

No. 671,703.

Patented Apr. 9, 1901.

E. J. KELLY.
REVERSIBLE WASHING MACHINE.

(Application filed Aug. 29, 1900.)

(No Model.)

Fig. 1.

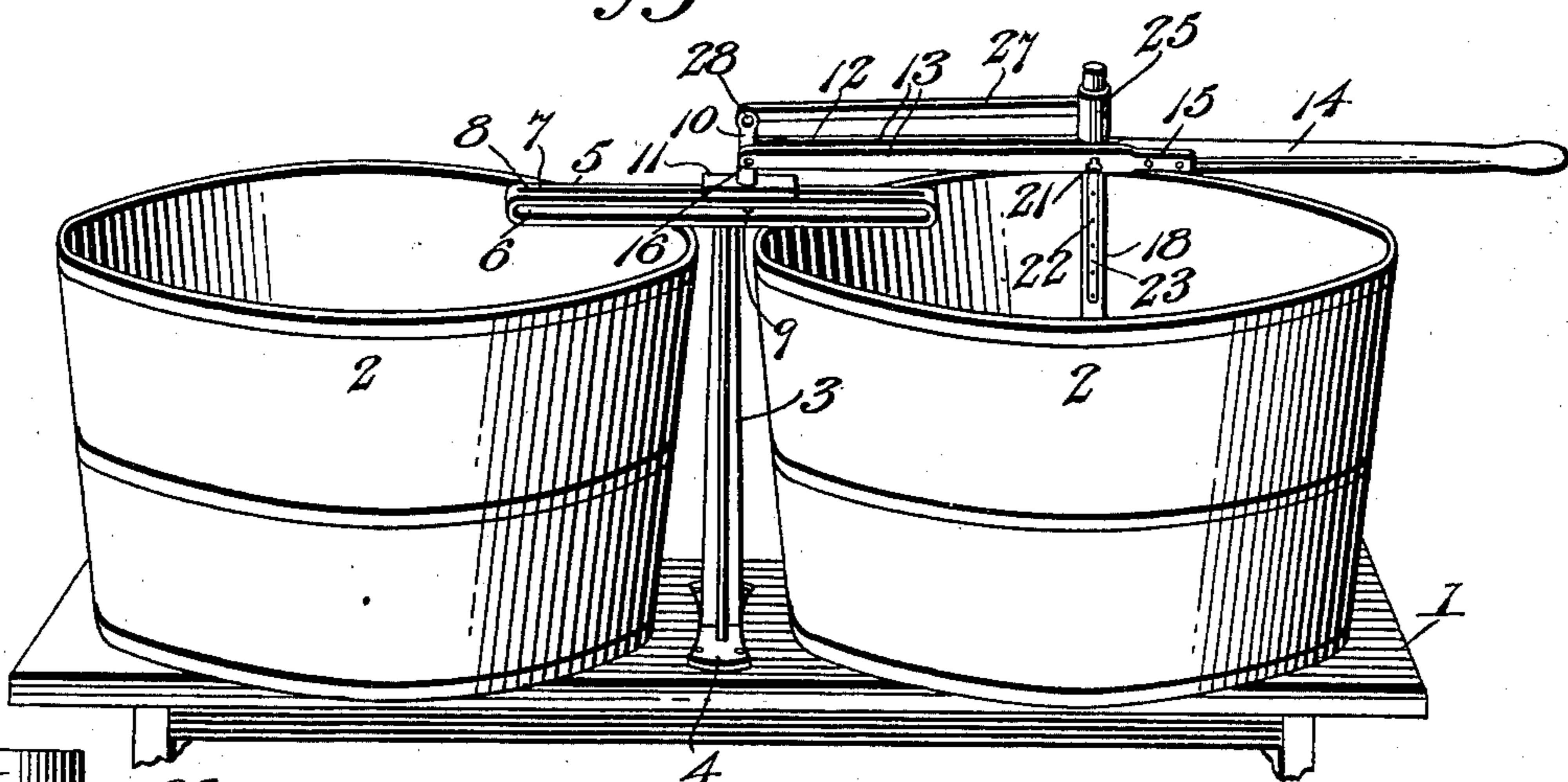


Fig. 2.

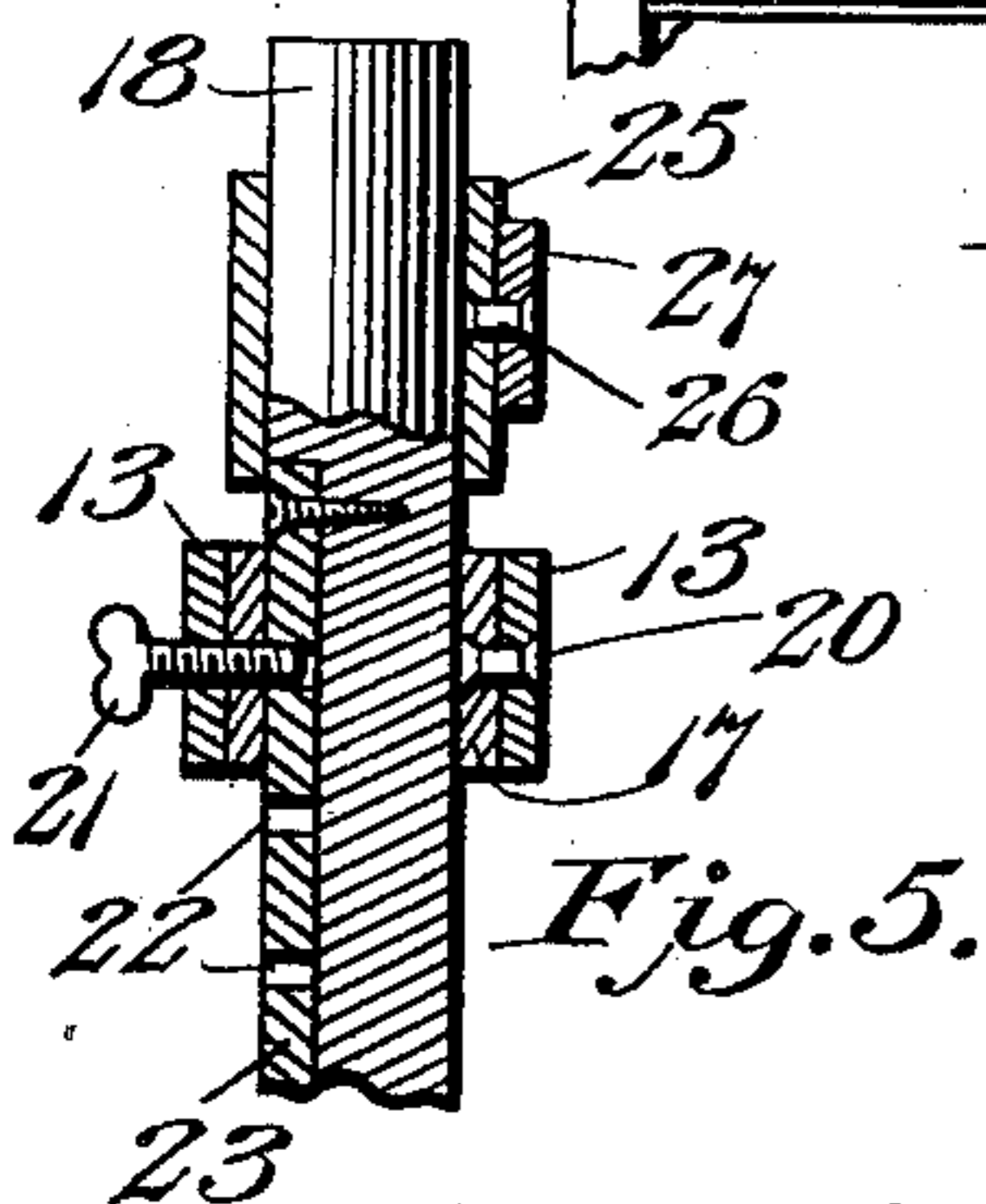
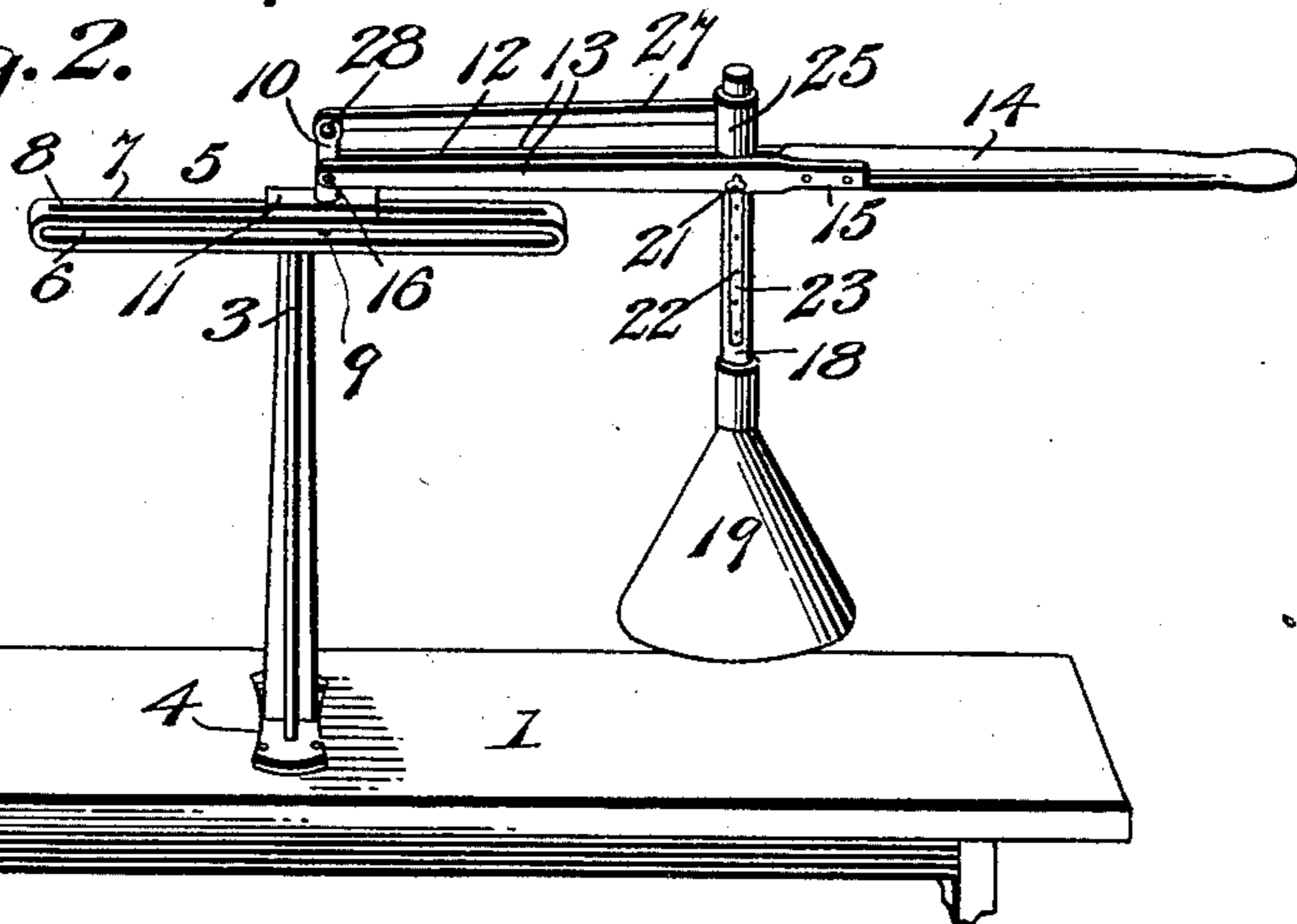


Fig. 6.

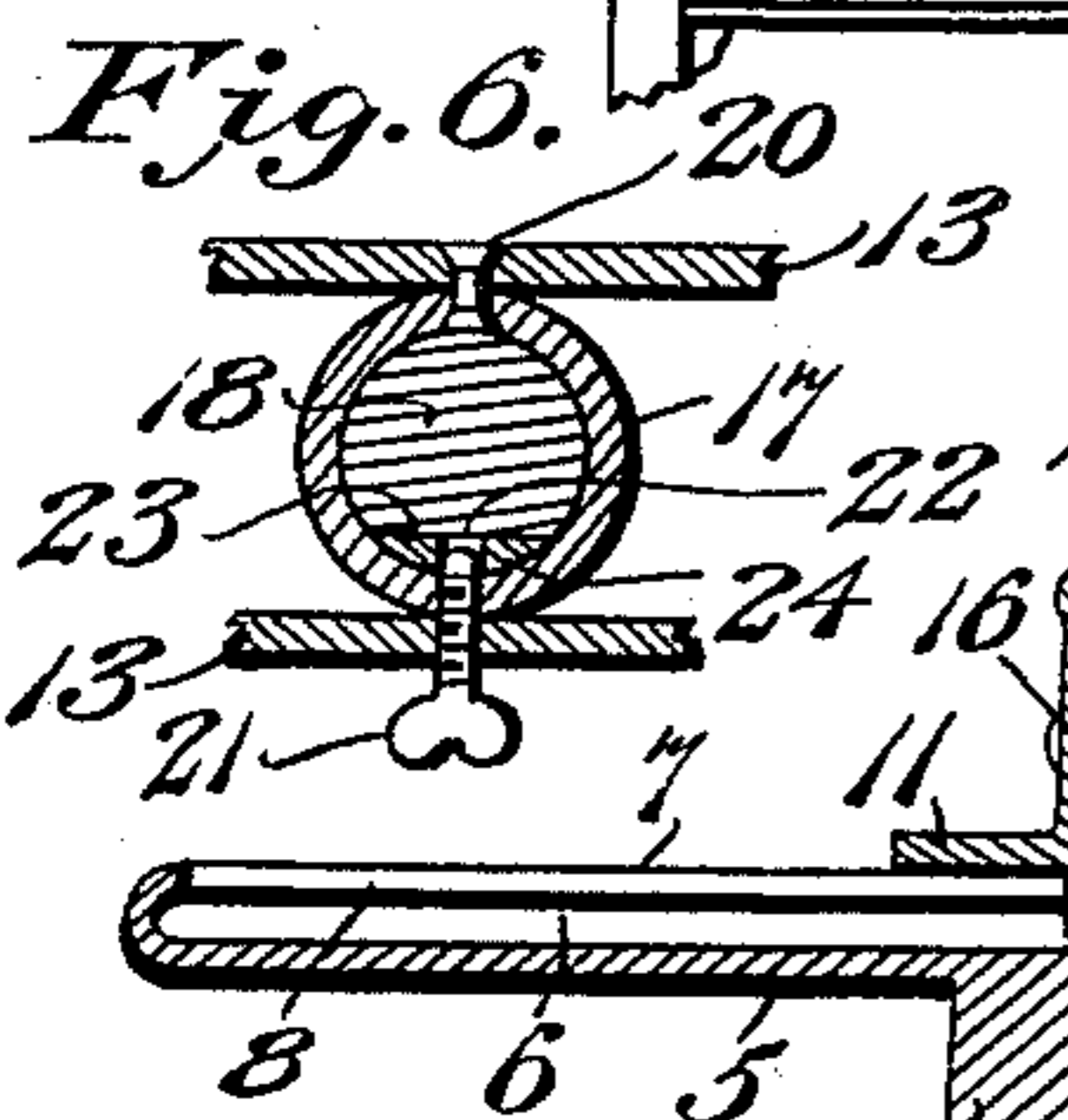


Fig. 3.

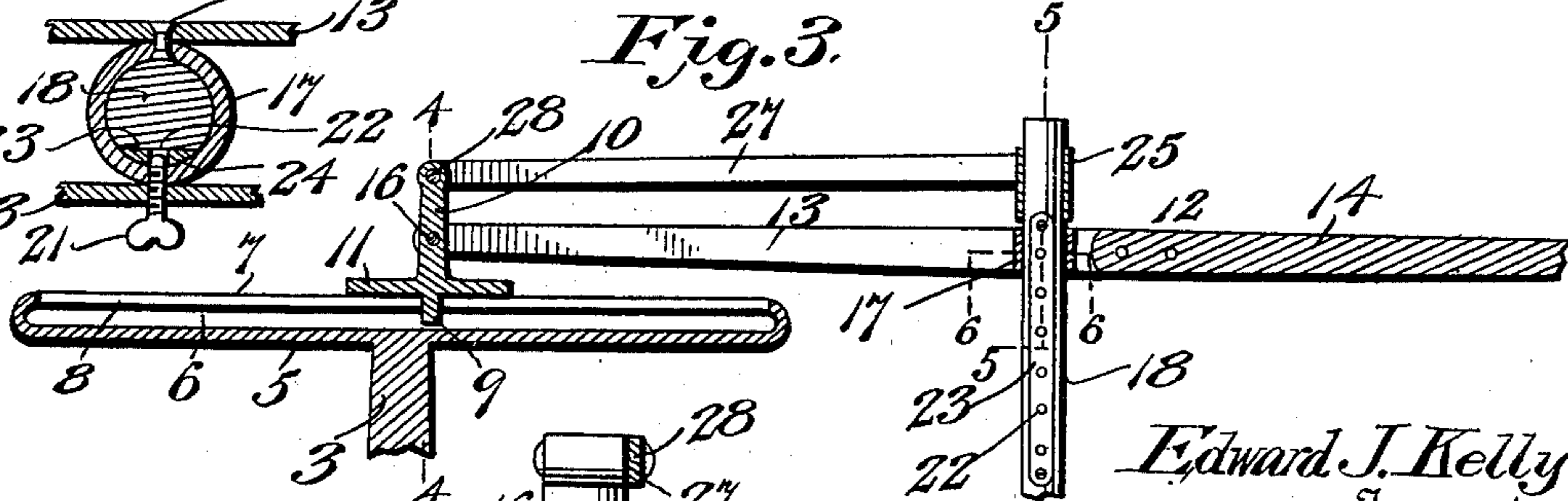
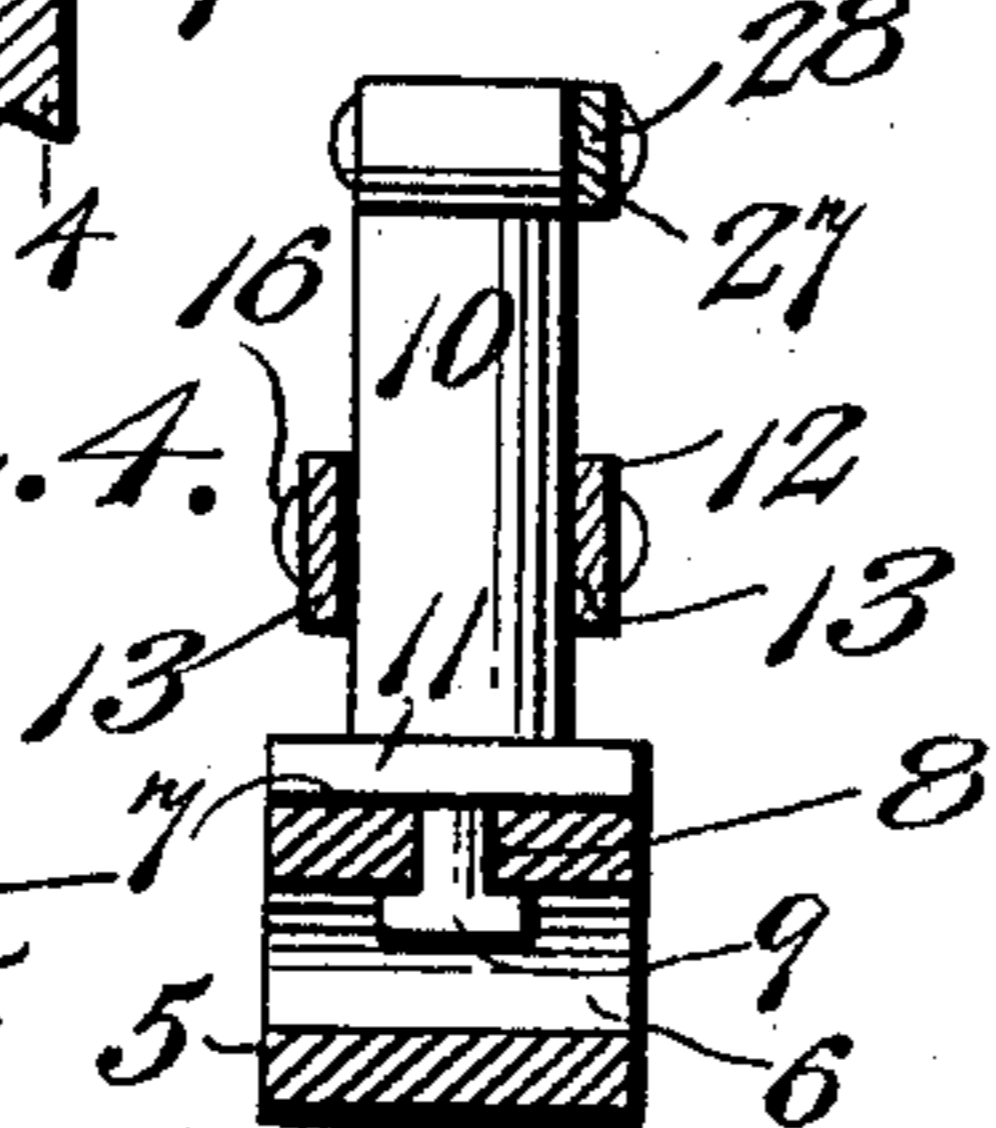


Fig. 4.



Witnesses

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EDWARD J. KELLY, OF ORONO, MAINE.

REVERSIBLE WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 671,703, dated April 9, 1901.

Application filed August 29, 1900. Serial No. 28,440. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. KELLY, a citizen of the United States, residing at Orono, in the county of Penobscot and State of Maine, have invented a new and useful Reversible Washing-Machine, of which the following is a specification.

This invention relates to washing-machines, and has special reference to that type of machines employing a vertically-reciprocating agitating plunger or pounder.

To this end the invention primarily contemplates an improved washing-machine embodying mechanism providing for the quick and easy cleansing of the clothes, while at the same time being readily reversible, so as to be shifted directly from one washtub to another without any readjustment of any part of the machine.

The invention also contemplates a washing mechanism which shall not only be shiftable or reversible from one tub to another, but which shall also be capable of being shifted within a washtub to any desired position therein which may be required during the washing operation.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts herein-after more fully described, illustrated, and claimed.

The essential features of the invention are necessarily susceptible to some modification without departing from the spirit or scope thereof; but the preferred embodiment of the improvements is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a washing-machine embodying the present invention and showing the same associated with a pair of adjacent washtubs upon the same bench or base. Fig. 2 is a perspective view of the washing mechanism with the tubs removed from the bench. Fig. 3 is a vertical sectional view of a portion of the washing mechanism, showing more clearly the mounting of the swivel-post and the connection of the operating and equalizing levers with the post and the plunger-staff. Fig. 4 is a detail sectional view on the line 4 4 of Fig. 3, showing the

slidable interlocking connection between the swivel-post and the horizontal supporting-guide therefor. Fig. 5 is a similar view on the line 5 5 of Fig. 3. Fig. 6 is also a detail sectional view on the line 6 6 of Fig. 3.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In carrying out the invention the washing mechanism is preferably associated with a washbench 1 of a sufficient length to support thereon a pair of washtubs 2, which when employed at the same time upon the bench are arranged, respectively, at opposite sides of the center thereof, so as to be disposed, respectively, at opposite sides of the upright carrying-standard 3 of the washing mechanism. The said upright carrying-standard 3 preferably consists of a single straight bar or strut provided at its lower end with a foot-plate 4, disposed at right angles to the length of the standard and resting flat upon the upper side of the bench 1. The said foot-plate 4 of the carrying-standard constitutes an attaching portion therefor and is adapted to receive the screws or other fastenings for holding the standard in a fixed upright position upon the bench. The said upright carrying-standard 3, which arises centrally from the washbench 1, is provided at its upper end with a horizontal supporting-guide 5, which is preferably formed integral with the standard, but which may obviously be a separate part and suitably joined rigidly with the standard in any approved manner. Such changes as this are clearly within the purview of the invention, as it is only essential that the upright carrying-standard have the horizontal supporting-guide 5, rigid therewith. The said horizontal supporting-guide 5 is preferably in the form of a slotted cross-head projecting equidistant beyond opposite sides of the standard 3, so that the opposite portions of the guide will overhang the upper sides of the pair of tubs 2, arranged, respectively, at opposite sides of the standard 3, as plainly shown in Fig. 1 of the drawings. The oppositely-projecting supporting-guide at the upper end of the carrying-standard is of a sufficient length to extend materially over both of the tubs in order that the washing mechanism may be readily used in connection with either

tub at the option of the operator, and said guide is preferably formed with a horizontal opening or slot 6 throughout the entire length thereof and is provided in its upper flat side 7 with a longitudinally-disposed guiding-slot 8, extending the full length of the guide 5 and intersecting or communicating with the horizontal opening or slot 6 therein. The said guiding-slot 8 in the flat upper side 7 of the guide is designed to slidably and pivotally receive therein a T-shaped pivot-stud 9, projecting from the lower end of the upright swivel-post 10, which constitutes a shiftable and pivotal support for a part of the washing mechanism. The shank of the T-shaped pivot-stud 9 extends through the longitudinal guiding-slot 8, and the cross-head thereof is designed to lie within the horizontal opening or slot 6 of the guide and engage beneath the upperside portion 7 of the guide, thereby providing an interlocking connection of the post with the guide, while at the same time permitting said post to freely turn on its axis, as well as to be shifted to any position within the plane of the guiding-slot 8.

To provide for a firm bracing of the post 10 in an upright position, the same is provided contiguous to the terminal stud 9 thereof with a flat horizontal bearing-plate 11, adapted to flatly contact with the upper edge 7 of the guide, and thus steady and brace the post in any adjusted position, as well as during the turning and shifting movements thereof upon the supporting-guide 5 therefor.

The shiftable swivel-post 10 constitutes a support for the vertically-swinging operating-lever 12, which operating-lever is of a sufficient length to extend entirely across the washtub with which the mechanism is being used. The said operating-lever 12 essentially comprises a pair of spaced lever-straps 13, arranged in parallel relation, and a handle 14, rigidly fastened at its inner end between the contiguous extremities of the straps 13 at the point 15, the opposite extremities of the lever-straps 13 being pivotally held to the post 10 by means of the pivot pin or bolt 16. At a point contiguous to the connection of the lever-straps 13 with the inner end of the handle 14 the operating-lever carries a holding-collar 17, which collar receives the vertically-movable plunger-staff 18, which carries at its lower end a plunger or agitator 19. The holding-collar 17 loosely embraces the plunger-staff 18, so as to permit of the vertical adjustment of said staff within the collar, and the latter is pivotally held to the lever-straps 13 of the operating-lever at an intermediate point between the opposite extremities of the lever through the medium of the oppositely-located rivet or pivot-pin 20 and the adjusting thumb-screw 21, passing through the oppositely-located straps 13 and respectively engaging the diametrically opposite sides of the holding-collar 17. The inner end or point of the thumb-screw is adapted to engage in any of a series of sockets or openings 22, formed

in the adjustment-plate 23, attached to one side of the plunger-staff 18 and extending longitudinally thereof a sufficient distance to provide for a suitable adjustment of the plunger-staff upon the operating-lever according to the depth of the tub or other requirements of the washing. The said adjustment-plate 23 is screwed or otherwise suitably fastened to the plunger-staff and is provided with an outer rounded or convexed side 24, conforming to the contour of the staff, so as to not interfere with the adjustment thereof within the collar 17 or its sliding movement within the guiding-sleeve 25.

The guiding-sleeve 25 receives the upper end portion of the plunger-staff above the operating-lever and is pivotally connected, as at 26, to one end of a vertically-swinging guide-bar 27, the other end of which lever is pivotally connected, as at 28, to the upper extremity of the swivel-post 10. The guide-bar 27 is arranged in parallelism to the operating-lever 12, and as the sleeve 25 and the holding-collar 17 are pivotally supported the same will maintain a vertical alinement in the operation of the machine and will provide for holding the plunger-staff to reciprocation in a fixed vertical plane. On account of the swivel-mounting of the post 10 the plunger may be moved laterally to any position within the tub, or by lifting the plunger out of one tub the same can be readily swung around to position for operation within the opposite tub. Also the slidable mounting of the post 10 permits of the free manipulation or moving of the plunger in any position. The sleeve 25 may be slipped off the plunger-staff to allow the plunger to hang vertically from the lever 14 when partly raised, so that the plunger may be rested on the supporting-guide or cross-head 5 while changing the clothes or tubs.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described washing-machine will be readily apparent to those skilled in the art without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a washing-machine, the combination with a bench, of a standard mounted on the bench so as to admit of tubs being arranged on opposite sides thereof, a horizontal supporting-guide in the form of a cross-head having oppositely-projecting portions adapted to overhang the separate tubs, said guide comprising upper and lower parallel members united at both ends and spaced apart to leave an intervening slot or way, the upper member having a longitudinal guide-slot, a swivel-post having a bearing upon the

upper member and provided with a T-head detachably associated with the guide-slot, and plunger-actuating mechanism connected with said post and shiftable into operative relation with either tub.

2. In a washing-machine, the combination of a standard, a horizontal supporting-guide in the form of a cross-head comprising upper and lower parallel members united at both ends and spaced apart to leave an intervening slot or way, the upper member having a longitudinal guide-slot, a swivel-post hav-

ing a bearing on the upper member and provided with a T-head detachably associated with the guide-slot, and plunger-actuating mechanism connected with said guide and shiftable lengthwise thereof.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD J. KELLY.

Witnesses:

FRANK A. HAWN,
M. E. WALL.