

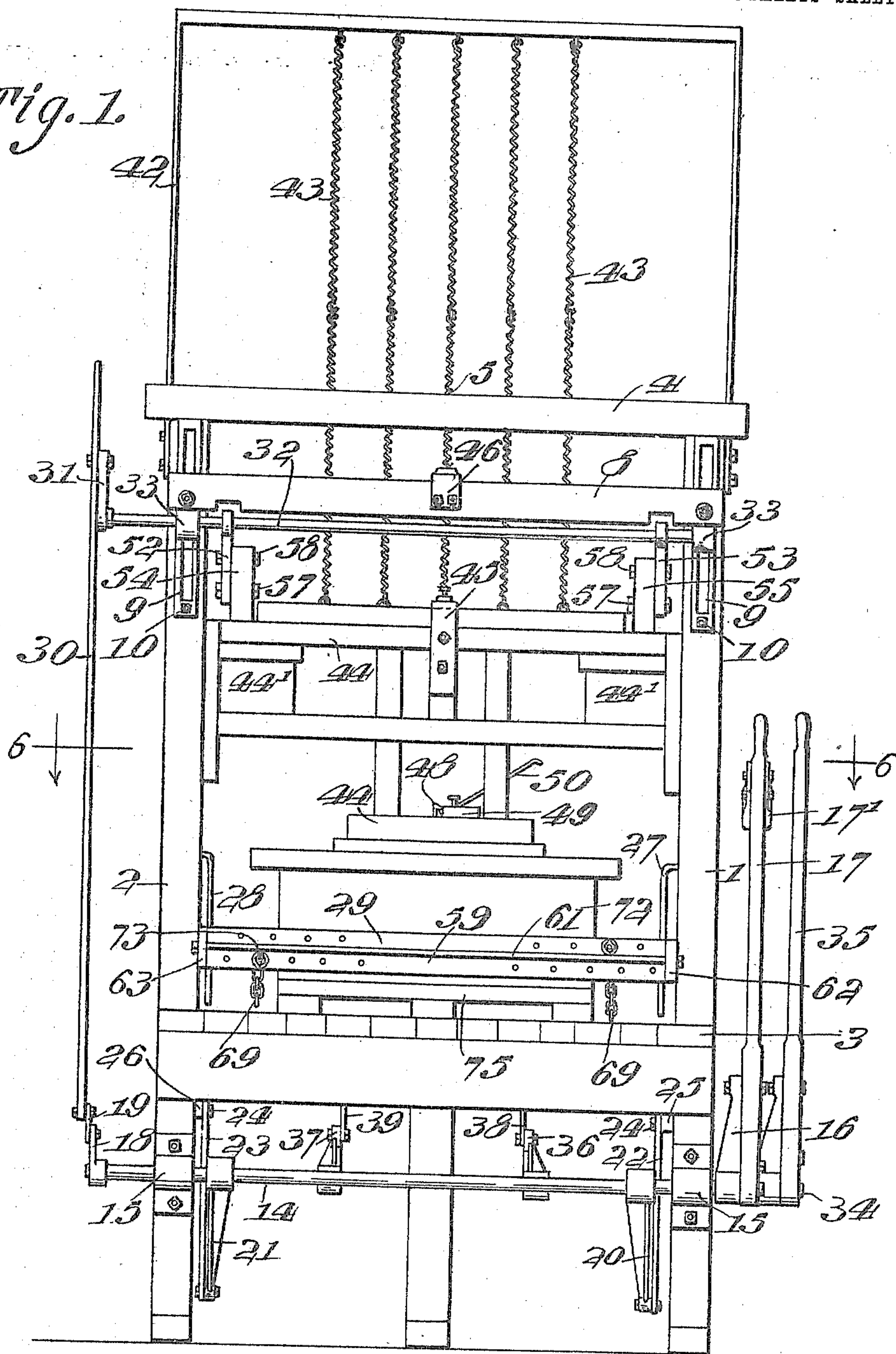
951,699.

A. J. RIOUX.
MOLDING MACHINE.
APPLICATION FILED JAN. 11, 1909.

Patented Mar. 8, 1910.

5 SHEETS—SHEET 1.

Fig. 1.



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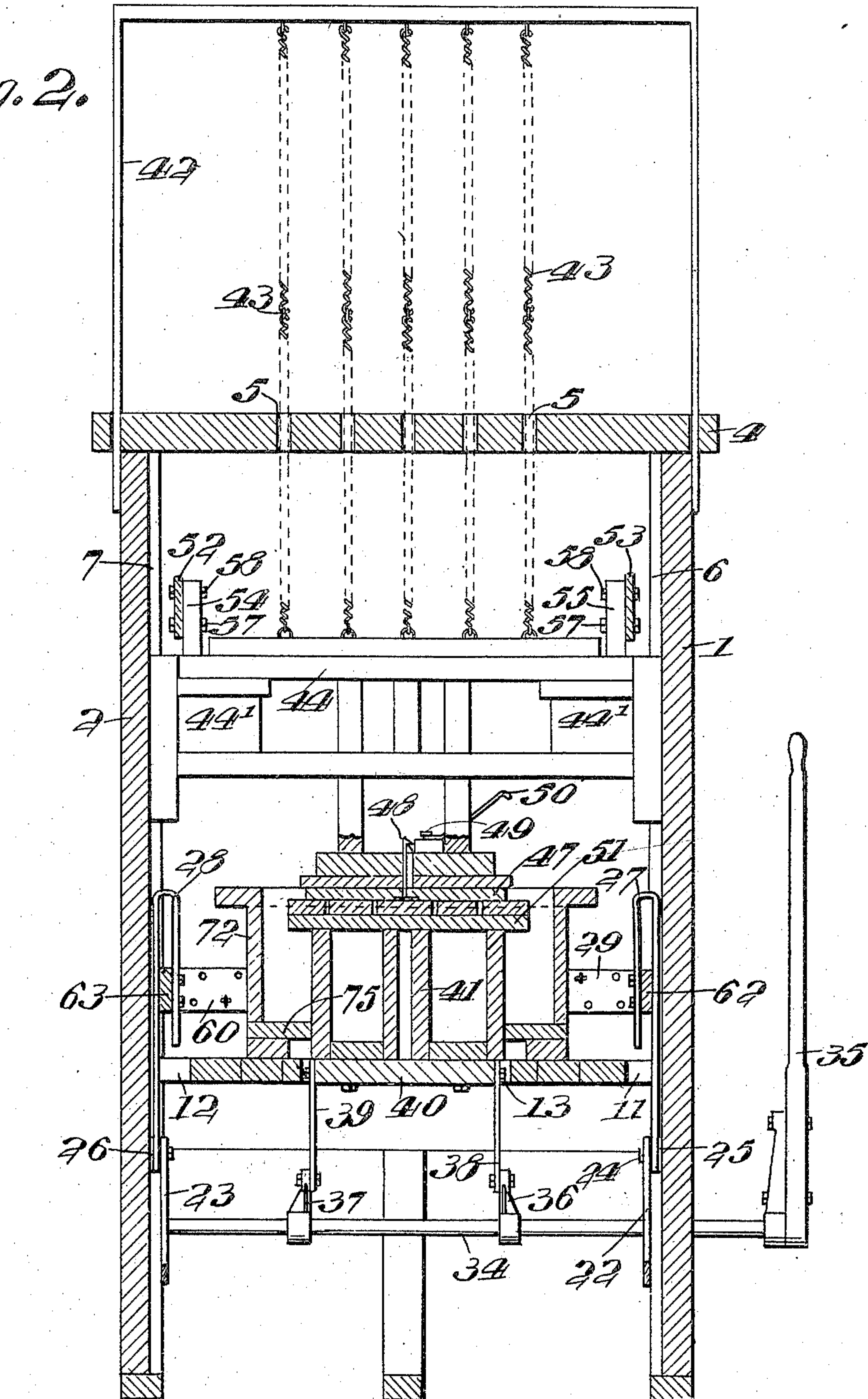
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Fig. 2.



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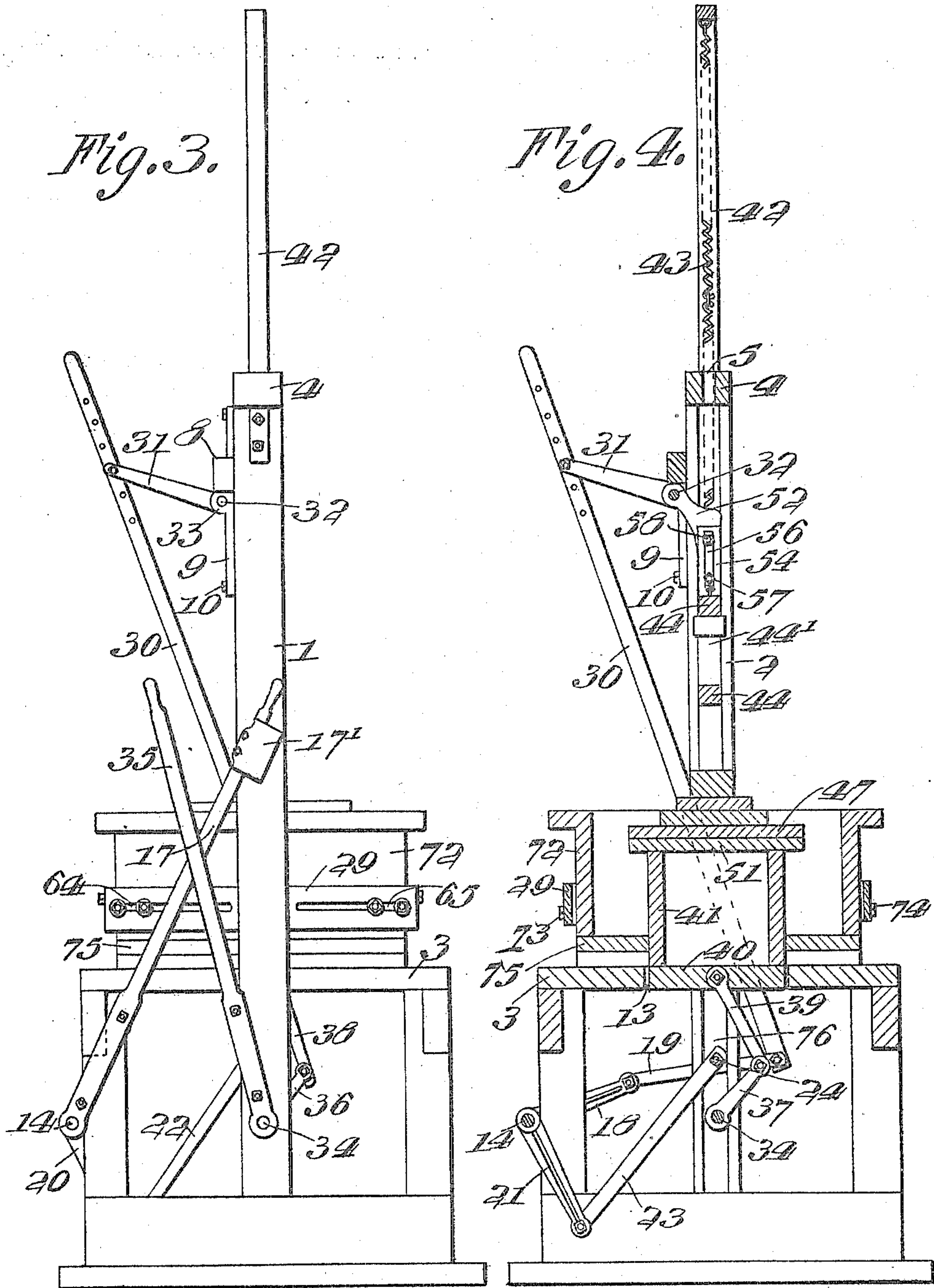
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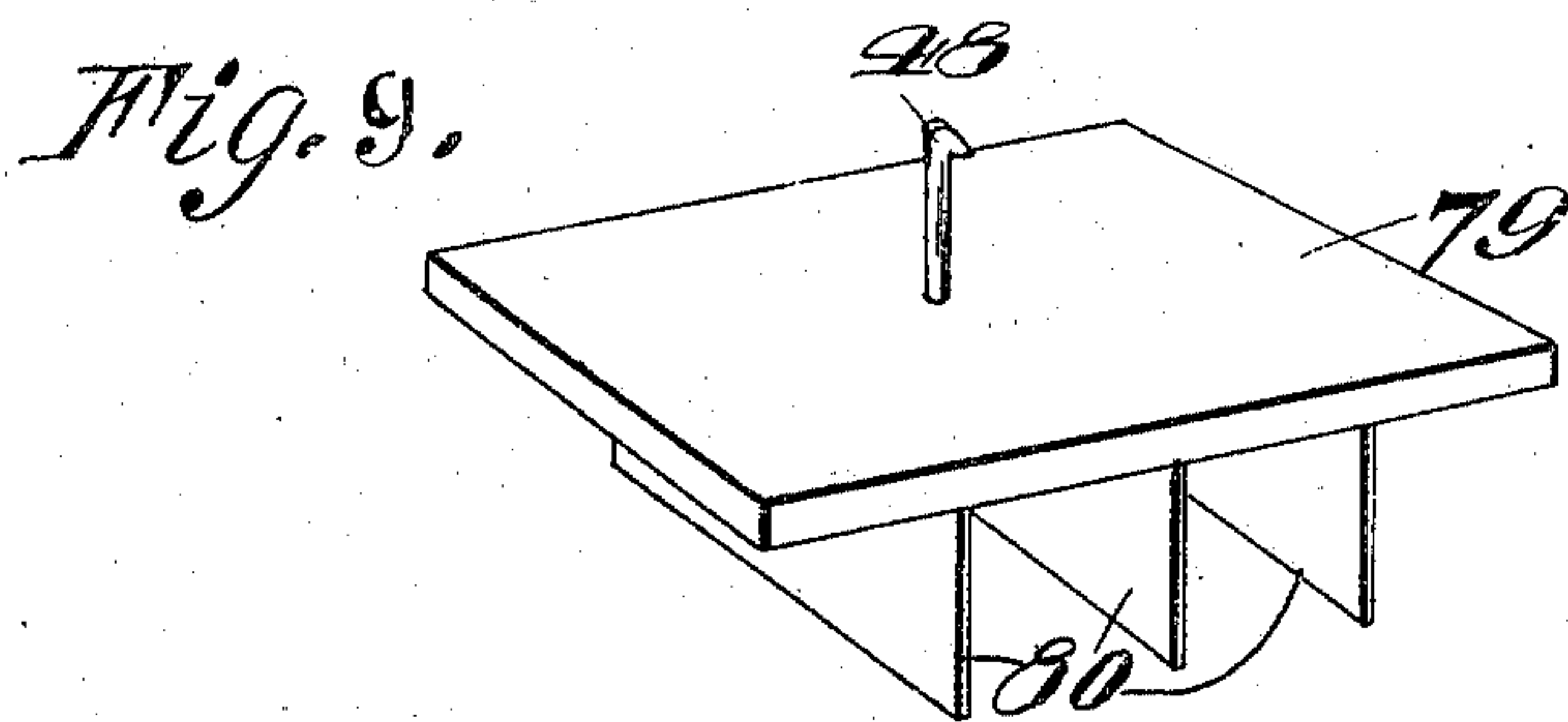
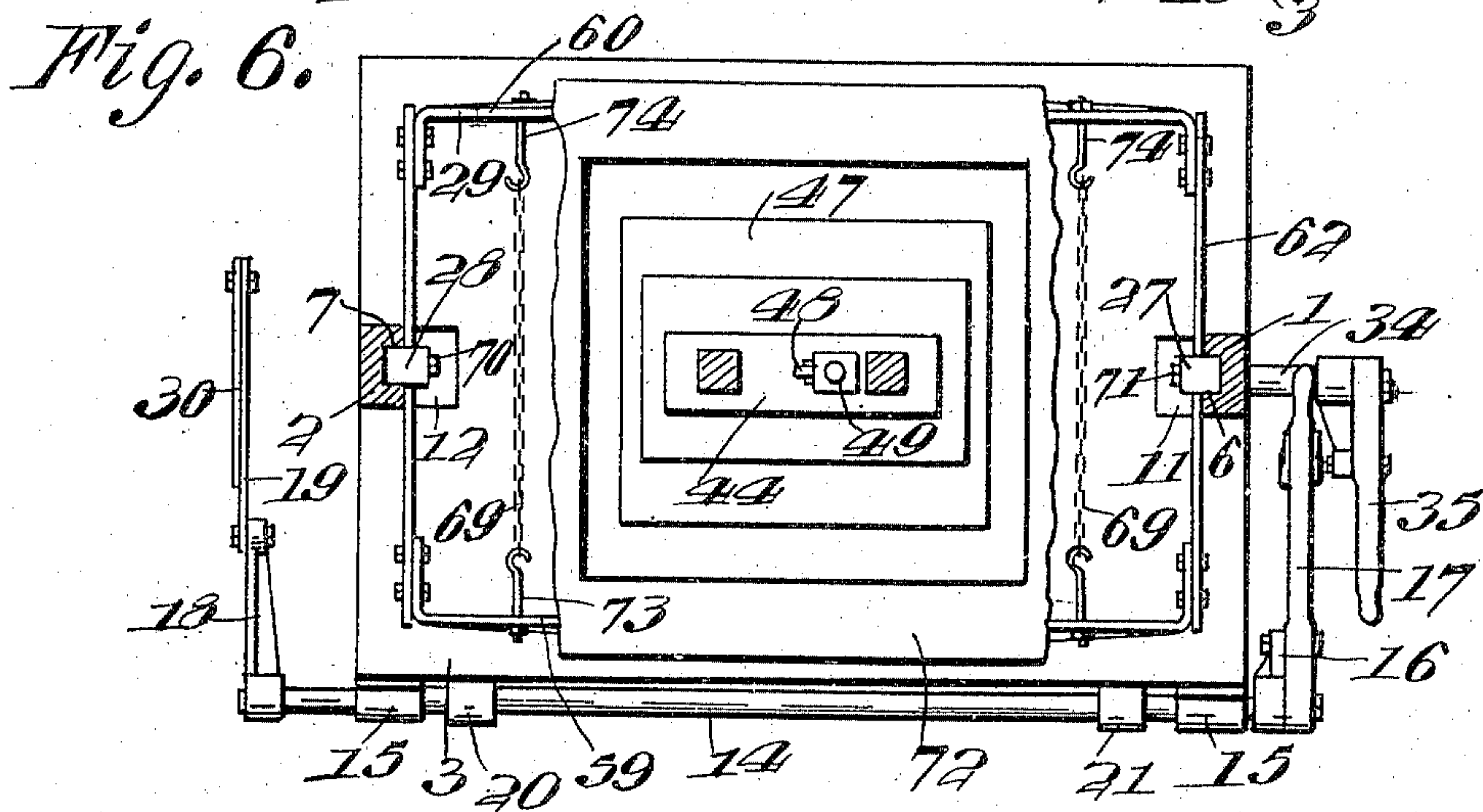
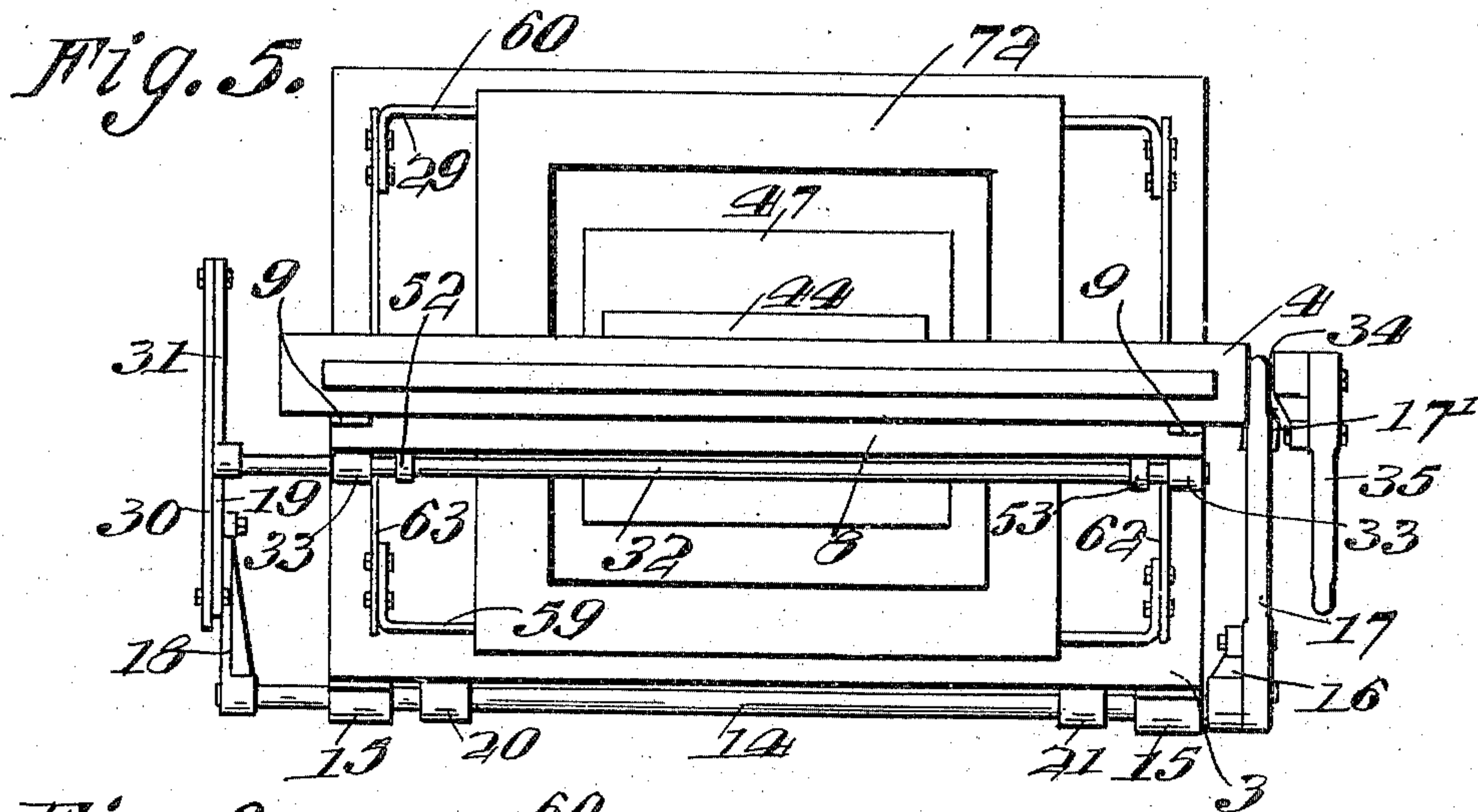
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5 SHEETS—SHEET 4.



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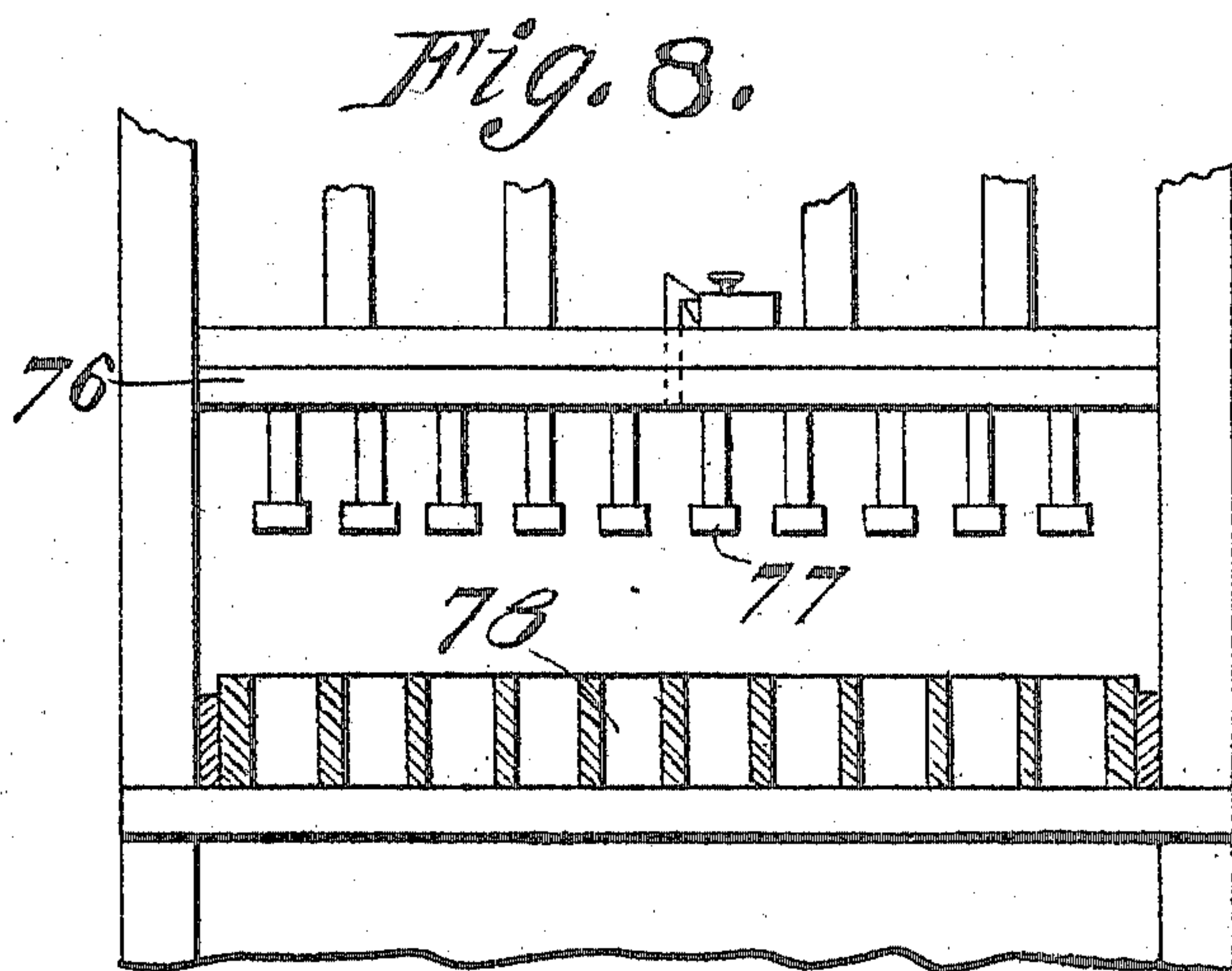
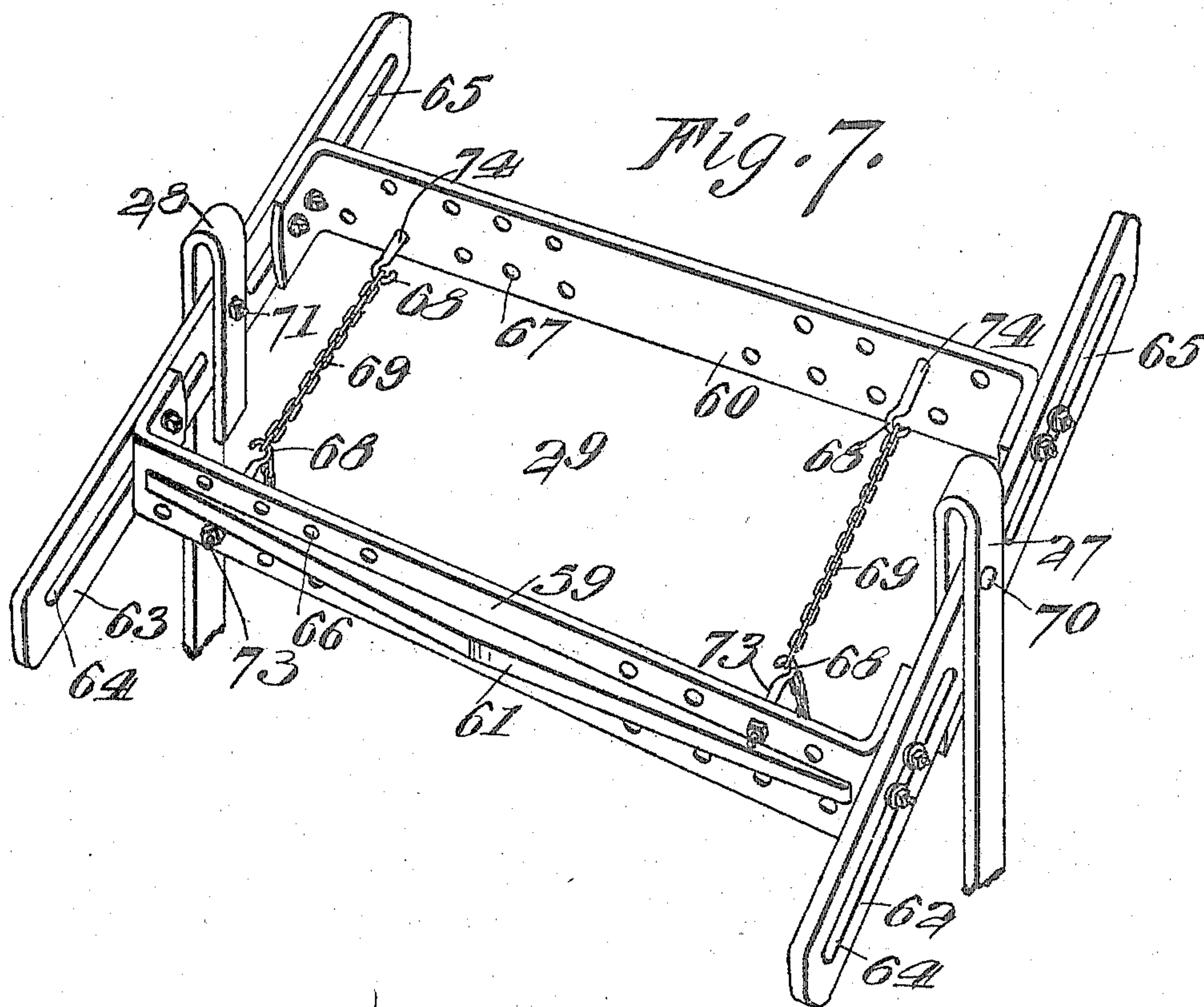
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UNITED STATES PATENT OFFICE.

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MOLDING-MACHINE.

951,699.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed January 11, 1909. Serial No. 471,826.

To all whom it may concern:

Be it known that I, ALFRED J. RIOUX, a citizen of the United States, residing at St. Johnsbury, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Molding-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in cement block presses and comprehends the production of a press capable of being utilized for the manufacture of different sized and different shaped cement blocks or for the manufacture of brick.

One of the objects of the invention is the provision of a cement block press with simple and efficient mechanism for raising the mold carrier with a simple and efficient mechanism for withdrawing the block core.

Another object of the invention is the production of a cement block press having sliding tamper mechanism and springs for elevating said mechanism.

A still further object of the invention is the production of a cement block press having an adjustable mold carrier and mechanism for operating the mold carrier.

A still further object of the invention is the production of a cement block press having a slidable tamper and a detachable tamper plate arranged to be locked thereto.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be fully described and particularly pointed out in the appended claims.

Figure 1 is a front elevation; Fig. 2 is a central longitudinal section, with certain parts shown in elevation; Fig. 3 is a side elevation; Fig. 4 is a transverse section, certain parts being omitted; Fig. 5 is a plan view; Fig. 6 is a horizontal section on line 6—6 of Fig. 1; Fig. 7 is a perspective view of the mold carrier; Fig. 8 is a perspective view of a modified form of tamper plate; and Fig. 9 is a longitudinal section showing a modified form of mold and tamper plate.

In the accompanying drawings which are prepared for illustrative purposes only and therefore not drawn to scale, numerals 1 and 2 designate side standards and 3 a platform which is mounted on said standards. A

cross bar 4 connects the upper ends of the standards 1 and 2 and is formed with a series of openings 5 through which a plurality of springs are adapted to extend. The standards 1 and 2 are provided with guide ways 6 and 7 which are adapted to receive V-shaped slides. A second cross bar 8 is adjustably connected to the front sides of the standards 1 and 2 by means of slotted plates 9 which are secured by bolts 10 to said standards. The platform 3 is formed with openings 11 and 12 through which operating links are arranged to move and a central opening 13 through which a mold core slidably moves.

A front shaft 14 is journaled in bearings 15 arranged on the standards 1 and 2 which are formed slightly wider at their ends than at their upper portions. The shaft 14 is connected by means of an arm 16 to an operating lever 17 which is preferably arranged on the right side of the press and on its opposite end is connected to a crank arm 18 having connections with an upwardly extending link 19. A weight 17' is secured to the lever 17. A pair of crank arms 20 and 21 are mounted on the shaft 14 and connect with links 22 and 23 which extend upwardly through openings 11 and 12 in the platform 3. The upper ends of the links 22 and 23 are connected by means of bolts 24 with V-shaped slides 25 and 26 which move in the guide ways 6 and 7 formed on the standards 1 and 2. The slides 25 and 26 are provided with downwardly projecting hooks 27 and 28 and carry a mold carrier 29 which is secured thereto by means of said hooks. The link 19 connects with a link rod 30 which extends upwardly and is pivotally connected with a crank arm 31 which is mounted on the outer left end of the upper shaft 32 journaled in bearings 33 on the upper ends of the standards 1 and 2.

A core operating shaft 34 extends across the lower part of the standards 1 and 2 through suitable bearings arranged thereon and is provided on its outer right end with a lever 35 which is keyed thereto and with intermediate crank arms 36 and 37 which are pivotally connected with upwardly extending core engaging links 38 and 39. The links 38 and 39 pivotally connect with a block 40 on opposite sides thereof and a suitable core 41 is mounted on said block and adapted to extend through the opening 13 formed in the platform 3.

A U-shaped brace 42 is mounted on the upper cross bar 4 and a plurality of springs 43 extend downwardly therefrom through the openings 5 formed in the bar 4. The lower ends of the springs 43 are connected to a tamper 44 which is adapted to slidably move in the guide ways 6 and 7. Weights 44' are arranged on the tamper 44. The tamper carrier 44 is provided with an upwardly extending lock plate 45 which is adapted to be locked by a spring lock or latch 46 which is centrally positioned on the cross bar 8.

The tamper carrier 44 is provided with a removable tamper plate 47 which plate is locked thereto by means of a locking hook or pin 48 formed on said plate and a locking device 49 arranged on the tamper carrier 44. The locking device 49 is provided with a finger engaging hook 50 and a detachably secured protective plate 51 secured to the base of said tamper carrier. The upper shaft 32 is provided with downwardly projecting crank arms 52 and 53 which are arranged, respectively, adjacent to the standards 1 and 2, and which carry block arms 54 and 55 formed with slots 56 through which adjusting bolts 57 and 58 extend and connect with the crank arms 52 and 53. The lower ends of the block arms 54 and 55 are adapted to engage the operating part of the tamper carrier 44 and tend to limit the upward movement of said carrier.

The adjustable mold carrier 29 comprises a pair of U-shaped longitudinal side pieces 59 and 60 which are formed with reinforcing ribs 61 and have their bent ends formed with bolt holes through which adjusting bolts are adapted to extend. The longitudinal side pieces 59 and 60 are connected to end pieces 62 and 63 which are formed with end slots 64 and 65 and said side pieces are formed with a series of spaced apertures 66 and 67. A pair of hooks 68 are connected to the ends of the longitudinal side piece 60 and chains 69 are connected to the ends of the longitudinal side piece 59. The end pieces 62 and 63 are connected with the slides 25 and 26 by means of bolts 70 and 71. A mold 72 is adapted to be carried by the mold carrier 29. The mold 72 is secured on the mold carrier 29 by means of eye-bolts 73 and 74 which extend through the openings 66 and 67 formed in the longitudinal side pieces 60 and 59 and are connected together by the chains 69. The bolts may be operated to tighten the chains and cause the side pieces to grip the sides of the mold. When it is desired to adjust the mold carrier 29 for receiving a different sized mold, the longitudinal pieces 59 and 60 are adjusted on the end pieces 62 and 63 and the chains 69 are adjusted on the hooks 68. The chains 69 tend to prevent any spreading apart of the mold carrier should the bolts that connect

the end pieces to the longitudinal side pieces become loosened.

To operate my improved cement block press, a pallet board 75 is placed on the platform 3 and the mold carrier 29 and the mold arranged thereon is brought to position over the pallet board. In the starting of the operation of making a cement block, the tamper 44 is connected to the locking device 46 and the tamper plate 47 is connected to the locking device 48 and both the tamper plate and the carrier are thereby held in an elevated position above the mold. Concrete is then placed in the mold over and around the core 41 and when the mold has been filled with concrete the tamper plate 47 is released from the mold carrier and by means of the lock releasing hook 50 and the tamper carrier 44 is moved on the standards 1 and 2 against the concrete contained in the mold. When the concrete has been sufficiently tamped, the tamper 44 is held thereon, in order to prevent the same from losing its shape and the block arms 54 and 55 are engaged with said tamper to hold the same in its position. The lever 35 is then depressed so as to bring the core 41 out of the mold and the mold elevated by the depression of the lever 16. When the mold has been elevated above the concrete block the block arms 54 and 55 are swung out of engagement with the tamper carrier and the tamper carrier 44 brought into engagement with the lock 46, after which the concrete block may be removed. The block arms 54 and 55 tend to prevent the tamper carrier 44 from rising by means of the springs 43 on the standards 1 and 2 and the locking plate 45 becoming locked with the locking device 46. When the lever 17 is depressed, the upper shaft 32 will be turned so that said block arms will be swung forwardly thereby enabling the tamper carrier 44 to rise beyond the lower ends of said block arms and the locking plate 45 to become locked with the locking device 46.

In Fig. 8, I have illustrated a modification of my improved machine whereby the same may be employed for making brick instead of making cement blocks. In this figure, the numeral 76 designates a tamper carrier provided with a plurality of individual tampers 77 which are adapted to enter brick cells formed in a brick mold 78 which is carried by the mold carrier 29 in the way that the cement block mold 72 is carried.

In Fig. 9, I have illustrated another modification of my improved machine comprising a tamper plate 79 which is provided with a plurality of downwardly projecting division plates 80 which are adapted to divide the cement in the mold 72 into four equal parts for the purpose of making quarter sized blocks.

My improved machine has been found to

be very efficient in making two concrete blocks in a single operation and with the use of power a larger number can be made in a single operation.

5 From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention, will be readily understood without requiring a more extended explanation.
 10 Various changes in the form, proportions and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the ap-
 15 pended claims.

Having thus described and ascertained the nature of my invention, what I claim as new and desire to secure by Letters-Patent is:

1. A machine of the class described comprising supporting standards, a platform arranged on the supporting standards, a mold, a tamper slidable on the standards, springs for elevating the tamper, a brace for supporting the upper ends of the springs
 20 connected to the standards, means for holding the tamper in depressed position, means for releasing said holding means, means for locking the tamper in an elevated position, a tamper plate secured to the tamper, and
 25 means for removably locking the tamper plate to the tamper.

2. A machine of the class described comprising supporting standards formed with vertical guide ways, a plurality of V-shaped
 30 slides movable in the guide ways, a mold carrier comprising slotted end pieces, longitudinal side pieces adjustably mounted on the end pieces, and means for adjusting said side pieces on said end pieces connected to

the V-shaped slides, and means for operat- 40
 ing the slides.

3. In a machine of the class described, an adjustable mold carrier comprising longitudinal ribbed U-shaped side pieces formed with a plurality of transverse openings, 45
 slotted end pieces arranged to be secured to the ends of the side pieces, bolts for adjustably securing said side pieces to the end pieces, adjustable rods crossing the side pieces, a plurality of hooks secured to one of 50
 the side pieces and chains secured to the remaining side piece.

4. In a machine of the class described, supporting standards, guide ways formed on the standards, a platform arranged on 55
 the standards, cross bars secured to the upper ends of the standards, a U-shaped brace connected to the upper cross bar, springs depending from the U-shaped brace, a slid-
 able tamper connected to the springs mov- 60
 able on the standards, means for limiting the upward movement of the tamper, locking means for holding the tamper in an elevated position, a tamper plate detachably
 secured to the tamper, an adjustable mold 65
 carrier slidable on the standards, means for adjusting the mold carrier, links connected to the mold carrier, means for operating the links, a core slidable through the platform,
 and means for operating the core. 70

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALFRED J. RIOUX.

Witnesses:

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 JOSEPH P. FRÉCHETTE.