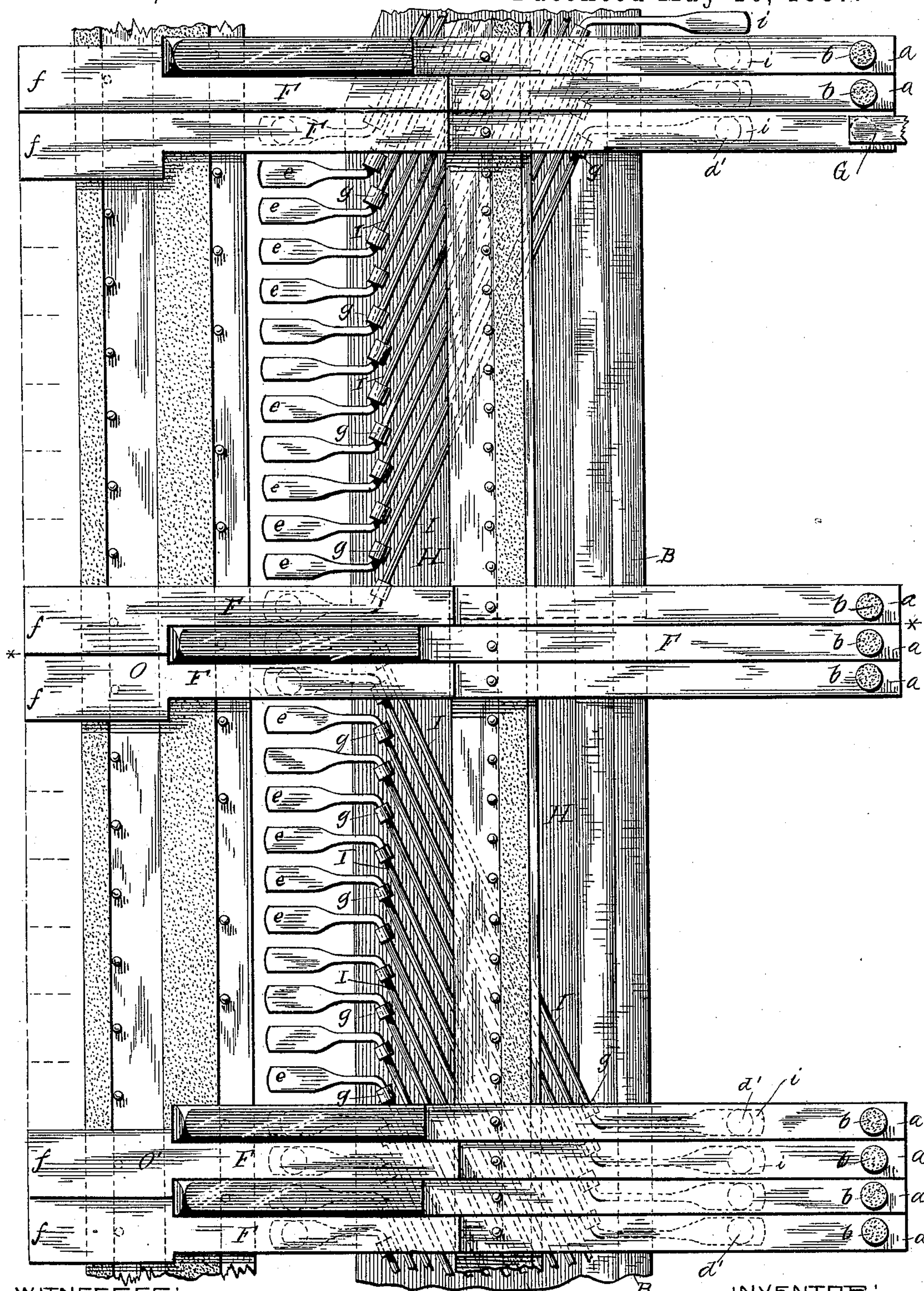
(No Model.)

2 Sheets—Sheet 1.

H. W. METCALF.
ORGAN COUPLER.

No. 362,645.

Patented May 10, 1887.



WITNESSES:

Chas. F. Schmitz

M. Ralph Dryden

FIG. 1.

INVENTOR:

Henry W. Metcalf
per *John C. Dewey*
Attorney.

(No Model.)

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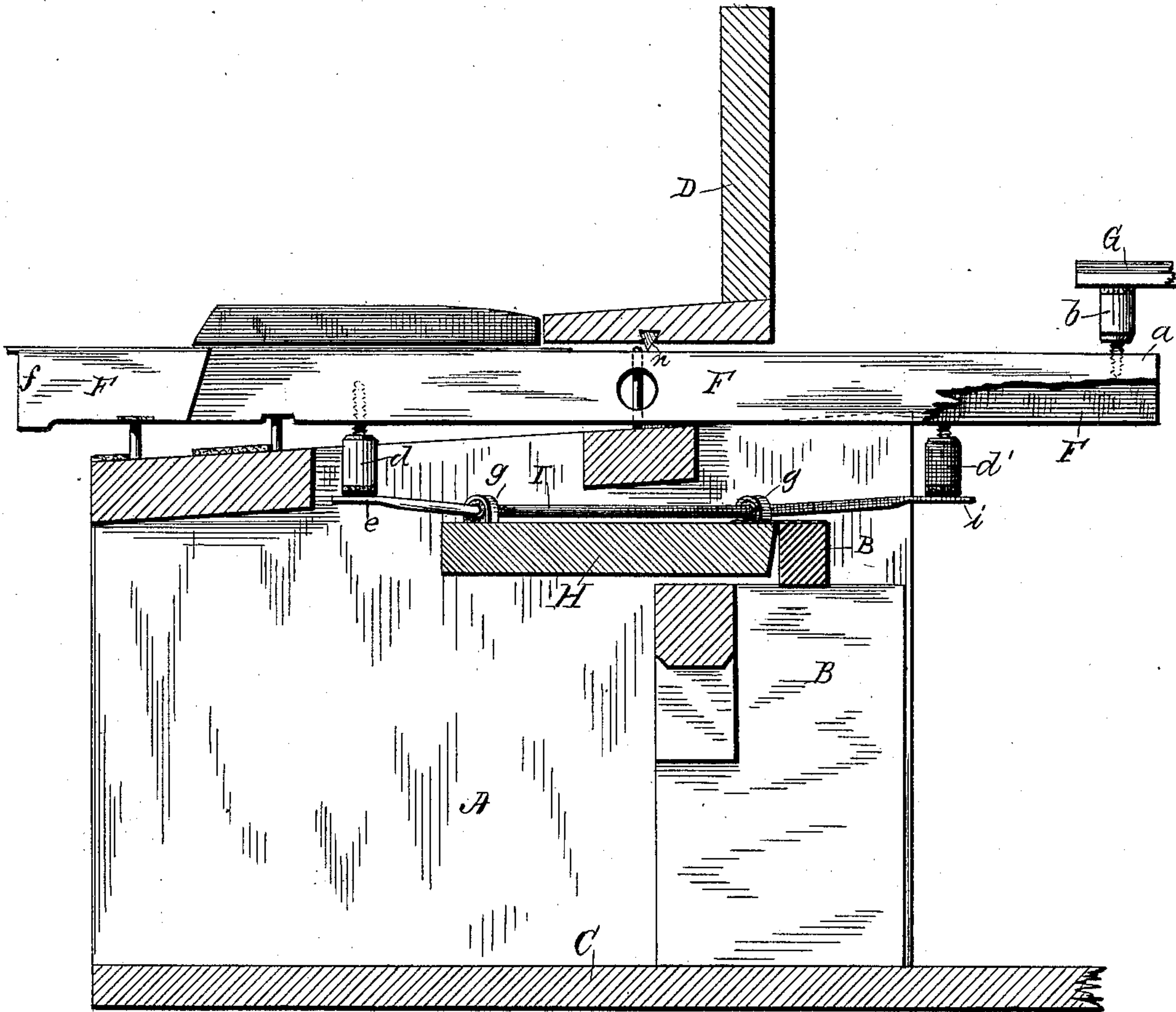


FIG. 2.

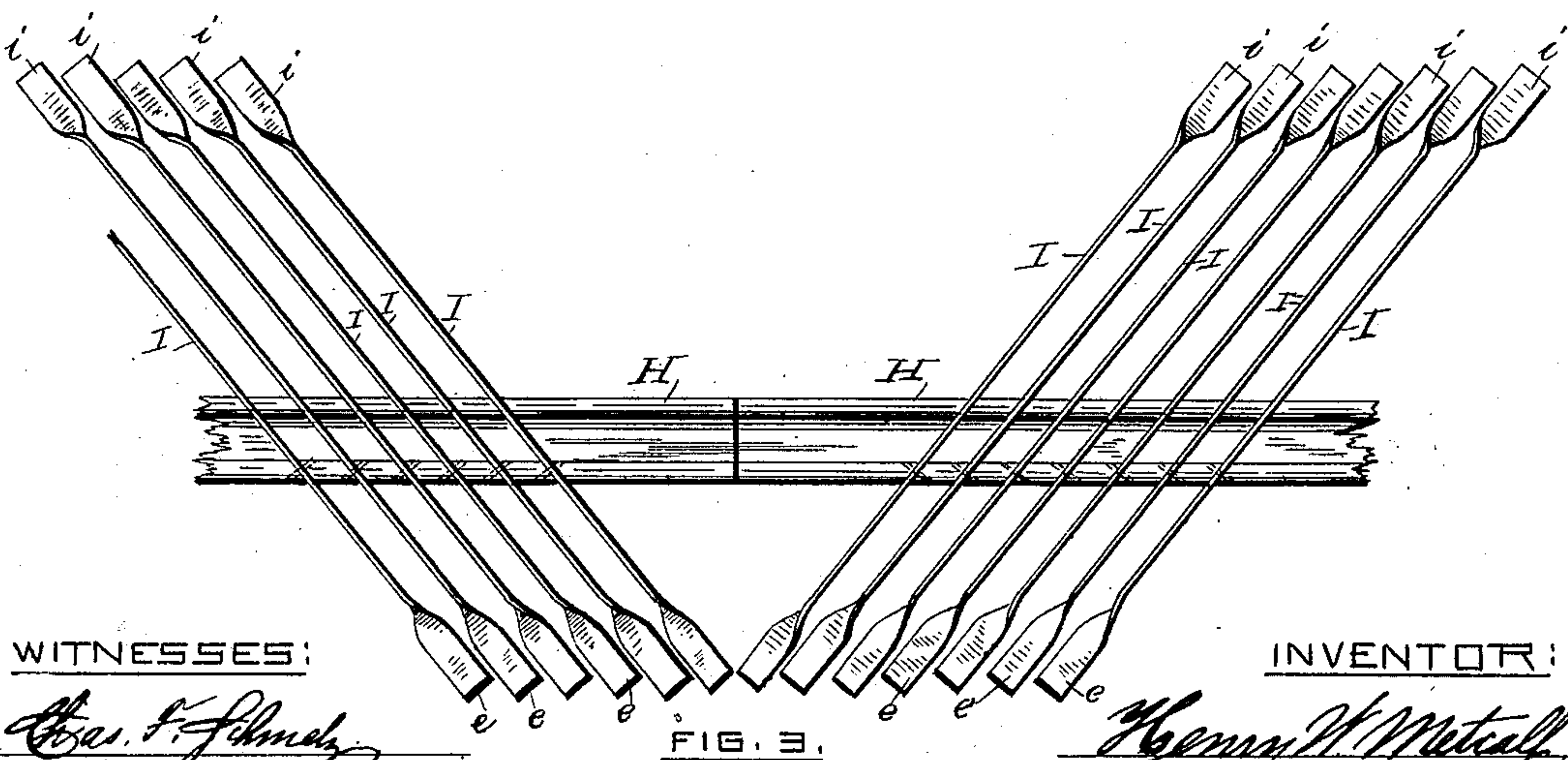


FIG. 3.

WITNESSES:

Chas. F. Schuch

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INVENTOR:

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UNITED STATES PATENT OFFICE.

HENRY W. METCALF, OF WORCESTER, MASSACHUSETTS.

ORGAN-COUPLER.

SPECIFICATION forming part of Letters Patent No. 362,645, dated May 10, 1887.

Application filed December 9, 1886. Serial No. 221,069. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. METCALF, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Reed-Organs; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to reed-organs or other similar musical instruments, and more especially to the coupling-action of an organ and the parts connected therewith, whereby a key will sound not only its own note, but also a note in the octave above or below, when the coupler is brought into action.

My invention consists in certain novel features of construction, arrangement, and combination of the keys and coupler attachment, as will be hereinafter fully described, and the nature thereof indicated by the claims.

Heretofore in reed-organs in which octave-couplers have been used the coupler-levers have operated the reed-valves through the intervention of pitmen or levers. By my improved construction I do away entirely with the use of any pitmen or levers and couple directly from a key to the octave-key above or below on the same key-board. I am enabled to do this by arranging the reed-chambers in a vertical position at the rear of the key-board and having the reed-valves extend in a horizontal direction, with their forward free ends adapted to engage directly with the keys, pivoted at their center or approximate center to be operated thereby, which construction is fully set forth in my application for a patent filed July 19, 1886.

In my improved organ-action I couple direct from the under side of the front part of a key to the under side of the rear part of the octave-key on the same key-board, and the upward motion of the coupler-lever at its operating end causes the front end of the key coupled, pivoted at its center or approximate center, to be depressed, thus coupling another octave by means of a coupler-lever connected with said key. I am thus enabled, by coupling di-

rect from the front of one key to the rear of the octave-key on the same key-board, the keys being pivoted at their center or approximate center, to couple a double octave with the use of a single set of coupler-levers.

Referring to the drawings, Figure 1 is a plan view of the parts of an organ-action embodying my improvement. The coupling device is shown applied to my improved organ-action set forth in my said application for a patent above referred to. The front of the key-board is at the left and the rear at the right of the drawing when in an upright position. Fig. 2 is a vertical sectional view of the action shown in Fig. 1, taken in the direction of the length of the keys. The coupling device is shown raised ready for action. The coupler-levers couple from the front of a key to the rear of the octave-key, and thus form a double-octave attachment; and Fig. 3 shows a plan view of a modified form of the coupler-levers shown in Figs. 1 and 2.

I have only illustrated in the drawings sufficient parts of an organ in which an octave-coupler is used to enable those skilled in the art to understand the manner of construction and mode of operation of my improvements relating to an octave-coupler attachment combined with keys pivoted at their center or approximate center in such a manner that the operating end of the coupler-lever will always act directly to couple an octave without the intervention of any pitmen or levers.

In the accompanying drawings, the part marked A is a frame or stand for supporting the key-board. B is a frame or stand for supporting the coupling device. Both frames are in this instance supported upon and secured to the base-board C. A detached section of the name board or case is shown at D, Fig. 2.

The keys F are supported and pivoted at their center or approximate center upon the frame A, and are connected at their rear ends with the reed-valves, to operate the same, in the manner indicated in Fig. 2, where the projecting end G of the reed-valve extends over the rear end, *a*, of the key F, and engages with it through the intervention of the regulating-button *b*. Below the keys F extends longitudinally the coupling device composed of the board H and the coupler-levers I, supported

thereon. Said board is hinged at its rear side to the frame B in the usual manner, so that it may be raised by any ordinary means at the proper time to bring the coupler attachment into action and cause the forward ends, *e*, of the coupler-levers I to come in contact with the regulating-buttons *d*, in this instance secured upon the under side of the keys F at their front ends, *f*, so that said coupler-levers I will be operated to couple the octaves by depressing the front ends, *f*, of the keys F, pivoted at their center or approximate center, as before stated.

In the drawings the coupler-board is represented as raised and the coupler-levers in position ready for action.

In Figs. 1 and 2 I have shown the coupler-levers with ends bent in opposite directions, so as to form oblique angles with the body of the levers. Said levers may be fulcrumed or journaled to the supporting-board H in any ordinary manner usually employed in octave-coupler attachments. In this instance I have shown them in Figs. 1 and 2 journaled in hooks *g*, secured upon the coupler-board H, and the coupler-levers are shown extending diagonally in opposite directions adapted to couple the base and treble side of the key-board.

In the drawings the coupler-levers are shown adapted to couple from the front of a key to the rear of the octave-key in the same key-board, and regulating-buttons *d* and *d'* are in this instance interposed between the under side of the keys and the ends of the coupler-levers for the purpose of adjustment. (See Fig. 2.) By this construction it will readily be seen that I have in effect a double-octave coupler, or a coupler attachment that will couple two octaves, for by depressing the front end, *f*, of the key marked O, Fig. 1, the coupler attachment being raised into action, I couple said key with the octave-key marked O', and at the same time, by the act of coupling said key O' at its rear end, *a*, I cause its forward end, *f*, to be depressed and to act on the coupler-lever with which its forward end is connected, and thus cause the octave-key above the key O' to be coupled.

If preferred, one or both of the regulating-buttons *d* and *d'*, interposed between the ends of the coupler-levers and the under side of the keys, may be dispensed with and the ends of the levers come in direct contact with the under side of the keys.

A narrow strip or binder, *n*, extends over the center of the keys operated by the coupler-levers, (see Fig. 2,) for the purpose of holding the center of the keys in position when both ends are acted on by the coupler-levers.

In Fig. 3 I have shown a modified form of the coupler-levers shown in Figs. 1 and 2. The coupler-levers I (shown in Fig. 3) are made straight instead of bent at their ends, and for this reason are pivoted at only one point upon the supporting board or frame H.

In carrying out my invention I do not limit myself to any special form or shape of coupler-levers, or any special manner of connecting said levers with the coupler-board or its equivalent, for I may use any of the ordinary octave-couplers now in general use to carry out my invention—to wit, the coupling direct from key to key on the same key-board without the intervention of any pitmen or levers.

Having thus described my improvements in reed-organs, what I claim as new, and desire to secure by Letters Patent, is—

1. In an organ-action, the combination, with keys pivoted at their center or approximate center, of octave-coupler levers coupling direct from the front of the keys to the rear of the octave-keys on the same key-board to produce a double-octave attachment, substantially as set forth.

2. In an organ-action, the combination, with keys, as F, pivoted at their center or approximate center and provided with regulating-buttons, as *d* and *d'*, upon their under side, of octave-coupler levers, as I, coupling direct from the front of the keys to the rear of the octave-keys on the same key-board to produce a double-octave attachment, substantially as set forth.

HENRY W. METCALF.

Witnesses:

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M. RALPH DRYDEN.