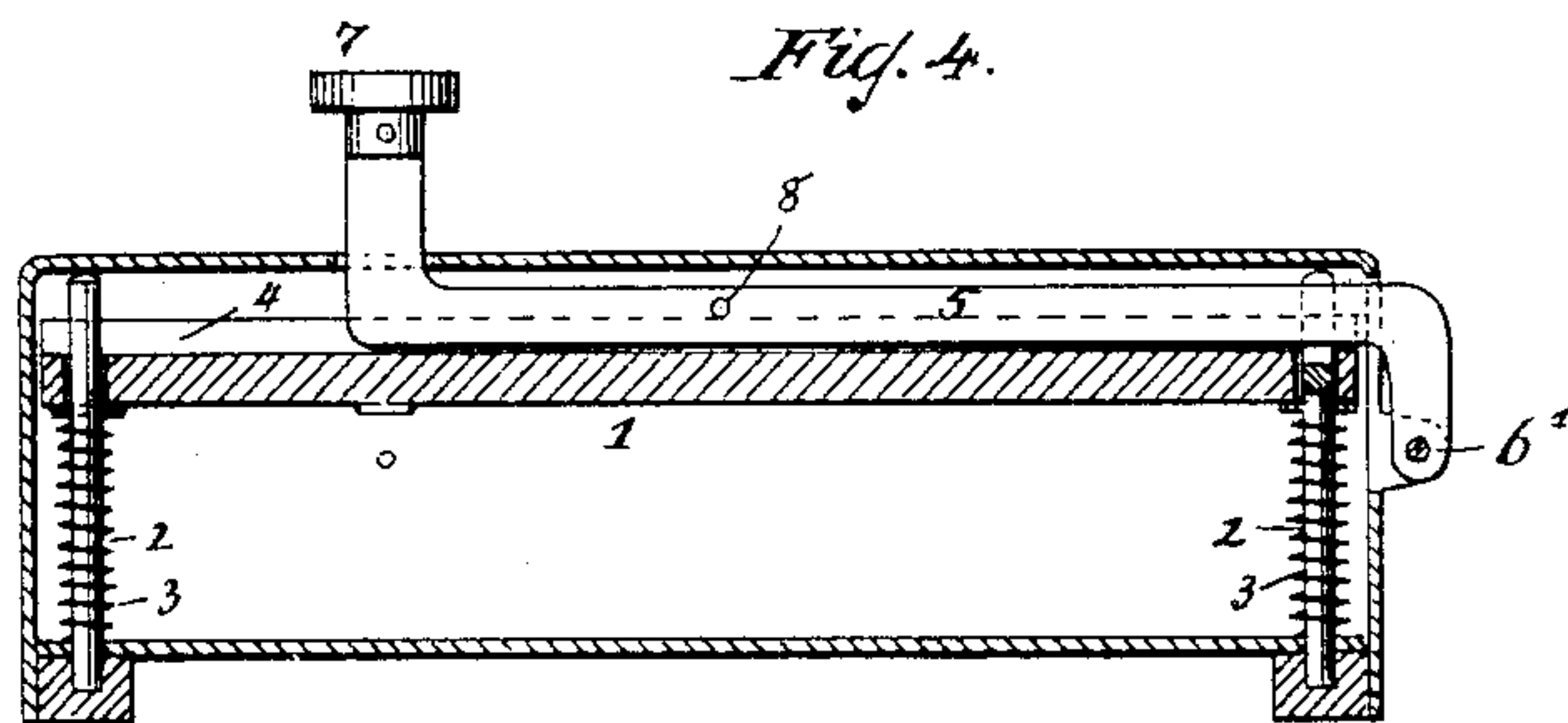
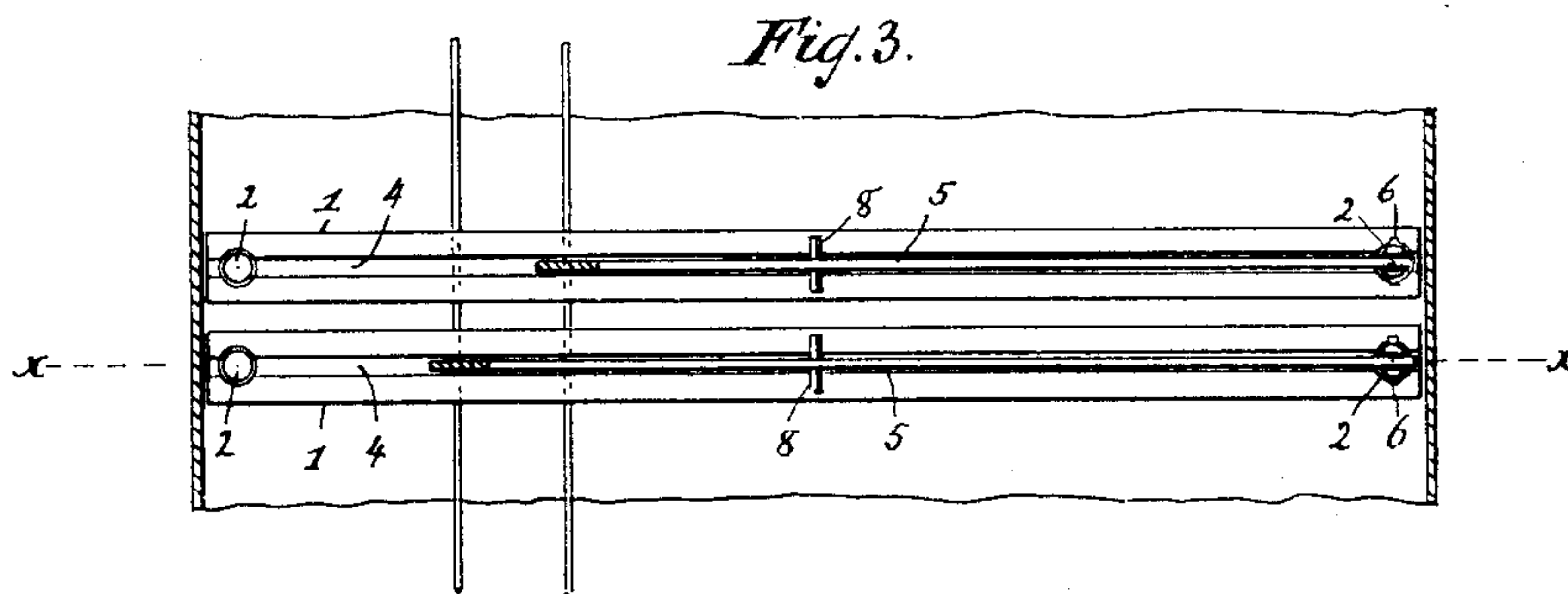
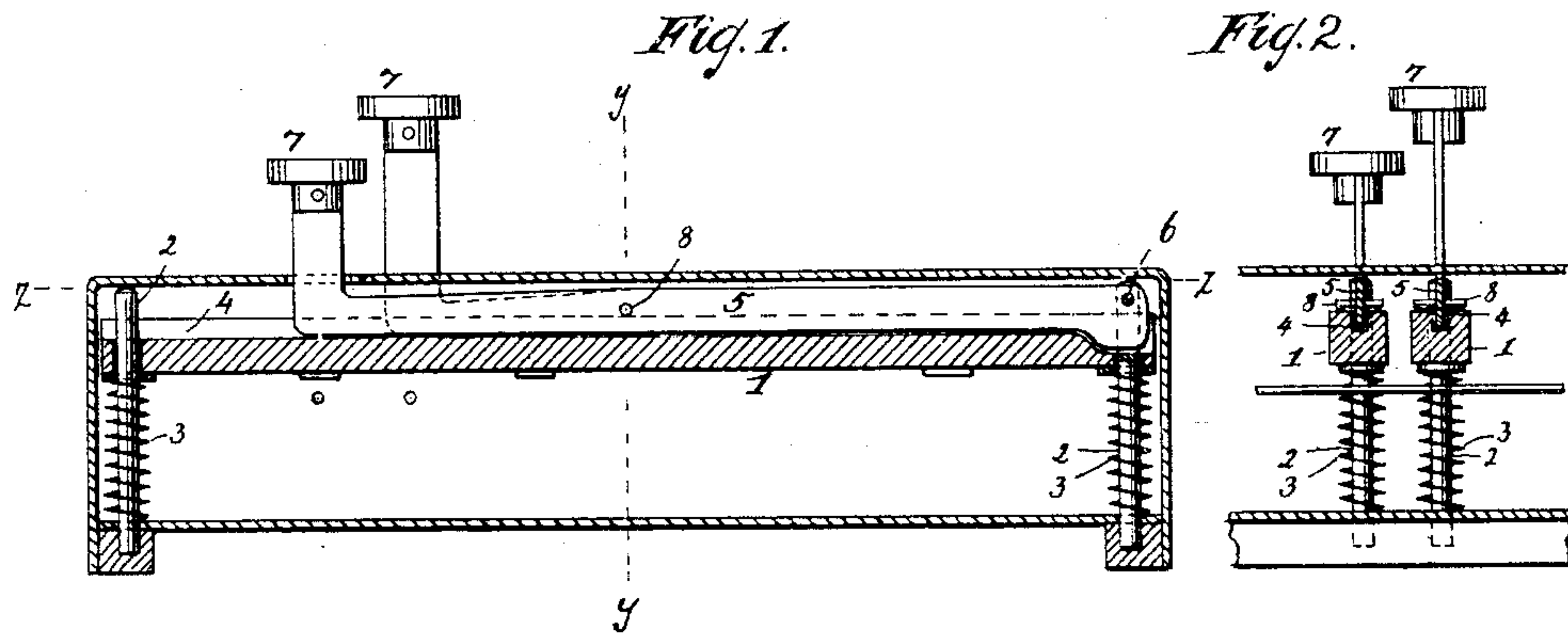


(No Model.)

W. B. OWEN & J. H. CROWELL.
STRINGED MUSICAL INSTRUMENT.

No. 542,533.

Patented July 9, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM BARRY OWEN, OF NEW YORK, N. Y., AND JOHN H. CROWELL, OF VINEYARD HAVEN, MASSACHUSETTS, ASSIGNORS TO THE C. F. ZIMMERMAN COMPANY, OF DOLGEVILLE, NEW YORK.

STRINGED MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 542,533, dated July 9, 1895.

Application filed April 18, 1895. Serial No. 546,224. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM BARRY OWEN, residing at New York, in the county and State of New York, and JOHN H. CROWELL, residing at Vineyard Haven, in the county of Dukes and State of Massachusetts, citizens of the United States, have invented new and useful Improvements in Stringed Musical Instruments, of which the following is a specification.

The object of this invention is to provide means for enabling the strings of a musical instrument to be readily and effectively damped, and the invention resides in the novel features of construction set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of a damper-bar sectioned along $x x$, Fig. 3. Fig. 2 is a section along $y y$, Fig. 1. Fig. 3 is a section along $z z$, Fig. 1. Fig. 4 shows a modification.

The damper-bar 1 is rectilinearly movable toward and from the strings, said bar being guided by the straight rods or guides 2, the springs 3 tending to hold or move the bar away from the strings. One or more such damper-bars may be provided, as required.

Each damper-bar is longitudinally slotted, as at 4, and a key 5 is seated or arranged along said slot, the key being fulcrumed at 6 to one of the guides 2 and being made to extend toward the other guide, the free end of the key being provided with a finger-button 7. The key 5 has a cross-pin 8 resting freely or loosely on the damper-bar 1, so that the key is independent of the bar, the key when depressed swinging about the fulcrum 6, while the bar 1 is rectilinearly depressed along guides 2 toward the strings to damp one or more of the latter, the cross-pin 8 causing the key when being depressed to move the bar toward the strings.

The buttons 7, by being arranged in proximity to one of the guides 2, can be brought into position to be readily reached and depressed by the finger of one hand.

The buttons when ranged along different

lines will be in position not to interfere with one another, and the buttons in the outer rank or line being at a lower height from the buttons in the inner rank the depression of a button along the inner rank is not liable to cause an accidental depression of an adjacent button along the outer rank, as the button starting from a higher level can be arranged so as to have completed its downward movement before the finger depressing such button will touch a button starting from a lower level.

The damper-bars are provided, as well known, with the damping-pads suitably spaced to effect the damping required for the formation of chords or other effects.

Instead of being fulcrumed at 6 to a support 2 the key 5 can be fulcrumed, as at 6', Fig. 4, to a suitable part of a frame or casing.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a stringed musical instrument, the combination with the strings, of a rectilinearly movable damper bar, a key mounted independently of the bar, and a cross-pin carried by said key and adapted to loosely engage the bar, substantially as described.

2. In a stringed musical instrument, the combination with the strings, of a rectilinearly movable damper bar, a key mounted independently of the bar and extending above the same, and a cross-pin carried by the key and loosely engaging the bar at its center, substantially as described.

3. In a stringed musical instrument the combination with the strings, of a movable and longitudinally slotted damper bar, and a key seated along the slot of the bar, substantially as described.

4. In a stringed musical instrument the combination with the strings, of a movable slotted damper bar, and a key arranged along the slot and having a cross pin made to rest on the bar substantially as described.

5. In a stringed musical instrument the combination with the strings, of a movable damper bar, guide rods for said bar, and a

key fulcrumed on one of said guide rods and made to extend toward the other guide rod substantially as described.

6. In a stringed musical instrument the combination with the strings, of a series of damper bars, and actuating keys for said bars, said keys being provided with finger buttons ranged along different lines, the buttons in different ranks being located at varying heights substantially as described.

In testimony whereof we have hereunto set

our hands in the presence of two subscribing witnesses.

WILLIAM BARRY OWEN.
JOHN H. CROWELL.

Witnesses as to William Barry Owen:

W. C. HAUFF,
E. F. KASTENBUBER.

Witnesses as to John H. Crowell:

S. F. CROWELL,
O. A. CROWELL.