(No Model.)

C. M. CONLEY.

STEREOTYPE CASTING APPARATUS.

No. 560,395. Patented May 19, 1896.

Fig. 1.

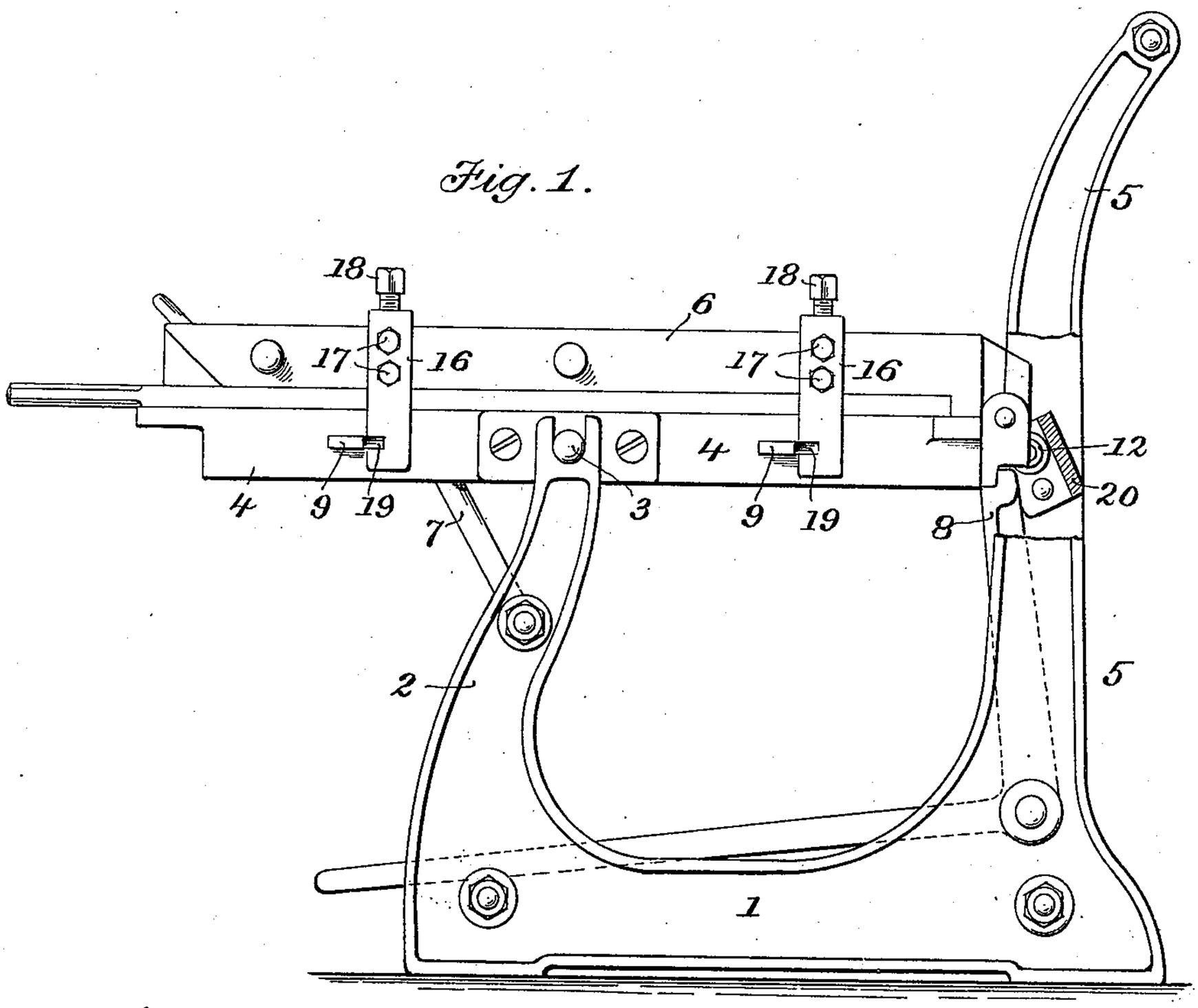
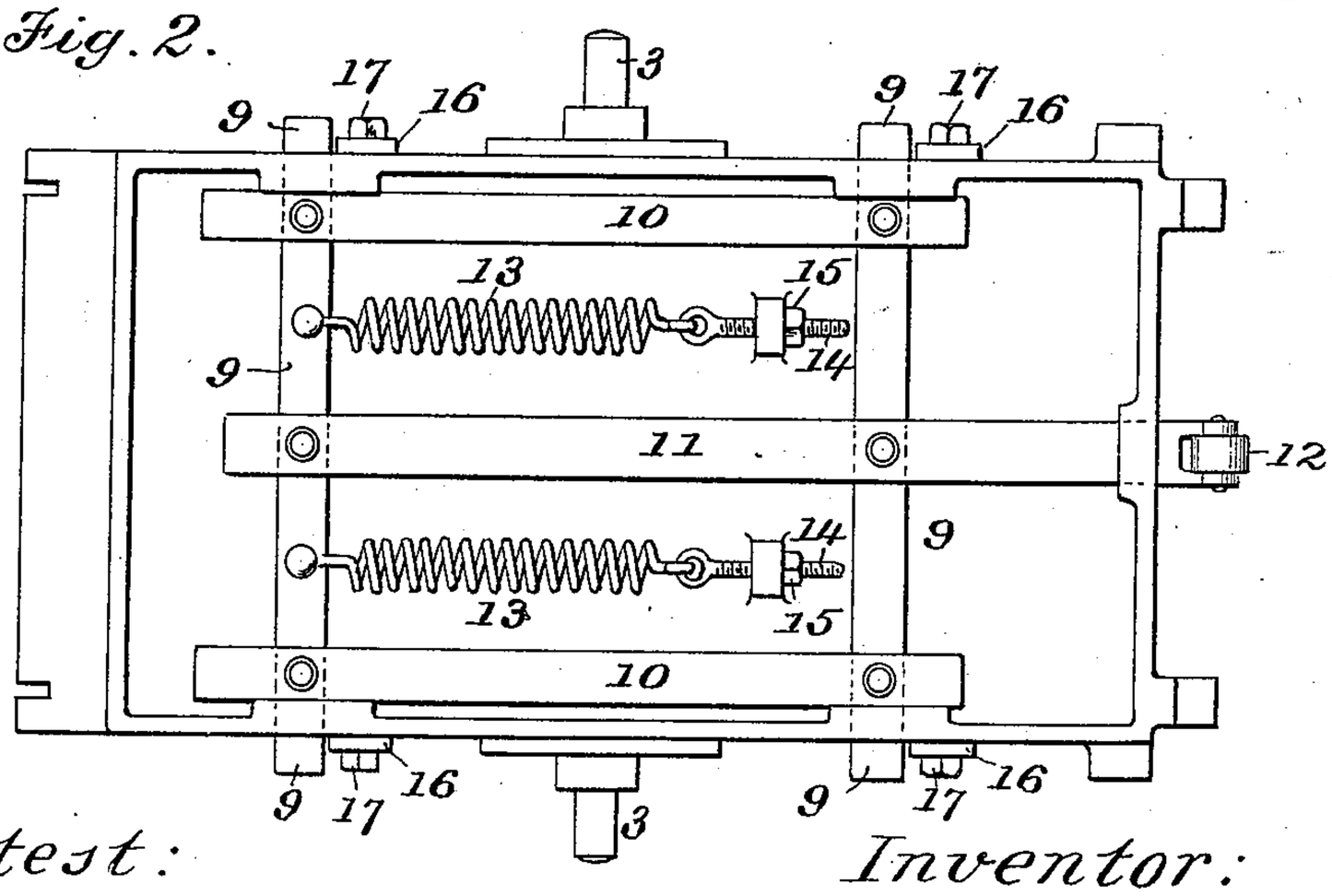


Fig. 2.



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STEREOTYPE-CASTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 560,395, dated May 19, 1896.

Application filed January 20, 1896. Serial No. 576,211. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. CONLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Stereotype-Casting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to automatically-operating means for locking together the cover and matrix-bed of a stereotype-casting box preparatory to the casting operation and in like manner automatically unlocking the parts when the cast plate is about to be removed; and the present improvement has for its object to provide a simple and efficient automatic locking means for such casting-boxes in which a uniform attachment is made at different portions of the box against springing and warping of the parts in use, and thus not only avoids the danger of leakage of the molten metal, but also insures a perfect cast-plate product. I attain such object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation with parts in section of a stereotype-casting box to which my present invention is applied; Fig. 2, a bottom plan of the casting-box proper.

Similar numerals of reference indicate like parts in both views.

Referring to the drawings, 1 represents the main supporting-frame, having upright standards 2, in which the casting-box is supported in a pivotal manner by means of trunnions 3 on the sides of its matrix-bed 4, and rearwardly-inclined standards 5, against which the cover 6 of the casting-box rests when the same is in an open condition.

7 is the usual stop for holding the front part of the casting-box against a downward movement from its usual open and horizontal position.

8 are the usual pivoted locking-arms engaging the rear end of the casting-box to lock the same in its horizontal open position during the removal of the cast plate and the preparation of the casting-box for a fresh casting operation. The casting-box will consist of the usual matrix-bed 4 and cover 6, hinged together at the rear, as shown in Fig. 1.

In the present improvement, 9 are a pair of transverse locking-bars that project through the side walls of the matrix-bed 4 and have limited movement in elongated slots in the same; 10, a pair of longitudinal side bars connecting the transverse locking-bars 9 together, and 11 a central connecting-bar that projects at the rear end of the casting-box and is preferably provided with a bearing-roller 12 at its rear end, as shown, for the purpose hereinafter stated, the series of bars 9, 10, and 11 being bolted or otherwise secured together to constitute a rigid frame that is capable of a limited reciprocation within the hollow bottom of the matrix-bed.

13 are springs secured to the matrix-bed and to the said frame, so that the tendency will be to draw the frame in a backward direction. The tension of these springs is capable of adjustment by means of screw-rods 14 and adjusting-bolts 15, as shown in Fig 2.

16 are catch-plates secured to the sides of the cover portion 6 of the casting-box by means of attaching-bolts 17 and adjusting-bolts 18, and have near their lower ends notches 19, into which the outer ends of the locking-bars 9 are adapted to engage to lock the cover to the matrix-bed of the casting-box.

20 is a cam-plate secured to the main frame 1 and in the path of the rear end of the central connecting-bar 11 and the friction-roller 12 of the same, the arrangement being such that when the casting-box is swung into a horizontal position said cam-plate will engage the friction-roller 12 to force the bar 11 forward against the tension of the springs 13 and cause the locking-bars 9 to move forward out of engagement with the notches 19 of the catch-plates 16, leaving the cover free to be swung away from the matrix-bed for the removal of the cast plate and the preparation of the casting-box for a fresh casting operation. After being so prepared the casting-box will be swung back into a vertical position, in which to receive the molten metal. In the initial part of this movement the friction-roller 12 leaves the cam-plate 20 and the

springs 13 are free to draw the locking-bars 9 into engagement with the notches 19 of the catch-plates 16 to lock the cover and matrix-bed together in a very firm and substantial manner.

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

1. In a stereotype-casting apparatus, the combination of the fixed supporting-frame, and casting-box journaled thereon, a centrally-arranged cam-plate secured to the frame, a reciprocating frame guided on the matrix-bed and carrying locking-bars 9, that project at each side of the matrix-bed, and a centrally-arranged and rearwardly-extending arm that projects into the path of the cam-plate, a series of catch-plates secured to the cover of the casting-box, and provided with notches adapted to engage the locking-bars, and a spring tending to move the locking-bars in a backward direction, substantially as set forth.

2. In a stereotype-casting apparatus, the combination of the fixed supporting-frame, and casting-box journaled thereon, a centrally-arranged cam-plate secured to the frame, a reciprocating frame guided on the matrix-bed and carrying locking-bars 9, that project at each side of the matrix-bed, and a rearwardly-extending arm carrying a centrally-arranged friction-roller 12, that projects into the path of the cam-plate, a series of catch-plates secured to the cover of the casting-box and provided with notches adapted to engage the locking-bars, and a spring tending to move the locking-bars in a backward direction, substantially as set forth.

3. In a stereotype-casting apparatus, the combination of the frame, and casting-box journaled therein, a cam-plate secured to the frame, a reciprocating frame sliding in the matrix-bed, and provided with locking-bars 9, and a rearwardly-extending arm that projects into the path of the cam-plate, a series of catch-plates adjustably secured to the cover of the casting-box by attaching-bolts 17, and adjusting-bolts 18, and provided with notches 19, adapted to engage the locking-bars, and a spring for moving the locking-bars in a backward direction, substantially as set forth.

4. In a stereotype-casting apparatus, the combination of the frame, and casting-box journaled therein, a cam-plate secured to the frame, a reciprocating frame sliding in the matrix-bed, and provided with locking-bars 9, and a rearwardly-extending arm, that projects into the path of the cam-plate, a series of catch-plates secured to the cover of the casting-box, and provided with notches adapted to engage the locking-bars, and a spring 13, attached to the locking-bars, and to the matrix-bed by adjusting-screw 14, and nut 15, substantially as set forth.

In testimony whereof witness my hand this 2d day of January, 1896.

CHARLES M. CONLEY.

In presence of—
ROBERT BURNS,
JAMES LAVALLIN.