

No. 762,489.

PATENTED JUNE 14, 1904.

A. F. NORRIS.
PEDAL FOR MUSICAL INSTRUMENTS.

APPLICATION FILED SEPT. 8, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

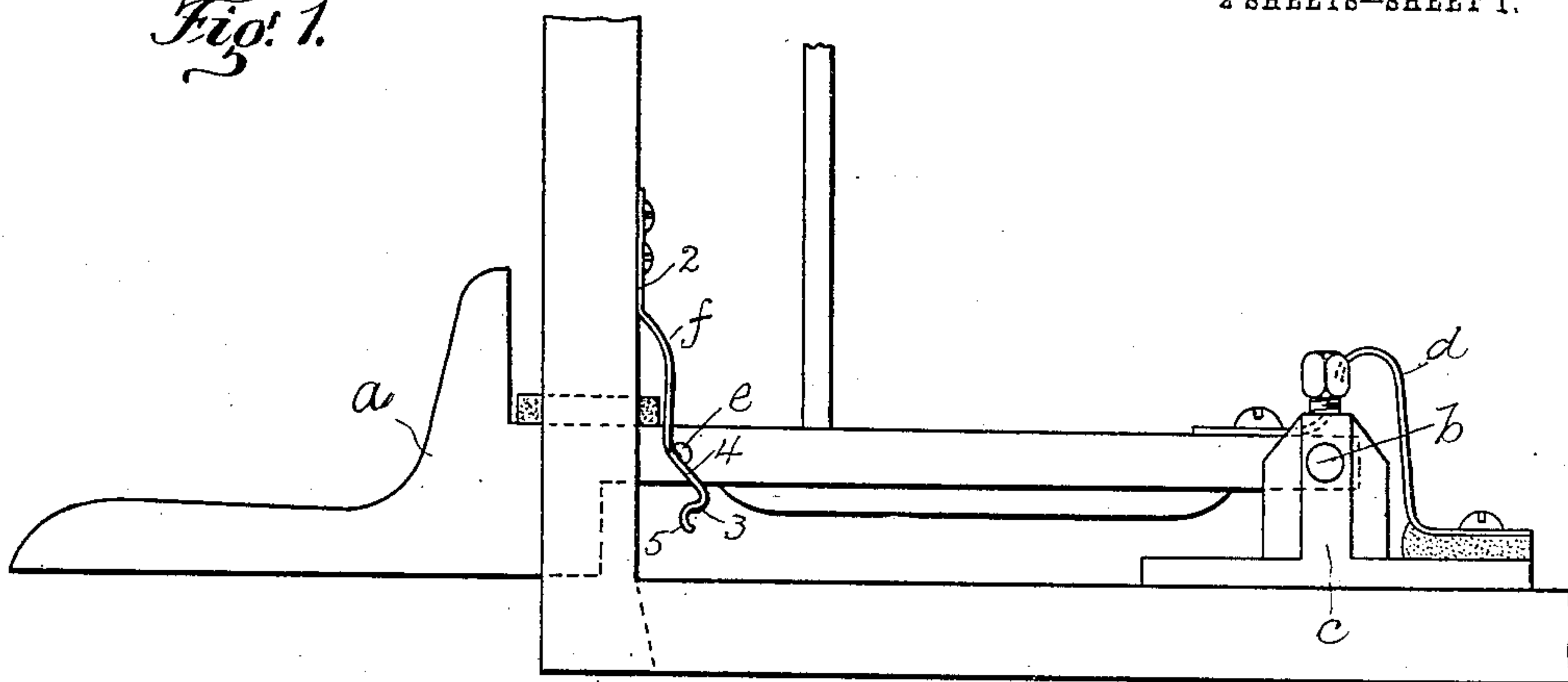


Fig. 2.

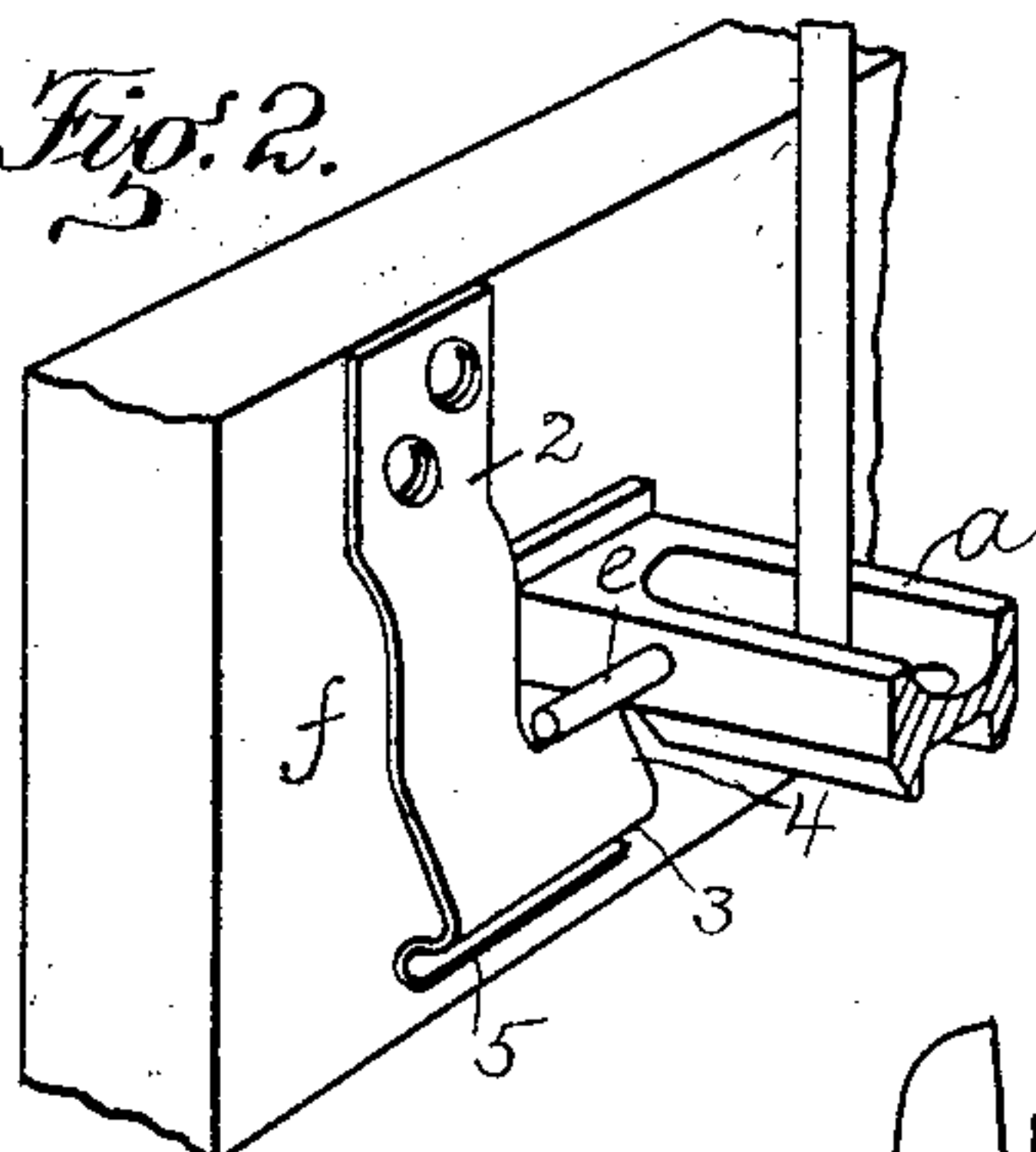


Fig. 3.

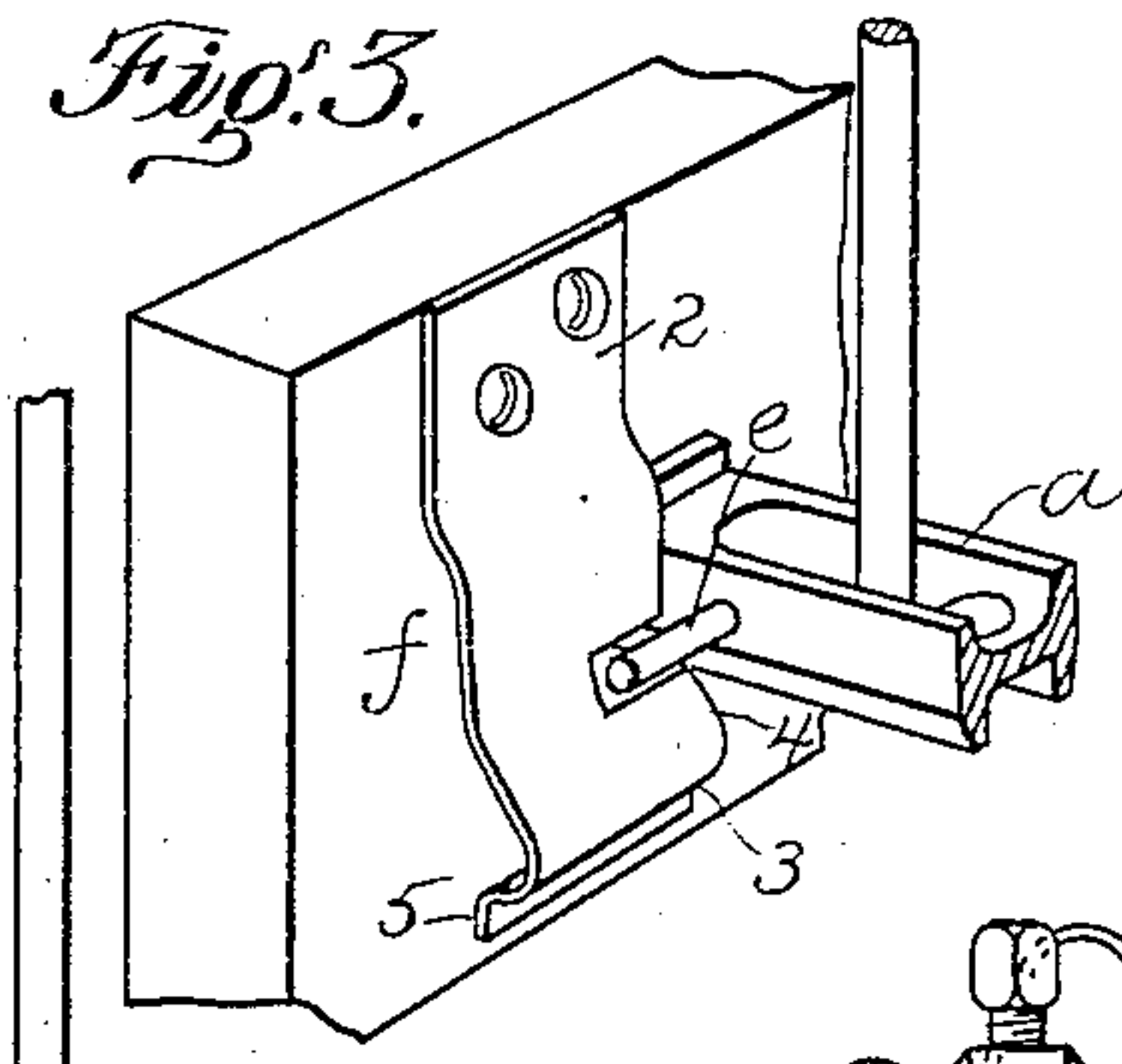


Fig. 4.

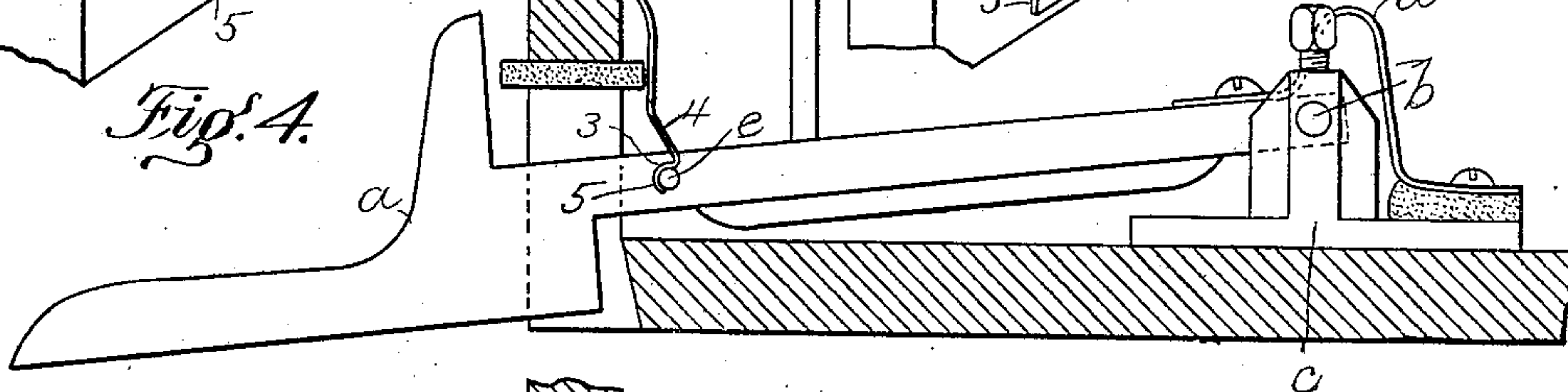
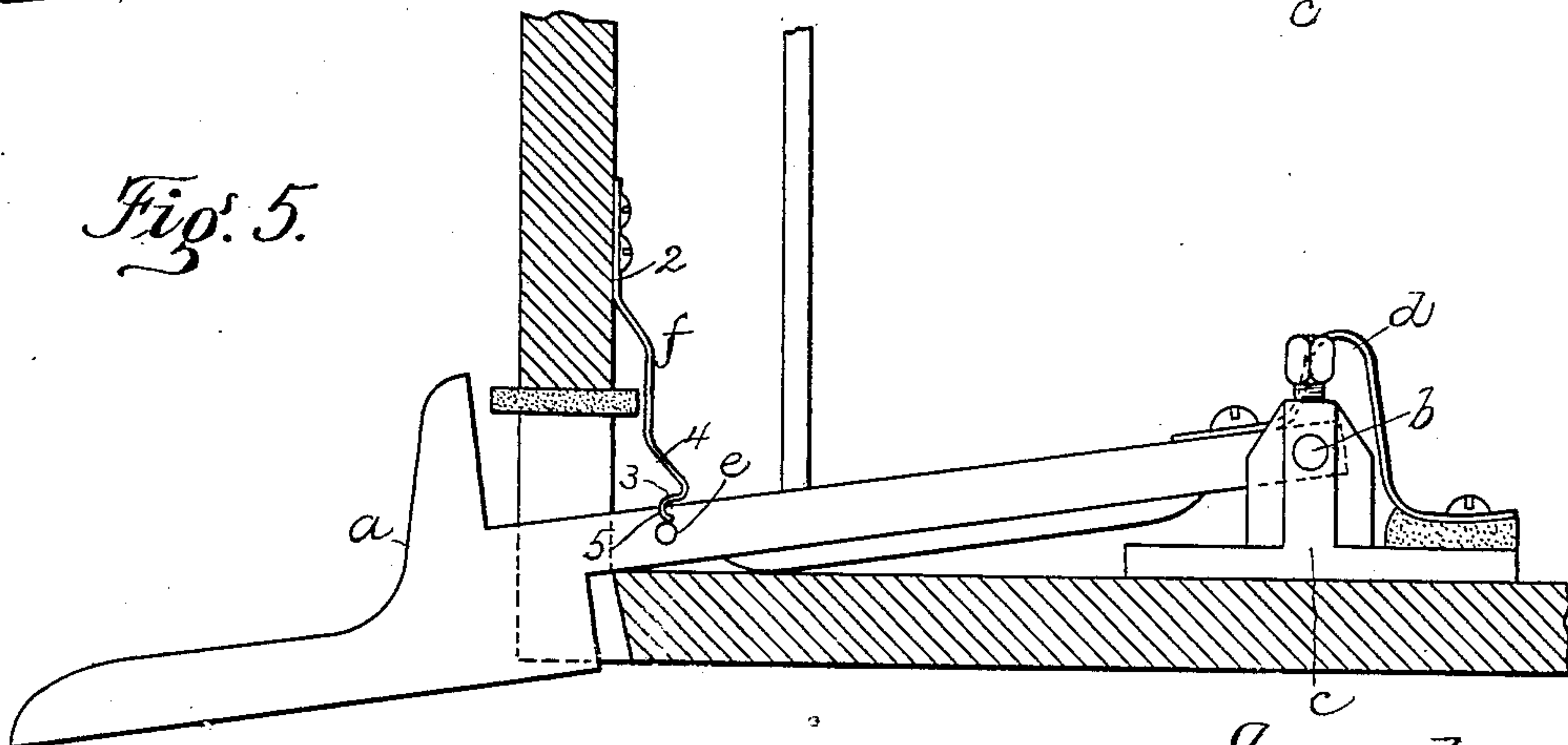


Fig. 5.



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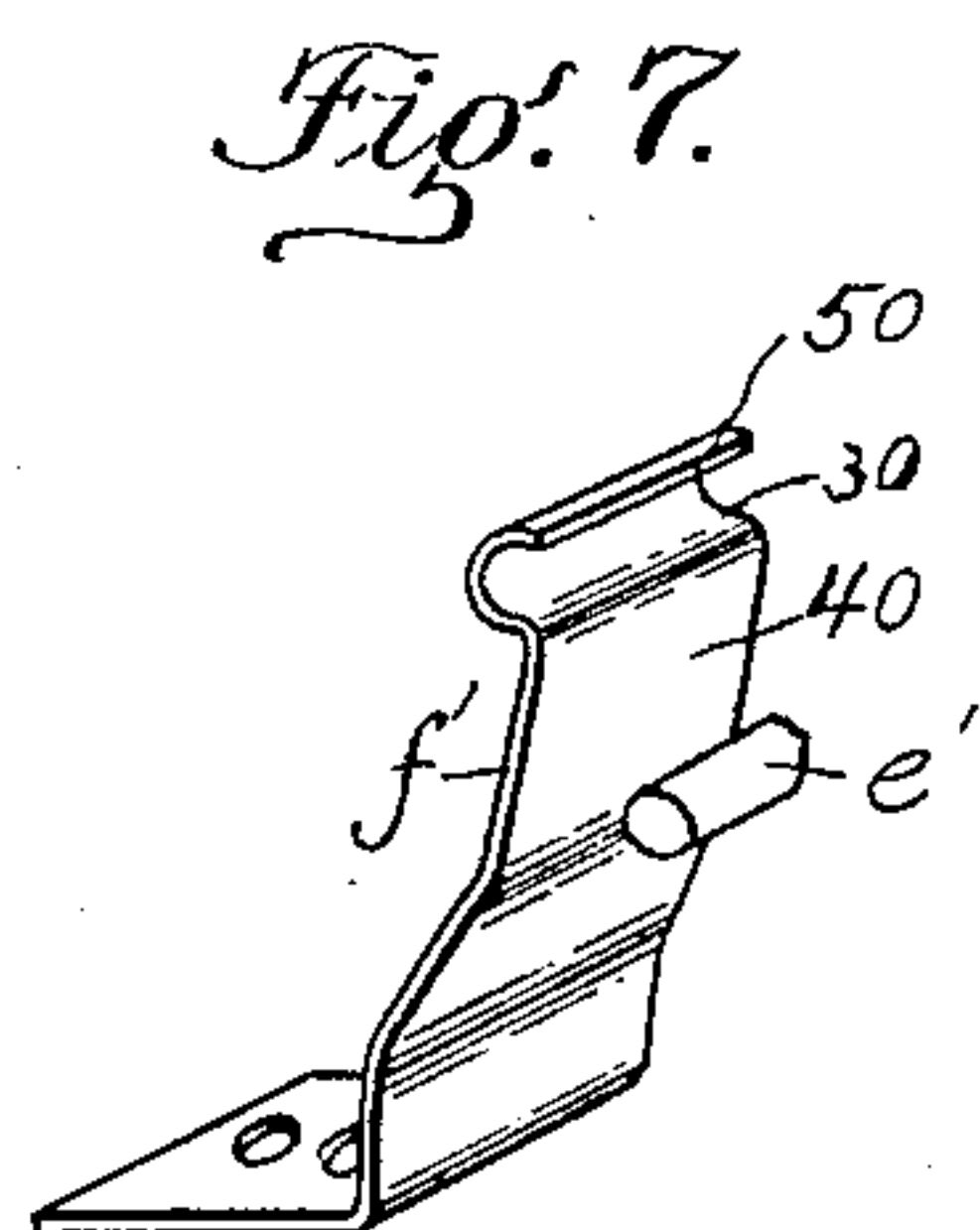
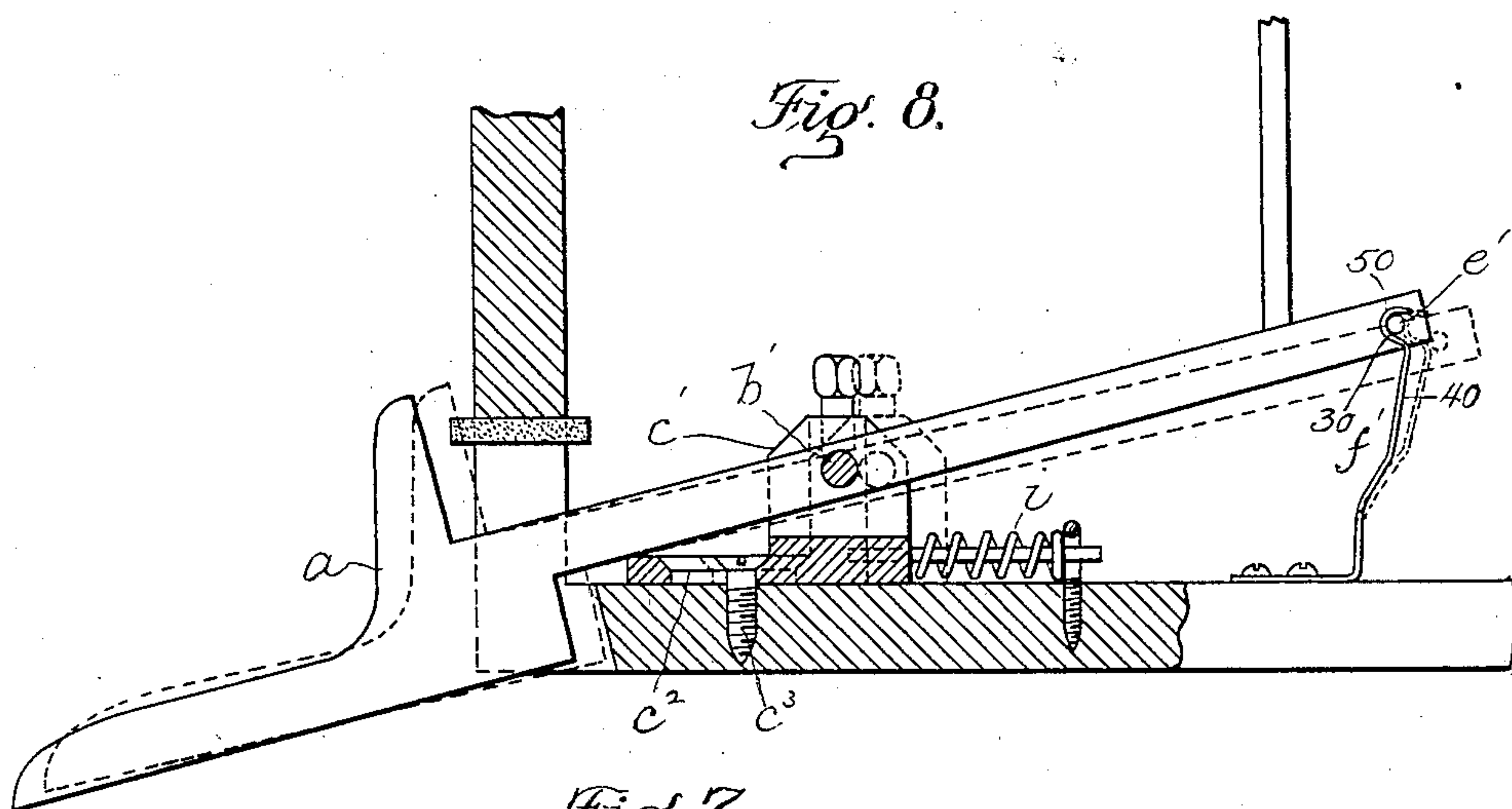
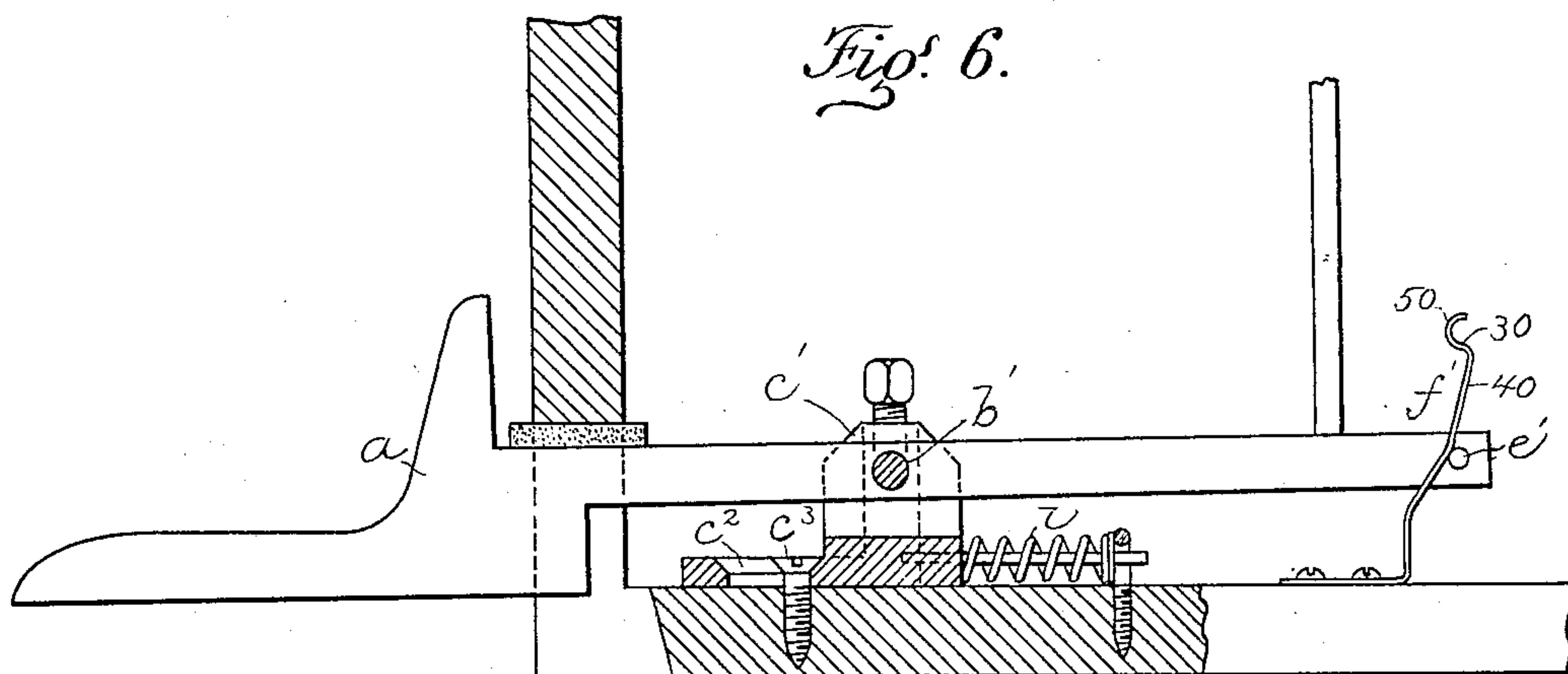
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2 SHEETS—SHEET 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT F. NORRIS, OF BOSTON, MASSACHUSETTS.

PEDAL FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 762,489, dated June 14, 1904.

Application filed September 8, 1903. Serial No. 172,353. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. NORRIS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pedals for Musical Instruments, of which the following is a specification.

This invention relates to means for temporarily holding or locking a pedal of a piano or other musical instrument in position to cause it to perform the function for which it is intended.

The invention hereinafter described has particular relation to the soft or mute pedal of a piano, although it is not limited thereto, and may be applied to a pedal intended for any purpose.

The object of the invention is to provide simple, inexpensive, easily-applied, and efficient means for automatically locking a pedal in its operative position when it has been moved thereto from its in operative position, in which it is normally held, and for causing an additional movement of the pedal to release it and permit its return to its normal position, the whole being effected by pressure of the operator's foot on the pedal itself.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a piano-pedal provided with a locking device embodying my invention, the pedal being in its normal position. Fig. 2 represents a perspective view of a portion of the pedal and the locking device, the position of the parts being the same as in Fig. 1. Fig. 3 represents a perspective view of a modification. Figs. 4 and 5 represent views similar to Fig. 1, showing the parts in different positions. Fig. 6 represents a side view, partly in section, showing a modification. Fig. 7 represents a perspective view of parts shown in Fig. 6. Fig. 8 represents a view similar to Fig. 6, showing the parts in different positions.

The same reference characters indicate the same parts in all the figures.

In the drawings, and referring for the present to Figs. 1 to 5, inclusive, *a* represents a piano-pedal, which is pivoted at *b* to a fixed support, such as a bracket *c*, affixed to the casing of a piano. The pedal is normally held in the inoperative position shown in Fig. 1 by the piano-action. In this case I have shown for convenience an auxiliary spring *d*, affixed at one end to the bracket *c* and at the other end to the pedal, the outer end of the pedal being thus yieldingly held in a raised position. *e* represents a stud or projection affixed to the pedal and projecting laterally therefrom. *f* represents a spring-arm having a shank portion 2, which is affixed to the casing, the other end of the arm being free and constituting a locking portion, which comprises a shoulder 3, an inclined face 4 at one side of the shoulder, and a guard-lip 5 at the opposite side of the shoulder. The arm normally stands in position to cause the face 4 to engage the projection *e* on the pedal when the latter is depressed. The engagement of the projection with the face 4 causes the projection to displace or force inwardly the spring-arm until the shoulder 3 springs into engagement with the projection, as shown in Fig. 4, and locks the pedal against backward movement to its normal position. In order that the pedal may be locked, as described, it is essential that the shoulder 3 of the locking portion of the spring-arm shall be sufficiently at a right angle to the shank to cause the projections *e* to be automatically held by said shoulder with the guard-lip 5 bearing against the projection *e*, so as to hold the shoulder 3 in engagement therewith. When it is desired to unlock or release the pedal and permit its return to its normal position, the operator gives the pedal an additional movement in the same direction as before, thus causing the projection *e* to pass beyond the guard-lip 5, whereupon the spring-arm, which was held under tension by the engagement of the guard-lip with the projection, is released and springs to its normal position, as shown in Fig. 5, so that the projection *e* is free to return along the inner side

of the locking portion of the spring-arm. In order that the arm f may spring back to normal position after the pin or projection e has moved upward behind the incline 4, one side of the said arm is cut away or recessed adjacent to the foot of said incline. The operations of locking and releasing the pedal may therefore be repeated indefinitely, although the pin e partakes of no other movement than the oscillatory ones of the pedal. It will be seen that the described locking device is very simple and requires the addition to the instrument of but two parts—viz., the stud or projection e and the spring-arm f . The arm may be reduced in width above the face 4, as shown in Fig. 2, or it may be slotted, as shown in Fig. 3, the lower edge of the slot forming the upper end of the face 4.

In Figs. 6, 7, and 8 I show a modification in which the pedal is pivoted at b' to a movable bracket c' , the pivot b' being nearer the front end of the pedal than in the first-described construction, so that a depression of the front end will raise the rear end, to which the stud or projection e' is attached. f' represents an arm which has an inclined face 40, a locking-shoulder 30, and a guard-lip 50, these parts being arranged as shown in Figs. 6 and 7, so that when the projection e' is raised by the depression of the outer end of the treadle the projection will cooperate with the inclined face 40 in causing the engagement of the shoulder 30 with the projection e' , the guard-lip maintaining such engagement. The bracket c' is movable horizontally, its base having slots c^2 , which receive the attaching-screws c^3 . A spring i normally holds the bracket in the position shown in Fig. 6. When the pedal has been locked by the engagement of the projection e' with the shoulder 30 and guard-lip 50, as shown by full lines in Fig. 8, the bracket and pedal may be moved horizontally by an inward pressure of the operator's foot to the position shown by dotted lines in Fig. 8 until the projection e' is disengaged from the shoulder 30, the pedal being thus released and permitted to return to its normal position. In this modification the arm f' may be substantially rigid, the yielding movement of the bracket and pedal permitting the projection e' on the pedal to spring into engagement with the shoulder 30. The arm f' may, however, be resilient, and may be formed to be engaged with and disengaged from the projection e' in the same manner as the arm f , in which case the guard-lip 50 will be formed to permit the projection e' to swing upwardly above it, so that when the projection e is moved downwardly by the return of the pedal to its normal position the said projection will move along the inner side of the locking portion of the arm f' .

Obviously the pedal will be locked in the

position determined by the position of the locking-shoulder of the spring-arm f or f' and that if the said spring-arm were to be formed with more than one locking-shoulder the pedal could be locked in the position determined by the position of the shoulder engaged by the projection e or e' .

I claim—

1. A pedal normally held in an inoperative position and provided with a stud or projection, combined with a locking-arm having a catch or shoulder formed to engage said projection when the pedal is displaced from its normal position, an inclined face which cooperates with the projection during the displacement of the pedal in causing the engagement of the shoulder and projection to prevent backward movement of the pedal, and a guard-lip which retains the shoulder in engagement with the projection, the pedal being movable to disengage the projection from the shoulder and permit the return of the pedal to its normal position.

2. A pedal normally held with its outer portion in a raised position and provided with a stud or projection, combined with a spring-arm having a catch or shoulder formed to engage said projection when the pedal is displaced from its normal position, an inclined face which is displaced with said shoulder by the projection during the displacement of the pedal to permit the shoulder to spring into engagement with the projection and prevent backward movement of the pedal, and a guard-lip which retains the shoulder in engagement with the projection, the shoulder being arranged to permit the disengagement of the projection from it and the return or backward movement of the pedal by a continuation of the displacing movement of the pedal.

3. A pedal normally held with its outer portion in a raised position and provided with a stud or projection, combined with a spring-arm having a locking portion located in the path of said projection and comprising a locking-shoulder, an inclined face at one side of the shoulder, and a guard-lip at the opposite side of the shoulder, the said inclined face engaging the projection when the latter is moved by the displacing movement of the pedal and causing the engagement of the shoulder with the projection to prevent backward movement of the pedal, while the guard-lip engages the projection to maintain the shoulder in engagement with the projection and hold the arm under tension, the projection being movable beyond the guard-lip to permit the arm to spring laterally into position to permit the return movement of the pedal.

4. As an article of manufacture, a pedal-locking spring-arm having an attaching portion or shank and a locking portion, said locking portion comprising a transverse locking-

shoulder having a wall substantially at a right
angle to the plane of said shank, an inclined
portion at one side of the shoulder, and a
guard-lip projecting from said wall in the op-
5 posite direction from that of said shoulder,
the arm being cut away or recessed adjacent
to the foot of the inclined portion.

In testimony whereof I have affixed my sig-
nature in presence of two witnesses.

ALBERT F. NORRIS.

Witnesses:

C. F. BROWN,
E. BATCHELDER.