

No Model.)

2 Sheets—Sheet 1.

G. C. WALTERS.

MACHINE FOR DRILLING HOLES IN FLOWER POTS.

No. 247,137.

Patented Sept. 13, 1881.

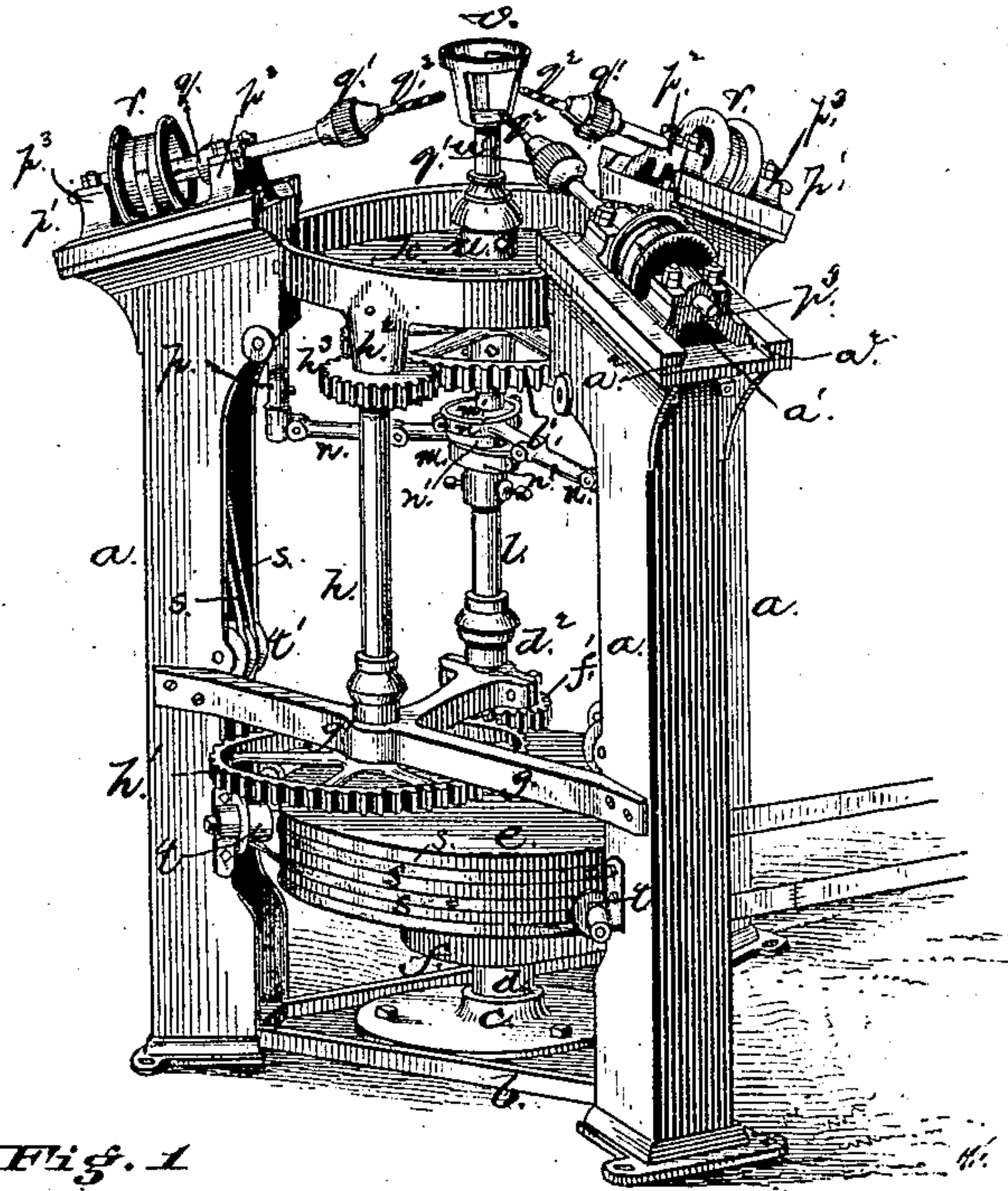


Fig. 1

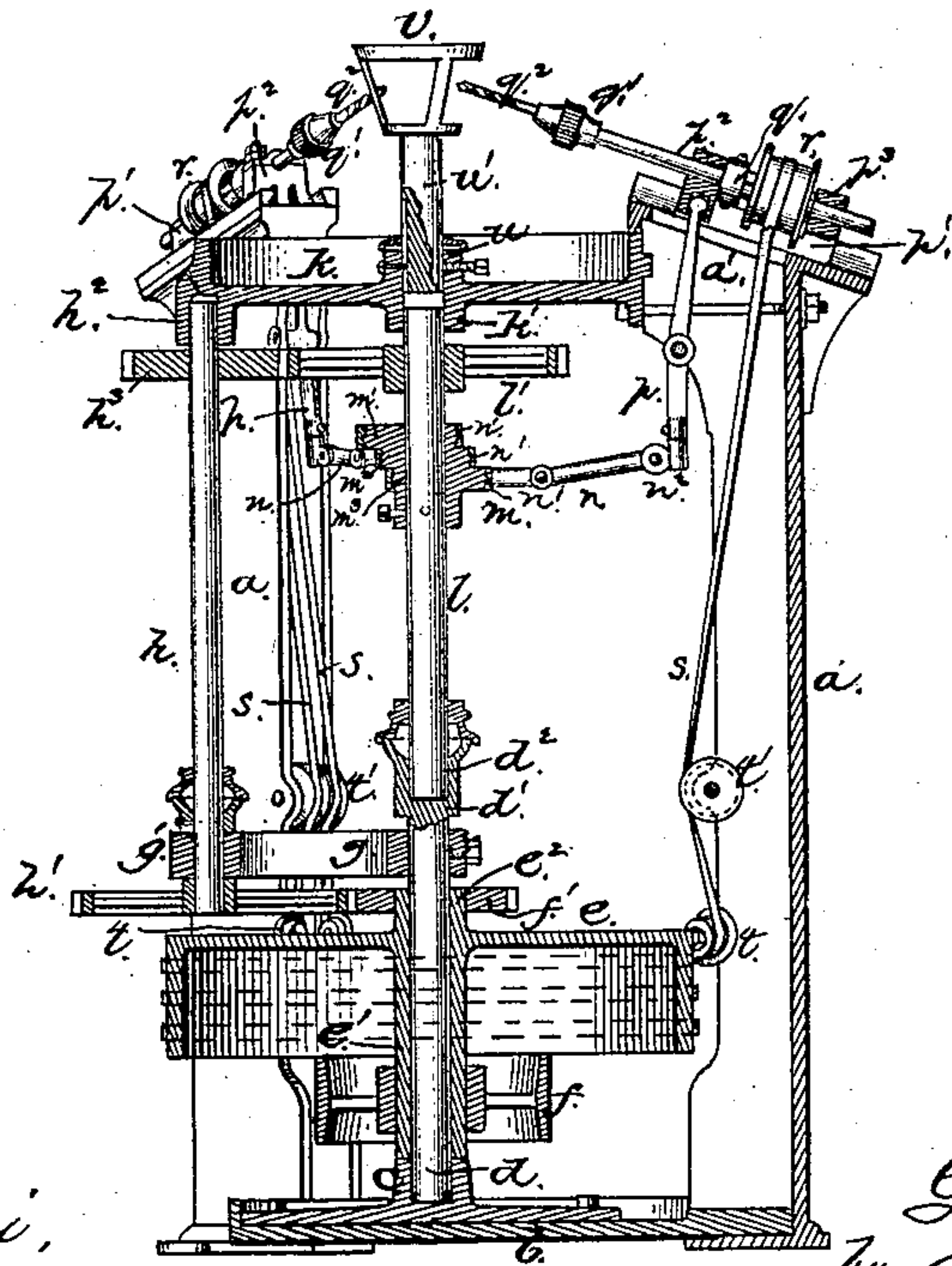


Fig. 2

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(No Model.)

2 Sheets—Sheet 2.

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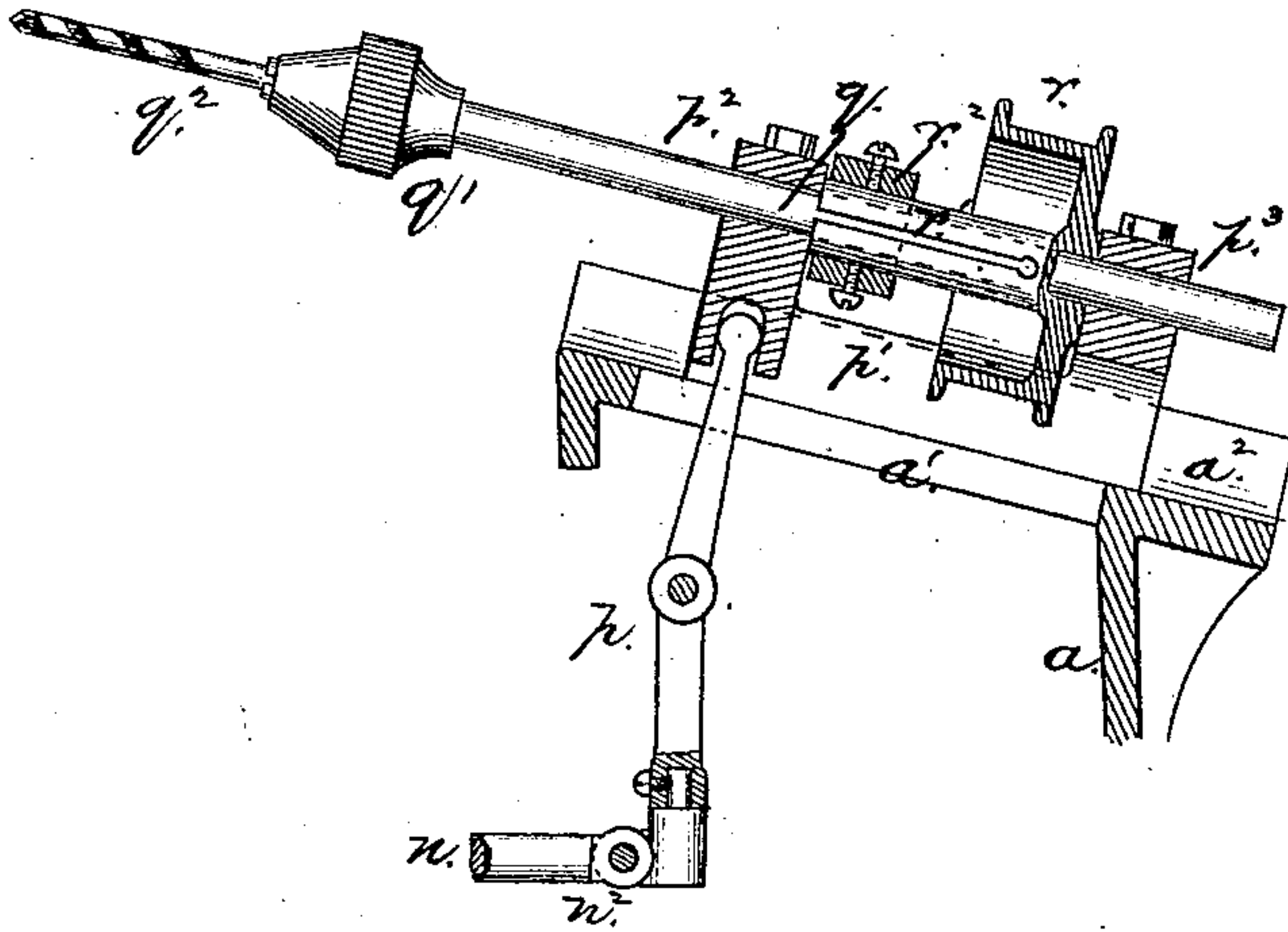


Fig. 3

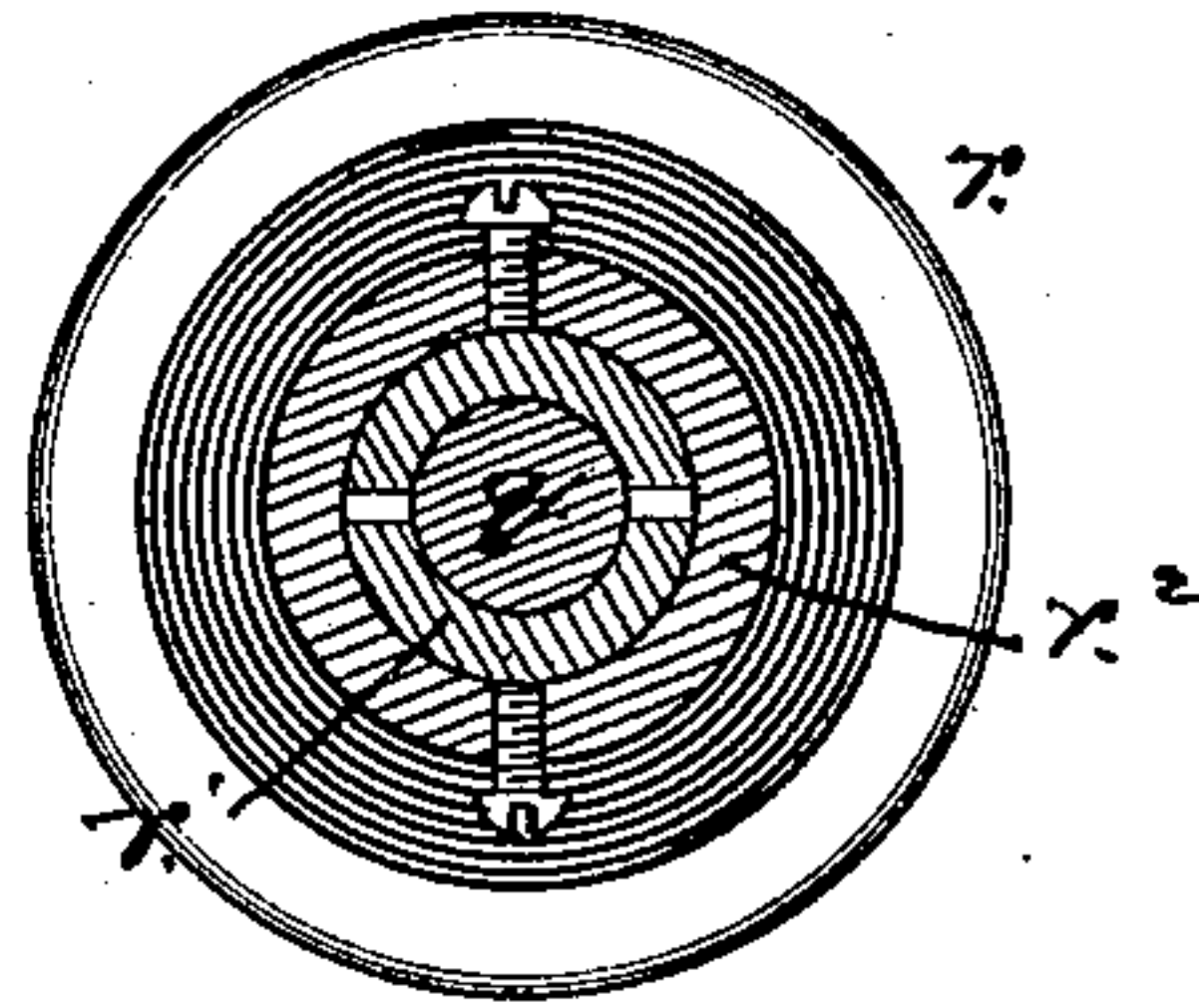


Fig. 4

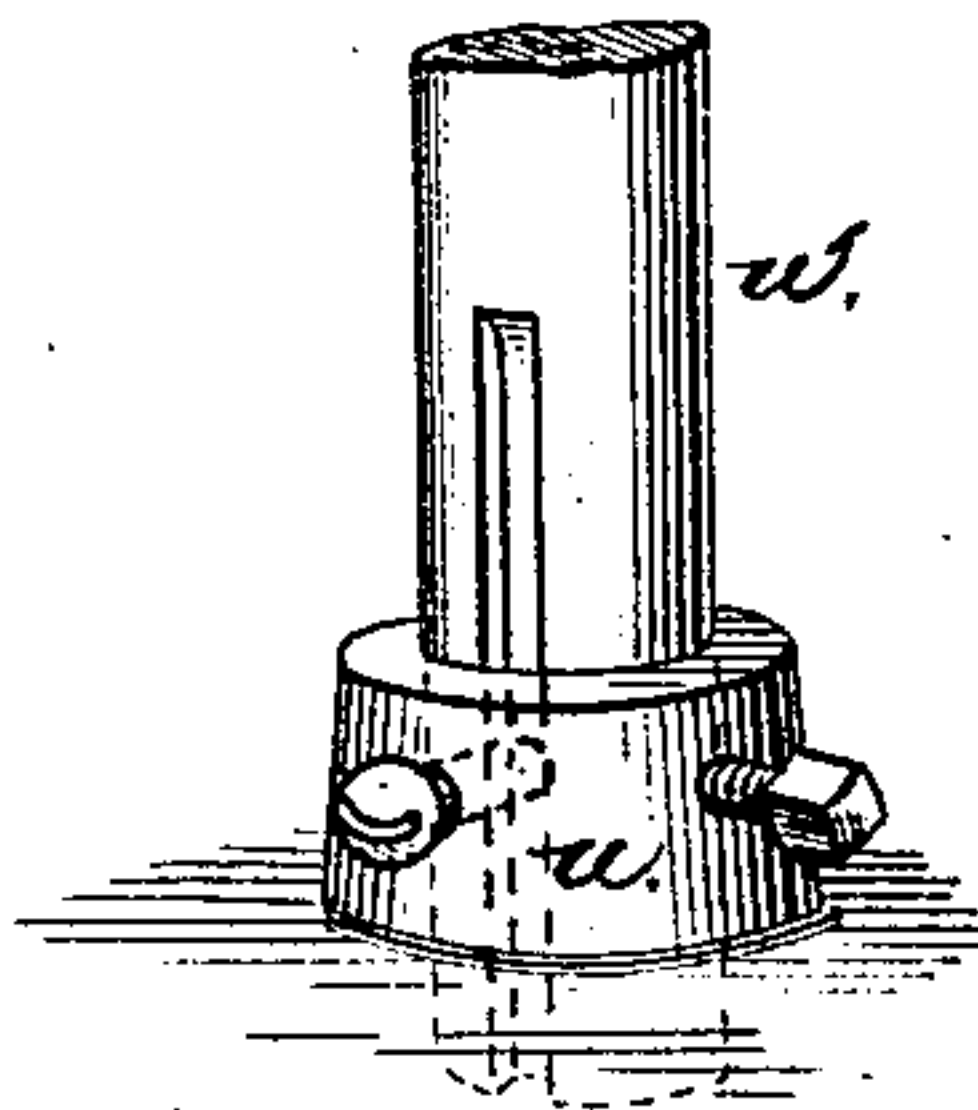


Fig. 5

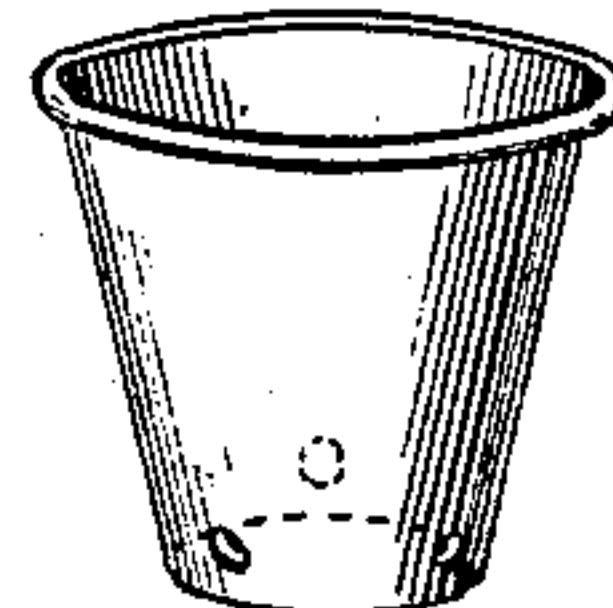


Fig. 6

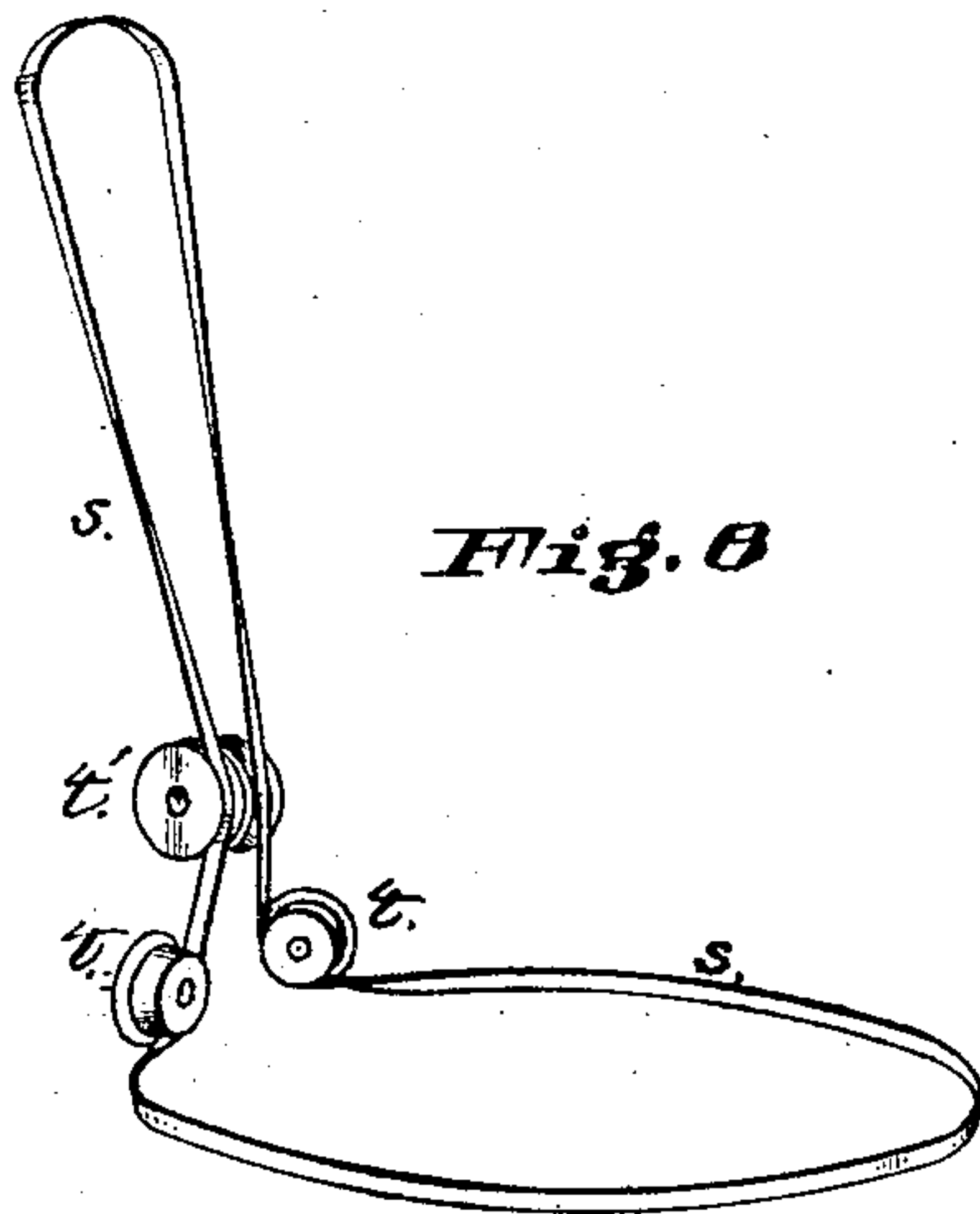


Fig. 7

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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR DRILLING HOLES IN FLOWER-POTS.

SPECIFICATION forming part of Letters Patent No. 247,137, dated September 13, 1881.

Application filed July 7, 1881. (No model.)

*To all whom it may concern :*

Be it known that I, GEORGE C. WALTERS, a citizen of the United States, resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Machines for Drilling Holes in Flower-Pots; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my invention. Fig. 2 is a vertical section. Fig. 3 is an enlarged view of the top of one of the posts with its mechanism. Fig. 4 is a cross-section of the same. Fig. 5 is a detail view of a portion of the upper platform. Fig. 6 is a detail perspective view, showing the course of the belts, and Fig. 7 is a view of the flower-pot.

This invention relates to improvements in pottery-lathes; and it consists in the construction and novel arrangement of parts, as hereinafter set forth.

In the annexed drawings, the letters *a* represent three hollow posts or standards, open on the inside and connected near the bottom by a base-plate, *b*, which carries at its center a step, *c*. Seated in this step *c* is the lower end of a vertical post, *d*, having its upper end, *d'*, enlarged and provided with a socket, *d*<sup>2</sup>.

Sleeved upon the post *d* is a large inverted cup-shaped wheel, *e*, having the central bearing-tube, *e'*, which rests on step *c*, and protrudes above the wheel *e* at *e*<sup>2</sup>. Keyed to the lower portion of this tube is a band-pulley, *f*, and to the upper portion a gear-wheel, *f'*.

Above the wheel *e* a T-frame, *g*, is secured to two of the posts *a*, and, at the end of its stem portion, to the upper part of post *d*. At the point where the arms and stem of the T-frame come together there is a bearing, *g'*, in which is placed the lower portion of a shaft, *h*, which projects below and carries a gear-wheel, *h'*, intermeshing with the wheel *f'* on the tube *e'* of the wheel *e*. At its upper end the shaft *h* has a bearing, *h*<sup>2</sup>, in the edge of a platform, *k*, which is secured to or made with

the upper ends of the posts *a*. Just below the bearing *h*<sup>2</sup> the shaft *h* carries a gear-wheel, *h*<sup>3</sup>.

In the socket *d*<sup>2</sup> of the post *d*, and in a bearing, *k'*, in the under side of the platform *k*, at the center, is placed a shaft, *l*, carrying a gear-wheel, *l'*, which engages the wheel *h*<sup>3</sup> on the shaft *h*. Somewhat below the wheel *l'* there is keyed to the shaft *l* a block, *m*, provided with three eccentrics, *m'* *m*<sup>2</sup> *m*<sup>3</sup>, having their points of greatest efficiency at the same angles as are the three posts *a*. Around these eccentrics are placed the straps *n'* of toggle-levers *n*, the other ends, *n*<sup>2</sup>, of which are jointed to the levers *p*, which are pivoted in the posts *a*; or the toggles are held to the levers by a knuckle. The tops of these posts are open, as at *a'*, and have an upward slant toward the center.

On each side of the opening *a'* is formed the under bevel, *a*<sup>2</sup>, the two bevels forming a slide-way, in which moves a carriage, *p'*. This carriage has two bearings, *p*<sup>2</sup> *p*<sup>3</sup>, in which is journaled the drill-holder *q*, having at its end the chuck *q'*, in which is secured the drill *q*<sup>2</sup>. Between the bearings *p*<sup>2</sup> *p*<sup>3</sup> there is sleeved upon the holder *q* a drive-pulley, *r*. This pulley has a split hub, *r'*, and is held to the holder by the clamping-ring *r*<sup>2</sup>, so that said holder can be adjusted lengthwise in the carriage and through the pulley. In the lower portion of the upper bearing, *p*<sup>2</sup>, of the carriage *p'* the upper end of the lever *p* has a loose connection.

From the cup-shaped wheel *e* there pass three bands, *s*, one of which goes up through each of the posts *a* and over a pulley, *r*, the line of direction of the bands being changed by friction-rollers *t* and *t'*, secured to the posts *a*.

In the center of the upper face of the platform *k* is a vertical socket, *u*, in which is fastened the lower end of a post, *u'*, adjustable in the socket, and carrying at its upper end the skeleton flower-pot holder *v*.

The upward slant of the tops of the posts *a* brings the drills *q*<sup>2</sup> on lines which are oblique to the bottom of the holder, and their points come above such bottom. The distance of the posts apart is to be the same all around.

The pot in which holes are to be drilled is placed in the holder *v* and the distance of the drills regulated. Power is applied to the band-pulley *f*, and, through the mechanism already

described, the drills are turned and at the same time forced up. The relation in size among the cup-shaped wheel, the gear-wheels and eccentrics, and the bands and drive - pulleys is  
5 such that the drills are forced up to the fullest extent during the boring of the holes, and are not withdrawn until the work is completed.

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

10 1. A pottery - lathe for drilling holes in a flower-pot, consisting in a set of drills arranged around a center, in combination with means, substantially as described, for turning and feeding said drills, as set forth.

15 2. The combination of a set of drills and a drive - wheel with a set of eccentrics, means,

substantially as described, for operating the eccentrics from the drive - wheel, and also for giving motion to the drills, and pulleys and bands for turning the drills by the drive-wheel, 20 as set forth.

3. The wheel *e*, bands, and drills, in combination with the rollers *t* and *t'*, as set forth.

4. The block *m*, provided with the three eccentrics *m'* *m*<sup>2</sup> *m*<sup>3</sup>, as set forth. 25

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE C. WALTERS.

Witnesses:

CHAS. F. VAN HORN,

A. H. GANGEWER.