

No. 890,913.

PATENTED JUNE 16, 1908.

A. J. LEVEQUE.
AMALGAM PRESS.
APPLICATION FILED JUNE 4, 1907.

2 SHEETS—SHEET 1.

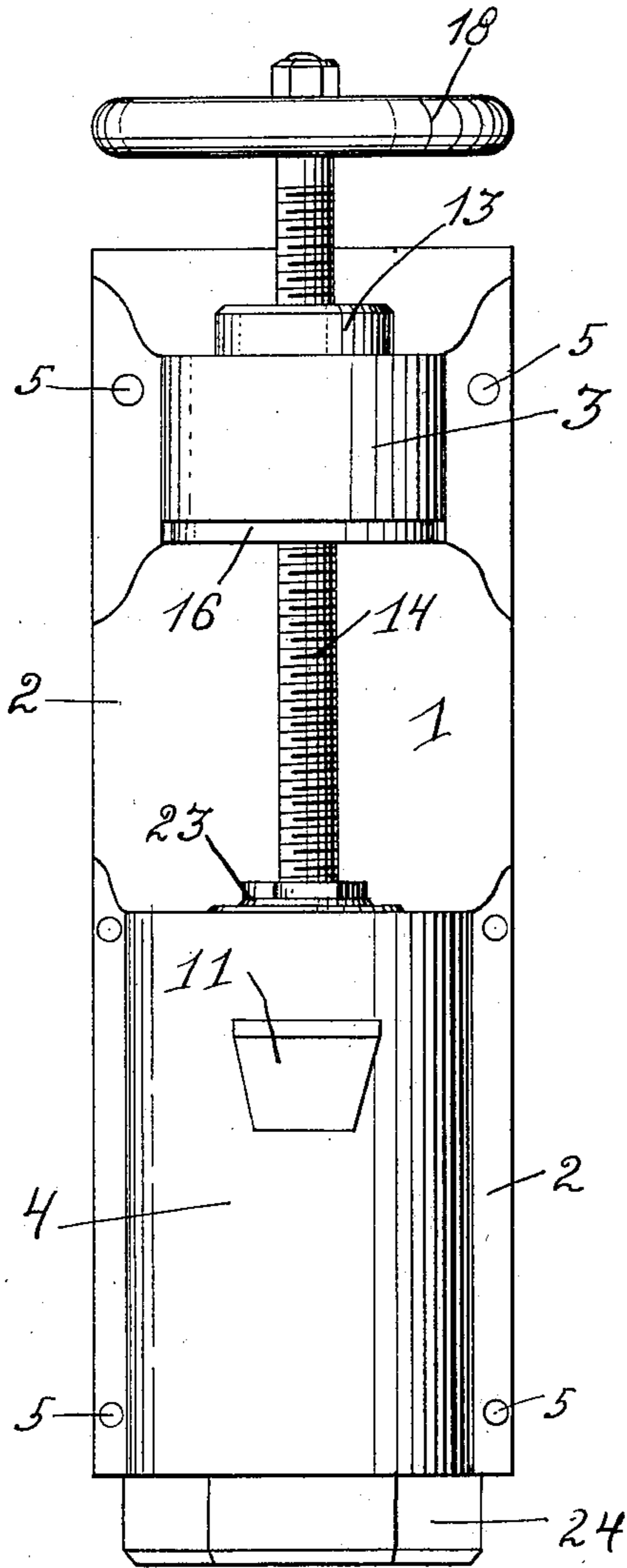


FIG. I.

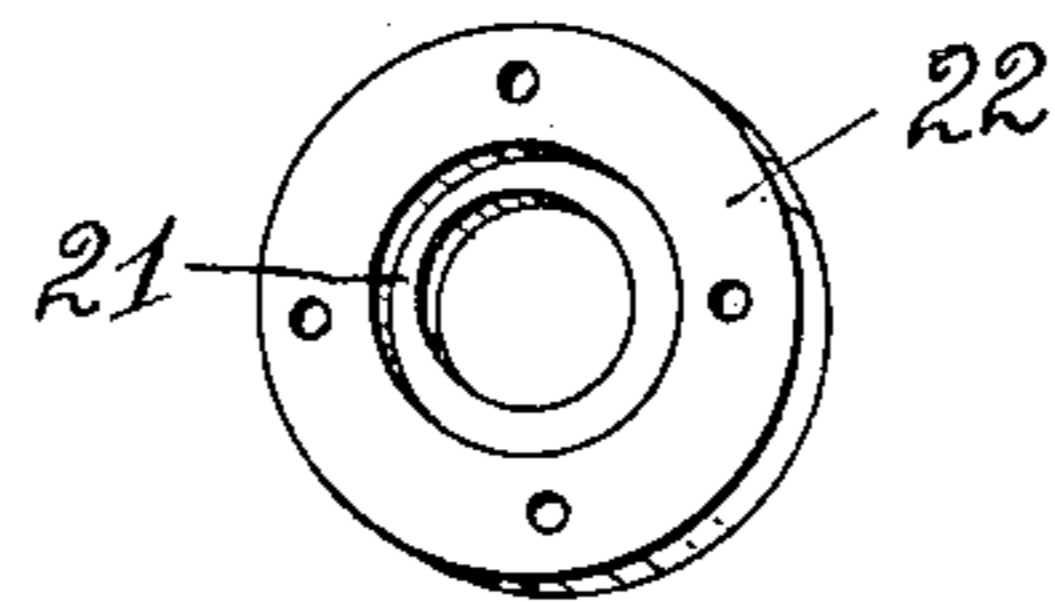
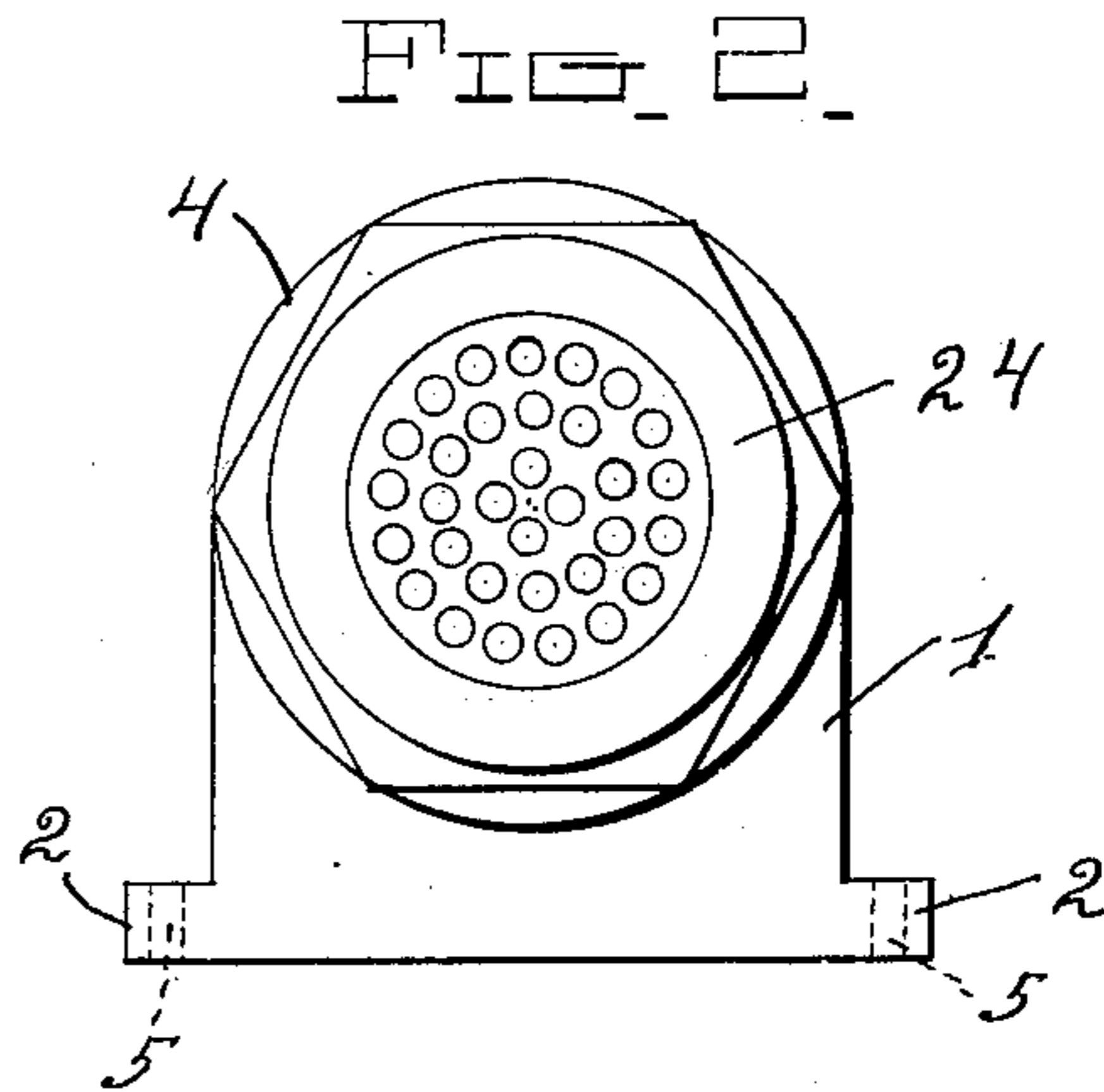


FIG. 3.

Witnesses

J. Milton Jester.
L. D. Little.

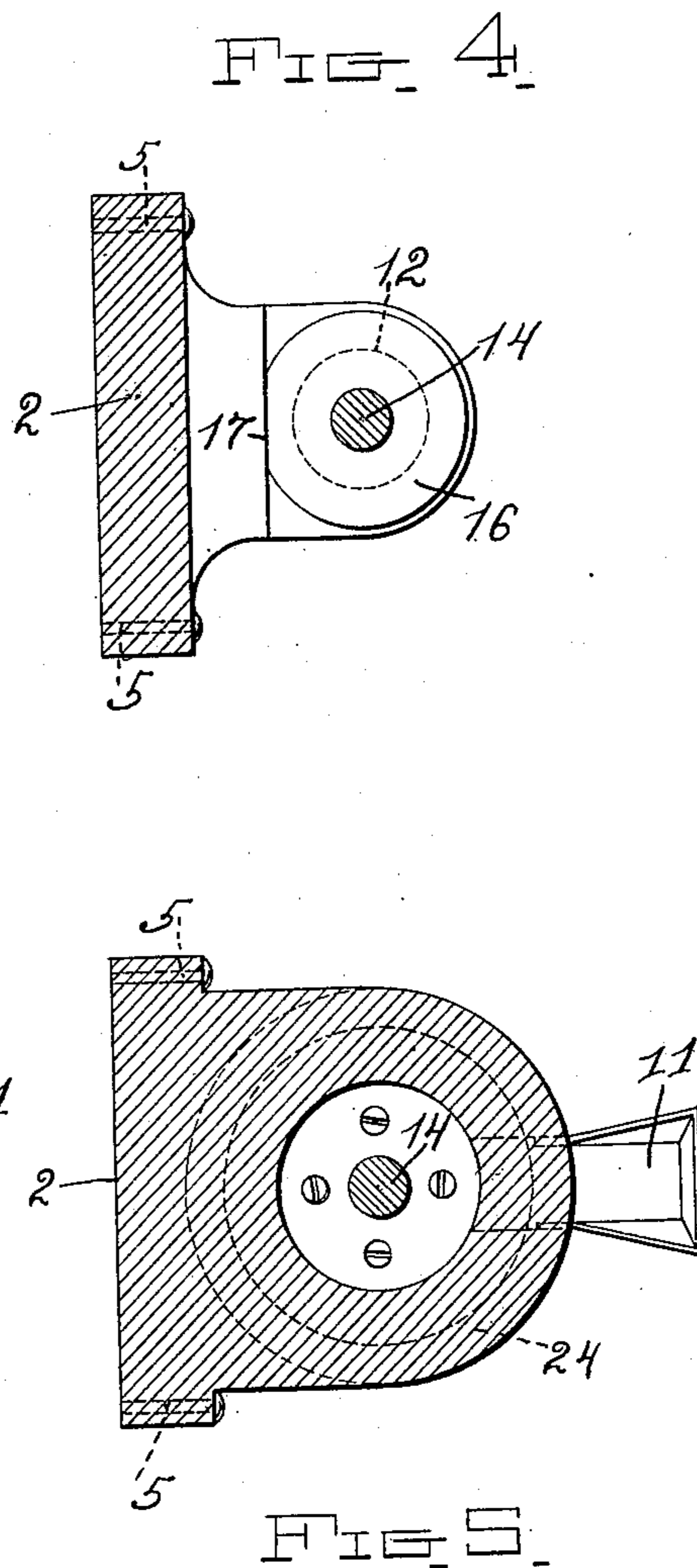
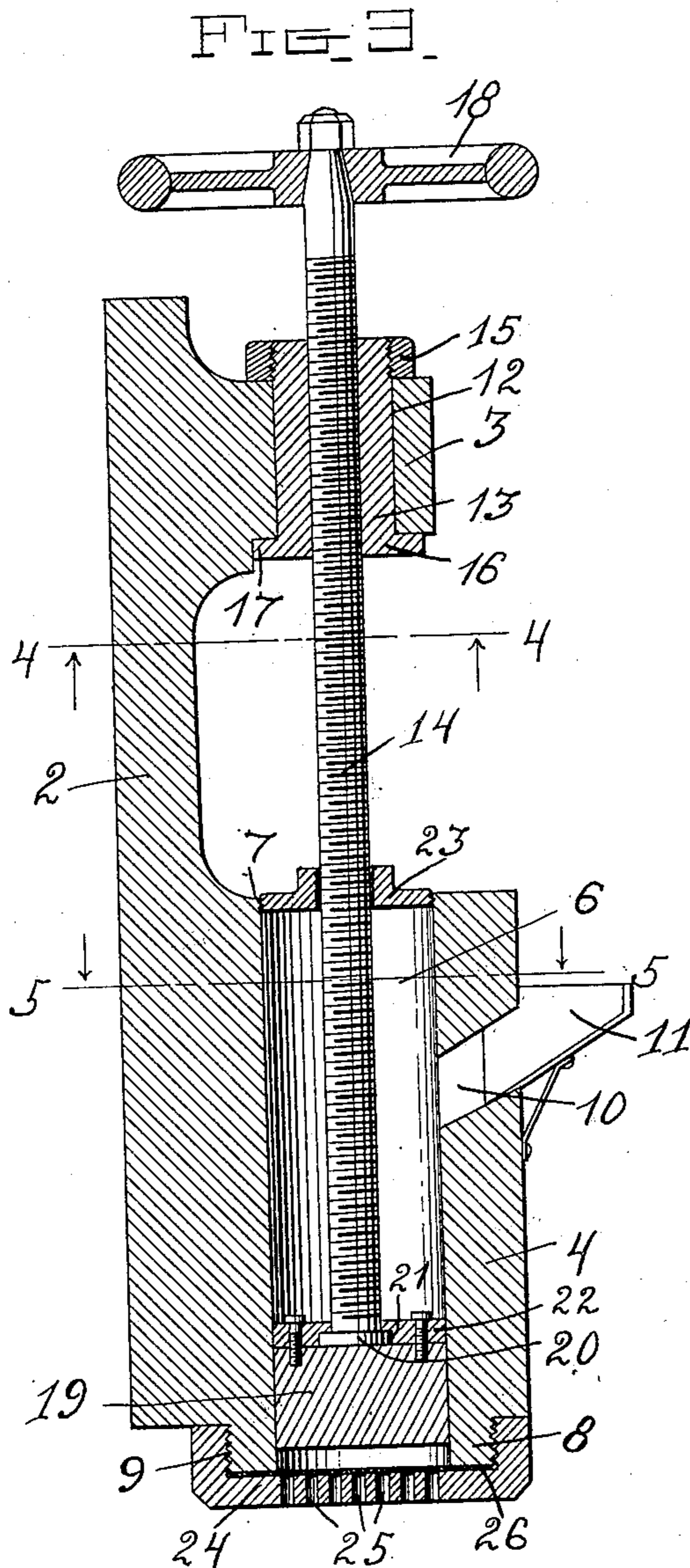
A. J. Leveque
By Watson E. Coleman
Inventor
Attorney

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2 SHEETS—SHEET 2.



Witnesses

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L. O. Little.

A. J. Leveque, Inventor
By *Walter E. Coleman*, Attorney

UNITED STATES PATENT OFFICE.

ANTHIME J. LEVEQUE, OF LEAD, SOUTH DAKOTA.

AMALGAM-PRESS.

No. 890,913.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed June 4, 1907. Serial No. 377,266.

To all whom it may concern:

Be it known that I, ANTHIME J. LEVEQUE, a citizen of the United States, residing at Lead, in the county of Lawrence and State of South Dakota, have invented certain new and useful Improvements in Amalgam-Presses, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in expressing presses and more particularly to one especially designed for pressing mercury from amalgam.

The object of the invention is to provide a simple and practical device of this character which will be convenient in use and powerful in operation.

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 front elevation of my improved press; Fig. 2 is a bottom plan view of the same; Fig. 3 is a vertical section; Figs. 4 and 5 are horizontal sections taken respectively on the planes indicated by the lines 4—4 and 5—5 in Fig. 3; and Fig. 6 is a perspective of the ring which unites the plunger head and the screw.

My improved press comprises a body 1 preferably in the form of a casting consisting of a base plate 2 from one face of which projects two enlargements 3, 4. The body 1 is preferably, but not necessarily, secured in a vertical position upon an upright support by screws or other fastenings inserted in apertures 5 in the base or attaching plate 2. The lower and larger projection or enlargement 4 is formed with a longitudinally extending cylindrical bore 6, the upper end of which is screw threaded, as at 7, and the lower end of which also extends through a concentric boss 8 formed upon the flat bottom of the body 1 and externally threaded, as at 9. In said enlargement 4 adjacent to its top is also formed a transverse inlet opening 10, the inner end of which communicates with the bore or cylinder 6 and from the outer end of which projects a hopper 11. The latter may be formed integral with the body 1 if desired but as illustrated it is formed separate and suitably secured in the opening 10.

In the upper and smaller projection or enlargement 3 is formed a vertically disposed

cylindrical opening or bore 12 which is arranged concentric with the cylinder 6 and is adapted to receive the similar shaped body portion of a nut 13. The latter is formed with a central threaded opening to receive the plunger screw 14 and one of its ends is externally screw threaded for the reception of a nut 15, while its other end is formed with an annular radially projecting flange 16 which has one of its sides cut away or flattened, as at 17.

Upon reference to Figs. 3 and 4 it will be seen that by constructing and arranging the nut in the manner just described it is removably retained in the body 1 by the nut 15 and is held against rotation by the engagement of the flat portion 17 of the flange 16 with the plate 2 of the body. The feed screw 14 has a hand wheel 18 or other suitable operating element upon its upper end and swiveled upon its lower end is a piston or plunger 19 adapted to snugly fit the cylinder 6 but have sliding movement therein. This plunger may be of any suitable form and construction but as illustrated, it comprises a cylindrical head or body which has a swivel connection with the lower end of the screw 14 by forming upon the latter an annular, radially projecting flange 20 which rotates in a recess 21 formed upon a ring 22 which surrounds the lower end of the screw and is secured upon the top of the plunger head by screws or other fastenings, as clearly shown in Fig. 3. The upper end of the cylinder 6 is closed by a plate 23 which has a threaded engagement with the screw threads 7 and which is formed with a central opening through which the screw 14 is adapted to freely work and with a reduced polygonal shaped upper end for the reception of a wrench. The lower end of the cylinder 6 is closed by a screw cap 24 which is engaged with the threads 9 of the boss 8 and is formed with a plurality of apertures 25 for the discharge of the mercury. Interposed between the lower end of the boss 8 and the inner or upper face of the screw cap 24 are one or more layers 26 of a straining or filtering material, such as canvas, and through which the liquid mercury may be forced while the amalgam is retained in the cylinder.

The operation of the amalgam press is as follows: The screw 14 is turned to raise the plunger 19 above the feed opening 10, the filtering or straining material 26 is then placed in the screw cap 24 and the latter is threaded

upon the boss 8. The amalgam from which the mercury is to be squeezed or pressed is then poured into the hopper 11, and the crew 14 is then turned in a direction to cause it to travel downwardly through the nut 13 and to force the plunger 19 downwardly upon the amalgam. When this is done the liquid mercury will pass through the canvas or screening material 26 and the apertures 25 in the cap and may be caught in a suitable receptacle provided for the purpose. The solid portion of the amalgam will be retained in the lower end of the cylinder 6 and may be removed by unscrewing the cap 24 and forcing the plunger downwardly, as will be readily understood.

While the device is especially designed for extracting the liquid mercury from all kinds of amalgamated metals, it will be understood that it may be used for other purposes and wherever it is desired to extract liquid from solid or partially solid substances.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. A device of the character described comprising a body having an attaching plate and upper and lower spaced projections, the lower one being formed with a vertically extending cylindrical bore and an inlet opening

intermediate its ends, a nut carried by the upper projection, a screw arranged in said nut, a plunger upon the screw to work in said bore, a removable apertured closure for the lower end of said bore and a straining or filtering material interposed between said closure and the lower end of the lower projection, substantially as described.

2. A device of the character described comprising a body, having an attaching plate and upper and lower projections, the lower projection having a vertically extending cylindrical bore and an inlet opening intermediate its ends, the upper projection having an opening in alinement with said bore, a removable nut in the opening of the upper projection, a screw to work in said nut, a plunger swiveled upon the screw and adapted to reciprocate in said bore, a screw closure for the lower end of said bore, said closure being provided with discharge openings and a screening or filtering material interposed between said closure and the lower end of the lower projection, substantially as described.

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

ANTHIME J. LEVEQUE.

Witnesses:

ALFRED GRAVEL,
VICTOR LEVEQUE.