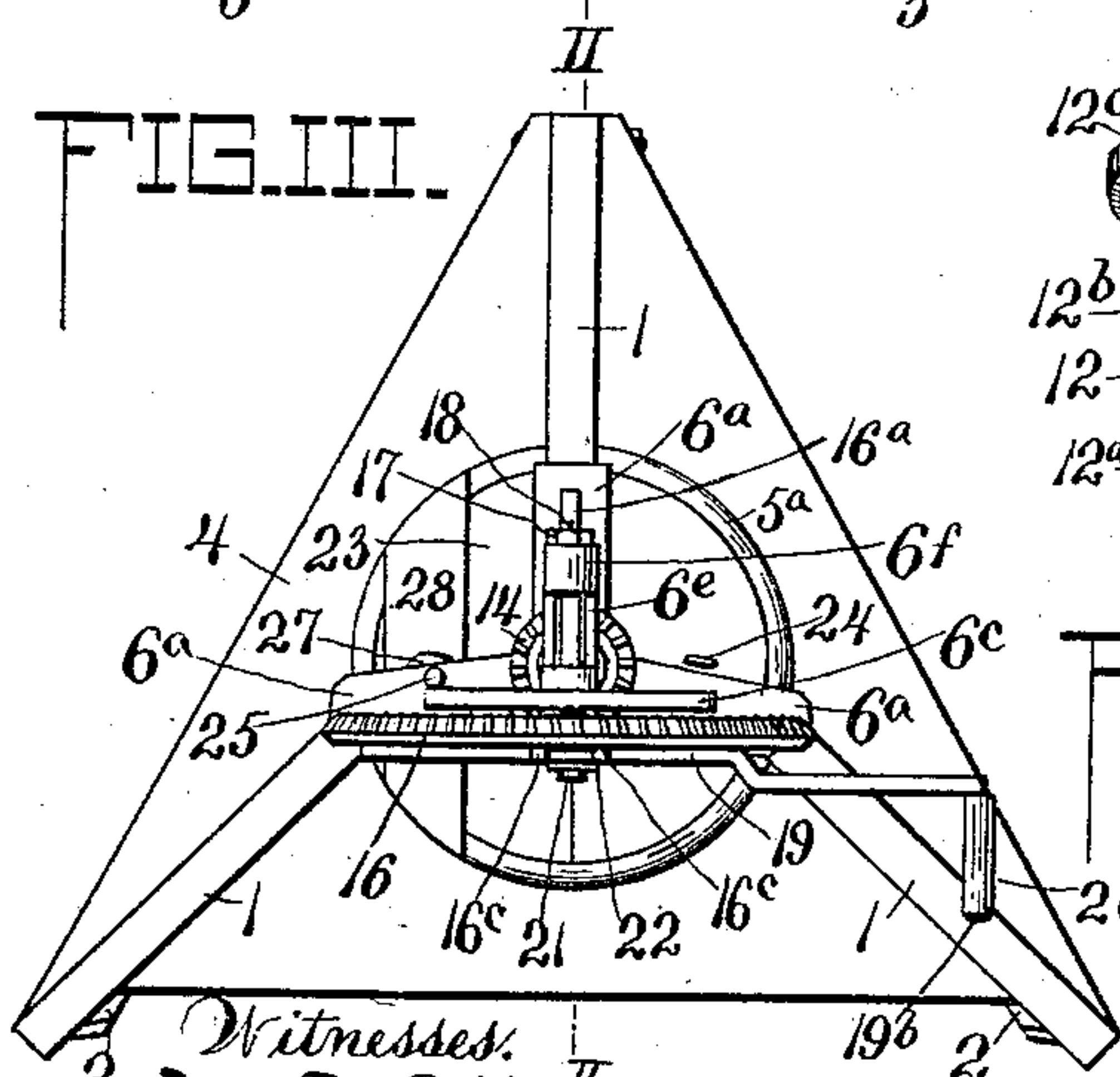
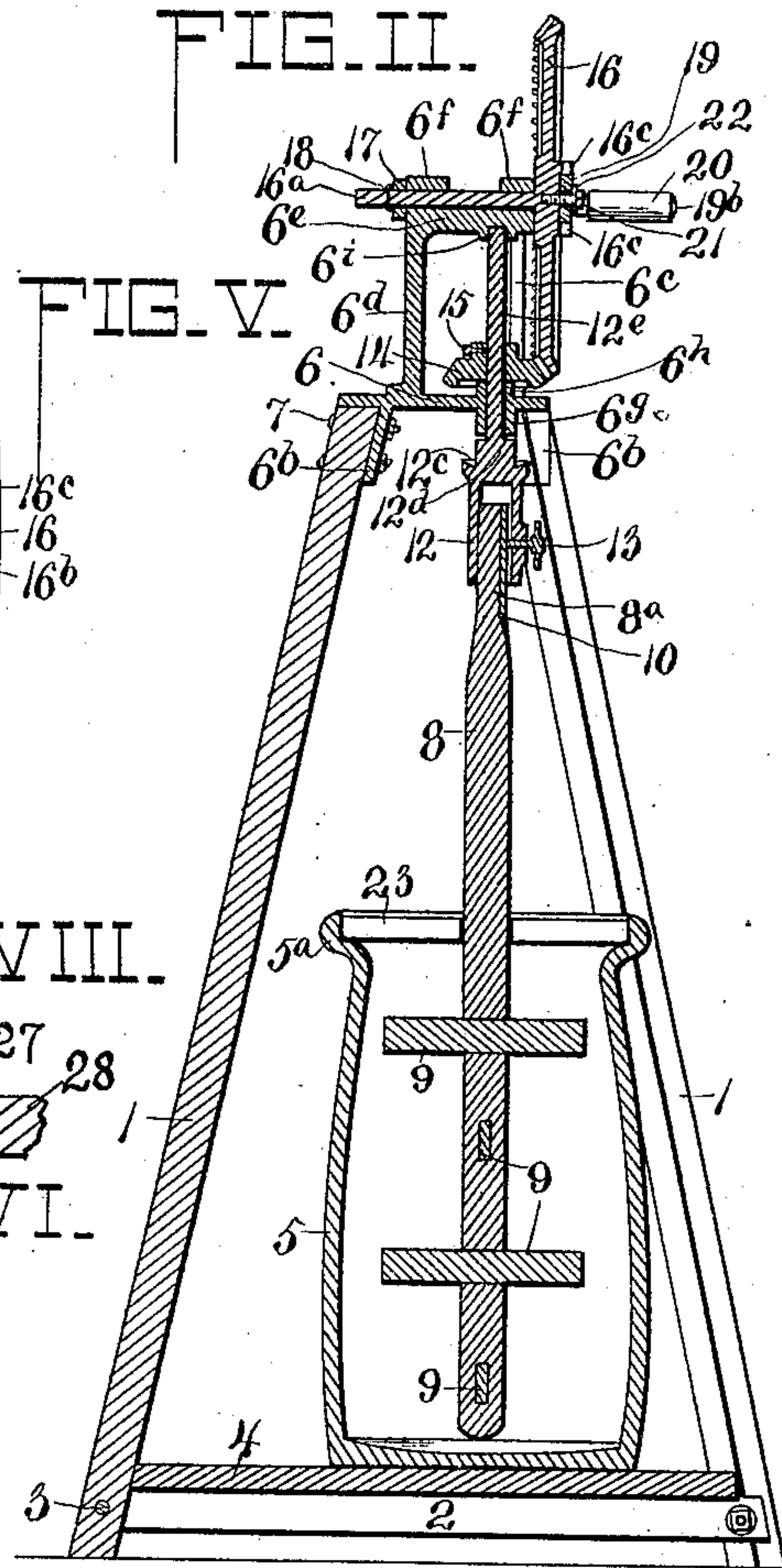


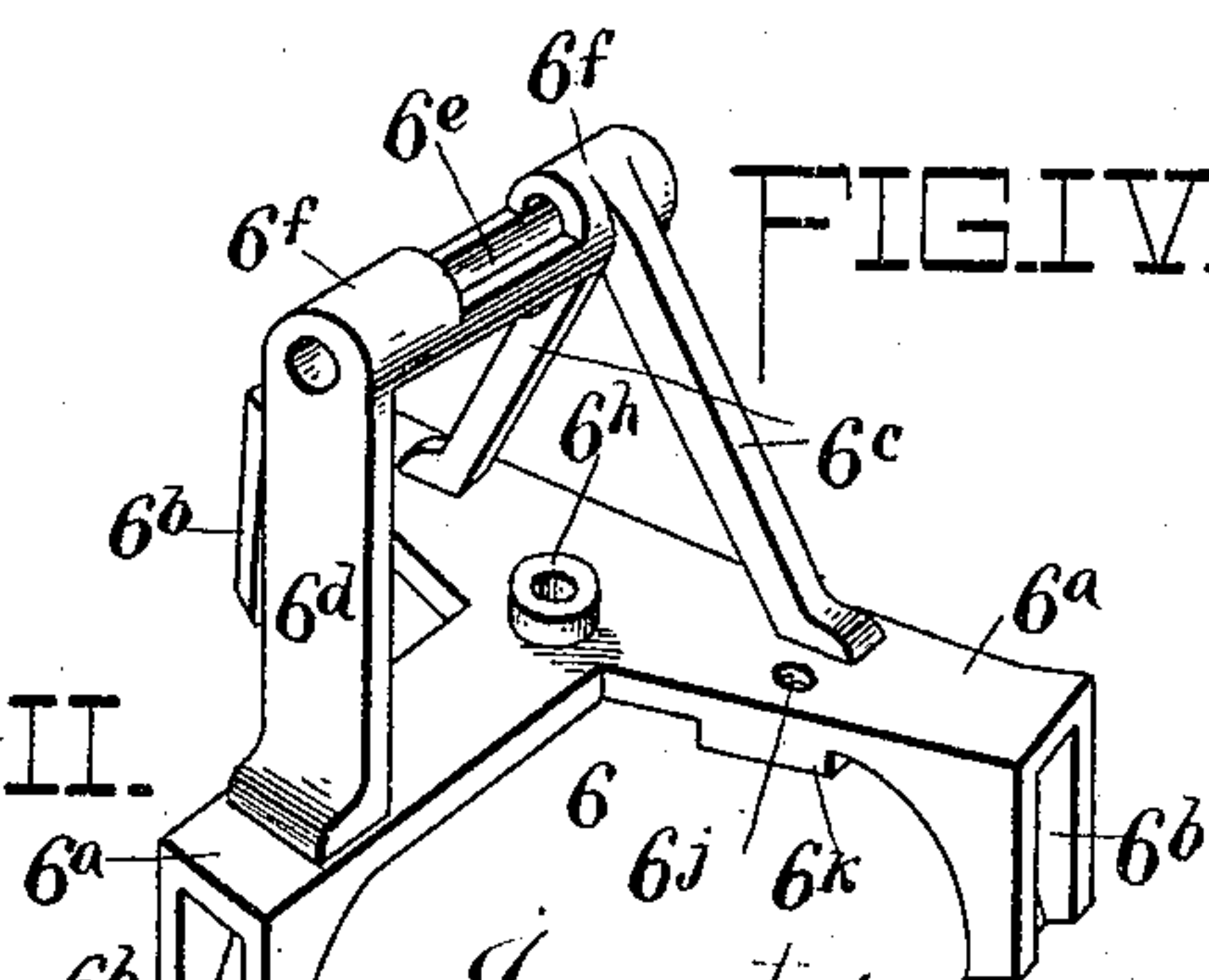
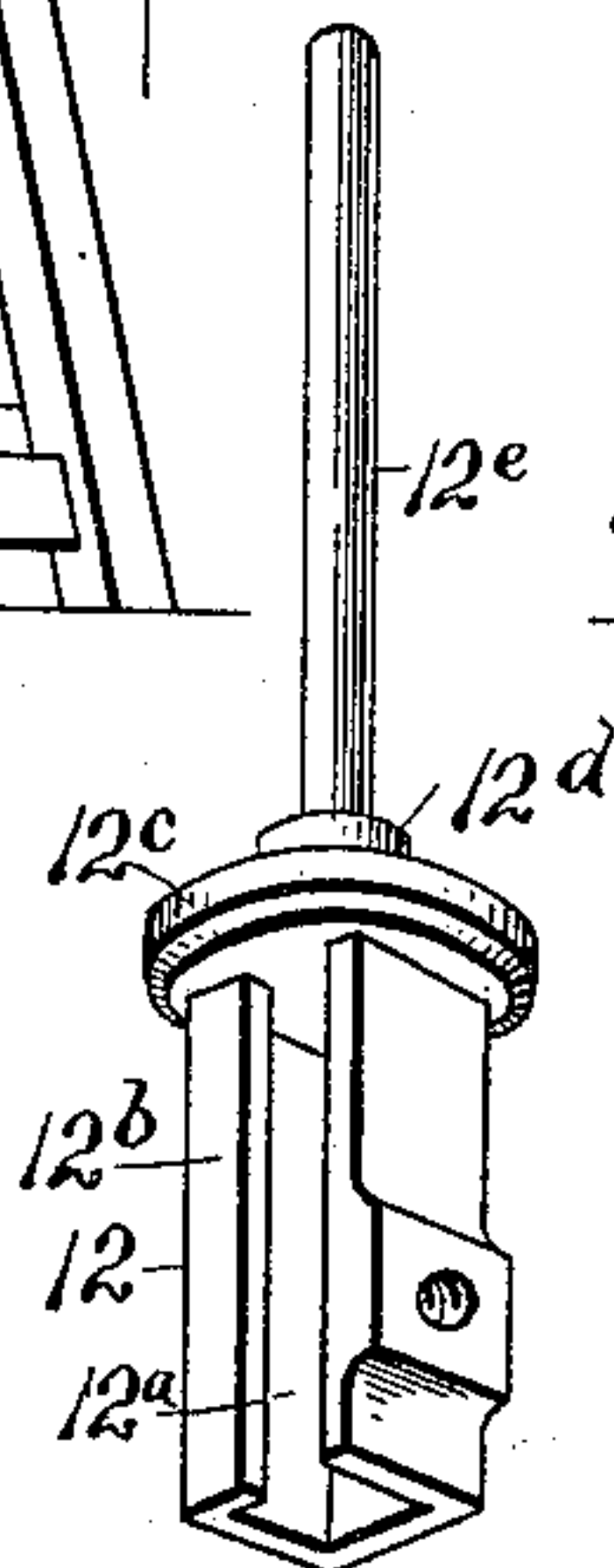
G. R. SEXSMITH.
CHURN.

(Application filed Oct. 29, 1897.)

FIG. I.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE R. SEXSMITH, OF ATCHISON, KANSAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 607,771, dated July 19, 1898.

Application filed October 29, 1897. Serial No. 656,815. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. SEXSMITH, a citizen of the United States, and a resident of Atchison, in the county of Atchison and State of Kansas, have invented certain new and useful Improvements in Churns, of which the following is a specification.

My invention relates particularly to improvements in rotary churns having vertical single dashers.

My invention consists in certain improvements in the details of construction of such churns, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it, with reference to the accompanying drawings, in which—

Figure I is a front elevation of my improved churn. Fig. II is a vertical section thereof on the line II II, Figs. I and III. Fig. III is a top view of the churn. Fig. IV is a perspective view of the gearing-frame on an enlarged scale. Fig. V is a perspective view of the driving bevel gear-wheel on an enlarged scale. Fig. VI is a perspective view of the dasher-coupling on an enlarged scale. Fig. VII is a perspective view of the upper end of the dasher-rod on an enlarged scale. Fig. VIII is a detail vertical section of the swiveled toe or cap piece of the screw-threaded rod.

The supporting-frame, which is of knock-down construction, is in the form of a tripod and is provided with three inclined legs 1 and horizontal bracing-strips 2 near the lower ends of the legs, which are detachably secured together by means of bolts 3.

4 is a flooring or deck resting on the bracing-strips and adapted to provide a support for an earthenware jar or churning vessel 5.

Mounted detachably on the upper ends of the legs is a gearing-frame of novel configuration, being constructed in one piece or cast solid with a bed-plate 6 of approximately T shape, having three arms 6^a extending laterally and provided at their ends with downwardly-projecting lugs 6^b, having upwardly-flaring and inwardly-inclined recesses providing sockets in which the upper ends of the legs are detachably fitted and secured by means of bolts 7. Extending upwardly from the bed-plate, at the front side thereof, is an

arch 6^c and at the rear end of the same a post 6^d. The arch and post are connected at top by means of a trough-shaped web 6^e, surmounted at the ends over the arch and post, respectively, by tubular shaft boxes or bearings 6^f.

The dasher is constructed with a wooden rod 8, having a series of transverse wooden strips 9, which are held by the rod and provide a head having blades which project from the rod, each blade extending at right angles to the adjacent blades. The dasher-rod is formed with a rectangular or square upper end 8^a, which is provided at one side with a wear-plate 10 and at one corner with a wear-plate 11. This end is connected with a shaft-coupling cast integral with a rectangular or square socket 12, having an open side 12^a, through which the upper end of the dasher-rod is inserted sidewise, and a retaining lip or fillet 12^b at the open side, fitting against the corner wear-plate. The dasher is held at desired height by adjusting the upper end of the dasher-rod within the socket and securing it by means of a set screw or bolt 13, working through the wall of the socket and impinging on the side wear-plate. The shaft-coupling is also formed with an oil-cup or ring 12^c, with a bearing 12^d above the oil-cup or ring, and with a shaft 12^e, extending through a shaft-bearing 6^g on the under side of the bed-plate, through the latter, and through a shaft-bearing 6^h on the upper side of the bed-plate into a shaft-socket 6ⁱ on the under side of the web 6^e, which provides a bearing for the upper end of the shaft.

14 is a bevel-pinion fixed to the shaft 12^e and supporting the shaft-coupling on the upper shaft-bearing 6^h. The bevel-pinion is secured by a set screw or bolt 15.

16 is the driving bevel gear-wheel, cast in one piece with a horizontal shaft 16^a, projecting from one face thereof, and with a central boss or rectangular projection 16^b on the other face of the same, having horizontal guide-lugs 16^c. The bevel gear-wheel meshes with the bevel-pinion and has its shaft extending through the tubular bearings on the trough-shaped web and is secured by a collar 17 and set screw or bolt 18 at the outer end of the shaft. The driving bevel gear-wheel is rotated by means of an adjustable crooked

crank-arm 19, formed in one piece, with a longitudinal slot 19^a and with a handle 19^b, surrounded by a hand-sleeve 20. The crank-arm is adapted to slide between the lugs 16^c on the central boss 16^b and is secured in desired position by a central set screw or bolt 21, working in the central boss and seating on a washer 22.

When it is desired to run the churn by water or other power, a pulley can be bolted on the driving bevel gear-wheel in the place of the crank, or the pulley can be mounted on the shaft of the wheel.

The churning vessel 5 is provided with a shoulder or rabbet 5^a at the top to receive a divided cover 23, the members of which may each have an eye-screw 24 to provide a handle.

To hold the churning vessel rigid while the churn is operated, I provide a screw-threaded rod 25, adjustable in a screw-threaded orifice 6^j, extending through a boss 6^k in the bed-plate and adjusted by means of a cross-bar or handle 26. This rod is provided with a swiveled toe-piece 27, bearing on a block 28, resting across the top of the churning vessel,

free of the divided cover, so as to permit of the cover being removed without removing the holding-block.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

A churn-gearing frame formed in one piece with an approximately T-shaped bed-piece having laterally-extending arms, provided with pendent recessed lugs, with an arch on the front arms of the bed-piece, with a post on the rear arm of the bed-piece, with a trough-shaped web having a shaft-socket on its under side and extending from the arch to the post, and with shaft-bearings surrounding the ends of the trough-shaped web, and the dasher-coupling formed with a vertical shaft passed through the bed-piece and seated in the shaft-socket of the trough-shaped web; substantially as described.

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