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**Patented July 18, 1911.**

4 SHEETS—SHEET 1.



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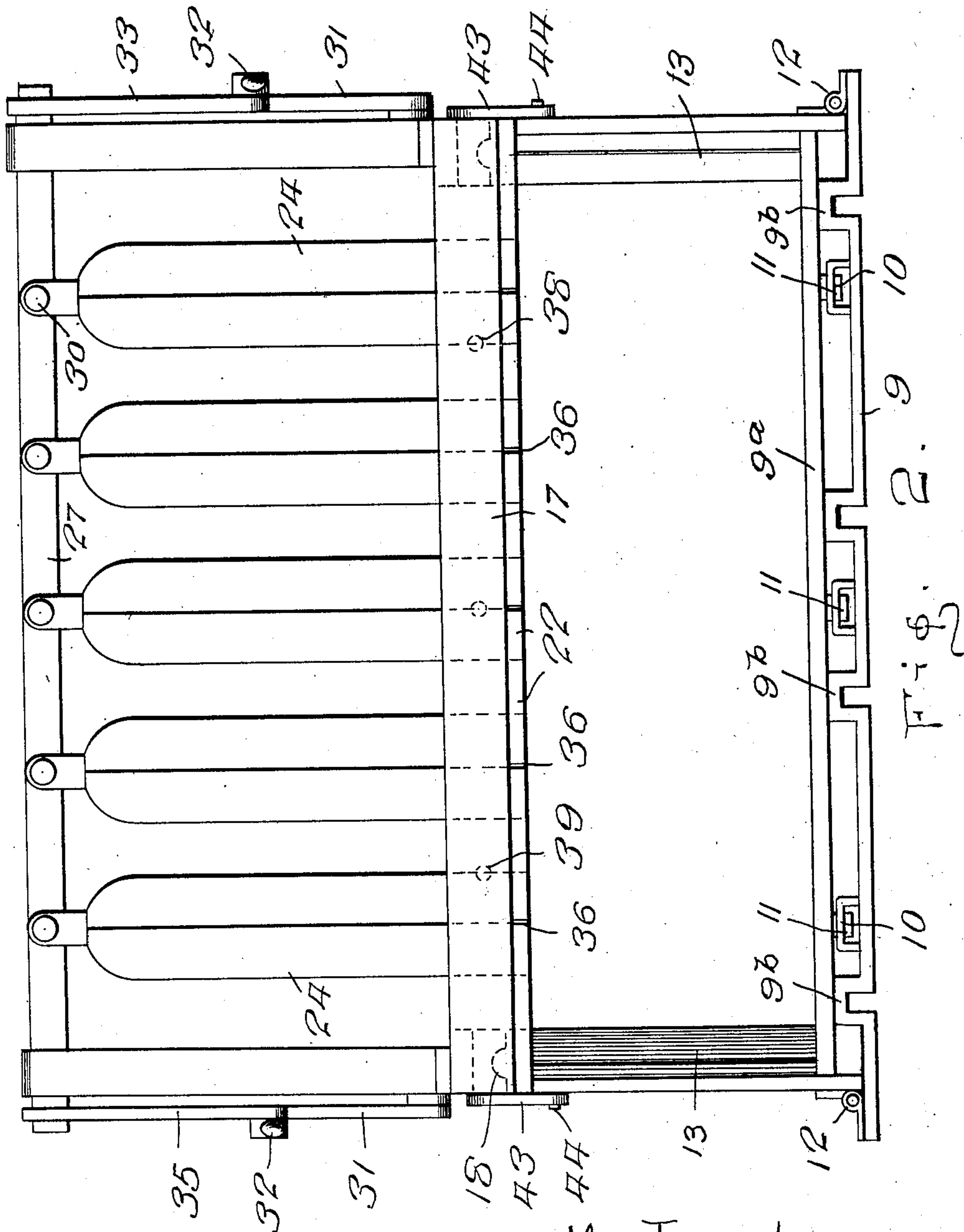
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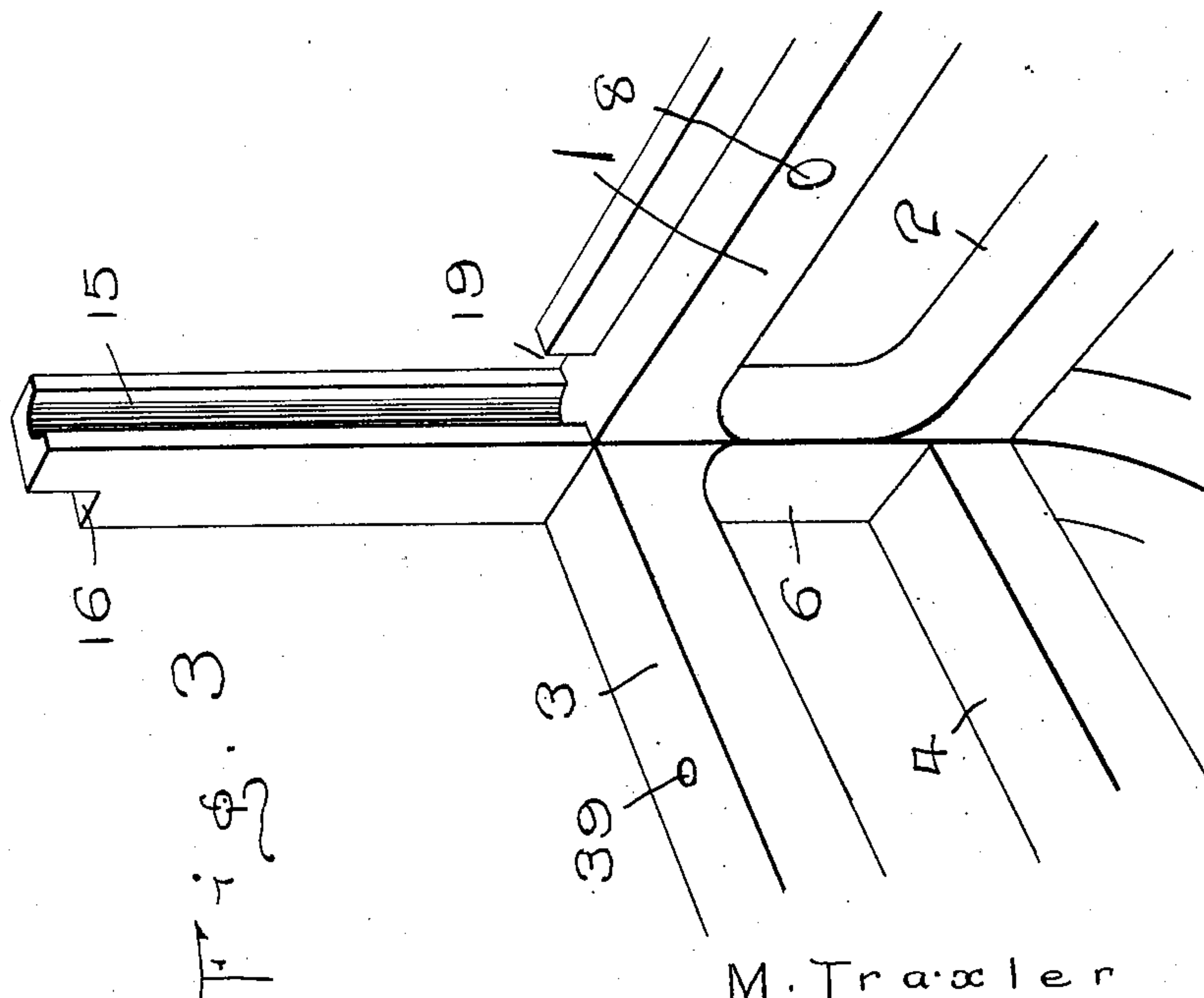
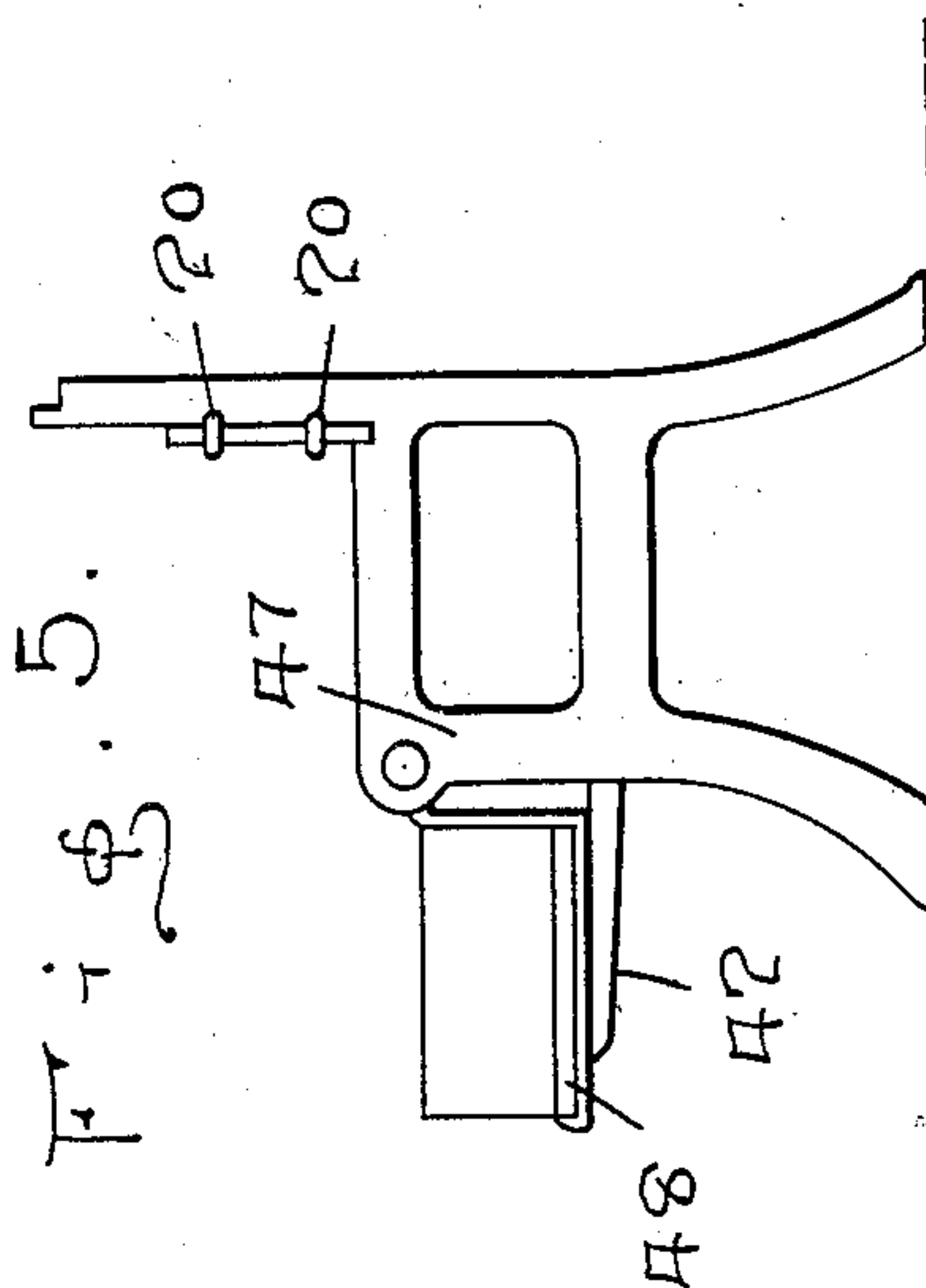
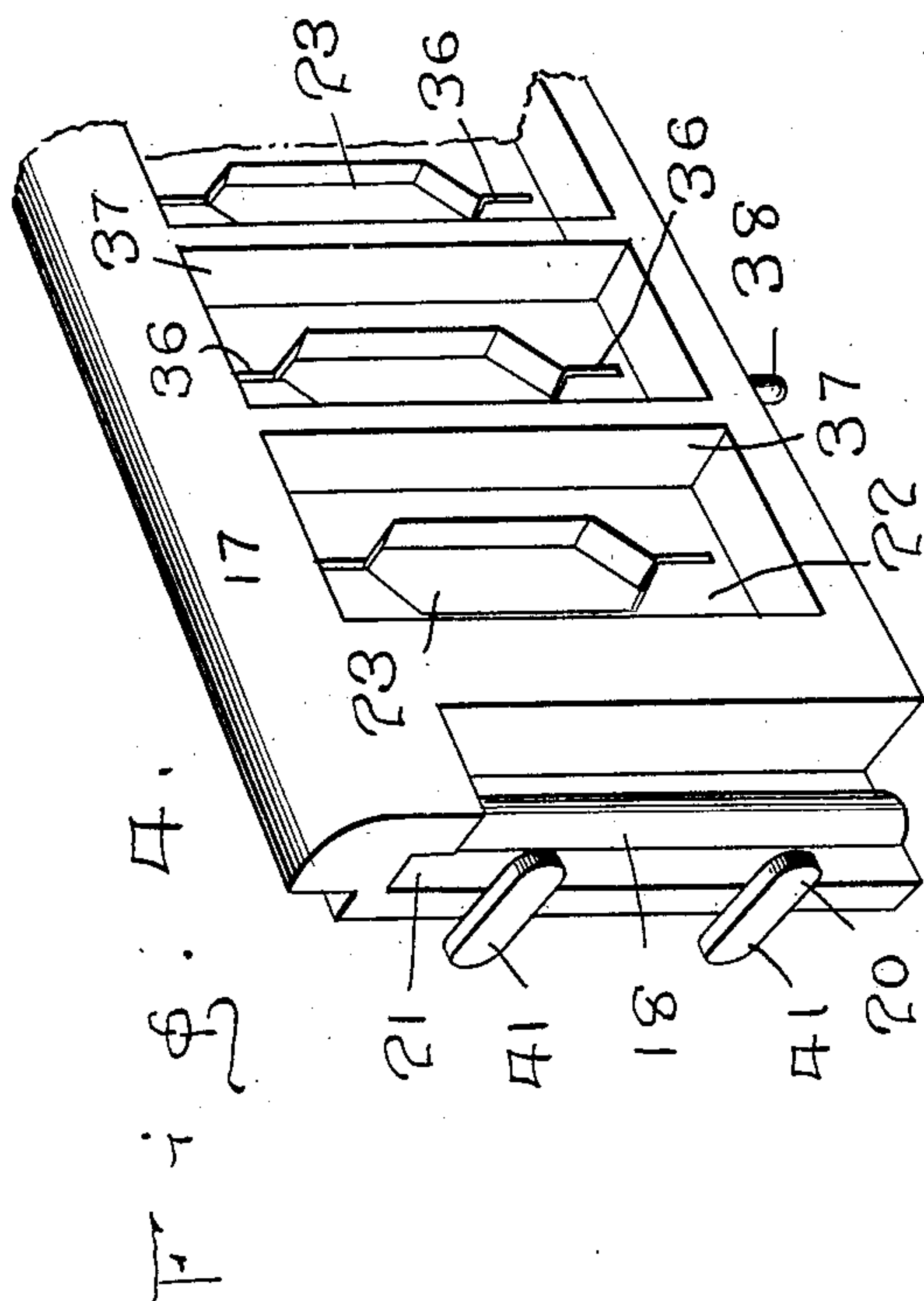
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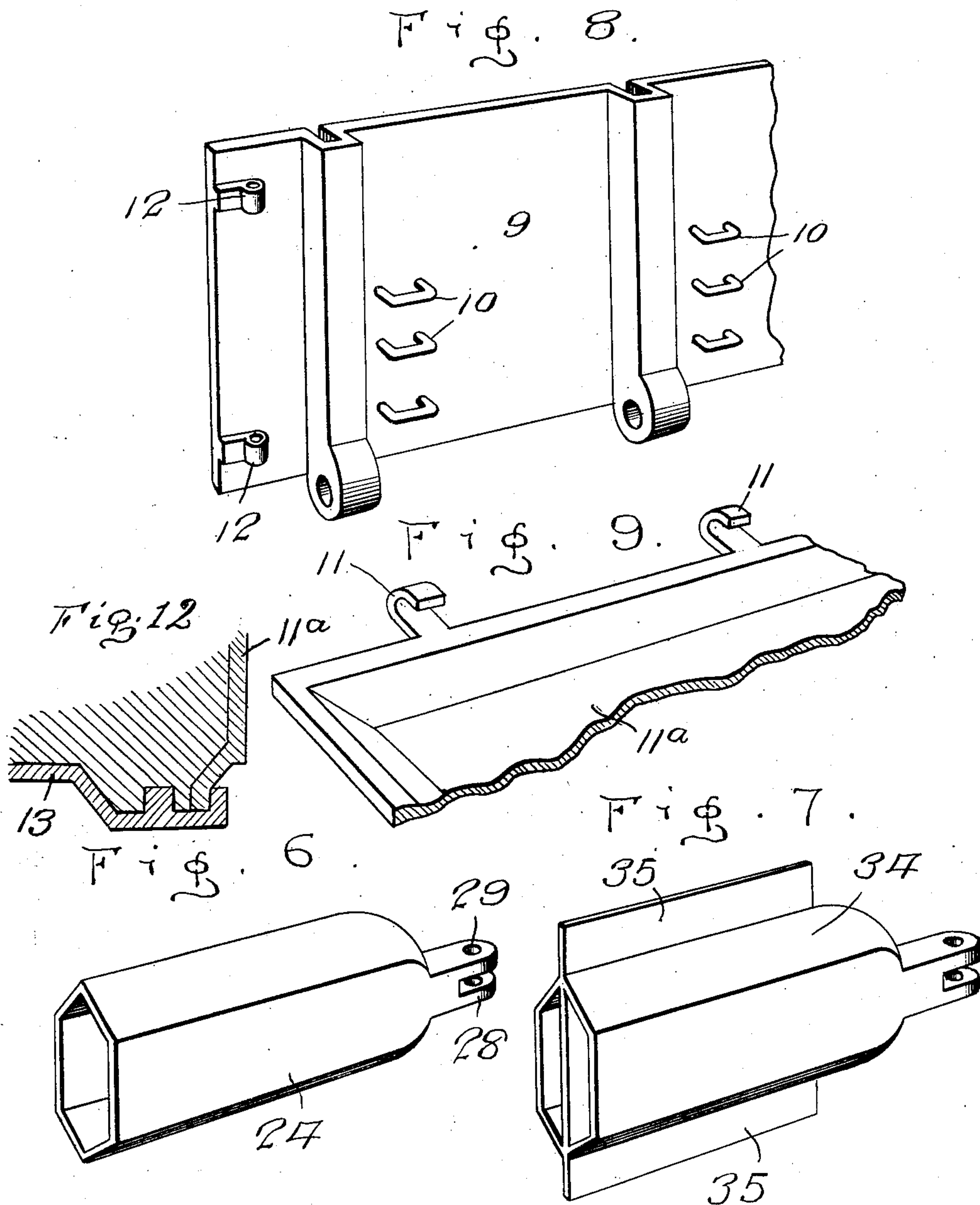


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WITNESSES:

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# UNITED STATES PATENT OFFICE.

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MOLD FOR MAKING PLASTIC BLOCKS AND BRICKS.

998,051.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that we, MARONI TRAXLER, ELMER E. LONG, and FRANCIS M. WELD, citizens of the United States, residing at Lamoni, in the county of Decatur and State of Iowa, have invented certain new and useful Improvements in Molds for Making Plastic Blocks and Bricks; and we do hereby 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.

Our invention relates to new and useful improvements in molds for making plastic blocks or bricks and it has primarily for its object to provide a novel device of this character wherein movable cores are employed.

It is a further object of the invention to provide a novel device of this character wherein the core moving means is carried by the frame proper in order to permit a ready removal of the core plate without interfering with the cores.

It is also an object of the invention to provide novel means in a device of this character, whereby the thickness of the block being molded may be varied in order to meet the necessities of practice.

It is also an object of the invention to provide a machine of this character with a novel frame possessing such rigidity as to obviate the necessity of preparing special foundations for supporting the same.

It is furthermore an object of the invention to provide a novel device of this character, wherein the division plates employed for forming a multiplicity of blocks or bricks within the mold are carried by the cores.

The invention also has for its object to provide a novel device of this character, whereby the cores are detachably secured to their operating means in such manner as to permit any one of cores to be withdrawn or dispensed with without interfering with the remainder of the cores.

The invention also has for an object to provide means acting with the division plates and a portion of the core-operating means for reinforcing or bracing the division plates and at the same time securing said plates to the operating means.

Still further, it is an object of the invention to provide a novel device of this character, which will be simple in construction, efficient in practice and comparatively inexpensive to manufacture.

With the above and other objects in view, the invention consists of the details of construction and in the novel construction and combination of parts to be hereinafter referred to.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification, wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is a view in side elevation of the device with the face plate open. Fig. 2 is a top plan view with certain parts removed. Fig. 3 is a view in perspective illustrating in detail a portion of the means for securing the core plate in position. Fig. 4 is a broken perspective view of the core frame. Fig. 5 is a view in end elevation showing a slightly modified form of the invention. Fig. 6 is a perspective view of a core, detached, employed in the present invention. Fig. 7 is a view similar to Fig. 6, illustrating a slightly modified form of core. Fig. 8 is a view in perspective of the front plate. Fig. 9 is a fragmentary view, in perspective of the face plate, illustrating means by which it is attached to the front plate, and Fig. 10 illustrates in perspective a mechanism for securing the division plates when the device is employed as a brick mold machine and Fig. 11 is a detail perspective view of the forward portion of the machine showing the means for holding the face plate when the machine is in its assembled position. Fig. 12 is a broken horizontal section showing more clearly the face plate and the end members in connection with a block formation.

In the drawings, 1 and 2 denote the parallel end bars of the frame and 3 and 4 the parallel side bars of the frame, preferably formed with the corner bars 5 and 6 which have their lower portions flared laterally with relation to the frame proper to afford a solid and rigid support for the machine in its entirety. The upper end bars 1 are L-shaped in cross section, and in the front side of the machine, the upper bar is omitted and in lieu thereof, is employed the circular shaft 14, which passes through suitable perforations 7 in the ends of the machine. This shaft is so mounted as to be readily removed, being inserted through the openings 8 located in the upper bars 1 intermediate their lengths preferably to one side of the center



thereof. This provision is made in order to permit the machine to be readily changed from a block molding machine to that of a brick molding machine, as will be, it is  
5 thought, clearly apparent as the description of the device progresses.

On the base of the L-shaped bars 1, rests a longitudinal edge of a front plate 9, which is provided with thimbles or bearings projecting beyond said edge thereof, through  
10 which the shaft 14, hereinbefore referred to, passes. By forming said front plate of such length as to extend in alinement with the corner bars 5, the inner longitudinal edge of  
15 said plate will abut or engage said corner bars, as indicated in dotted lines in Fig. 1, and thus provide for stopping the downward movement of said plate when the latter is moved into a horizontal position as  
20 shown in said figure.

Extending laterally across the plate 9 at predetermined distances longitudinally thereof, are series of eyes or loops 10, which are adapted to be engaged by hooks 11, projecting from a longitudinal edge of the face  
25 plate 11<sup>a</sup>. By this means, it will be readily seen how the thickness of the block may be conveniently changed, as it is only necessary to engage the proper hooks of each series  
30 to attain the position of the face plate desired.

The front plate 9 has applied thereto a pallet 9<sup>a</sup> which is preferably of wood, and rests upon ribs 9<sup>b</sup> formed laterally upon the  
35 front plate 9, the height of said ribs being such as to enable the pallet to clear the loops 10 upon the front plate 9. The ends of the plate 9 are provided with eyes or bearings  
40 12, to which are hingedly secured the end doors 13.

The corner bars 6 project upwardly above the upper bar 1 and each has its inner face grooved, as at 15, while the free ends thereof are reduced as at 16 to form shoulders.

45 The end doors 13 are provided with channels 13<sup>a</sup>, in which are adapted to extend the ends of the face plate 11<sup>a</sup> when the parts of the mold are in their assembled position, the entering of said ends in the grooves thus  
50 providing for forming a support for the plate and it will be readily seen that when the parts of the mold are in the position shown in Fig. 1, the swinging of the end doors 13 to a horizontal position, will release the face plate and permit the same to  
55 move away from the plastic block and leave the block free to be removed from the front plate of the mold.

60 Resting on the upper bar 3, are the lower edges of the core frame 17, which project beyond the inner edge of the corner bars 6 and are provided with beads 18 to fit within the grooves hereinbefore referred to.

65 In order to permit the frame to pass beyond the bars 6, portions of the stems of the

L-shaped bars 1 are cut away, as at 19. The ends of the core frame are provided with inwardly extending lugs 20, which contact with the outer end faces of the bars 6 to hold the frame against longitudinal movement. In order that the same may be effectually held in position, the upper portion thereof is socketed as at 21 to embrace the free ends of the posts 6 and to rest on the shoulders 16 thereof. By this arrangement, it will be observed that a positive means is employed for holding the core frame in position without the use of bolts or like fastenings, thereby reducing the labor of assembling and the cost of manufacture  
70 to a minimum. 75 80

The core frame is formed of one piece of material and has a face plate 22 provided with a plurality of openings 23 coinciding in form with the exterior contour of the cores  
85 24, more particularly shown in Fig. 6. These cores are octagon shape in cross section. This presents the desirable feature of permitting plastic material placed within the mold to be thoroughly and compactly  
90 tamped. 95

The cores 24 hereinbefore referred to are removable through the openings 23 and such movement of the cores is made in unison. This is permitted by extending rearwardly from the corner bars 6, the horizontally disposed extensions 25, each of said extensions having horizontally disposed slots 26, in which are movably mounted the end portions of a rod 27. The cores have projecting from their ends paralleling ears 28 provided with alined openings 29. The ears 28 straddle the rod 27 and are held thereto by bolts 30 passing through the perforations 29 of the ears and the rod.  
100 105

Rigidly secured to the corner bars 6 of the frame adjacent the upper bars 1 are the ends of arms 31, which have pivoted to their opposite ends, the lower ends of hand levers 32. These hand levers have pivotally secured thereto intermediate their length the ends of links 33, the opposite end of each link being pivotally held by the end portions of the rod 27. To move the cores within the mold, it is only necessary for the operator to stand in front of the machine and pull the levers inwardly and to remove the cores the operation is reversed.  
110 115

It is thought to be apparent from the foregoing, that should it be necessary to remove any one of the cores independent of the others, its securing or retaining bolt 30 only need be withdrawn, when the core can be easily dispensed with. It has been found in practice that when a core has been removed for any reason that the opening thereof be closed by a thin metal plate. This arrangement is obvious.  
120 125

Should it be desired to mold more than one block at an operation, division plates  
130



are employed, the same being movable with the extraction of the cores. It has been found best in practice when a multiplicity of blocks are being molded, to use the form of core shown in Fig. 7. In this form the core 34 has formed therewith the division plate 35. When such form of core as this is used, the projecting portions of the division plate pass through recesses 36 communicating with the top and bottom edge of the openings 23, as is shown in Fig. 4.

It may be well to state that the core frame 17 is further held against displacement by dowel pins 38 which engage sockets 39 in the upper surface of the bar 3. The frame is further reinforced by the ribs 37, which extend from the top to the bottom of the frame and are positioned between the openings 23.

When the mold is folded into operative position for the reception of the plastic material it is held in such position by latches 43, engaging hooks 44 on the end doors 13. These doors 13 are further held in position by lugs 41 carried by the ends of the core frame and projecting forwardly thereof. These lugs 41 overlap the end doors and thus effectually hold said doors against outward movement during the tamping.

When the apparatus is to be employed in the molding or manufacture of bricks the bar 14 is removed and inserted through the openings 8, hereinbefore referred to, together with the parts carried thereby, it being understood, of course, that by this expression it is not meant the identical parts, but similar parts in proper proportion. The cores 24 are then detached from the rod 27 and a multiplicity of division plates substituted therefor.

Secured to the rod 27 in any desired manner, but preferably as shown in Fig. 10 are plates divided into two series, each plate of a series being connected by the superimposed U-shaped brackets 45 provided with aligned openings 46, through which the bolts 30, hereinbefore referred to are inserted. It might be well to state that these division plates will pass through the recesses 36, hereinbefore referred to.

Instead of moving the bar 14 as just described it can be retained in the opening 7 and the bricks are faced downward. After the bricks have been formed the mold is turned forward and caused to rest upon arms 42 projecting from the mold frame 47 as more particularly shown in Fig. 5. It might be well to state that before the mold is turned forward a wooden pallet 48 is placed above the bricks.

We claim:

1. In a molding machine, the combination

with a core plate having openings there-through, a frame to which said core plate is removably secured a plurality of cores adapted to extend through said openings and a pallet; of a front plate hingedly secured to the frame, end plates hingedly secured to the front plate, a face plate having means at one edge thereof adapted to engage parts of the front plate, whereby said face plate may be adjusted vertically.

2. In a molding machine, the combination with a frame constructed of horizontal side and end bars and corner bars therefor, the rear corner bars extending above the horizontal bars and having their forward faces grooved and their upper ends reduced to form shoulders and a pallet; of a core plate adapted to fit between the extended corner bars, said core plate having ribs adapted to enter the grooves in the corner bars, the upper portion of the core plate having sockets to engage the reduced ends of the corner bars, means to hold the core plate against longitudinal movement and a plurality of cores adapted to cooperate with the core plate.

3. In a molding machine, the combination with a frame a core plate removably secured to the frame, said core plate having openings therein and recesses communicating with said openings and a pallet; of a front plate hingedly secured to the frame, a plurality of loops arranged in series on the inner face of the front plate, a face plate having hooks thereon adapted to be engaged with the loops to adjust the face plate upwardly or downwardly, end plates pivoted to the front plate, said end plates being adapted to engage the ends of the face plate and division plates adapted to enter the recesses in the core plate and divide the contents of the molding machine into separated blocks.

4. In a molding machine for blocks, the combination with the side plates and end plates adapted to extend vertically when closed, and means for hinging the side plates, of a face plate adapted to extend horizontally when the mold is closed, and means for supporting the face plate solely from the side and end plates in a plurality of different adjusted positions.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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Witnesses:

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