

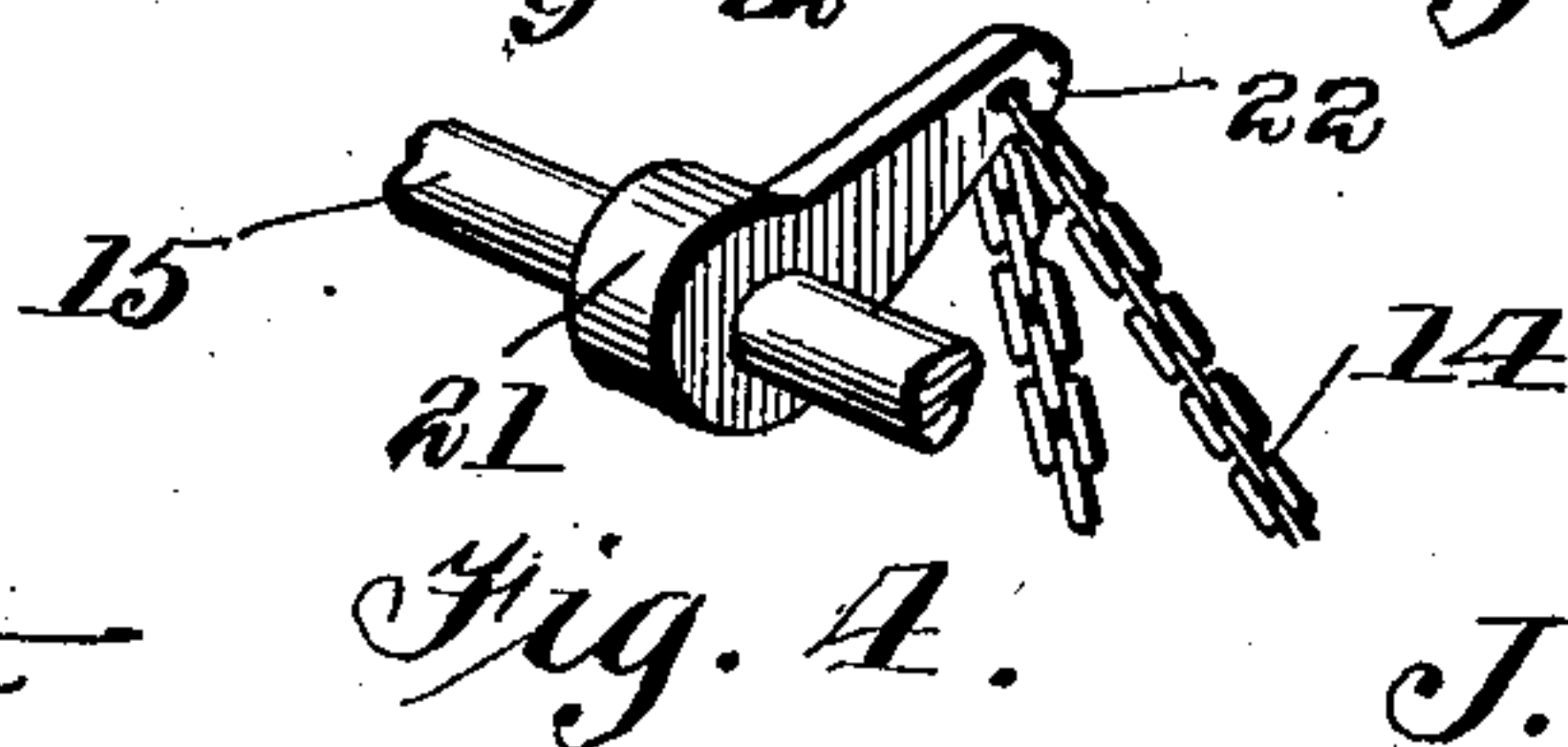
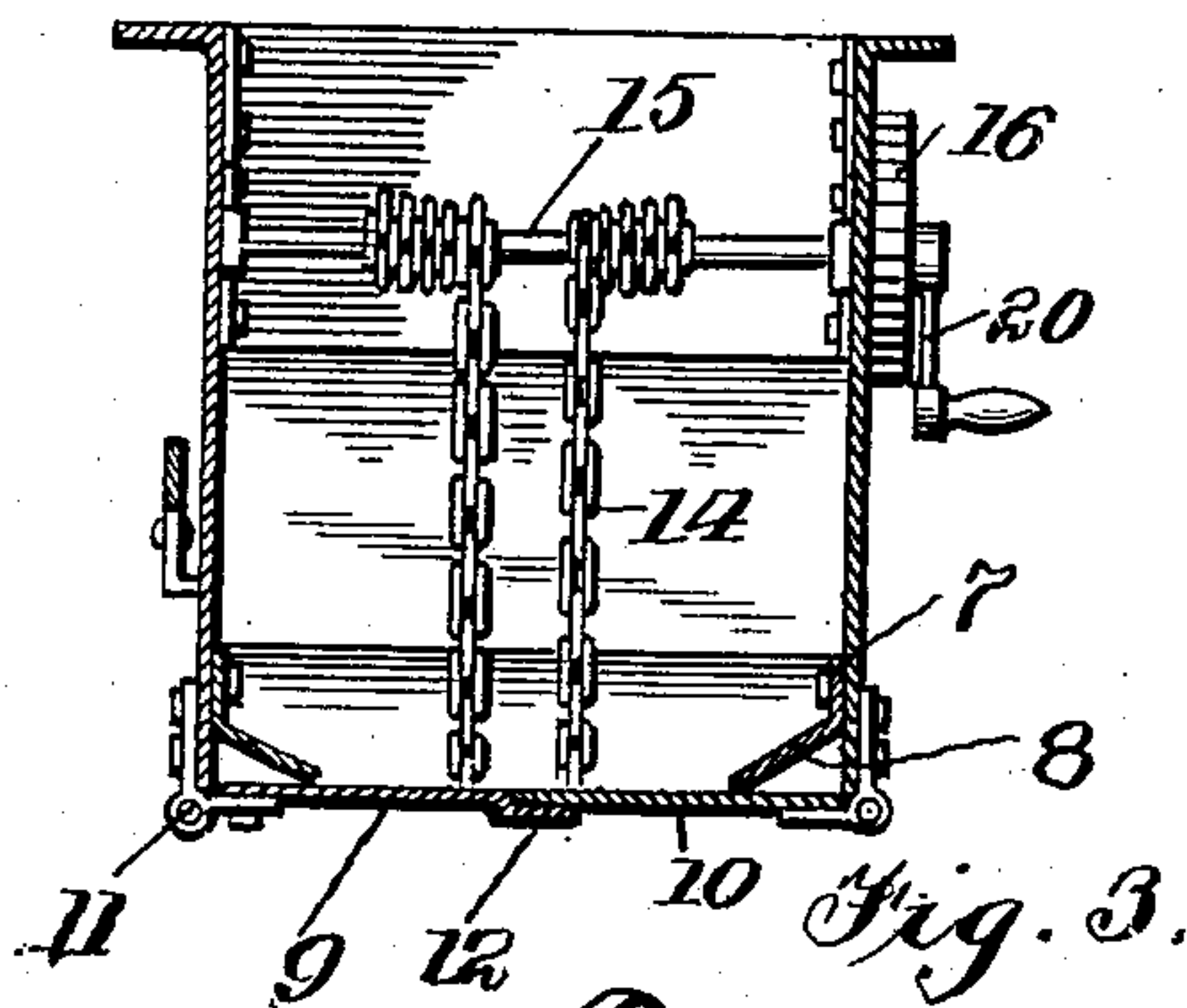
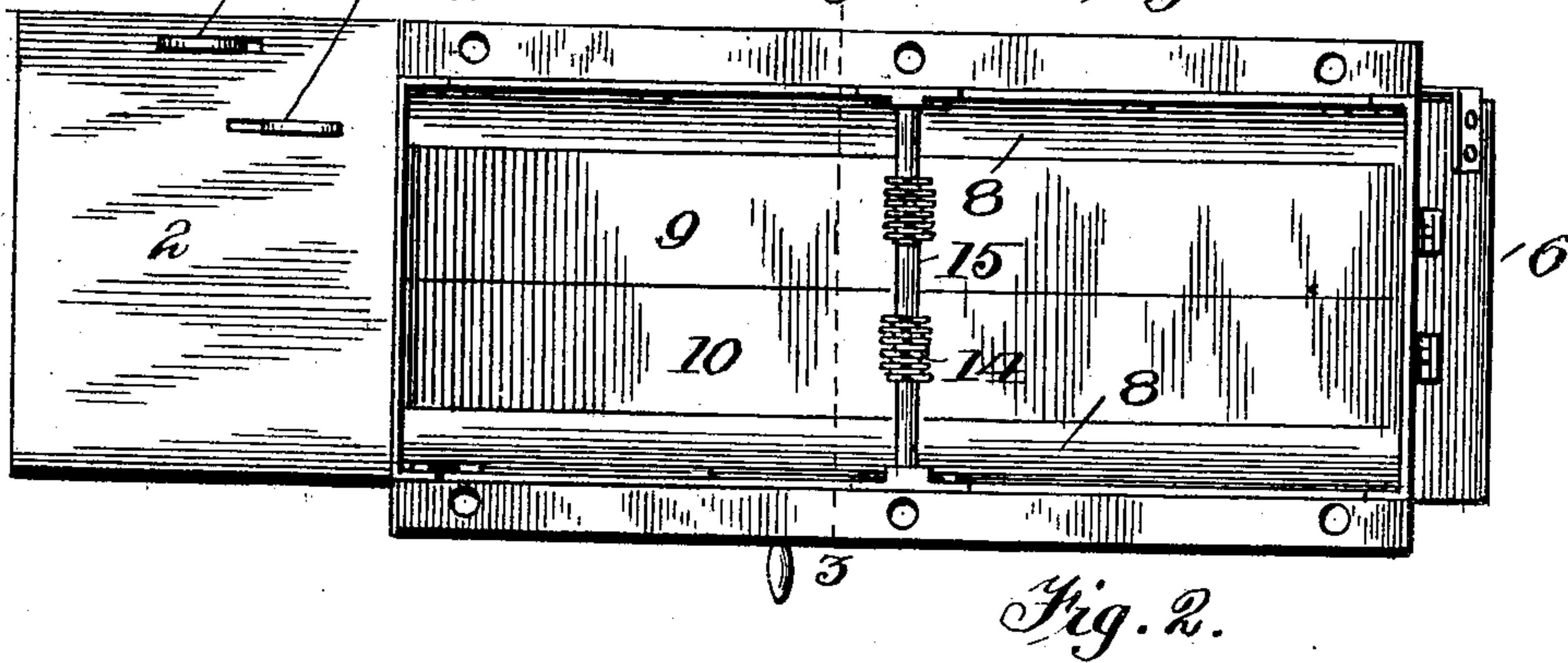
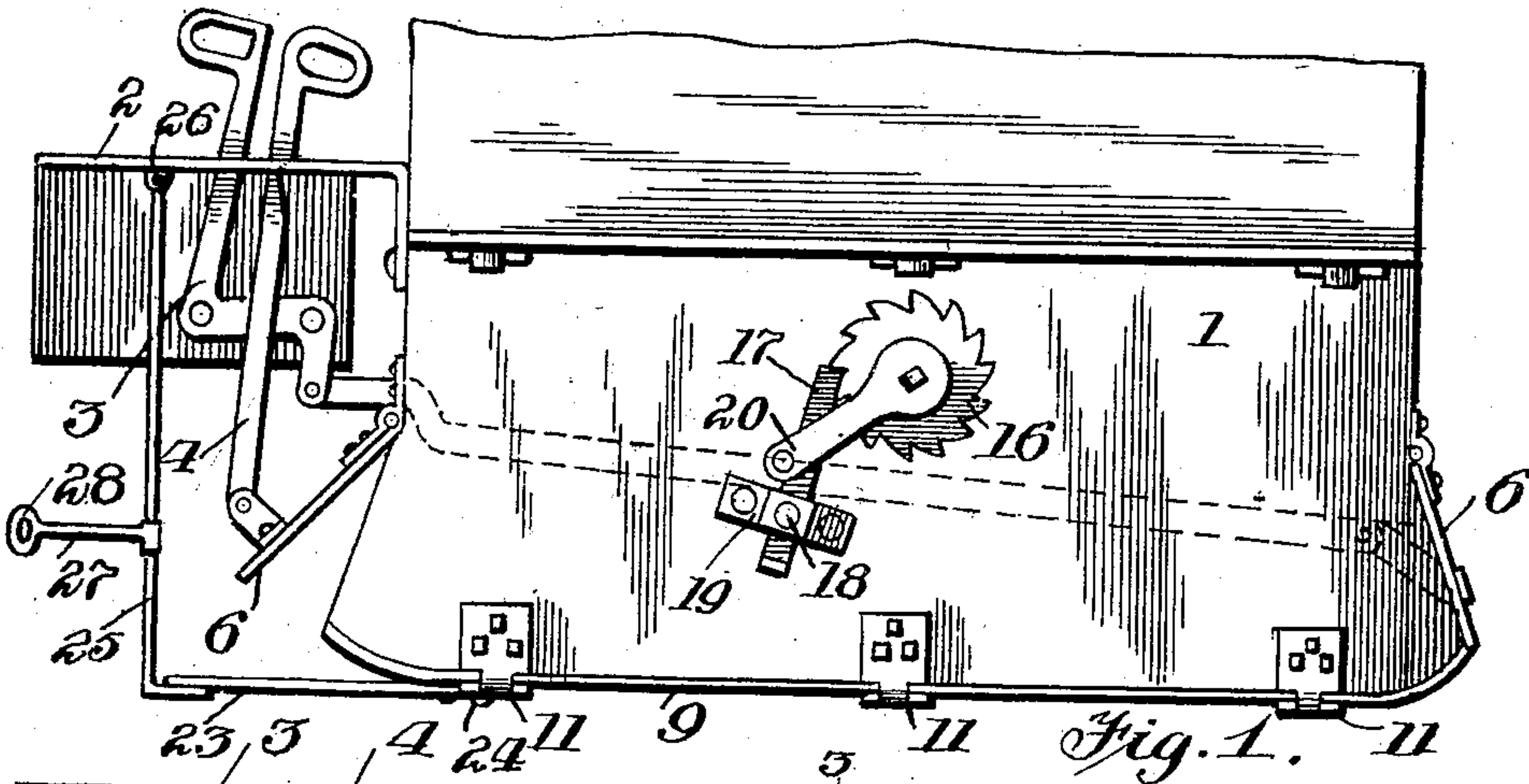
No. 698,971.

Patented Apr. 29, 1902.

J. A. KREMSEK.
DROP-BOTTOM FOR ASH PANS.

(Application filed Jan. 18, 1902.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN A. KREMSER, OF DUQUESNE, PENNSYLVANIA.

DROP-BOTTOM FOR ASH-PANS.

SPECIFICATION forming part of Letters Patent No. 698,971, dated April 29, 1902.

Application filed January 18, 1902. Serial No. 90,350. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. KREMSER, a citizen of the United States of America, residing at Duquesne, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Drop-Bottoms for Ash-Pans, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in drop-doors for ash-boxes in locomotives, and has for its object the provision of novel means whereby ash-boxes may be readily dumped or cleaned, 15 thereby obviating the necessity of opening the end doors to remove the ashes from the ash-pan, as is now the case in this class of inventions.

Another object of the present invention is 20 to provide drop-doors that may be easily operated and again placed in the closed position; furthermore, to provide novel means for locking the doors in a closed position.

Heretofore many difficulties have been experienced in the removal of ashes from the 25 ash-boxes stationed below the fire-box of the engine, and it is the object of the present invention to overcome all such difficulties and to materially lessen the labor that has been 30 heretofore necessary to accomplish the desired result.

The herein-described invention further aims to provide a device of the above-described character that will be extremely simple in construction, strong, durable, comparatively inexpensive to manufacture, and highly efficient in its use.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically 40 pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings, 45 forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of my improved 50 ash-box, showing the drop-doors applied thereto. Fig. 2 is a top plan view of the same.

Fig. 3 is a vertical sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a perspective view showing a modified form of shaft for opening and closing the drop-doors.

55 In the drawings the reference-numeral 1 indicates the ash-box; 2, the platform leading to the cab of the engine. The reference-numerals 3 4 represent operating-levers to operate the hinged doors 5 6, secured at the ends 60 of the ash-box. This construction is well known and does not constitute a part of the present invention. Interior plates 7 are secured in the inner face near the lower portion of the side walls, these plates extending 65 inwardly at an angle, as shown at 8, in order that all the particles of ashes may be dumped when the doors are lowered. The drop-doors 9 and 10 form the bottom of the ash-box and are hinged at 11 to the sides. The door 10 is 70 provided with a plate 12, formed integral therewith, which is adapted to underlap the drop-door 10. These drop-doors 9 and 10 are suspended by chains 14, the upper ends of said chains extending over the operating- 75 shaft 15, which is suitably journaled in the ash-box and extends transversely across the same. This shaft 15 extends through one side of the ash-box and carries a ratchet-wheel 16, which ratchet-wheel is locked by 80 means of the gravity-pawl 17, pivotally secured at 18 in the guide 19, the latter being rigidly secured to the outer face of the ash-box. At the end of the shaft 15 is secured a crank-handle 20 to operate the shaft and 85 ratchet-wheel. The reference-numeral 21 represents an arm secured to the operating-shaft 15, showing the chains 14 connected to the end of the arm, as illustrated at 22 in Fig. 4 of the drawings. By this construction both 90 doors may be conveniently operated with a single chain, the center of the chain being connected, at 22 to the arm 21 and the free ends of the chain being secured to the doors 9 and 10.

95 At the end of the drop-door 9 is secured a bar 23 to flange 12 of the door by means of rivets 24, said bar resting upon a hook which is carried by a bar 25, said bar being pivotally hung to the platform 2 at 26. To the bar 25 100 is secured a rod 27, carrying a handle 28. This rod 27 may extend to the rear, as shown

in the drawings, or may pass to either side, as may be preferable in construction. The function this construction performs is in case of a break in the chain 14, when the door will
 5 be supported by the hook formed on the bar 25. To release the doors, the rod 27 is pulled back or to the side, as the construction may be, thus releasing the doors.

The operation of my improved device, as
 10 well as the many advantages obtained by the use of my improved device, will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

15 It will be noted that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what
 20 I claim as new, and desire to secure by Letters Patent, is—

1. In an ash-box of a locomotive, the combination of drop-doors forming the bottom thereof, one of said doors carrying a platform
 25 integral therewith and underlapping the other door, an operating-shaft, chains connected to said operating-shaft and said doors, means to operate and lock the operating-shaft, and means independent of the said chains for preventing the accidental releasing of the said
 30 doors, substantially as described.

2. In an ash-box for locomotives and the

like, the combination of drop-doors hinged to the sides of said box forming the bottom thereof, a plate carried by one of said doors underlapping the other door, an operating-shaft
 35 carrying a crank-handle, chains connecting said shaft and doors, and inwardly-inclined plates secured to the inner sides of said box near the bottom and above the hinges thereof, said plates being inclined at an angle, substantially as described. 40

3. In an ash-box for locomotives and the like, the combination of drop-doors hinged to the sides of said box forming the bottom thereof, a plate carried by one of said doors underlapping the other door, an operating-shaft
 45 carrying a crank-handle, arms secured on the operating-shaft to which the chains are attached, plates secured to the inner sides of said box near the bottom thereof, said plates being inclined at an angle, a ratchet-wheel
 50 carried by said operating-shaft, and a locking-pawl, a bar extending from the doors, a rod pivoted to a platform, said rod supporting said bar and means for releasing the same, all parts being arranged and operating substantially as shown and described. 55

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN A. KREMSER.

Witnesses:

JOHN NOLAND,
 CARLE A. YAHNSON.