

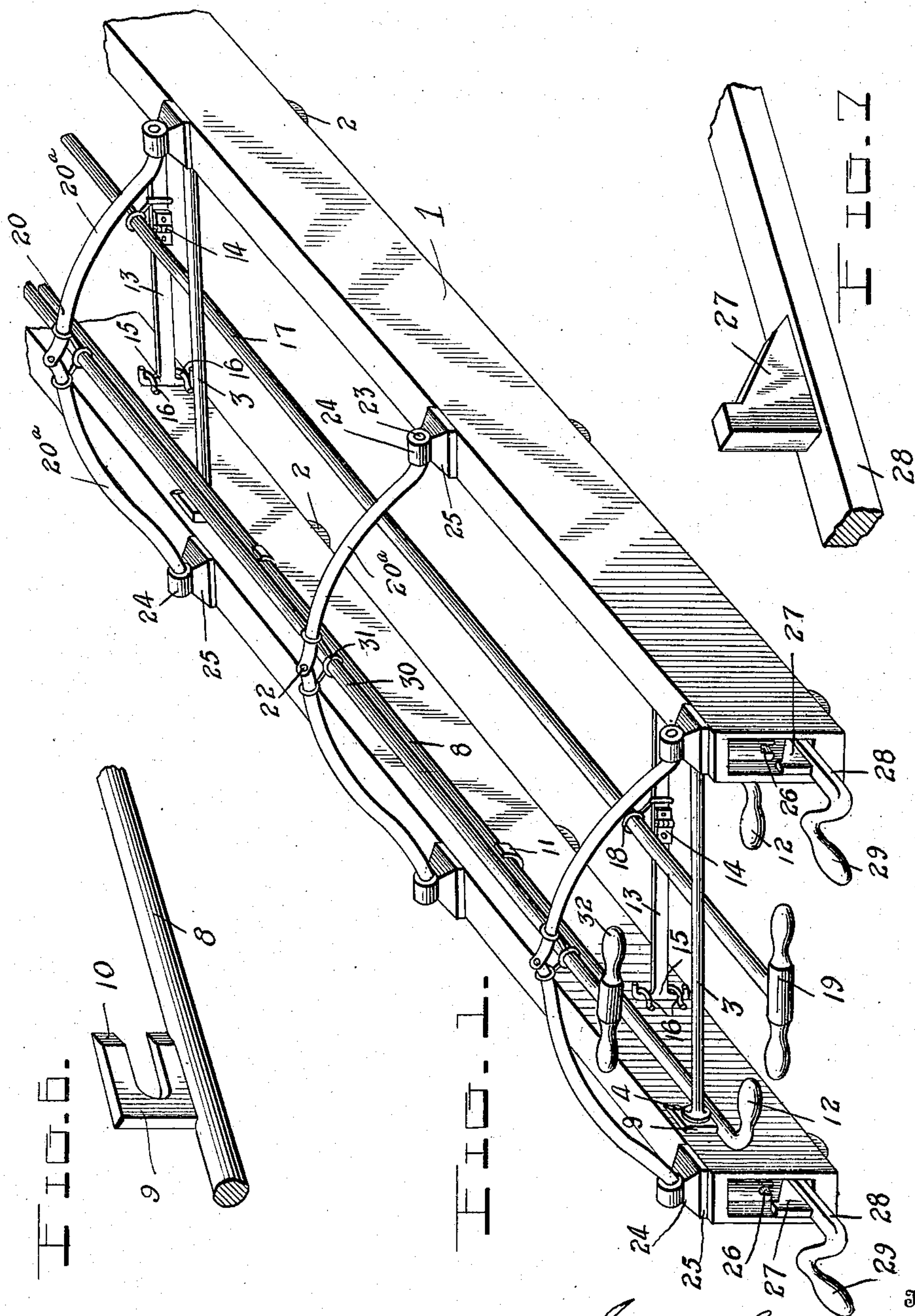
No. 881,299.

PATENTED MAR. 10, 1908.

S. S. CHEZEM.  
MOLD.

APPLICATION FILED JULY 27, 1907.

2 SHEETS—SHEET 1.



Witnesses

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Inventor

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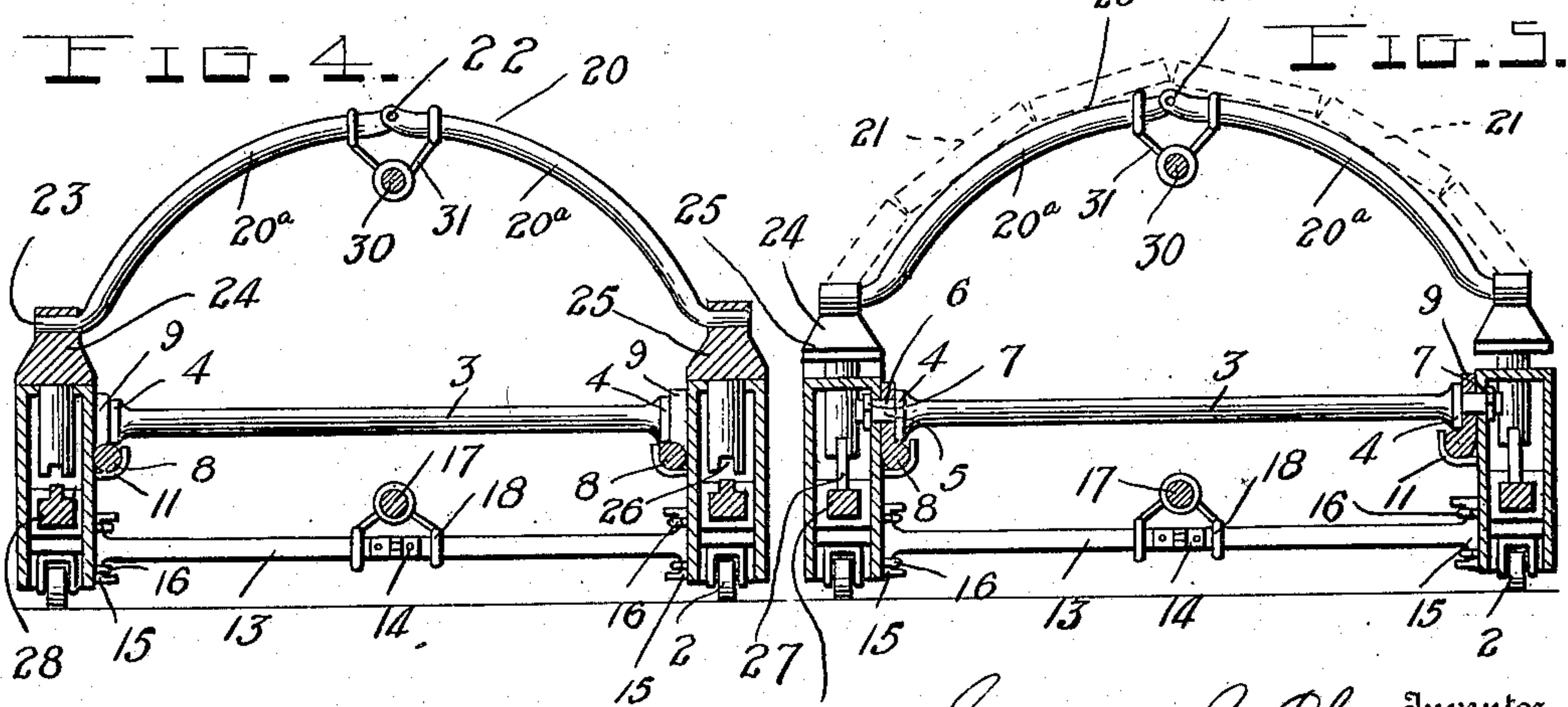
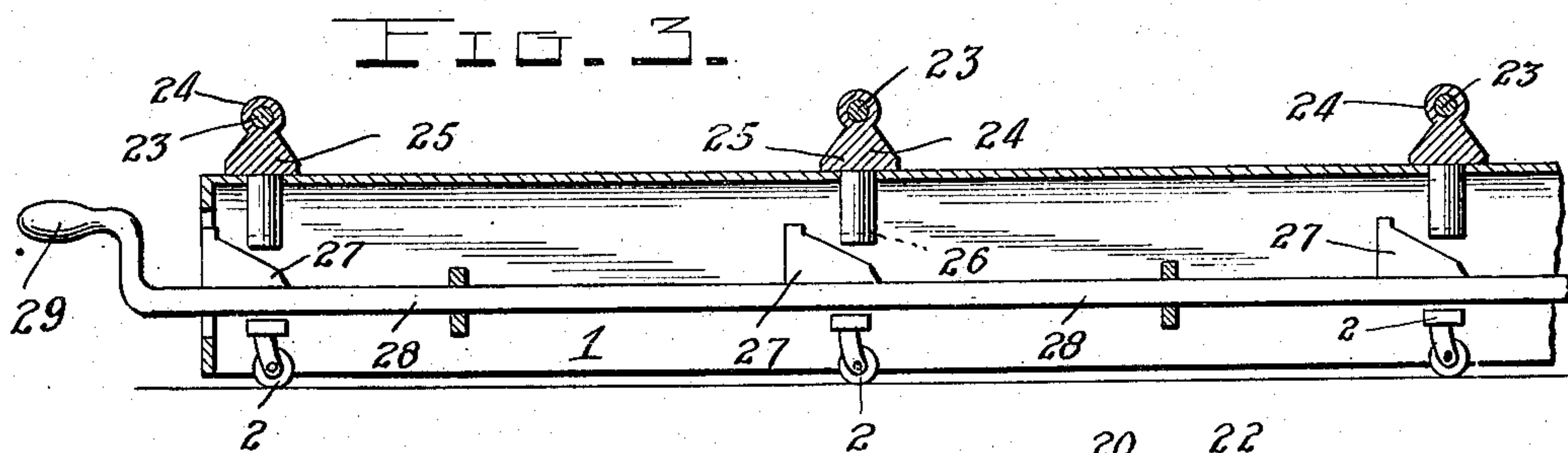
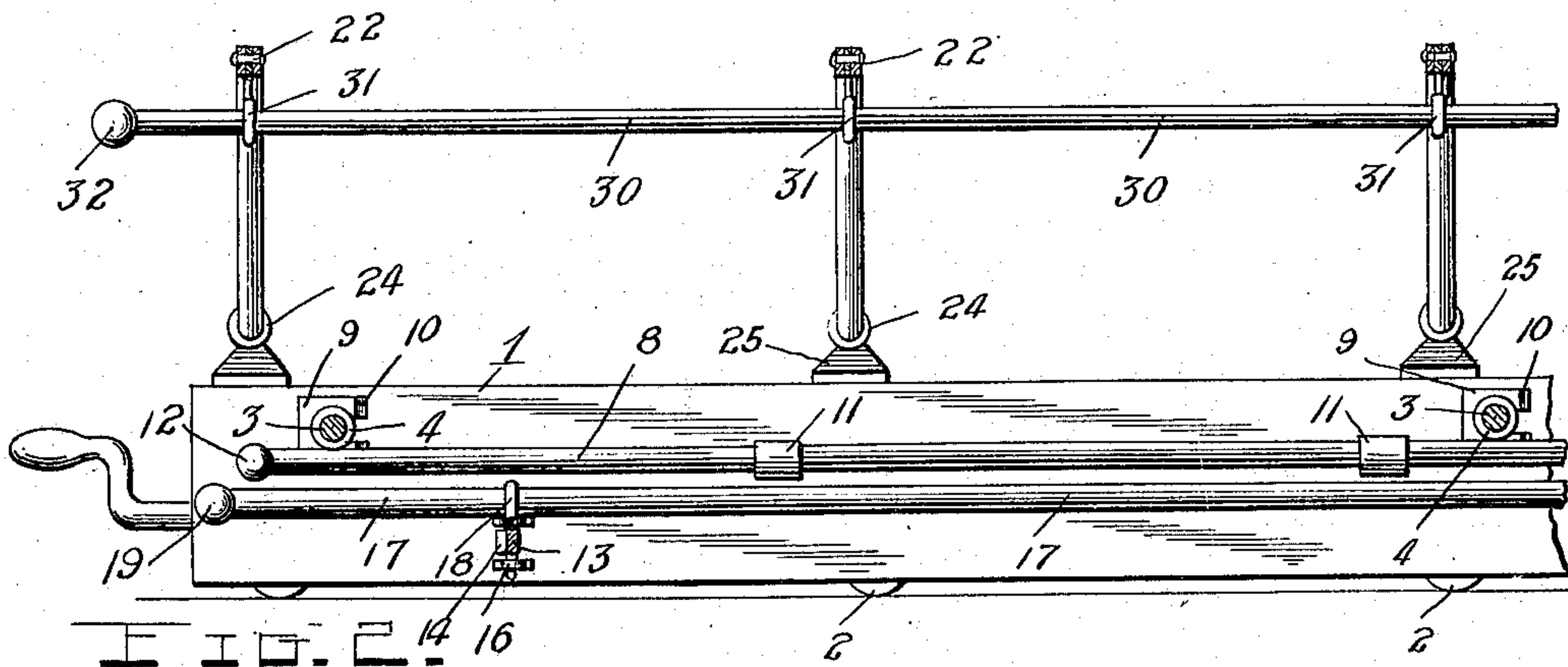
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# UNITED STATES PATENT OFFICE.

SAMUEL S. CHEZEM, OF TERRE HAUTE, INDIANA.

MOLD.

No. 881,299.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed July 27, 1907. Serial No. 385,820.

*To all whom it may concern:*

Be it known that I, SAMUEL S. CHEZEM, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Molds, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in devices for use in molding sewers or conduits and the like of concrete or other plastic matter, and more particularly to a collapsible and portable frame for supporting the mold plates or sections.

The object of the invention is to provide a supporting device of this character which may be quickly and easily set up for use in supporting the mold sections and as readily collapsed to permit it to be removed from the finished arch or conduit, and which will be in the form of a portable truck so that it may be readily shifted to a new position after it has been collapsed.

With the above and other objects in view the invention consists in the novel construction and the combination and arrangement of parts hereinafter described and claimed, and illustrated in the accompanying drawings in which

Figure 1 is a perspective view of a portion of my improved molding device or truck; Fig. 2 is a central longitudinal section; Fig. 3 is a longitudinal section, through one of the sides of the device; Figs. 4 and 5 are vertical transverse sections; Fig. 6 is a detailed perspective of a portion of one of the lock bars for the braces, and Fig. 7 is a similar view of a portion of one of the operating bars for the slidable bearings.

My improved portable and collapsible mold support comprises two side members or beams 1 which are preferably hollow and adapted to be supported upon rollers or wheels 2. The sides 1 are connected together and spaced apart by two or more transverse braces 3 the ends of which have a limited sliding engagement with said sides, as shown in Fig. 4. This connection consists in providing stop shoulders 4 formed by annular flanges arranged adjacent to the ends 5 of said braces or rods, which ends project through and slide in openings 6 in the inner side walls of the side members 1, and by providing retaining heads or steps 7 upon the extremities of said ends 5. This sliding connection between the sides and the

braces permits the former to be moved inwardly upon the braces and toward each other for a purpose presently explained, and for the purpose of rigidly securing the sides to the braces when the sides are separated I provide a locking means consisting preferably of two operating rods 8 carrying a plurality of hook shaped projections 9 which are adapted to enter between the shoulders 4 and the inner faces of the sides 1 and thereby rigidly hold the latter upon the braces. These spacing projections or blocks 9 project laterally from the rods 8 and their recessed or hook shaped edges 10 are slightly beveled so that they will readily enter between the shoulders 4 and the sides. The rods 8 extend longitudinally of and are mounted for sliding movement in suitable guides 11 upon the inner faces of said sides. Upon one or both of the ends of the lock operating rods 8 are right angularly bent portions 12 which serve as handles.

In order to move the sides 1 toward or from each other when they are unlocked, I provide two or more pairs of toggle levers 13. The levers of each pair are pivotally or hingedly connected at 14 and their outer ends are formed with T-shaped heads 15, which are pivoted in staples or other suitable bearings 16 upon the inner faces of the sides. These pairs of toggle levers are simultaneously actuated by an operating rod 17 which is connected to each of the levers by flexible or resilient fastenings 18 and which has upon one or both of its ends a cross bar 19 adapted to serve as a handle. It will be seen that when the toggle levers are straightened and in a transverse position at right angles to the sides they will hold the latter apart so that the braces may be locked by the projections or blocks 9, and that when the latter are removed from between the shoulders 4 and the sides 1 and the operating rod 17 is moved longitudinally to cause the toggle levers to assume angular positions the sides 1 will be drawn inwardly or together.

Connecting the upper portions of the two sides 1 at suitable intervals throughout their lengths are collapsible arches 20 adapted to support, when in their upright or extended position, longitudinally arranged mold plates or sections 21, as indicated in dotted lines in Fig. 5, or a mold frame or casing, of any other form and construction. Each of the supporting arches 20 consists of two longitudinally curved sections 20<sup>a</sup> having their inner



ends hingedly connected at 22 and their outer ends formed with journals 23 mounted for rotation in bearings 24 which are vertically slidable and adjustable in the sides 1. Each of the bearings 24 has a body portion 25 and an upper enlarged end or head apertured to receive one of the journals 23. The body 25 of each of said bearings is vertically slidable in an opening in the top of one of the sides 1 and its lower end projects into the opening or cavity in said side and is formed with a longitudinally extending groove or seat 26 adapted to receive one of the wedges 27 formed upon an operating rod 28 extending longitudinally through said side. One of the rods 28 extends through each of said sides and upon one or both of their outer ends may be provided suitable handles 29 so that they may be reciprocated longitudinally to cause their wedge blocks or projections 27 to simultaneously actuate the bearings 24 in a vertical direction. The arches 20 are pivoted in their bearings 24 so that they may be swung downwardly to collapse the mold and they are adapted to be simultaneously lowered or raised by an operating rod 30 which extends longitudinally beneath them and is connected to each of their sections 21 by a reflexible or resilient fastening 31. At one or both ends of the operating rod 30 is arranged a cross bar handle 32.

My improved mold support may be used for making sewers, bridges, arches, conduits and the like of plastic material, brick work or masonry and in setting the same up for use the handle 19 is pulled outwardly to straighten the toggle connections 13 and thereby force the sides 1 apart. The handles 12 are then forced inwardly to cause the locking blocks or projections 9 to enter between the shoulders 4 on the braces and the inner faces of the sides to lock the sides in extended position. The handles 29 are then moved inwardly to cause the wedge 27 to elevate the bearings 24 and the handle 32 is pulled outwardly to elevate the arches. The mold plates or boards 21 are then placed in position upon the arch. When it is desired to collapse the device and shift it to another position, the handles 29 are pulled outwardly to allow the bearings 24 of the arches to lower, the handle 32 is then forced inwardly to swing the arches downwardly, the handles 12 are then pulled outwardly to unlock the braces and the handle 19 is forced inwardly to move the sides 1 together. The device may then be moved upon its supporting wheels 2 out of the finished section of the arch or conduit and set up to form the next section or a continuation of the same.

Having thus described my invention what I claim is:

1. A device of the character described comprising side members, means for moving them toward and from each other, and col-

lapsible supporting arches pivoted to the side members to swing downwardly.

2. A device of the character described comprising side members, means for moving them toward and from each other, collapsible arches having their ends pivoted to the side members to swing downwardly and means for swinging said arches simultaneously.

3. A device of the character described comprising side members, pairs of toggle levers having their inner ends hingedly connected and their outer ends pivoted to said side members at opposite points, an operating rod connecting the inner ends of the toggle levers for simultaneous operation and collapsible supporting arches pivoted to the side members to swing downwardly.

4. A device of the character described comprising side members, pairs of toggle levers having their inner ends hingedly connected and their outer ends pivoted to said members at opposite points, an operating rod connecting the inner ends of the toggle levers for simultaneous operation, collapsible supporting arches having their ends pivoted to the side members to swing downwardly and means for simultaneously swinging said arches.

5. A device of the character described comprising side members movable toward and from each other, collapsible supporting arches having their ends pivoted upon said members to swing downwardly and means upon said members for raising and lowering the pivots of said arches.

6. A device of the character described comprising side members movable toward and from each other, collapsible supporting arches between said side members and having their ends pivoted to permit them to be swung downwardly, means upon said side members for raising and lowering the pivoted ends of the arches and means for simultaneously swinging the arches.

7. A device of the character described comprising side members, means for moving them toward and from each other, bearings vertically movable upon said side members, supporting arches having their ends pivoted in said bearings and each consisting of hingedly connected sections and means for simultaneously operating said arches, substantially as described.

8. A device of the character described comprising side members, means for moving them toward and from each other, bearings vertically movable upon said side members, means for simultaneously moving the bearings upon each of said side members and foldable arches connecting said bearings, substantially as described.

9. A device of the character described comprising side members, means for moving them toward and from each other, bearings



vertically movable upon said side members, slidable operating rods in said side members, wedges upon said rods for actuating said bearings and foldable supporting arches connecting said bearings, substantially as described.

10. A device of the character described comprising side members, means for moving said members toward and from each other, braces connecting said members, the ends of said braces being slidably engaged with said members, means for locking said braces and side members rigidly together and mold supporting devices connecting said side members, substantially as described.

11. A device of the character described comprising side members, means for moving the same toward and from each other, braces arranged between said side members and having their ends slidably engaged therewith, stop shoulders upon said braces, operating rods slidable upon said side members, projections upon said rods to enter between said stop shoulders and said side members and mold supporting devices connecting said side members, substantially as described.

12. A device of the character described comprising hollow side members, supporting wheels for the same, toggle levers connecting said members, a rod for simultaneously operating said levers, braces slidably engaged with said side members, means for rigidly locking the side members and braces, bearings vertically slidable in said side members, operating rods in said side members

for actuating said bearings, supporting arches pivoted in said bearings and consisting of hingedly connected sections, and means for simultaneously actuating said arches, substantially as described.

13. A device of the character described comprising side members movable toward and from each other, bearings vertically movable in said side members, supporting arches having their ends pivoted in said bearings and each consisting of foldable or collapsible sections and means for simultaneously swinging said arches.

14. A device of the character described comprising side members, vertically movable bearings thereon, and supporting arches pivoted in said bearings and adapted to swing downwardly.

15. A device of the character described comprising side members, arches pivoted to said side members to swing downwardly, and means for simultaneously swinging said arches.

16. A device of the character described comprising side members, vertically movable bearings thereon, supporting arches between said bearings, operating rods slidably mounted and wedges carried by said rods and adapted to actuate said bearings.

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

SAMUEL S. CHEZEM.

Witnesses:

JAMES C. LEFORGE,  
JOHN L. KETCHAM.