

(No Model.)

O. C. WHITNEY.
ORGAN.

No. 401,474.

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Fig 1.

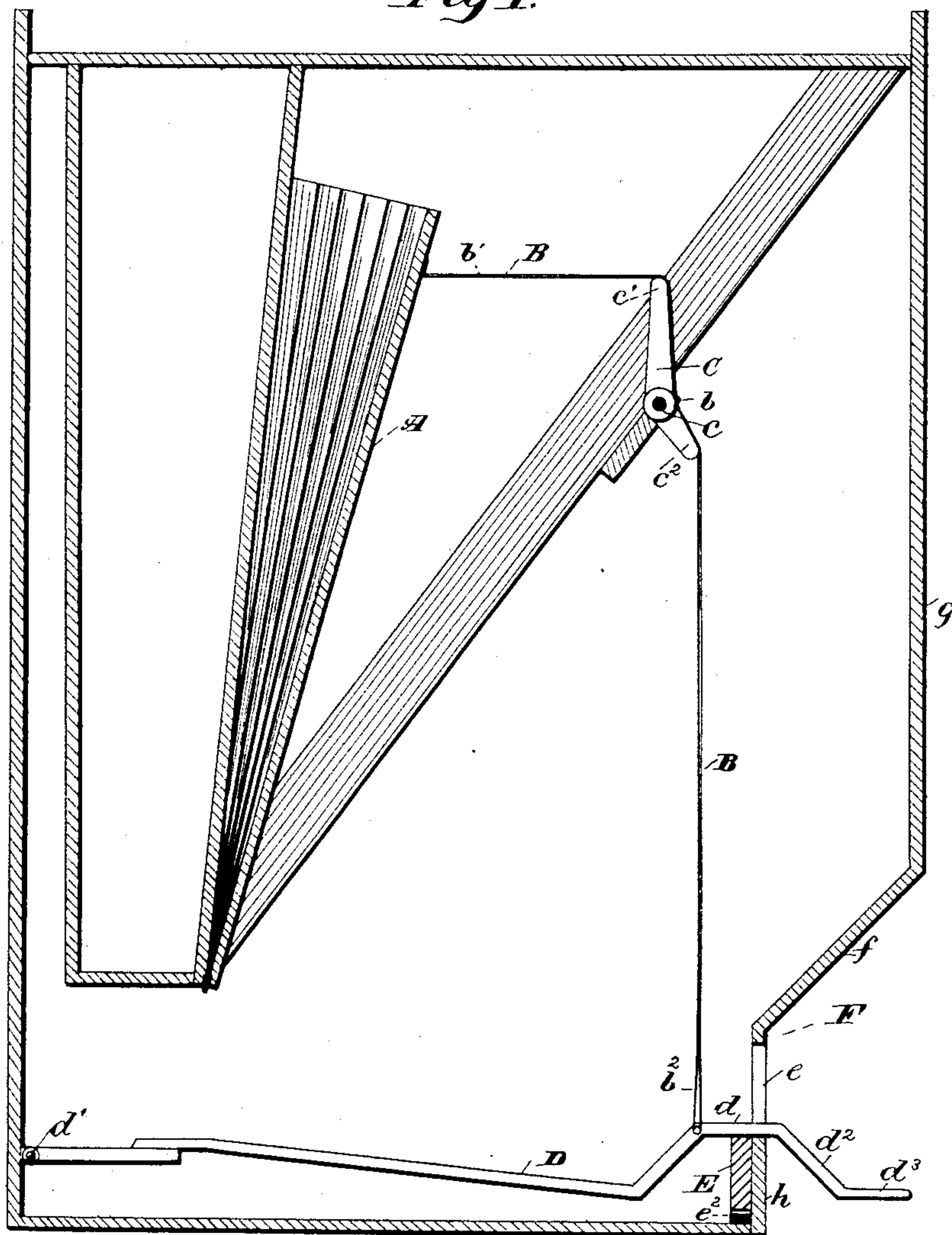
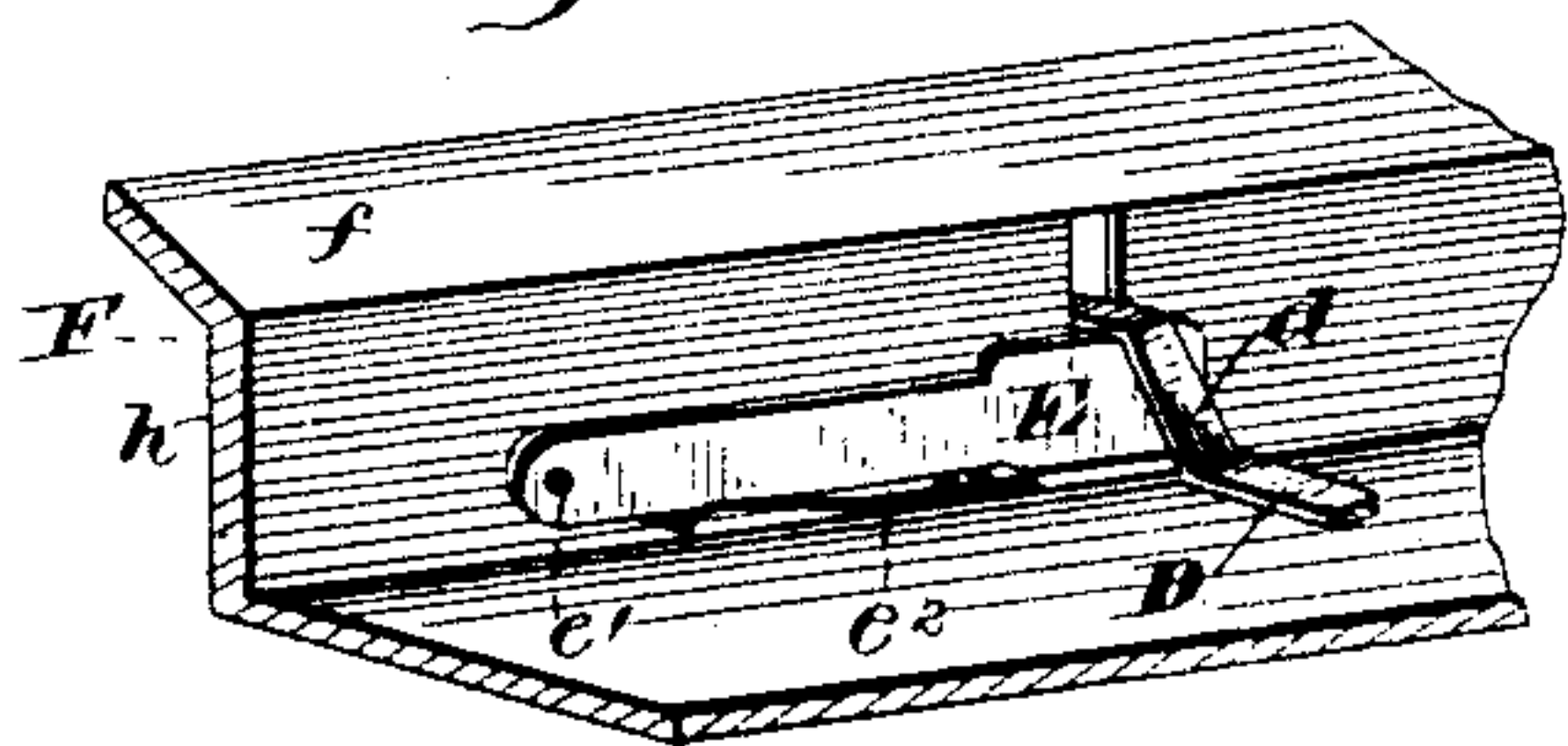


Fig 2.



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SPECIFICATION forming part of Letters Patent No. 401,474, dated April 16, 1889.

Application filed March 6, 1886. Serial No. 194,288. (No model.)

To all whom it may concern:

Be it known that I, ORISON C. WHITNEY, a citizen of the United States, residing at Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Organ Appliances; and I do hereby declare the following to be a description of the same and of the manner of constructing and using the invention in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, forming a part of the specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The main object of this invention is to provide improved means for operating the bellows. Certain other objects are also had in view, as will appear in detail farther on.

In the drawings, Figure 1 is a transverse vertical section of the lower portion of an organ provided with my several improvements. Fig. 2 is a detail view in rear perspective of a portion of the lower front case of the organ.

The bellows A is worked by a band, B, which passes over the longitudinal face of a lever, C, and is connected at its lower end to a pedal, D. The band is secured to said lever-face at a point, *b*, thereon in line passing transversely through the pivotal point *c* of the lever. The upper section, *b'*, of the band is connected at its upper end to the bellows, while the lower section, *b''*, of the band is connected at its lower end to portion *d* of the pedal. The pedal is pivoted at its inner or rear extremity to the organ-case by a suitable hinge, *d'*. The opposite or forward extremity of the pedal projects out from the front casing of the organ and is free, while the portion of the pedal to which the band is secured is intermediate of said rear pivotal extremity and said forward free extremity. The lever C has an upper long arm, *c'*, and a lower short arm, *c''*, the upper band-section, *b'*, passing longitudinally over said long arm *c'*, while the lower band-section, *b''*, passes longitudinally over said short arm *c''*. The reciprocating movement of the lower band-section, *b''*, is short and slow

relatively to the reciprocating movement of the upper band-section, *b'*, and such relatively long and quick reciprocating movement of the upper band-section results in imparting a corresponding action to the bellows. The pedal movement is thus transmitted to the bellows, so as to operate the latter in a desirable movement of speed and space.

The desirableness of a pedal which has a free swinging forward extremity is readily apparent. It is the form of the popular piano-pedal. It permits the heel of the player to rest on the floor while the toe or ball of the foot rests on the pedal, and it permits of easier position and action of the limb than obtains with a pedal having its forward extremity pivoted while its rear extremity swings. The latter form of pedal is adapted to impart a long and rapid movement to the bellows-connection in comparison with the form of pedal herein shown; but by means of the rocking lever C having its upper arm of greater length than its lower arm the bellows is operated at the desired speed and as satisfactorily in its movement as if driven by the said other form of pedal.

The pedal is further provided with detail improvements, as follows: It is in double-crank form. Its portion which projects in free swinging form from the front wall of the organ-case has an inclined section, *d''*, which projects upwardly from the foot-piece *d'''*, said section *d''* affording a check for the foot of the player, so as to protect the organ-casing. Slot *e* in the organ-casing, through which the horizontal section *d* of the pedal works, is provided with a pivotal guard, E, pivoted to the inner side of the organ-casing at *e'* and pressed upwardly by spring *e''*. When the pedal is in unused position, said guard closes such portion of the pedal-slot as is not filled by the pedal, thus shutting out mice from entering the organ-casing.

The lower portion of the front wall of the organ-casing is made with recess F, formed by section *f*, inclining downwardly and inwardly from the vertical section *g*, in connection with vertical section *h*, extending below said inclined section. This construction affords a retired location for the pedals, and also for the feet of the player.

The foregoing description and accompany-

ing drawings represent my preferred form of connecting the two arms of the rocking lever indirectly to the bellows and the pedal, respectively, the upper section, b' , of the band serving as the connection between the bellows and the long arm of the rocking lever, while the lower section, b^2 , of the band serves as the connection between the pedal and the short arm of the rocking lever.

It will be understood that other mechanical forms may, however, be substituted for such preferred form, provided the same embody my principle of invention, as set forth in my claims.

What, therefore, I claim is—

1. In an organ, the combination, with a bellows and a pedal having a free swinging forward extremity, of a rocking lever having its upper arm longer than its lower arm, a connection between said long upper arm and the bellows, and a connection between said short lower arm and said pedal, substantially as set forth.

2. In an organ, the combination, with a bellows and a pedal having its rear extremity pivoted within the case and its forward extremity projecting from the latter, of a rocking lever having its upper arm longer than its lower arm, a connection between said long upper arm and the bellows, and a connection between said short lower arm and the pedal at a point on the latter intermediate of its pivotal rear extremity and its free swinging forward extremity, substantially as set forth.

3. In an organ, the combination, with a bellows and a pedal, of a band connecting said two parts, and a two-arm rocking lever over the arms of which said band passes intermediate of the pedal and bellows, said rocking lever having its upper arm of greater length than its lower arm, substantially as set forth.

4. In an organ, a pedal having the double-crank formation, for the purpose and substantially as set forth.

5. The combination, with the front wall of an organ-case, having slot e , of a pedal, D, having a double-crank formation, the horizontal section d of which fits in said slot and works therein, substantially as set forth.

6. The combination, with an organ-case having its front wall provided with a pedal-slot and a pedal hinged within said case and working in said slot, of an automatic mouse-guard which covers that portion of the slot not filled by the pedal when the latter is at rest, substantially as set forth.

7. The combination, with a pedal and an organ-case having a slot, of a spring-pressed mouse-guard for said slot, substantially as set forth.

8. The combination, with pedal D and organ-case provided with slot e , of guard E and spring e^2 , substantially as set forth.

9. An organ-case having its front wall below the key-board formed with the recess F in its lower portion, said recess extending to the plane of the lower side of the organ-case floor, substantially as set forth.

10. An organ-case having its front wall located below the key-board formed with the vertical section f , the inwardly-inclined section g , extending below the latter, and the vertical section h , extending below said inclined section, substantially as set forth.

In testimony that I claim the foregoing to be my invention I have hereunto set my hand this 27th day of February, A. D. 1886.

ORISON C. WHITNEY.

Witnesses:

T. B. HALL,

J. G. HALL, Jr.