

No. 774,338

PATENTED NOV. 8, 1904.

T. C. PROUTY.  
DOOR HANGER.

APPLICATION FILED APR. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. III.

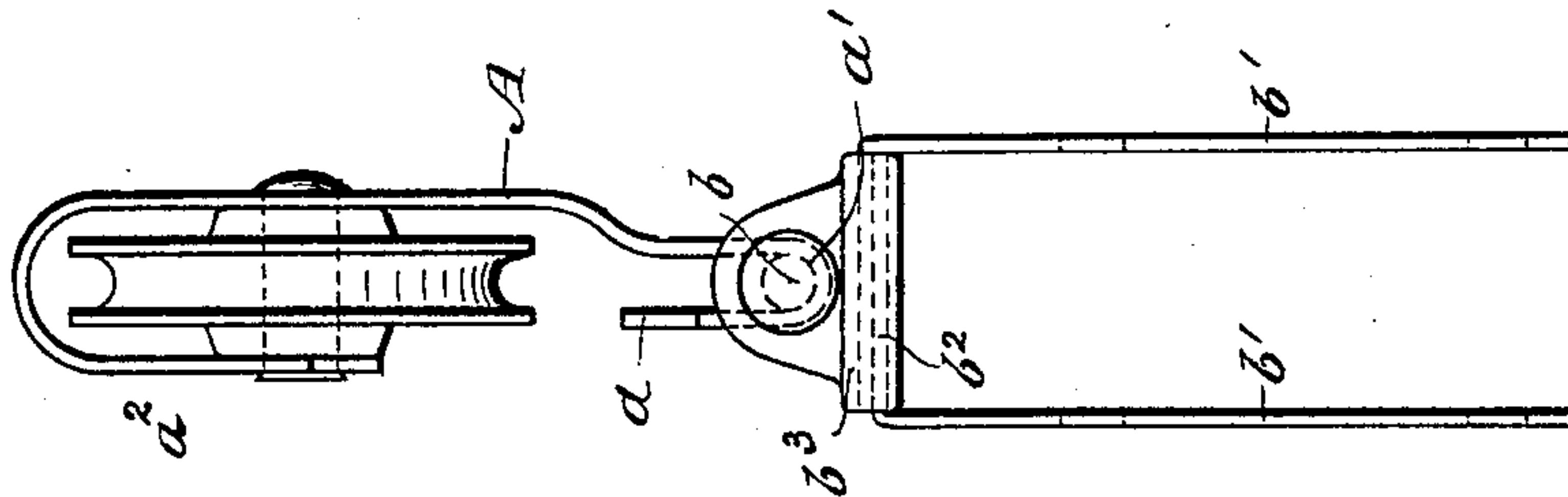


Fig. I.

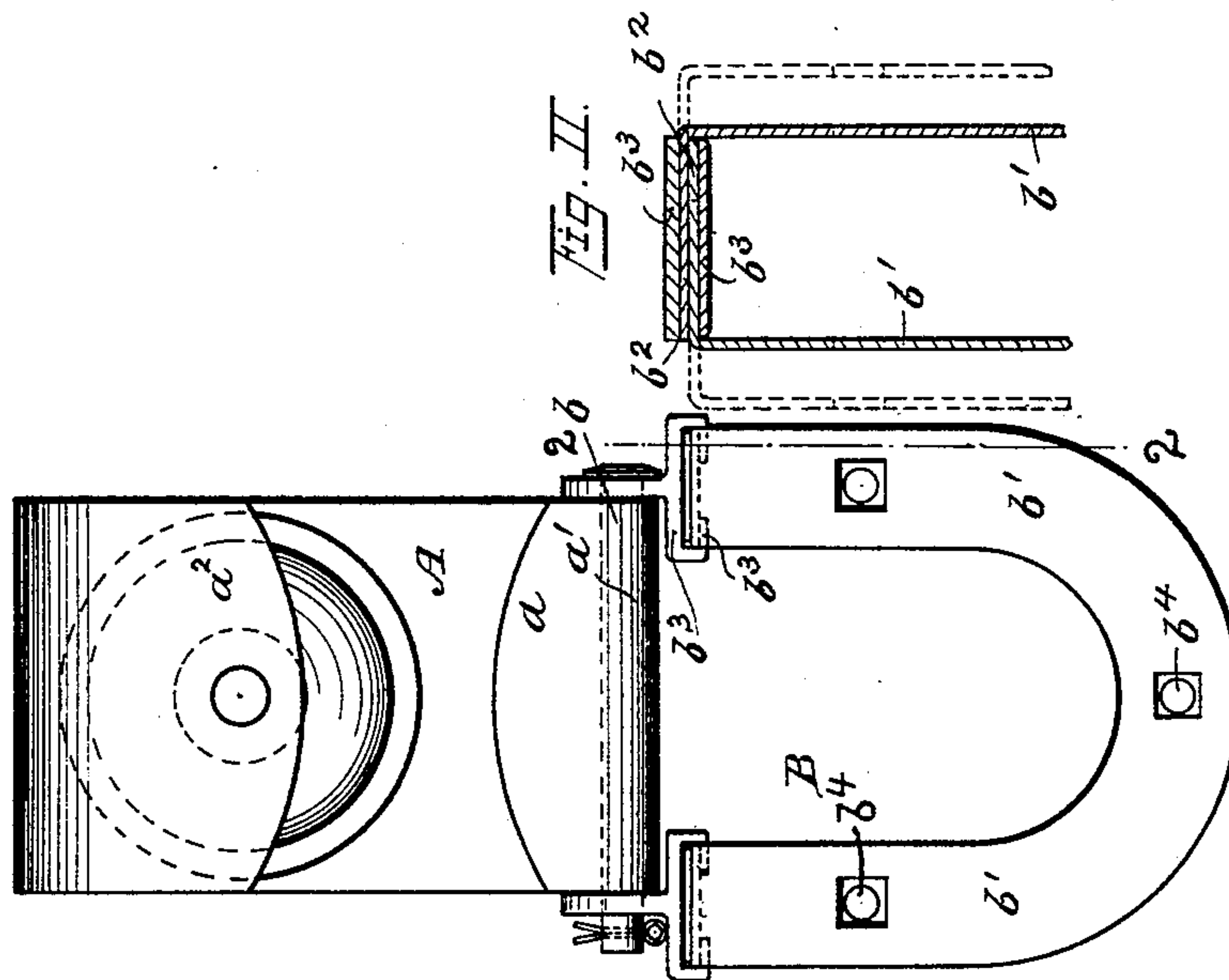
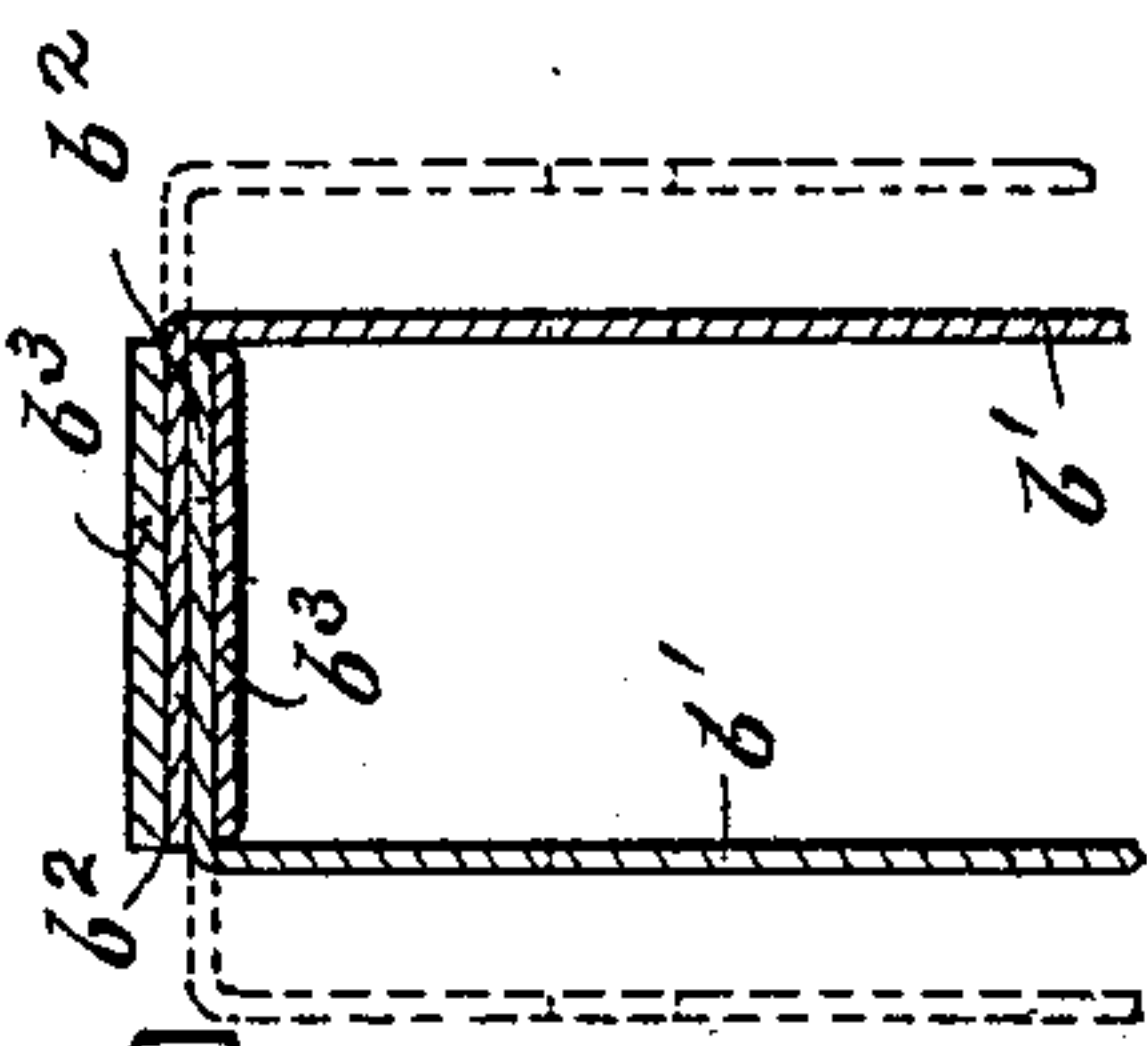


Fig. II.



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2 SHEETS—SHEET 2.

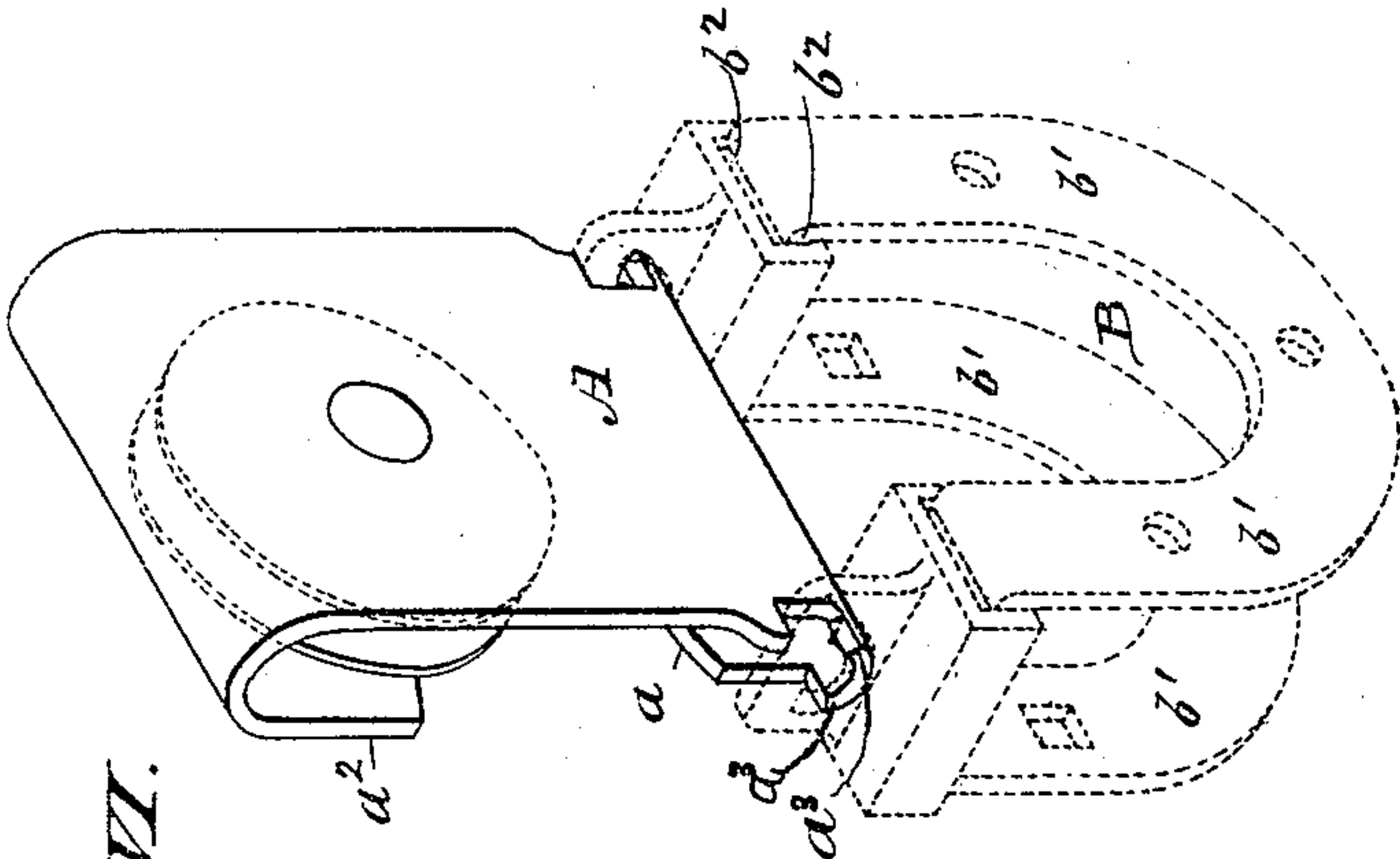


Fig. VI.

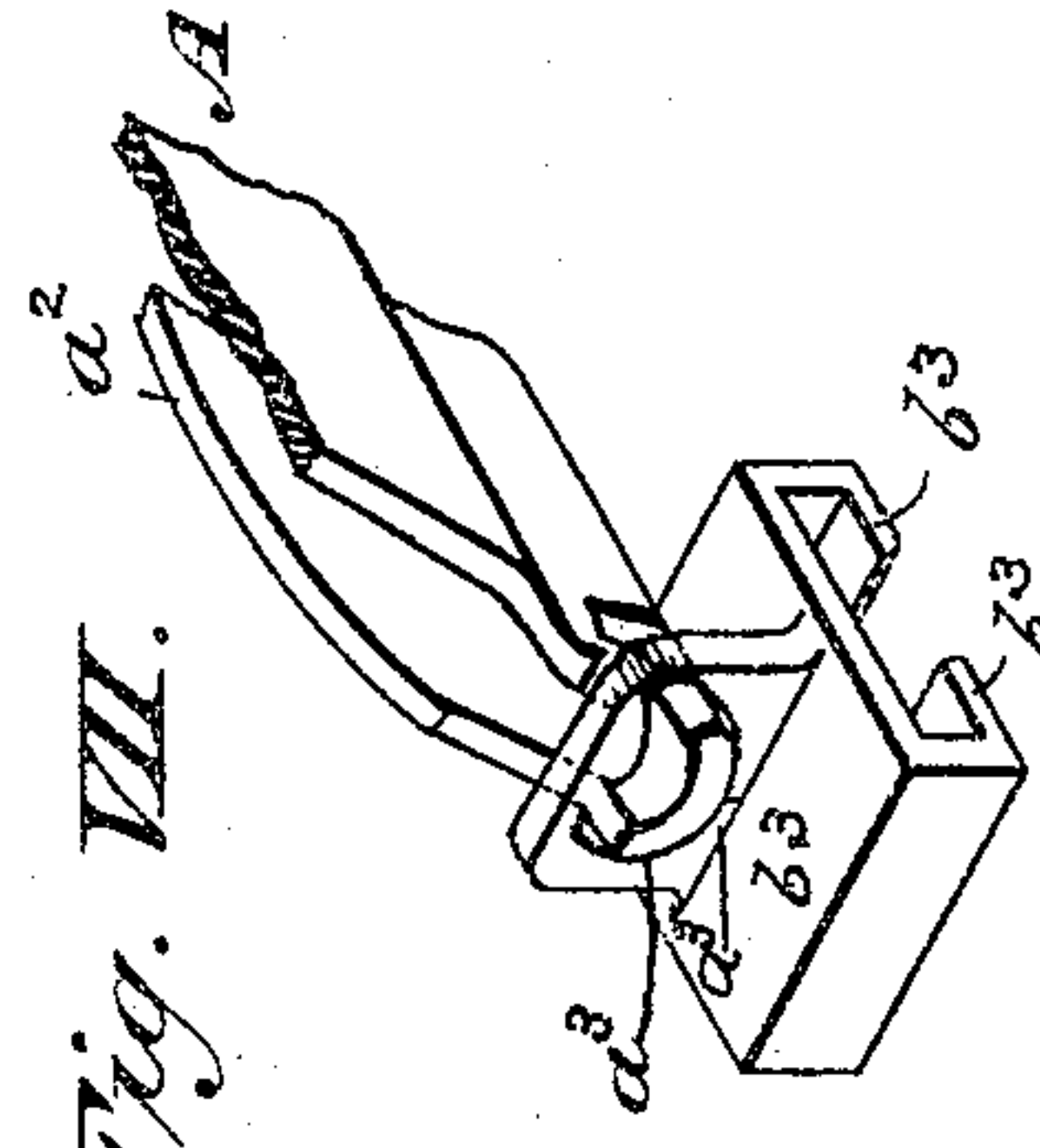


Fig. VII.

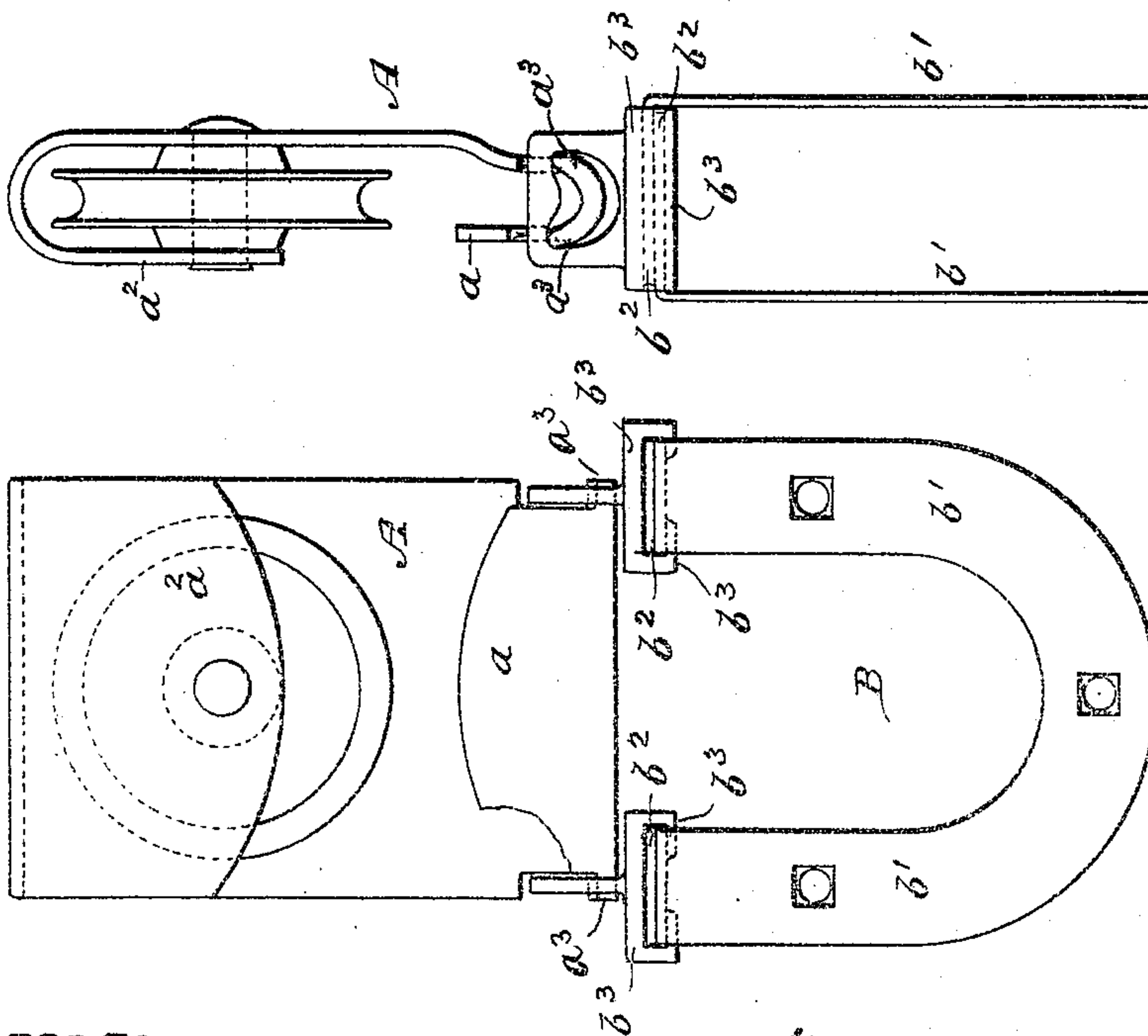


Fig. IV.

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# UNITED STATES PATENT OFFICE.

THEODORE C. PROUTY, OF ALBION, MICHIGAN.

## DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 774,338, dated November 8, 1904.

Application filed April 10, 1903. Serial No. 152,001. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE C. PROUTY, a citizen of the United States, and a resident of Albion, county of Calhoun, and State of Michigan, have invented a new and useful Improvement in Door-Hangers, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to door-hangers, the object thereof being to produce a hanger which can be readily and easily adjusted to doors of different thicknesses and which readily accommodates itself to the different angles that are created by various causes between the central plane of the door and the central plane of the hanger-wheel.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of the various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a front elevation of my improved hanger. Fig. II represents a section through the line 2 2, Fig. I, illustrating the adaptability of the hanger to be secured to doors of different thicknesses. Fig. III represents an end elevation of the hanger. Fig. IV represents a hanger which has a modified form of bearing. Figs. V, VI, and VII are respectively rear, perspective, and detail perspective views of said modified form.

Said improved hanger consists of two parts of suitable material A and B, respectively. The lower part B of the hanger consists of two flat pieces  $b' b'$  in the shape of horseshoes with long angular end portions  $b^2 b^2$ , said two horseshoe sections being identical in construction and held in parallel planes facing each other, the angular end portions of one lying flat upon those of the other, as shown in Fig. III. The distance between the planes of the two horseshoe sections may be changed as desired between the length of one angular end portion and twice such length by varying the

proportion of one angular end portion lying upon the other, and thus the part B is adapted to be secured to doors of different thicknesses, the shortest distance between the two horseshoe sections being obtained when the two angular end portions completely contact each other and lie in parallel planes, the greatest practical distance being obtained when the ends of the two angular end portions abut each other and they lie in the same plane. Said two angular end portions are held in contact by means of a flat strip  $b^3$  of substantially the same length and width as the end portions and forming a grooved bearing in which said portions are held firmly, but in which they are easily slidable one upon the other, whereby the proportions of their surfaces in contact may be adjusted to accommodate doors of different thicknesses, as is illustrated in dotted lines in Fig. II. Said lower part B of the hanger is fastened to the door by any suitable means, such as the bolts  $b^4 b^4$ , Fig. I.

The lower portion  $a$  of the upper part A of the hanger is turned up so as to form a hook having a deep groove  $a'$ , in which is seated a cylindrical pin  $b$ , (shown in dotted lines in Fig. I,) by means of which the upper part A is pivotally united to the lower part B. The flat strips  $b^3$  lie transversely across the upper edge of the door and have upwardly-projecting ears located centrally thereof, which ears provide bearings for the ends of the pin  $b$ , the hook in the portion  $a$  being adapted to pivotally engage the portion of the pin which lies intermediate of such bearings. It is thus readily seen that the two parts of the hanger are easily separated and, furthermore, that they are capable of lying in different planes, and consequently there is no tension or binding action upon the door when for various reasons, as when there is side pull or pressure upon the door or when the door is not hanging perpendicularly, the central plane of the hanger-wheel and the central plane of the door do not coincide or are not parallel, but intersect at an angle at the points of connection of the two parts of the hanger. The upper portion of part A is bent double for about half the length of said part, the bent portion  $a^2$  be-



ing riveted to part A through the central axis of a grooved wheel adapted to run upon the track.

In the modified form of hanger illustrated in Figs. IV, V, VI, and VII the groove  $a'$  and cylindrical pin  $b$  are dispensed with and the lower part B of the hanger is attached to and supported by the upper part A by means of two bearings  $a^3 a^3$  upon each end of the semicylindrical lower part of the upper portion of the hanger, there being provided thereby four bearings, two on either side of the central plane of the hanger, thus providing two parallel axes of oscillation for the lower portion of the hanger upon the upper, the two bearings on one side of the central plane of the hanger lying in one axis of oscillation and the two bearings on the other side of the central plane lying in the second axis. This double bearing-pin is accommodated in the upwardly-extending ears of the transverse retaining-strips by perforations in such ears which conform to the shape of the bearing-pin. Means are thus provided whereby the hanger is made sufficiently rigid to keep the door from swinging out and in with every change of wind-pressure, and yet movable enough to enable the door to be easily moved when it is necessary, whereby the hanger adjusts itself without detriment to the track or door to the different angles that are created between the central plane of the door and the central plane of the hanger-wheel.

It is evident that other means may be employed for connecting the two parts of the hanger for the purpose in view; but I am not aware that means have been shown for securing to the hanger both rigidity and movability for the purposes and consequent advantages described above. Neither am I aware that either combined with this improvement or shown alone has been described the hanger that is adapted to be secured to doors of different thicknesses, which adaptation may be secured by various expedients, one of which has been herein specifically explained, said hanger being composed of parts assembled as has been hereinbefore described and as is hereinafter claimed.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any one of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention—

1. A door-hanger provided with a track-bearing and with two members adjustable with reference to one another, whereby said hanger may be secured to doors of different thicknesses.

2. In a door-hanger, the combination with an upper wheeled portion adapted to fit the track for said hanger of a lower portion secured to such upper portion and having two axes of oscillation thereon.

3. In a door-hanger, the combination with an upper wheeled portion adapted to fit the track for said hanger of a lower portion secured to such upper portion and having two axes of oscillation thereon in a plane perpendicular to the central plane of the hanger.

4. In a door-hanger, two separate portions pivotally hinged together, the upper portion provided with a track-bearing, and the lower portion provided with two members adjustable with reference to one another, whereby said hanger may be secured to doors of different thicknesses, said lower portion having two axes of oscillation on said upper portion.

5. In a door-hanger, the combination with an upper wheeled portion providing a track-bearing, of a lower portion comprising in its construction transversely-disposed, retaining-strips each having a groove or way on its under side and provided with upwardly-projecting perforated ears located centrally thereof, means connecting said ears with said upper portion and door-plates adapted to be secured to opposite sides of a door and constructed to be adjustably seated in the grooves or ways of said transverse retaining-strips, whereby the hanger may be secured to doors of different thicknesses.

6. In a door-hanger, the combination with an upper wheeled portion provided with a track-bearing and provided with double bearing-pins integral therewith, of a lower portion provided with adjustable door-plates, in combination with the transverse retaining-strips and the upwardly-projecting ears located centrally thereof, said ears perforated to engage said double bearing-pins.

Signed by me this 6th day of April, 1903.

THEODORE C. PROUTY.

Witnesses:

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