(No Model.)

T. C. PROUTY.

DOOR HANGER.

No. 587,491. Patented Aug. 3, 1897.

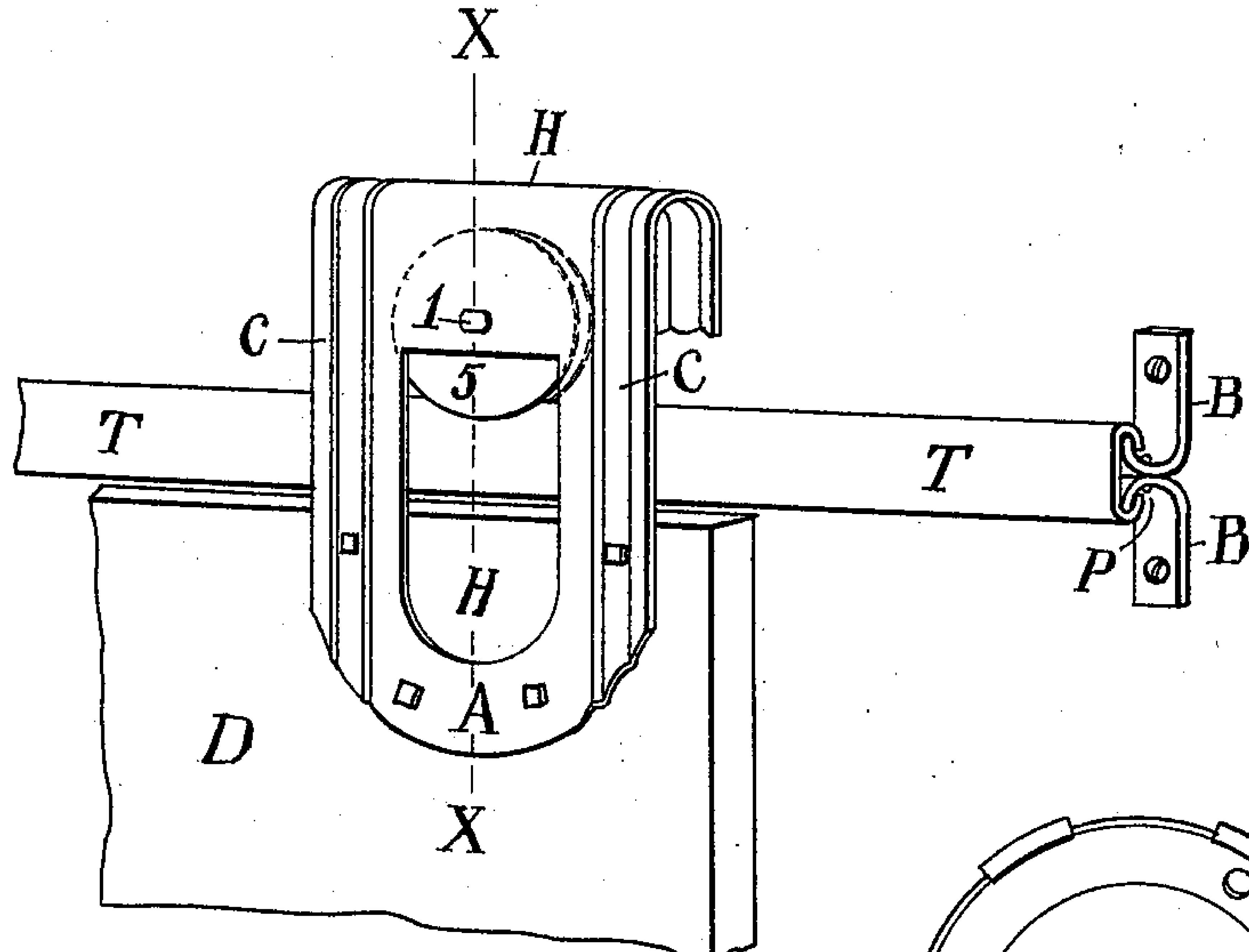

Fig. 1

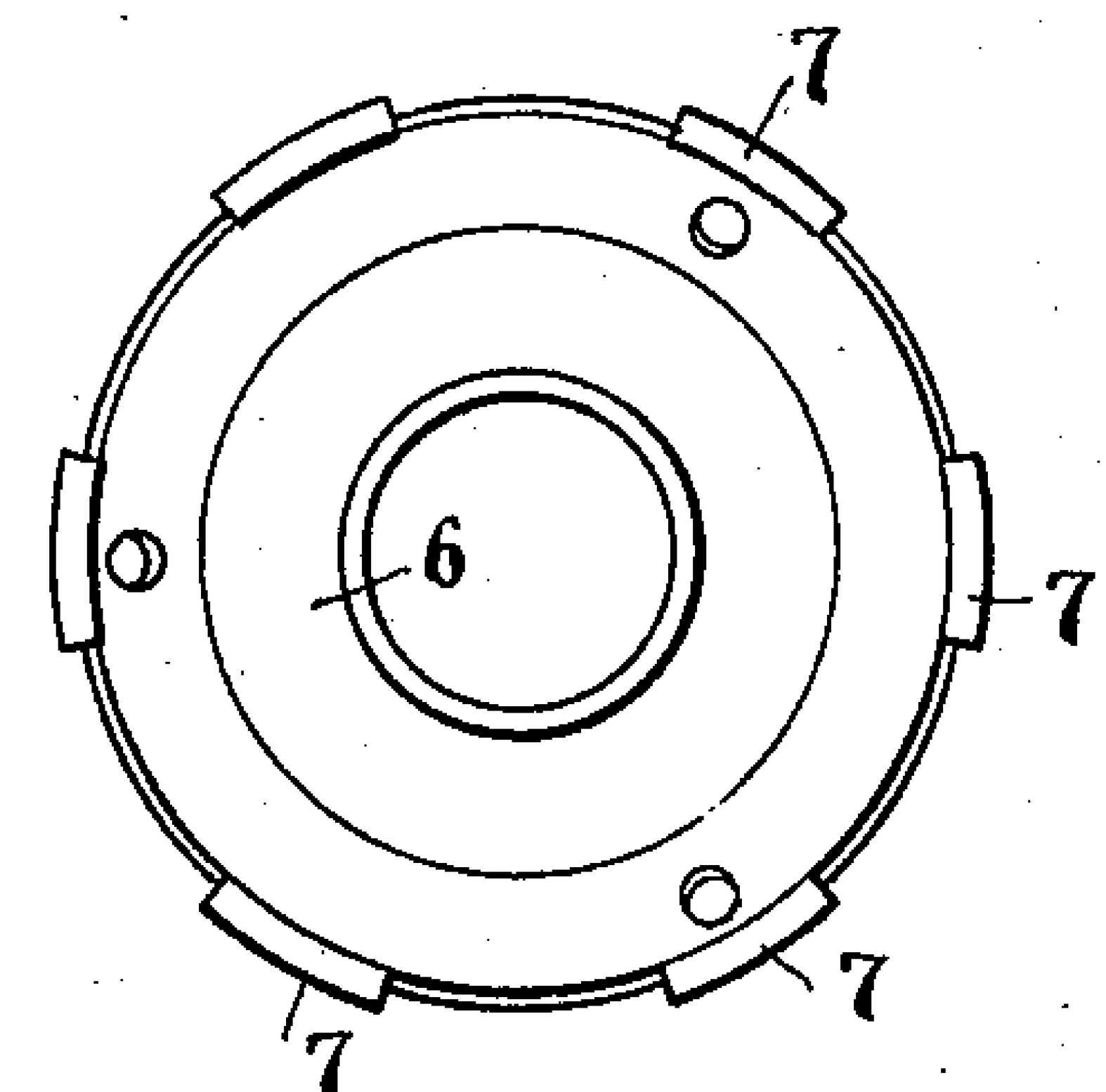

Fig. 3

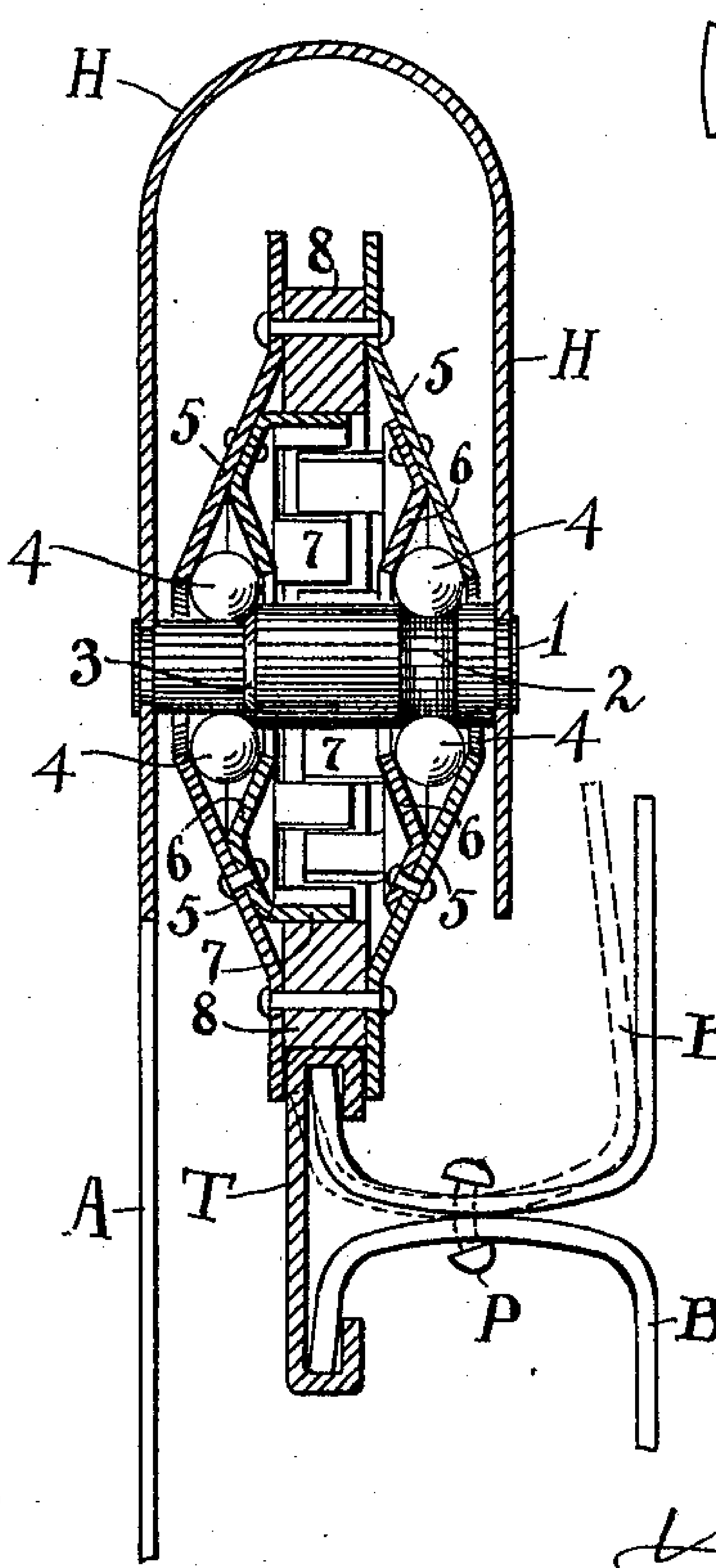

Fig 2

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THEODORE C. PROUTY, OF MIDLAND, MICHIGAN, ASSIGNOR TO THE T. C. PROUTY COMPANY, OF SAME PLACE.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 587,491, dated August 3, 1897.

Application filed March 11, 1896. Serial No. 582,706. (No model.)

To all whom it may concern:

Be it known that I, THEODORE C. PROUTY, a citizen of the United States, residing at Midland, in the county of Midland and State of Michigan, have invented certain new and useful Improvements in Door-Hangers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention is an improved door-hanger for sliding doors, particularly barn-doors; and it consists in the peculiar construction of the carriage, the ball-bearing wheel, and the support for the track, in connection with their peculiar arrangement and combination, as shown and described.

Figure 1 is a perspective of the hanger as applied to the door. Fig. 2 is a vertical sectional view on line X X of Fig. 1. Fig. 3 is a view of the inside plates of the wheel.

In the drawings, B is a bracket supporting a track T, made from a single piece of sheet metal, its edges being doubled over, as shown, to form the proper surface for the tread of the wheel and to add rigidity to the track, as described in my Letters Patent of August 14, 1894, No. 524,609.

The bracket B is made in two parts B and B′, exactly similar, the parts being of the shape of the letter J, the part B being inverted and loosely pivoted by the pivot P through slots to B′. This allows the parts to turn on their abutting surfaces, as shown in dotted lines in Fig. 2, so that their outer ends may be moved when the bracket is loosened from the wall in the grooves in the track T, formed by the turning over of the edges, as mentioned, but when screwed to the wall or frame they strive against one another and against the turned-down edges of the track, holding the track rigid and firm.

H represents the hanger, having a hood, in which the wheel 5 is mounted, and adapted to be secured to the door. This hanger is formed from a single piece of metal blank corrugated along its outer edges longitudinally for the purpose of additional rigidity and then bent to the required form. As shown, a blank may be cut from a portion of the hanger-blank, designed to form the vertical part thereof, without materially affecting its strength, and the blank thus cut out I utilize to make the sides 5 of the wheel, thus effecting a saving of material and cost of construction. The lower end of the sheet may then be cut in any form desired, the form shown in Fig. 1 being preferable, and provided with suitable screw-holes for securing it to the door.

I am not aware that it has been common to form a hanger in this manner—viz., from one piece of sheet metal corrugated as described.

The wheel is formed somewhat similar to the wheel described in my Letters Patent previously mentioned—viz., the side plates 5 5 are cut from the sheet metal forming the hanger, as above described, and are then pressed outward at the center, as shown. To the inside of each of these plates 5 is secured a disk 6, having its center pressed outward oppositely to that of the plate 5, forming between the disk 5 and the plate 6 a bearing for the balls 4. The disks 6 have upon their circumference a number of inwardly-extending lugs 7, and so arranged that when the plates 5 are secured together, as shown in Fig. 2, these lugs 7 on the disks 6 will mesh and form a continuous annular rim within the wheel thus formed.

8 is a ring of fibrous material fitting onto the rim thus formed and between the plates 5 5, the ring 8 being of less thickness than the distance between the rim formed as aforesaid and the outer edges of the plates 5, so that the outer edges of the plate 5 form the flanges of the wheel and the fibrous material 8 a tread.

The journal 1 is adapted to receive two rows of balls, the bearing on one end of the shaft having a concave runway 2 to overcome the lateral motion of the wheel, the other runway being cut a uniform diameter, so as to present no shoulder for the balls to run against laterally. This permits the tread 8 to vary in width without bringing the balls against opposing shoulders. The ends of said journal 1 are squared, so as to be firmly held in the carriage H.

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

1. In a door-hanger and track, a bracket for supporting the track comprising two pieces of metal formed in the shape of a J, one piece inverted and loosely pivoted to the other at their bent portions, whereby the abutting surfaces will move and turn upon each other, thereby permitting the bracket to be adjusted to the track, substantially as and for the purpose set forth.

2. In a door-hanger and track, the combination with a track made from a sheet of metal having its edges turned over, forming two grooves, of a bracket made in two parts, the parts similar in size and shape and having a curved end, the curved ends loosely pivoted together and adapted to fit in the groove of the track formed by turning over the edges, substantially as and for the purpose set forth.

3. In a wheel for door-hangers having two series of balls, a journal having an enlarged center portion terminating in an inclined shoulder upon one side, forming the inner side of a track for one series of balls, the remaining portion of that end being straight, the opposite side of the journal having a concave cut-away portion forming a track for the outside series of balls, the end of the journal next to the bearing being larger than the track, whereby the journal is held in rigid position within the wheel, substantially as described.

4. In a wheel for door-hangers, made by securing together two opposite disks having between them two smaller disks so bent and secured to the larger disks as to form bearings for two series of balls, the tread of the wheel made of fibrous material and fitted upon an annular inner rim formed by meshing together laterally-extending lugs of the smaller disks within the wheel, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE C. PROUTY.

Witnesses:
THOMAS J. SECOR,
WM. D. GORDON.