(No Model.)

J. R. LOMAS.

COUPLER FOR ORGANS.

No. 258,780. Patented May 30, 1882.

fig 2

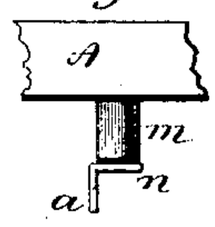


fig 1

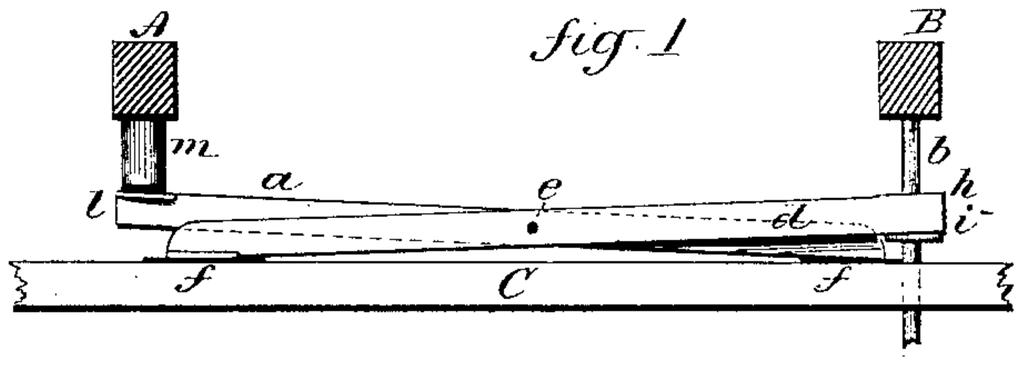


fig 3

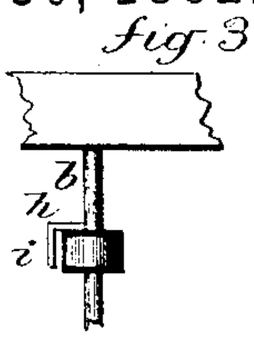


fig 4

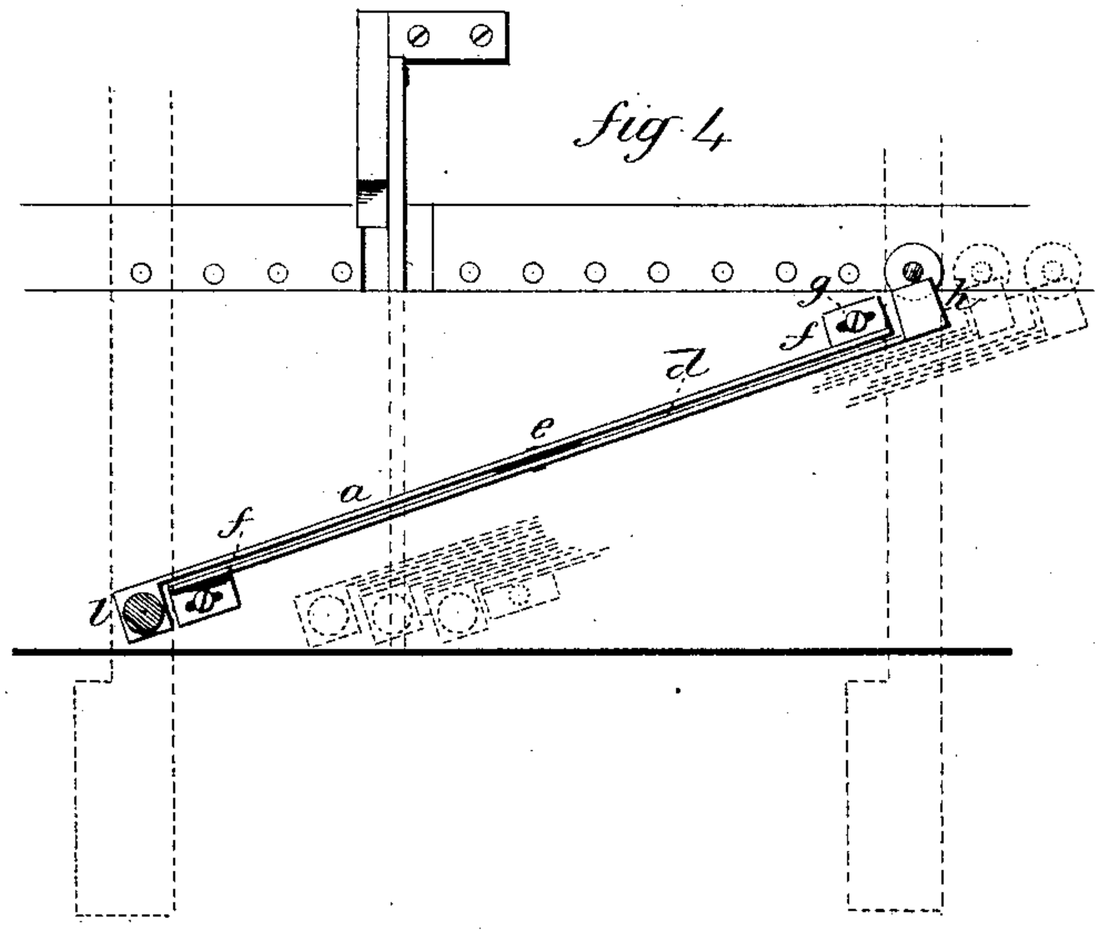
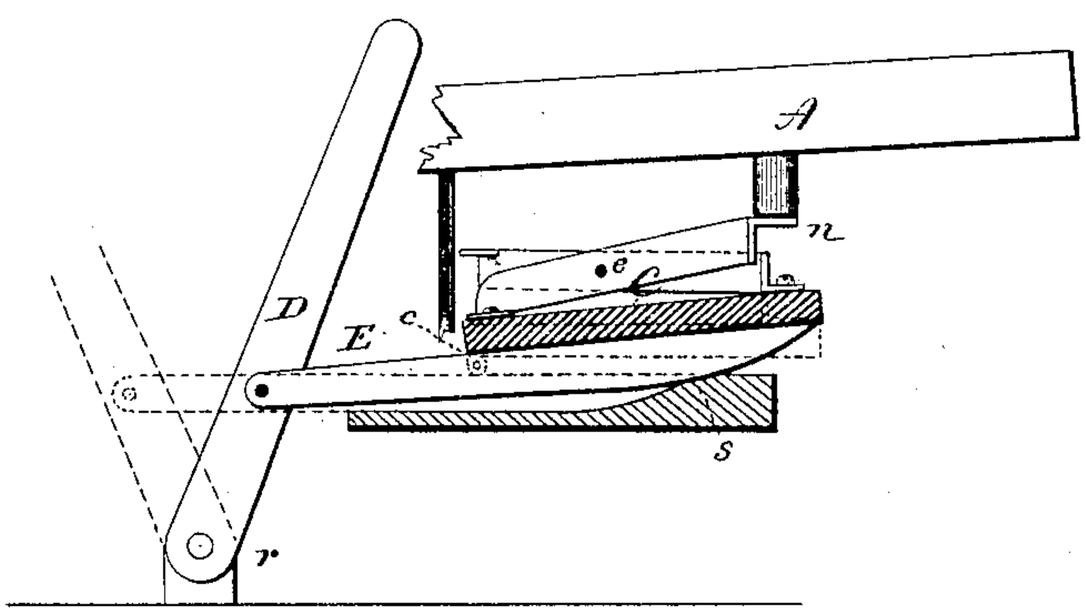


fig 5



Witnesses

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COUPLER FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 258,780, dated May 30, 1882.

Application filed February 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. LOMAS, of West Haven, in the county of New Haven and State Connecticut, have invented a new Improvement in Couplers for Organs; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute a part of this specification, and represent, in—

Figure 1, a front view of the coupler-levers; Fig. 2, an end view of the end of the lever beneath the octave; Fig. 3, the end of the other lever in connection with the key to be coupled; Fig. 4, a plan view; Fig. 5, a transverse section.

This invention relates to an improvement in mechanism for coupling the keys of an organ or piano—as, for instance, the key of one octave with the corresponding key of the next octave—the object being to construct a coupler which is not liable to get out of order, and also to be simpler and occupy less space than the couplers heretofore in use; and the invention consists in a pair of levers, jointed together midway of their length, arranged between the keys to be coupled, and so as to swing in a vertical plane relatively to the keys, one end of each lever taking a bearing on a support below the keys, the other end of each in connection or so as to be placed in connection with its key, so that the depression of one key depresses the end of its lever, and because of the connection of the two levers the other end of the other lever depresses a corresponding key, valve, or pitman, as the case may be, as more fully hereinafter described.

In the illustration I show only two keys, represented as A and B, these being the two keys which are to be coupled, and are of the usual construction, *b* representing the spindle which extends from the key to the valve, and which that key operates in the usual manner. Below the keys is the coupler-board C. This board is hinged at the rear, as at *c*, and so as to swing up and down, as from the position seen in Fig. 5 to that in broken lines in the same figure. On this board the coupler-levers *a d* are arranged. These levers are simply thin flat metal bars, pivoted together midway of their length, as at *e*, and so as to turn on the said pivot in a vertical plane relatively to the keys. One end, *f*, of each lever rests upon the coupler-board C and is secured thereto upon a stud or by a screw, *g*, but so as to have a slight longitudinal movement, and when so arranged their other ends extend respectively to the keys A B to be coupled, those ends free to rise and fall. The free end *h* of the lever *d* rests upon a collar, *i*, on the spindle *b*, preferably by a flange on the end of the lever turned over that collar, as seen in Figs. 3 and 4. The corresponding end, *l*, of the other lever, *a*, rests beneath the other key A, and so that when in position the key A will bear on that end of the lever, preferably by means of a stud, *m*, on the key extending downward, the end of the lever provided with a flange, *n*, like the flange *h* of the other lever, and upon which the stud will strike. Therefore, when in the position seen in Fig. 1, if the key A be depressed it will correspondingly press that end of the lever *a*, and that depression will be communicated through the pivot *e* to the other lever, *d*, and bring the flange *h* of that lever to bear down upon the collar *i* on the spindle *b* and correspondingly depress that spindle and key; but if the lever *a* be moved out of the reach of the key A, then the depression of that key would have no effect upon the other key, and each would perform its own independent function. To disconnect the coupler is the object of hinging the board C. The levers are arranged in diagonal line on the board C, so that one end, *h*, will be nearly over the hinging-point of the board, as seen in Figs. 4 and 5, while the other end will be at the opposite edge, distant from the hinging-point. Hence when the board is dropped, as indicated in broken lines, Fig. 5, the outer ends of the levers will be moved down out of the way of the key which operates them. Then when the coupling is required the board is turned upward, as seen in Fig. 5, to bring the outer end of the levers into position to be depressed by the respective keys.

Various devices may be applied for adjusting the board, here represented as by means of a lever, D, hung below upon a fulcrum, *r*, with an arm, E, pivoted to the said lever and extending underneath. The board is arranged to ride up an incline, *s*, when the lever is turned in one direction, as seen in Fig. 5, so as to raise the outer edge of the board, but turned in the opposite direction will draw the lever

down the incline and cause the board to be depressed. This lever is arranged in a convenient position to be operated by the player like a common stop or any common coupler. The levers for the respective keys are arranged parallel to each other, as seen in Fig. 4, so that the ends of the respective pairs will come in the same line. These levers may be employed between the keys for coupling purposes, and thrown out of or into action by devices other than the hinged board C. Hence I do not wish to limit the levers to their combination with the hinged board C.

I claim—

1. The herein-described coupler for organs, pianos, and like instruments, consisting of the two levers *a d*, crossing each other, pivoted together midway of their length, and arranged to swing in a vertical plane, one end of one lever engaged with the spindle, or valve, or key to be coupled, the opposite end of the other lever beneath the active key, the opposite ends of the two levers taking a bearing below, and so that the depression of the active key will through the said two levers, depress the coupled valve, spindle, or key, combined with means, substantially such as described, to throw the said lever out of or into engagement, substantially as described.

2. The herein-described coupler for organs, pianos, and like instruments, consisting of the two levers *a d*, crossing each other, pivoted together midway of their length, and arranged to swing in a vertical plane, one end of one lever engaged with the spindle, or valve, or key to be coupled, the opposite end of the other lever taking a bearing below, and so that the depression of the active key will through the said two levers depress the coupled valve, spindle, or key, the said levers arranged upon and combined with the hinged board C, and mechanism for turning the said board upon its hinge to engage or disengage the said levers with the active key, substantially as described.

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Witnesses:
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J. H. SHUMWAY.