

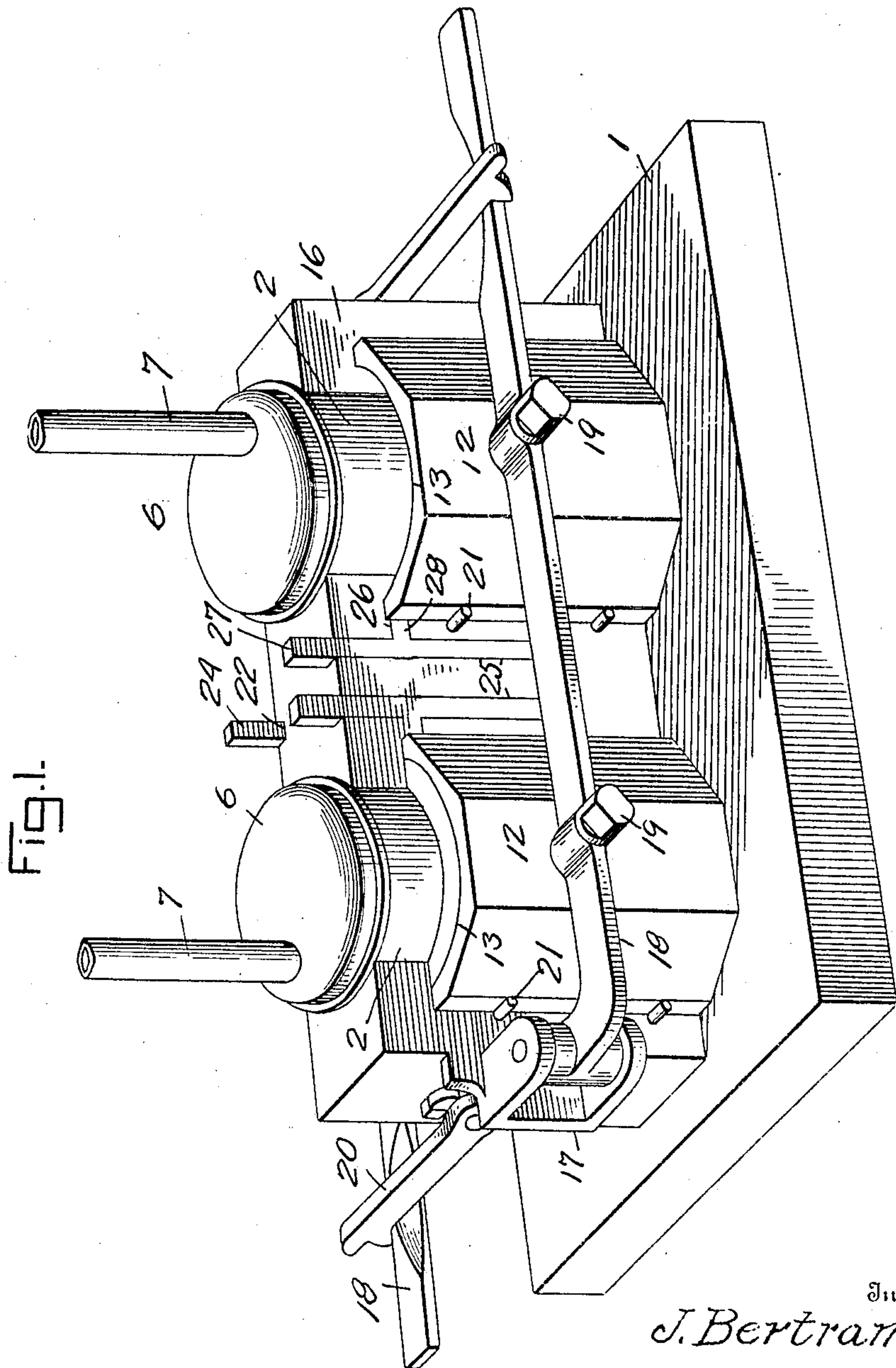
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PATENTED JAN. 7, 1908.

J. BERTRAM.
MOLD.

APPLICATION FILED MAR. 27, 1907.

3 SHEETS—SHEET 1.



Inventor

J. Bertram

Witnesses

G. R. Thomas
R. H. Powell.

By

Dean Swift

Attorney

No. 876,135.

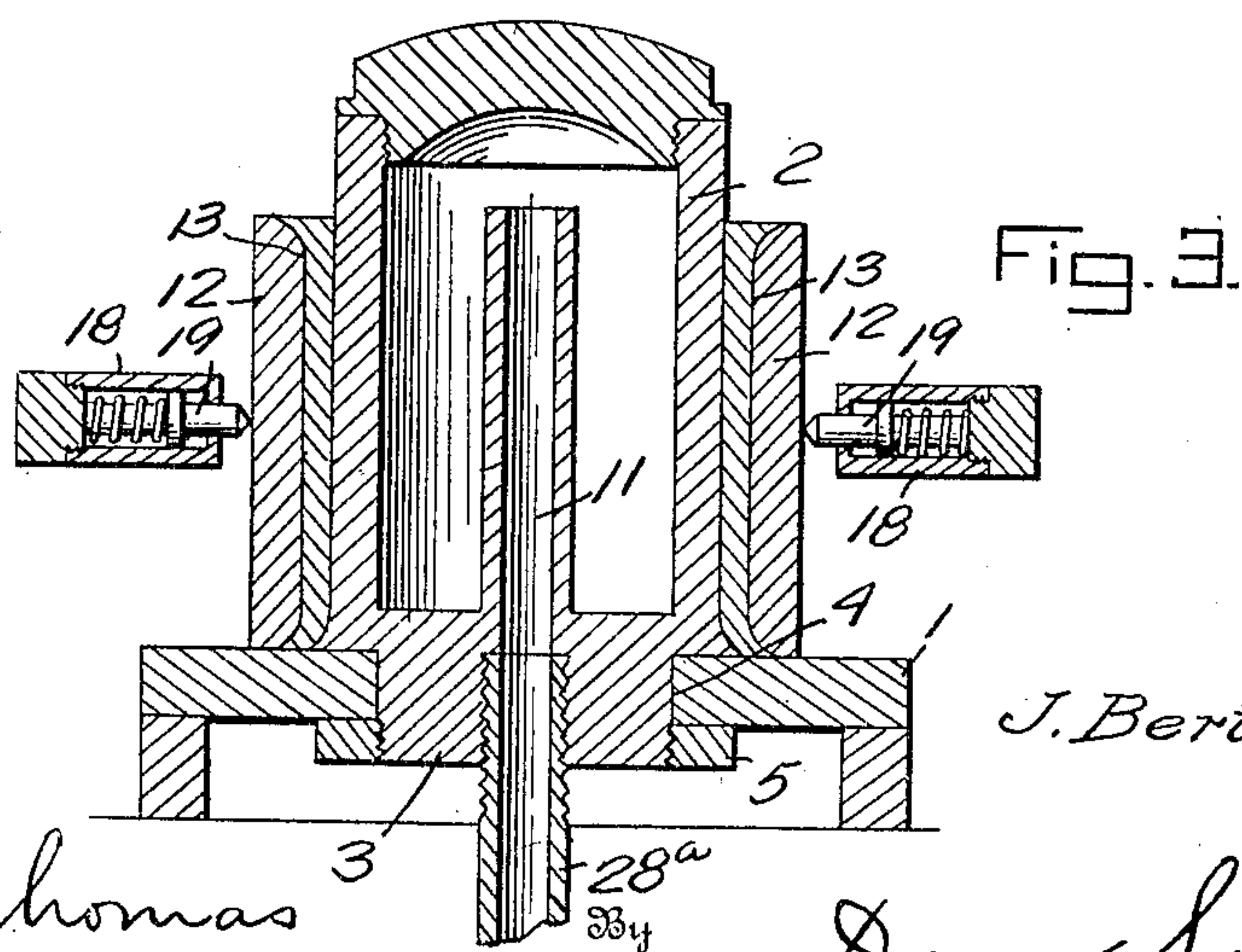
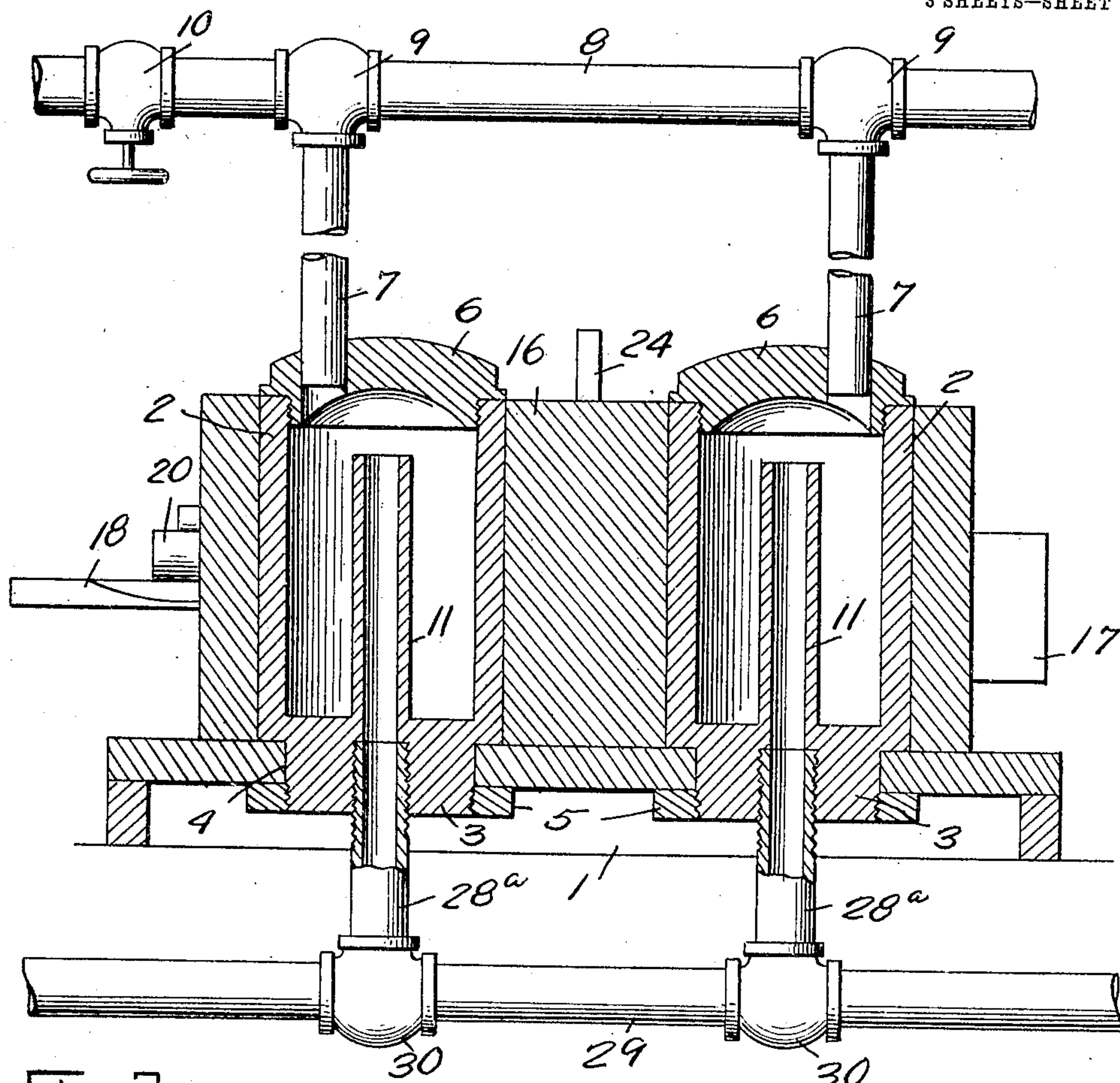
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3 SHEETS—SHEET 2.



Inventor

J. Bertram

Witnesses

Witnesses
C. R. Thomas
R. A. Sweet

Dear Swift

Attorney

No. 876,135.

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3 SHEETS—SHEET 3.

Fig. 4.

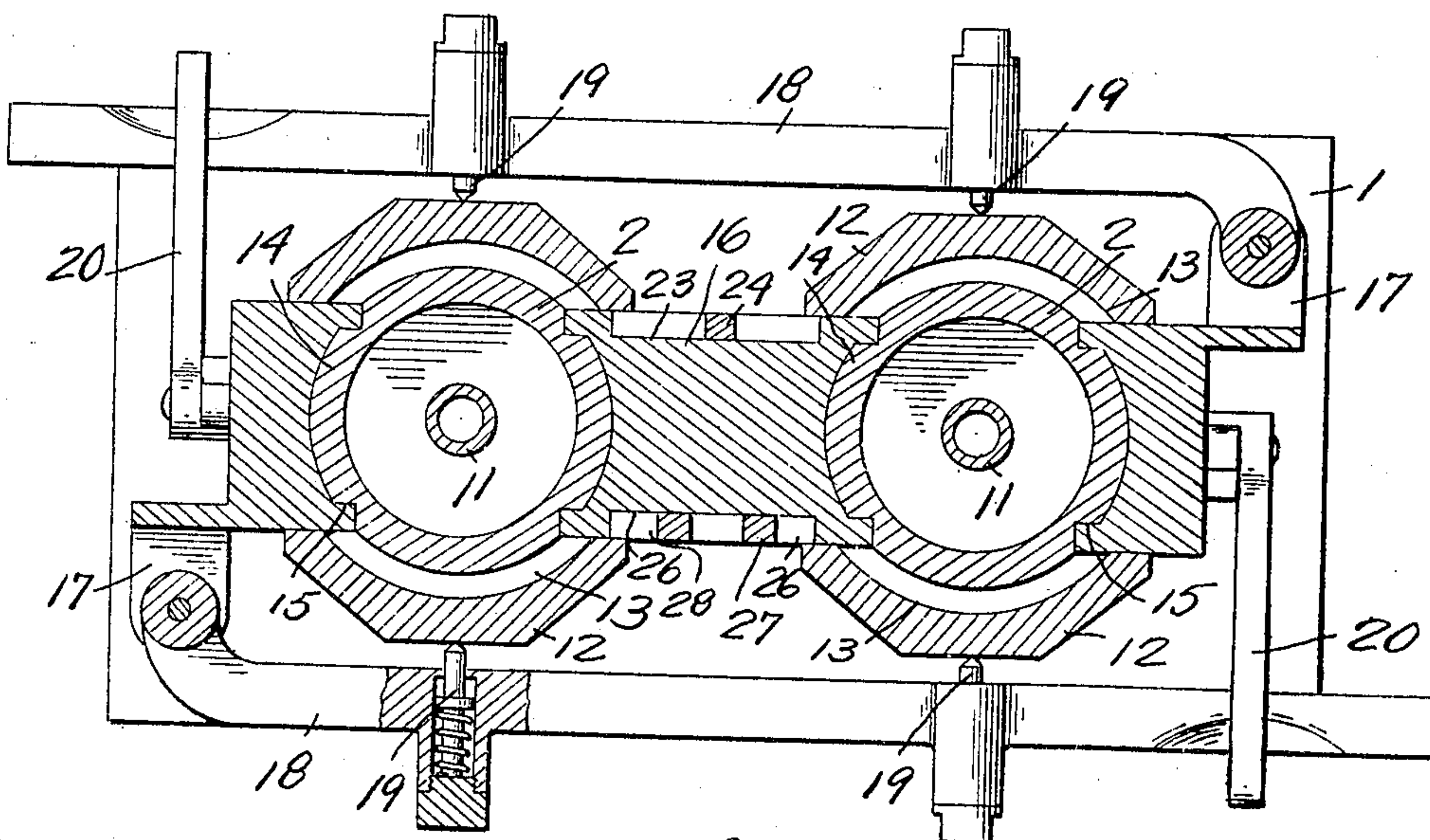
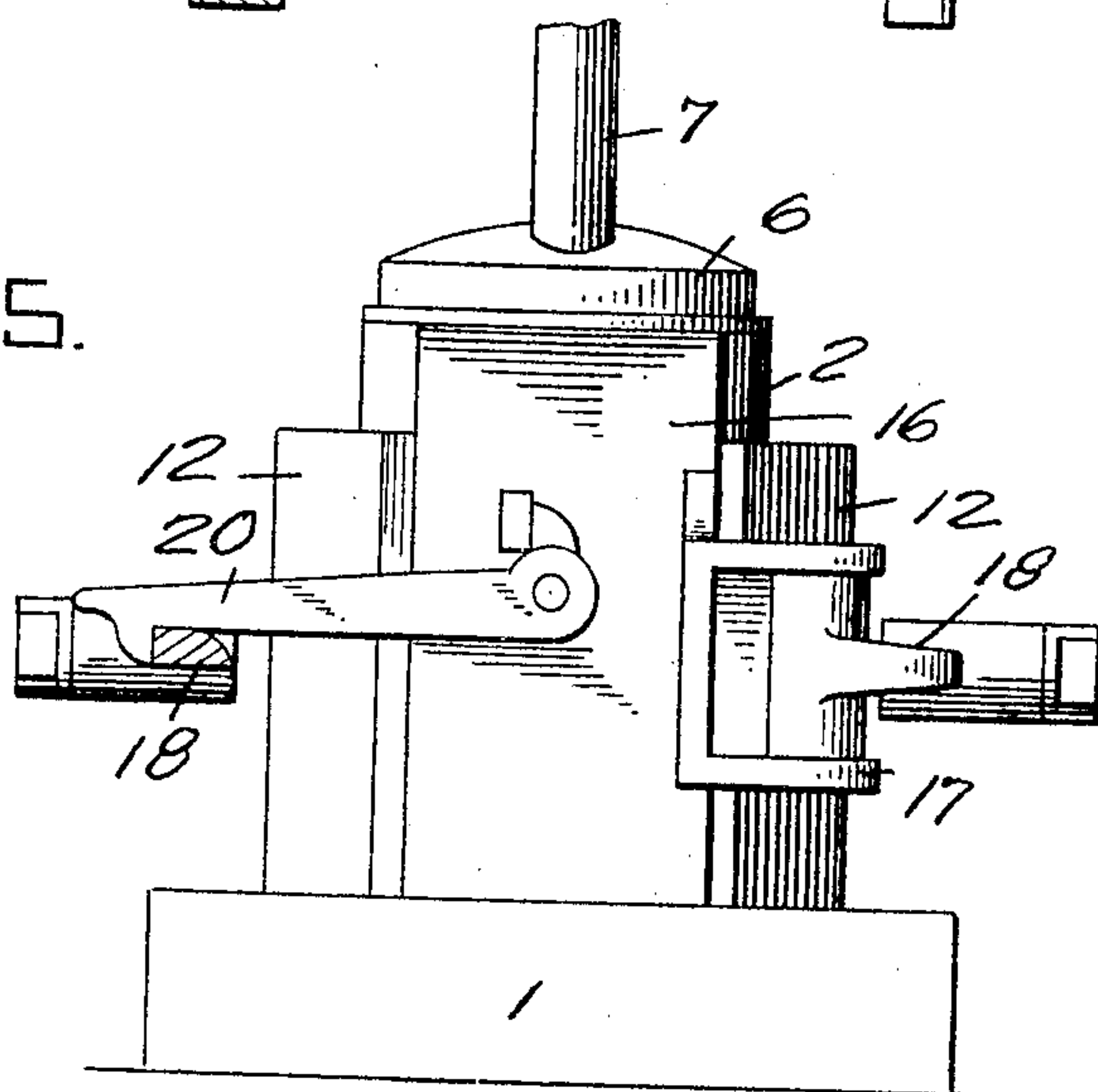


Fig. 5.



WITNESSES:

C. R. Thomas

A. H. Powell

INVENTOR

J. Bertram

By

Dean Swift

Attorney

UNITED STATES PATENT OFFICE.

JULIUS BERTRAM, OF ST. LOUIS, MISSOURI.

MOLD.

No. 876,135.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed March 27, 1907. Serial No. 364,851.

To all whom it may concern:

Be it known that I, JULIUS BERTRAM, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Mold; and I 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.

This invention pertains to a new and useful water cooled molding machine; in connection with an apparatus of the above type, the invention aims as a primary and essential object, to provide a device of this character, by which linings for journals, or babbitt bearings of any configuration or description, especially railway car wheel journal bearings may be cast.

This invention aims as a further object to provide a new and useful construction of interchangeable character, that is, the mandrels of the device, forming the bore of the babbitt bearing, may vary in proportions and configurations, and also suitable to the demand thereof. The various elements of the device mostly utilized are hardened to avoid wear thereon.

This invention comprises further objects and combinations of elements which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claims.

To obtain a full and correct understanding of the details of construction, combinations of features, elements and advantages, reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein

Figure 1 is a perspective view of the above type of molding machine embodying the invention. Fig. 2 is a longitudinal section thereof illustrating the water inlet and overflow outlet. Fig. 3 is a horizontal section, longitudinally through the device. Fig. 4 is a cross sectional view through one of the mandrels illustrating the bearing elements in their proper positions. Fig. 5 is a detail view of the members for dislocating the bearing elements. Fig. 6 is a detail view, showing the pivotal point for the element 24.

Making renewed reference to the accompanying drawings, wherein similar reference characters indicate corresponding parts in

the several illustrations, by figures, 1 designates the base of the device, in carrying out the embodiment of the invention, upon which base a pair of parallel vertically disposed mandrels 2 are positioned; these mandrels are secured to the base by their shank portions 3 which are threaded. These shank portions extend through openings 4 of the base after which suitable nuts 5 are threaded thereon, for the purpose of securely clamping the mandrels in their vertical disposed position. These mandrels are provided with suitable screw threaded tops or closures 6, which are designed to engage threads upon the inner circumference of the said mandrels; threaded to the tops or closures are the water inlet pipes 7 which are connected to the main water supply pipe 8 by a suitable union 9, which main water supply pipe is controlled by a valve 10. These mandrels are hollow as shown and are provided with a centrally disposed overflow pipe 11, which extends vertically from the bottoms of the mandrels, upwardly and adjacent to the tops or closures.

Each mandrel has positioned adjacent thereto, removable bearing elements 12 which are positioned in such wise as to leave an intervening space between them and the mandrels, into which space 13 the metal for forming linings or bearings is poured. One side of each mandrel is provided with a rib 14, which extends into dove-tailed grooves 15 of a connecting member 16 for the mandrels. Upon the outer sides of the mandrels are castings 17, each of which is provided with a pivoted lever 18 having spring pressed pins 19, for pressing against the bearing elements, for holding them in close proximity with the mandrels. For securely holding the pivoted levers locked in engagement with the bearing elements, the castings 17 are provided with suitable latches 20 to engage the said pivoted levers.

To prevent lateral displacement of the bearing elements, the castings 17 and the connecting member 16, upon each side thereof, are provided with lugs 21, which are to be engaged by the free edges of the bearing elements. To dislocate the bearing elements after the metal has hardened in the space 13, the connecting member 16 upon one side thereof is provided with a vertically disposed recess 22, having a recess 23 at right angles

thereto, and also crossing the same, into which recesses 22 and 23 a cross lever 24 is pivoted and is designed to rest therein; this cross lever is for the purpose of dislocating one pair of bearing elements, while on the other side of the connecting member 16 is a pair of vertically disposed recesses 25, each of which has a recess 26 extending therefrom and at right angles thereto. Pivoted in the vertically disposed recesses 25 are levers 27, each having a right angled arm 28 to lie in the recesses 26; these levers are for removing the other pair of bearing elements, after the metal which has been poured into the space 13 has hardened. A pair of outlet pipes is connected to the overflow pipes of the mandrels, which outlet pipes are designated by the numeral 28^a, and are connected to a main outlet pipe 29, by a union 30, as depicted from the drawings.

The operation of the mold is as follows: The bearing elements are placed adjacent the mandrels, and are held in such position by the levers 18, having spring press devices 19 to engage therewith. The levers 18, when holding the bearing elements in position are engaged by the latches 20, as will be clearly manifest. While the bearing elements are held in position, as above set forth and shown in Fig. 4 of the drawings, Babbitt metal is poured into the spaces 13 in which the metal stands until set, which is quickly accomplished by the inflow of cold water into the hollow mandrels, the overflow of which, allows for a fresh supply, as will be readily observed by reference to Figs. 2 and 4. After the metal has set, the latches are released from the levers 18, after which, the bearing elements and babbitt bearings are removed through the medium of the levers 24 and 27, as will be understood upon examination of the drawings. The levers 24 and 27 are provided with lateral projecting arms, which extend into the spaces 13 so as to be in the rear of the babbitt bearings and bearing elements. By this construction, the said elements and babbitt bearings are removed.

It is to be understood that various changes and modifications may be employed in the construction and embodiment thereof, combinations of features, and elements, without in any way departing from the spirit and scope of the invention covered by the claims thereof; it being understood that whatever variations or modifications may be employed must fall within the scope of the appended claims.

From the foregoing, the essential features, elements and the operation of the device, together with the simplicity thereof, will be clearly apparent, and, when manufactured in

accordance with the invention, an inexpensive market will be easily obtained therefor.

Having thus fully described the invention, what is claimed as new and useful by the protection of Letters Patent, is:—

1. In a mold, a base, a pair of parallel disposed hollow mandrels rising from the base and secured thereto by their shank portions, and nuts threaded thereon, said mandrels having water inlets and overflow outlets, said mandrels having a connecting member therebetween having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing elements to prevent lateral displacement thereof, pivoted levers having spring pressed pins cooperating with the bearing elements, said mandrels having pivoted latches to engage said pivoted levers, said connecting member having pivoted levers for removing said bearing elements.

2. In a mold, a base, a pair of parallel hollow mandrels rising therefrom, said mandrels having water inlets and overflow outlets, said mandrels having a connecting member therebetween, having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing elements to prevent lateral displacement thereof, means for holding the bearing elements in position, said connecting member having pivoted levers for removing said bearing elements.

3. In a mold, a pair of parallel disposed hollow mandrels a base therefor, said mandrels having threaded shank portions, to be fixed to said base, nuts to engage said shank portions, said mandrels having a connecting member therebetween having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing elements to prevent lateral displacement thereof, pivoted levers having spring pressed pins to cooperate yieldingly with the bearing elements, pivoted latches for the levers, said connecting member having pivoted means for removing said bearing elements.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JULIUS BERTRAM.

Witnesses:

JOEL T. MUNN, Jr.,
ALBERT J. LILLY.