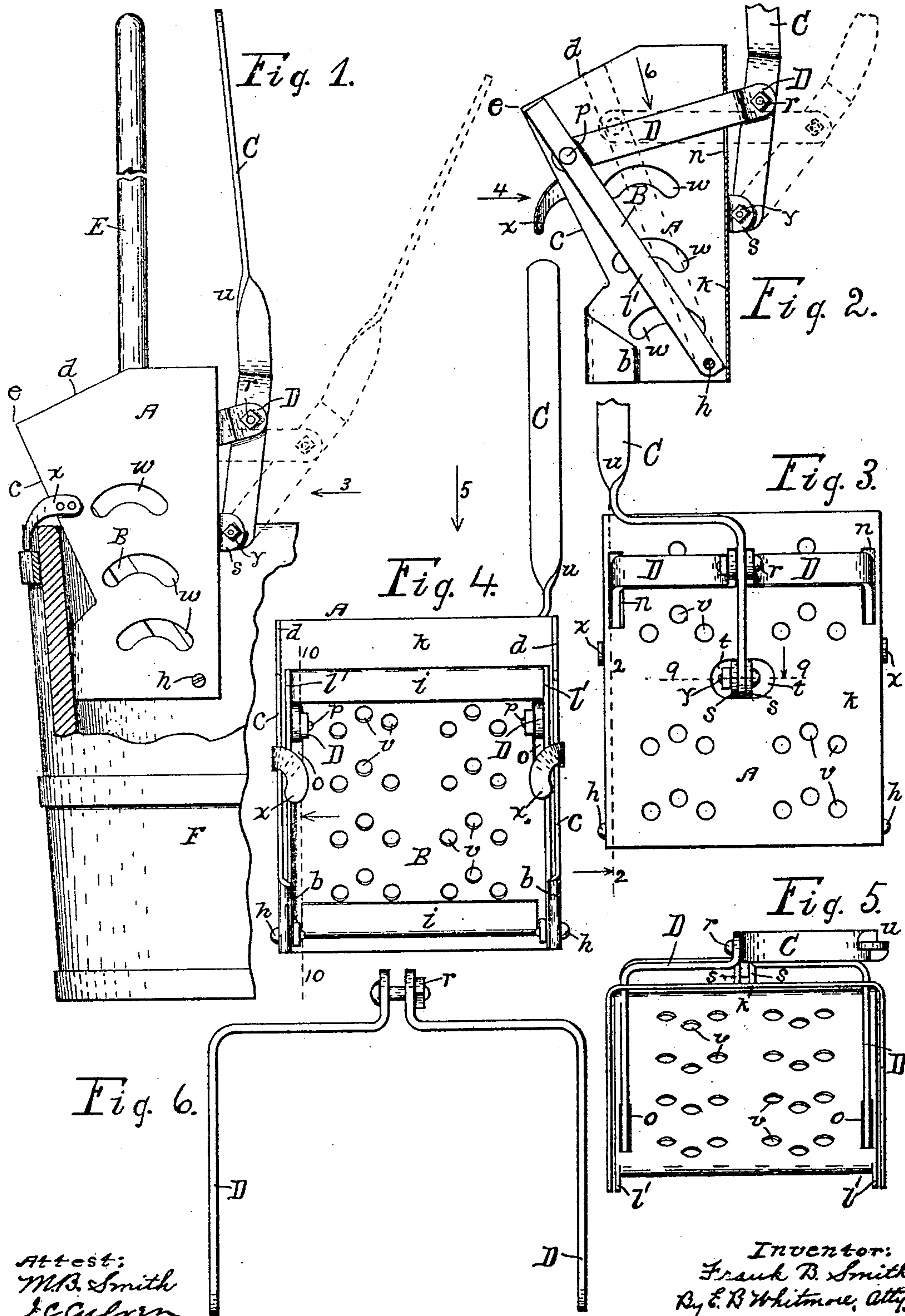


F. B. SMITH.  
MOP WRINGER.

APPLICATION FILED FEB. 4, 1905.

2 SHEETS—SHEET 1.



Attest:  
M.B. Smith  
J. Culver

Inventor:  
Frank B. Smith  
By E. B. Whitmore, Atty.

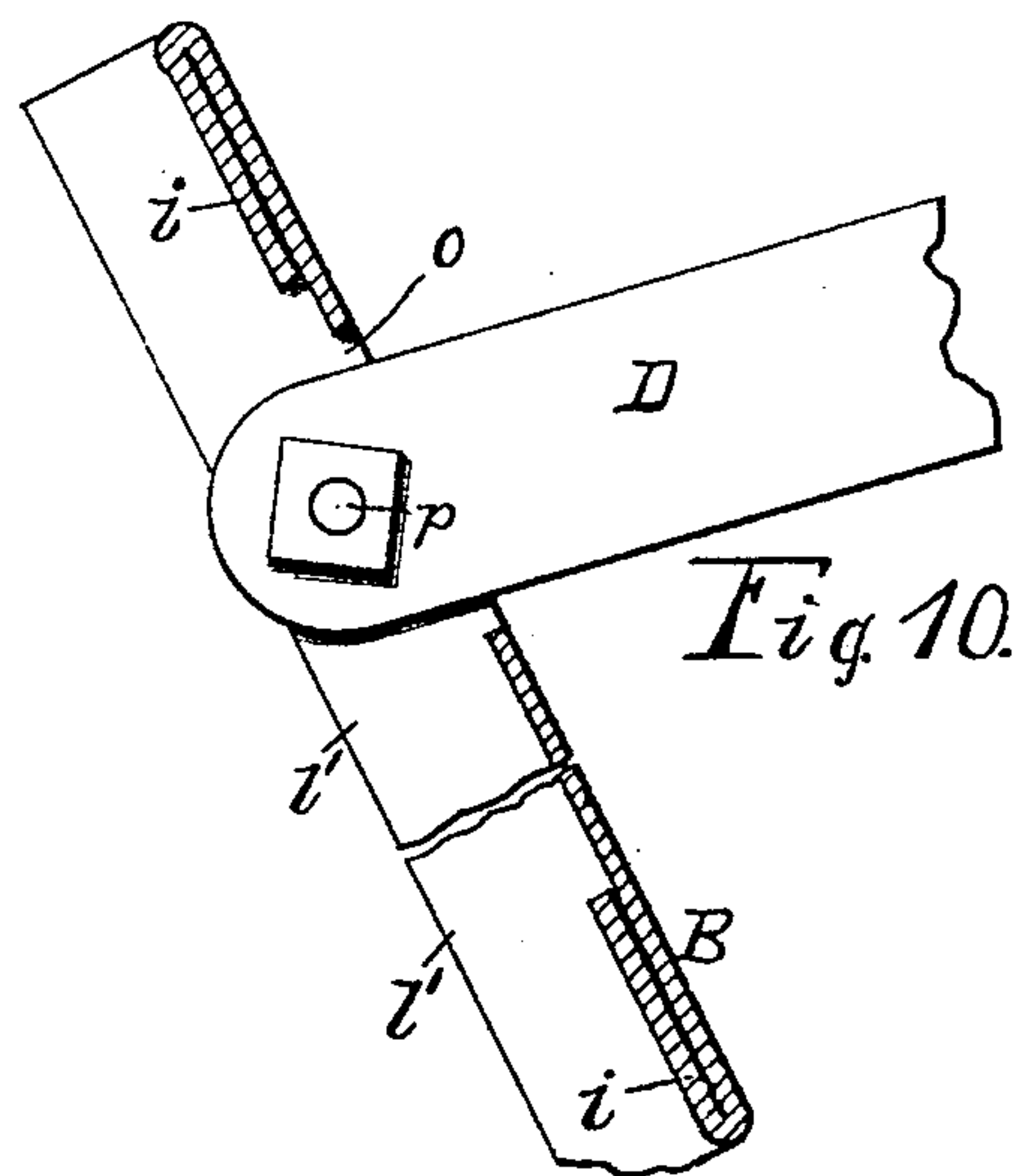
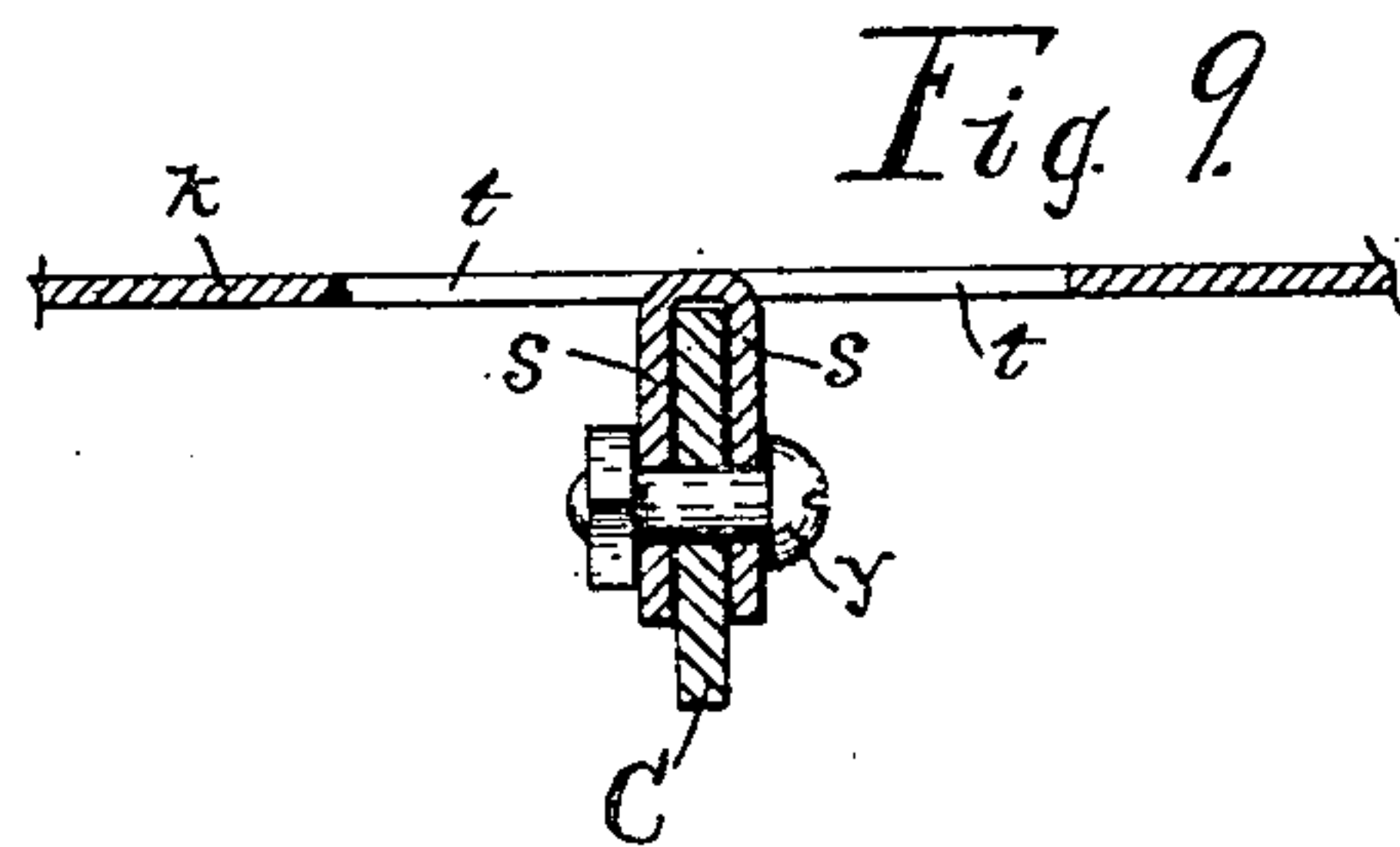
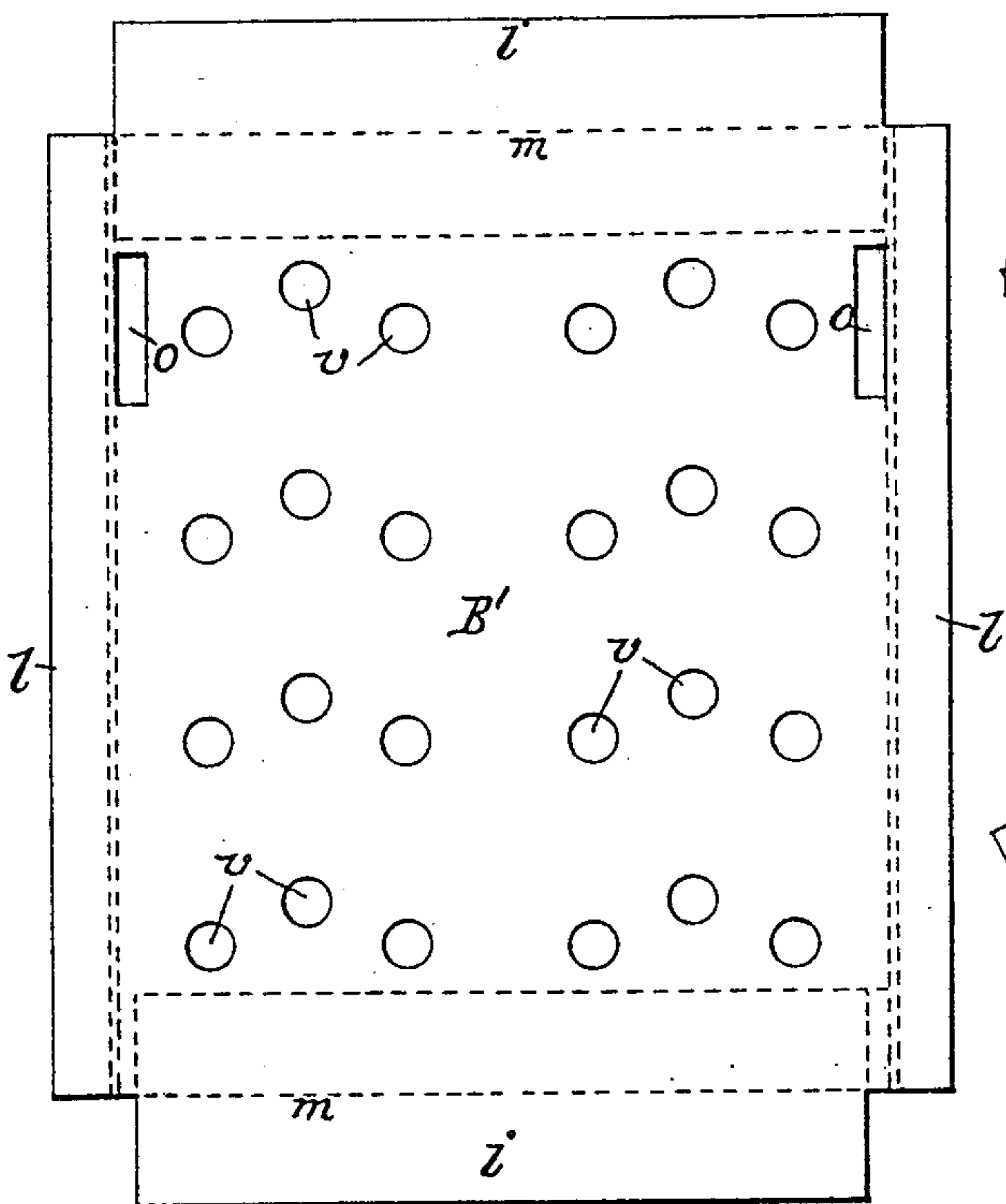
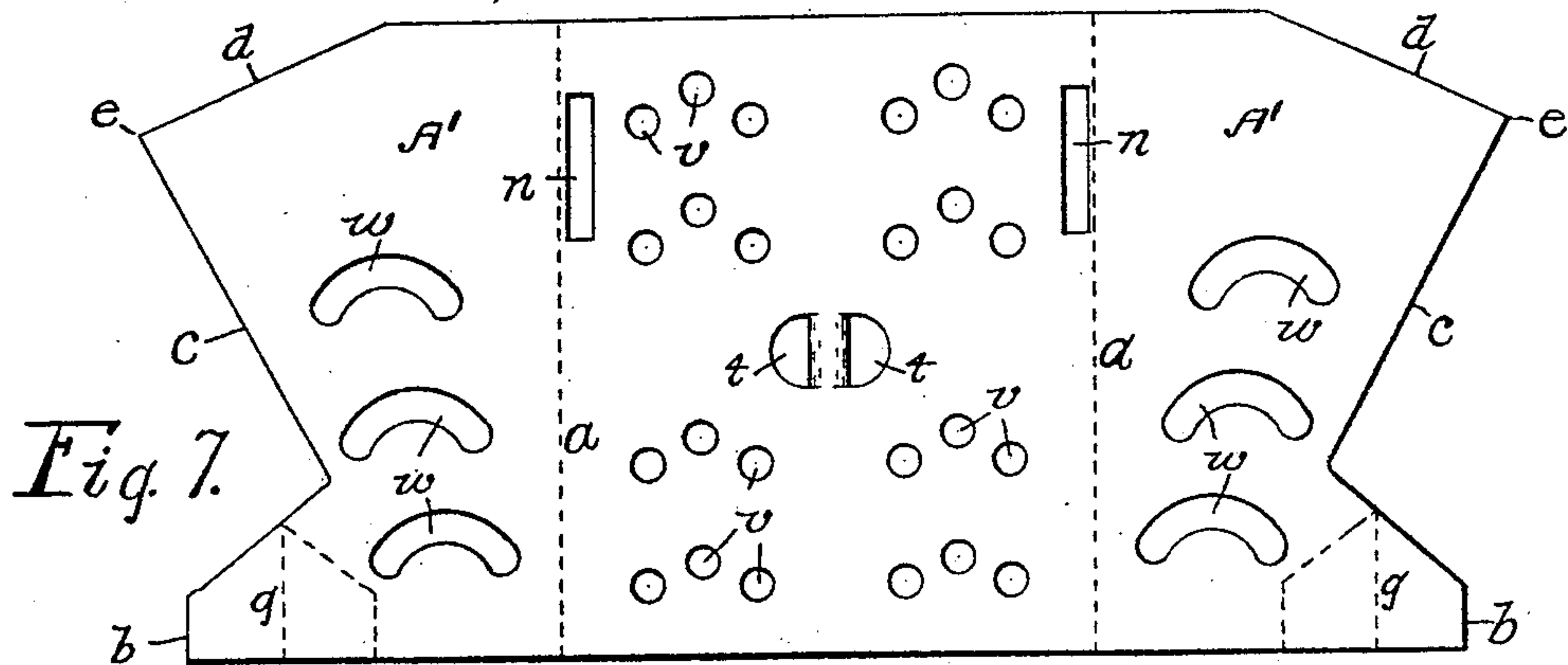
No. 813,179.

PATENTED FEB. 20, 1906.

F. B. SMITH.  
MOP WRINGER.

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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

FRANK B. SMITH, OF PALMYRA, NEW YORK.

## MOP-WRINGER.

No. 813,179.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed February 4, 1905. Serial No. 244,199.

*To all whom it may concern:*

Be it known that I, FRANK B. SMITH, of Palmyra, in the county of Wayne and State of New York, have invented a new and useful Improvement in Mop-Wringers, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is a device to be used with a pail, tub, or similar vessel for quickly and conveniently pressing by lever action the water out of cloth or fibrous bodies or substances, as in the operation of washing or cleansing the same, the invention being intended, however, more particularly for the purpose of squeezing or pressing the water from the fabric of a mop-head in the act of wringing the mop.

The main object of my invention is to produce a mop-wringer having few and simple parts and one that may be easily and cheaply constructed and offered to the trade at low rate.

Another object of my invention is to construct the operating-lever so as to be more handy and convenient of action than those heretofore employed in similar devices.

Other objects and advantages of the invention will be brought out and made to appear in the following specification and particularly pointed out in the appended claims, reference being had to the accompanying drawings, which, with the reference characters marked thereon, form a part of this specification.

Figure 1 is a side elevation of the wringer shown attached to a vessel, parts being broken away and other parts shown in various positions by full and by dotted lines. Fig. 2 is a view similar to that shown in Fig. 1 with the body of the wringer vertically sectioned on the dotted line 2 2 in Fig. 3, parts being shown in various positions by full and by dotted lines. Fig. 3 is an elevation of the wringer seen as indicated by arrow 3 in Fig. 1. Fig. 4 is an elevation of the wringer seen in the direction indicated by arrow 4 in Fig. 2. Fig. 5 is a plan of the wringer seen as indicated by arrow 5 in Fig. 4. Fig. 6 shows in plan the draft-links detached as indicated by arrow 6 in Fig. 2. Fig. 7 shows in plan the blank sheet which goes to form the main part or body of the wringer. Fig. 8 shows in plan the blank sheet from which to form the swinging side or member of the wringer. Fig. 9 is a horizontal section of parts on the dotted

line 9 9 in Fig. 3. Fig. 10 is a vertical section of the swinging member, taken on the dotted line 10 10 in Fig. 4, parts being broken away. Figs. 6, 8, 9, and 10 are drawn to various scales larger than that of the remaining figures.

In the drawings, A is the main part or body of the wringer, formed from the perforated blank A'. (Shown in Fig. 7.) This blank A' is of sheet metal, as iron, with both ends formed alike and the lower edge and the main part of the upper edge straight and parallel. The end portions of the blank are similarly notched and formed with equal inclined parts or edges *c c*, forming at their upper ends, with the inclined parts *d d* of the upper edge, two right angles *e e*, and with oppositely-projecting points *b b*, as shown.

In forming the body A from the blank A' the latter is bent along the two vertical dotted lines *a a* to form right angles, the body thus consisting of three consecutive rigid sides in a single piece, hollow, and with the fourth side and the upper and the lower ends open. The body A is further formed and constructed by folding the extended points *b b* of the blank sheet A' inward along the respective vertical dotted lines *g g*, doubling the sheet at those parts, as shown in Figs. 2 and 4 and by dotted lines in Fig. 7, to form smoother and easier contacts with the inner surface of the vessel F, Fig. 1, against which the wringer rests when in place upon the vessel. Within the body A is placed a movable fourth side B, Figs. 2, 4, 5, and 10, the same being a rectangular metal sheet held upon pivot-bearings *h h* in opposite sides of the body A and above its lower end in a manner to swing within the hollow of said body A in a vertical plane toward and from the intermediate side or wall *k* of the three consecutive sides of the body. This swinging member or side B is formed from a rectangular blank B', Fig. 8, formed with upper and lower rectangular end extensions *i i* of unequal length and equal rectangular side extensions *l l*, as shown, the shorter extension *i* being at the bottom or lower edge of the sheet to make room for the adjacent parts of the pivots *h h*. In forming the member B the end extensions *i i* are folded or doubled outward along the horizontal dotted lines *m m* back onto the body of the sheet or plate B' to reinforce or strengthen the same at its upper and its lower ends, these doubled or folded parts being shown in Figs. 4 and 10 and by dotted lines



in Fig. 8. The side extensions *l l* are also turned up to positions at right angles with the body of the blank to form stiffening flanges or wings *l' l'*, Figs. 2, 4, 5, and 10 and shown by dotted lines in Fig. 8. The side extensions *l l* are turned up adjacent to and against the respective ends of the upper longer folded part *i*, but being clear of the ends of the lower short folded part *i*, as shown.

D D, Figs. 1 to 6, inclusive, are a pair of angular pull or draft links passing through slots *n n* in the body A, Figs. 2, 3, and 7, and through slots *o o* in the swinging member B, Figs. 4, 5, 8, and 10, the ends of the links being joined, respectively, to the flanges *l' l'* of the part B by bolts *p p*. The outer portions of the draft-links bend toward each other, as clearly shown in Fig. 6, and are joined by a pivot *r* without the body A to an operating-lever C, Figs. 1 to 5 and 9, fulcrumed at its lower end on a pin *y* between parallel lips *s s*, projecting outward from the wall *k* of the body A, the lips being formed of parts of said wall turned outward from openings *t t*, as shown. Above the draft-links the lever C is bent or offset horizontally, as shown, for the purpose of rendering it more convenient for the hand of the operator, who in using the wringer stands at the left of the same as it appears in Figs. 1 and 2 and pushes against the lever with the right hand. The offset in the lever brings the upper part into a position more convenient for the hand than if the lever extended straight upward from the pivot-bearing *y*, and a twist *u* in the lever brings its broad or flat side in position to comfortably receive the hand when pressing the lever.

The pivot-pins *h h*, holding the swinging side B, are horizontal and coaxial, passing through the two opposing rigid side walls of the body A a short distance above their lower ends, as has been already pointed out, and near the intermediate wall *k*, so as to hold the lower edge of said side B near to and parallel with the wall *k*, as shown. By placing these pivot-bearings above the lower end of the body A and in the substance of the body itself, as shown in Figs. 2 and 4, the operator is enabled to, by using the lever C, conveniently bring a greater pressure against the head of the mop E, placed within the body A, than if the axis of motion of the swinging side B were below the body.

The blank sheets A' B' are formed with perforations *v*, circular or of other convenient form, for the purpose of discharging the water pressed from the mop, the sheet A' being further formed at its ends with series of curved openings *w*, as shown, which further admit of the outflowing of the water from the mop.

This wringer is employed with a pail or tub F, Fig. 1, as stated, and held in position by

loops or hangers *x x*, Figs. 1, 2, and 4, to hang within the vessel, as shown, the hangers catching upon the edge of the vessel. These hangers *x x* are secured to the sides of the body A of the wringer, so as to project from or overhang the same; and may be of any suitable form or kind; but in constructing the wringer I prefer to employ the curved pieces punched out of the blank A' in forming the curved openings *w*. These pieces are slightly twisted, as shown, before being put to place upon the body A to give their overhanging ends such shape as to better meet and rest upon the edge of the vessel F.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A mop-wringer consisting of a rectangular hollow body having three consecutive sides formed of a single integral metallic piece and open at the remaining side and at the ends, a section within said hollow body and pivoted to opposite sides thereof and above the lower end of the body, said body having projecting points folded at the lower inner edges thereof and means for swinging said pivoted section within the hollow body.

2. A mop-wringer consisting of a rectangular perforated hollow body having three sides formed of a single piece and open at the remaining side and at the upper and the lower ends, a perforated section forming a fourth side of the hollow body pivoted to said body and adapted to swing therein, a pair of draft-links joined to said pivoted fourth side and extending through openings in the back wall of the hollow body, and an operating-lever pivoted on lips projecting outward from said body and joined directly to said draft-links, to swing said pivoted side.

3. A mop-wringer consisting of a rectangular perforated hollow body having three sides formed of a single piece of metal and open at one side and at the upper and the lower ends, a perforated section forming a fourth side for the hollow body, said body provided with integral lips projecting therefrom, said section being pivoted to swing into said body, a pair of draft-links joined to said pivoted fourth side and extending through openings in the rear wall of the hollow body, and an operating-lever pivotally held in said lips on said body and joined to said draft-links to swing the pivoted side, the operating-lever being offset above the draft-links.

4. A mop-wringer consisting of a rectangular perforated hollow body having three sides formed of a single piece and open at one side and at the upper and the lower ends, a perforated part forming a fourth side for the hollow body pivoted to said hollow body and adapted to swing therein, a pair of draft-links occupying openings in said fourth side and in the opposing side of the hollow body and having their ends offset and joined by a pivot-bolt outside of said body, and a hand-



lever pivoted to said opposing intermediate side of the hollow body and upon said pivot joining the draft-links, for swinging said pivoted fourth side, the two opposite sides of 5 said body having integral points folded inward toward the third side to contact with the inner surface of a containing vessel.

5. In a mop-wringer a perforated blank sheet of metal having similar notched and 10 angular ends and bent along two parallel lines to form three consecutive sides of a rectangular hollow body or inclosure and having projecting points folded, a fourth movable side of the hollow body held upon pivot-bear- 15 ings of said body, a lever carried by said hollow body, and connectors for said lever and said movable side.

6. In a mop-wringer a perforated blank sheet of metal having similar notched and 20 angular ends each formed with a projecting

point, the sheet being bent to form three consecutive sides of a rectangular hollow body with said projecting points folded, a rectangular blank sheet of metal with projecting sides and ends the latter being folded upon 25 the body of the sheet, and the projecting sides bent at right angles with the body of the sheet to form stiffening-flanges therefor, said sheet thus formed constituting a fourth movable side of said hollow body, and means for 30 holding said fourth side and for moving it within the hollow body.

In witness whereof I have hereunto set my hand, this 1st day of February, 1905, in the presence of two subscribing witnesses.

FRANK B. SMITH.

Witnesses:

GEORGE W. BARNES,  
F. VERNON SMITH.