

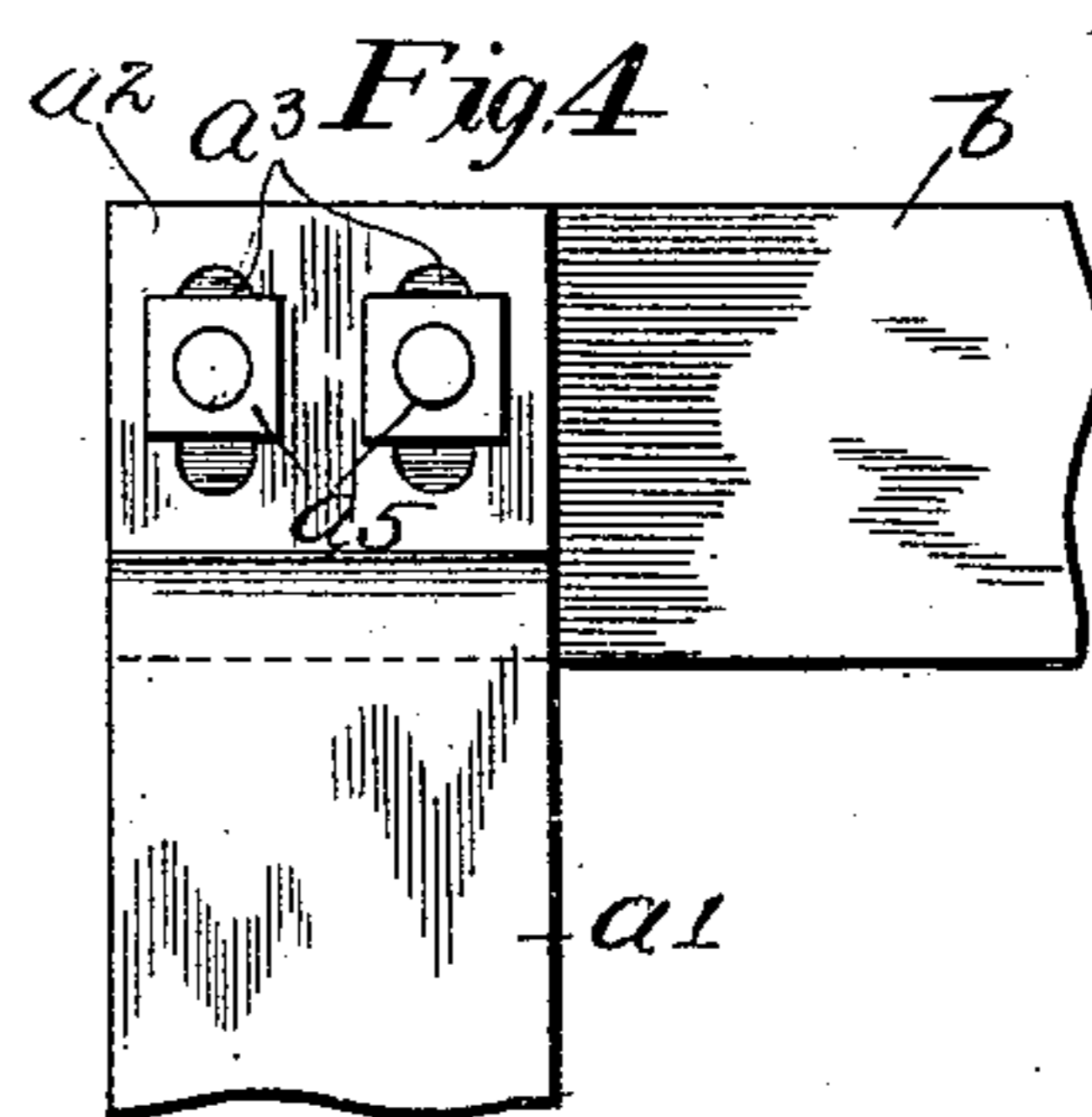
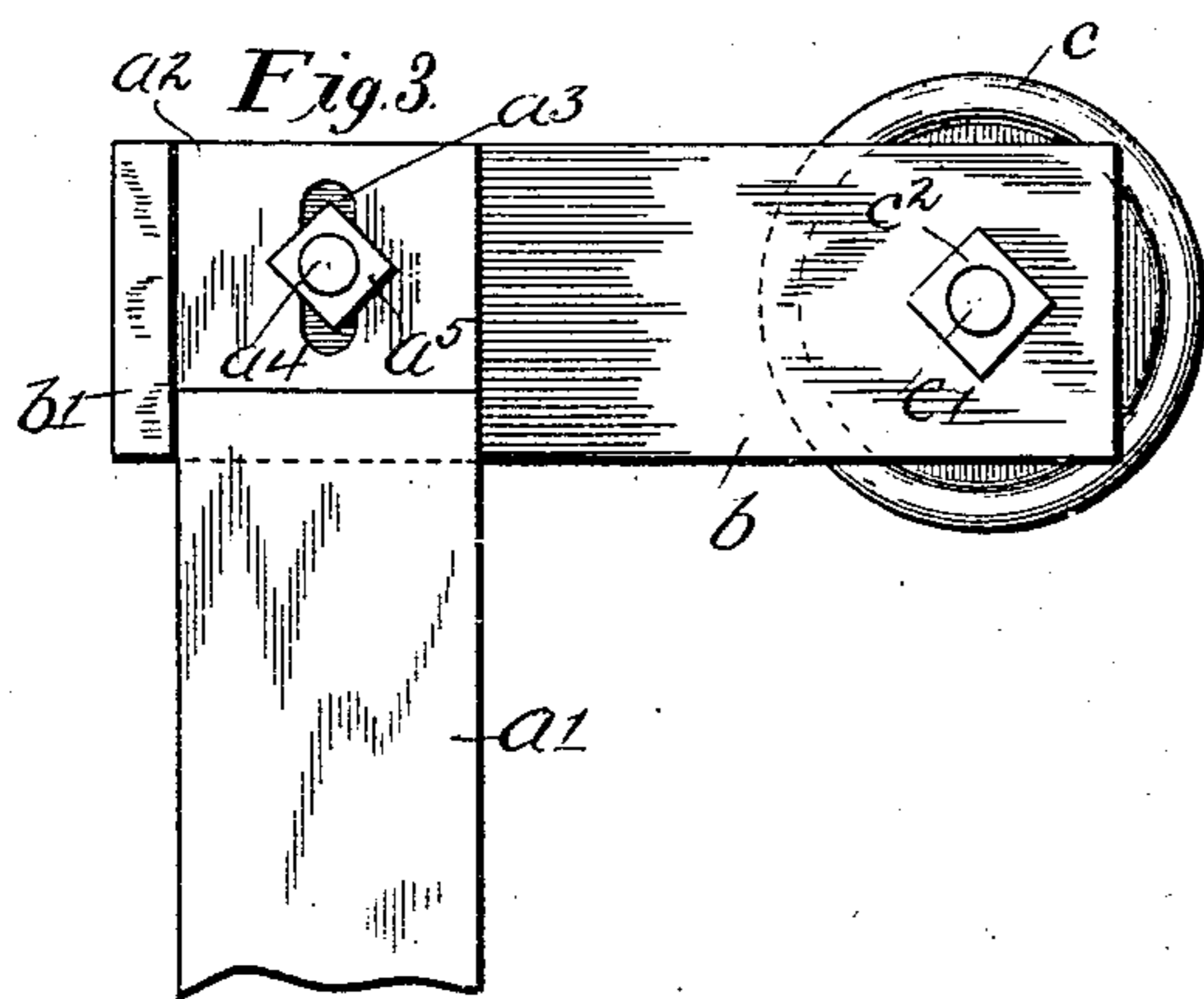
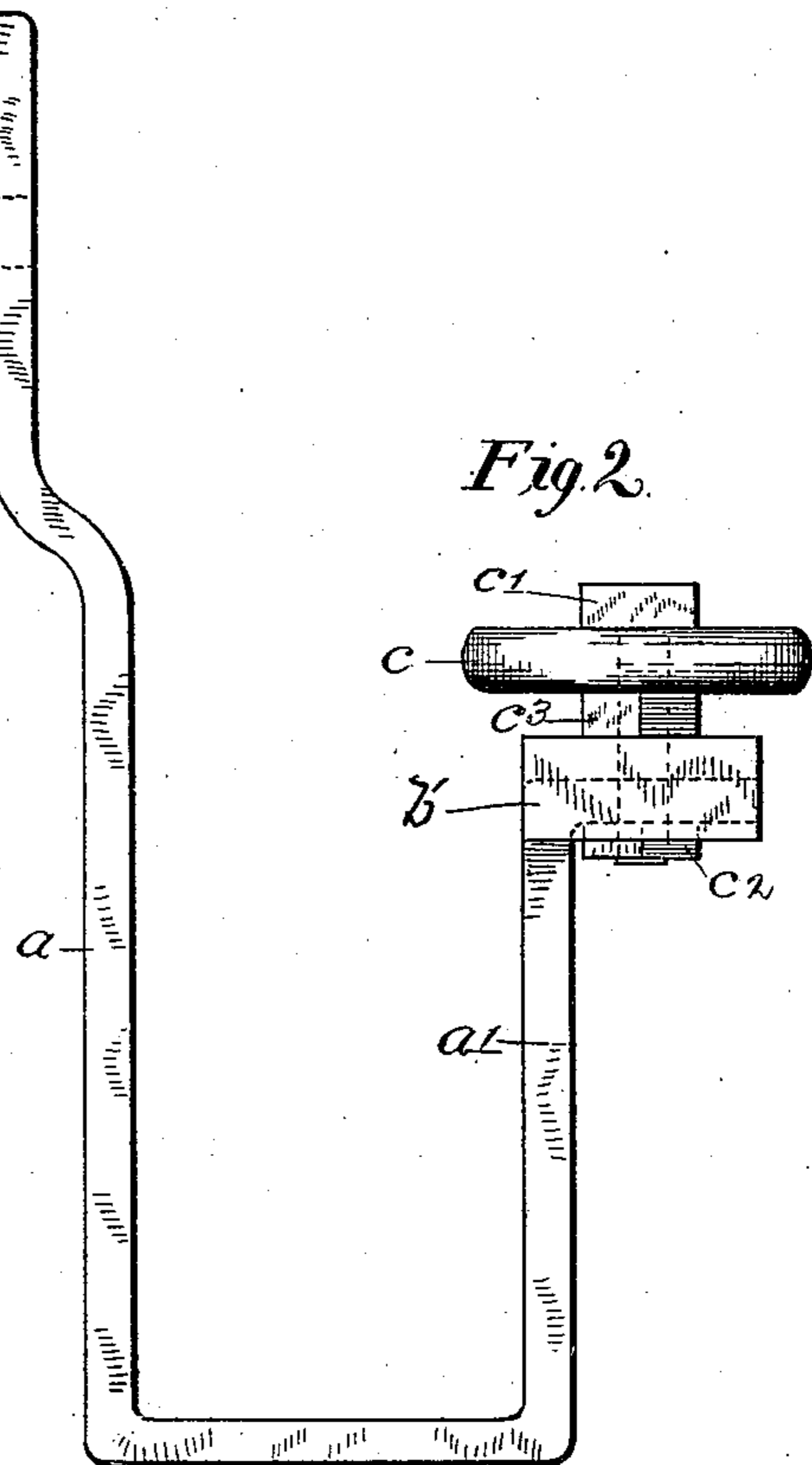
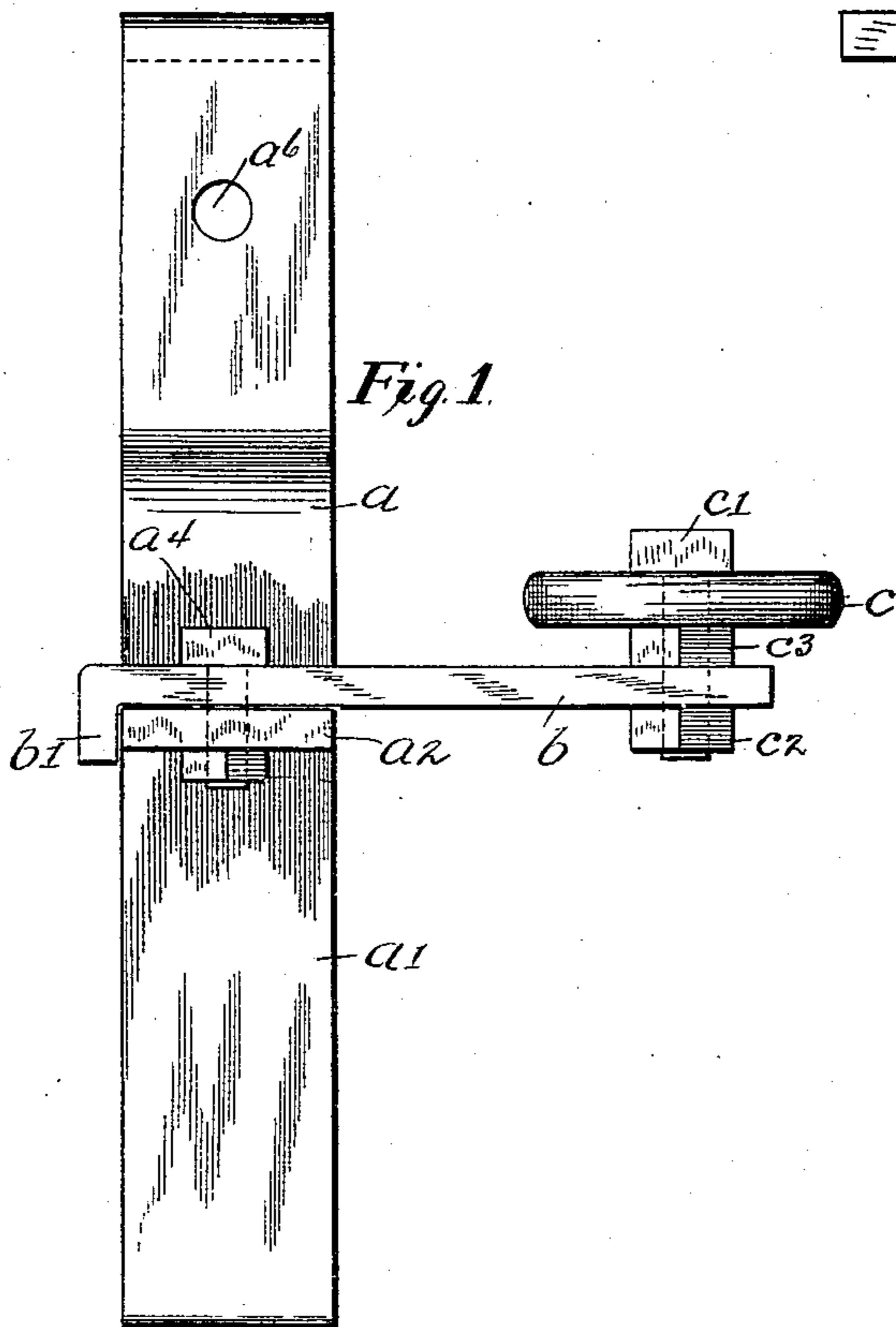
No. 873,816.

PATENTED DEC. 17, 1907.

G. WIDEMAN.
STAY ROLLER.

APPLICATION FILED DEC. 9, 1905.

2 SHEETS—SHEET 1.



Witnesses:

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2 SHEETS—SHEET 2.

Fig. 5.

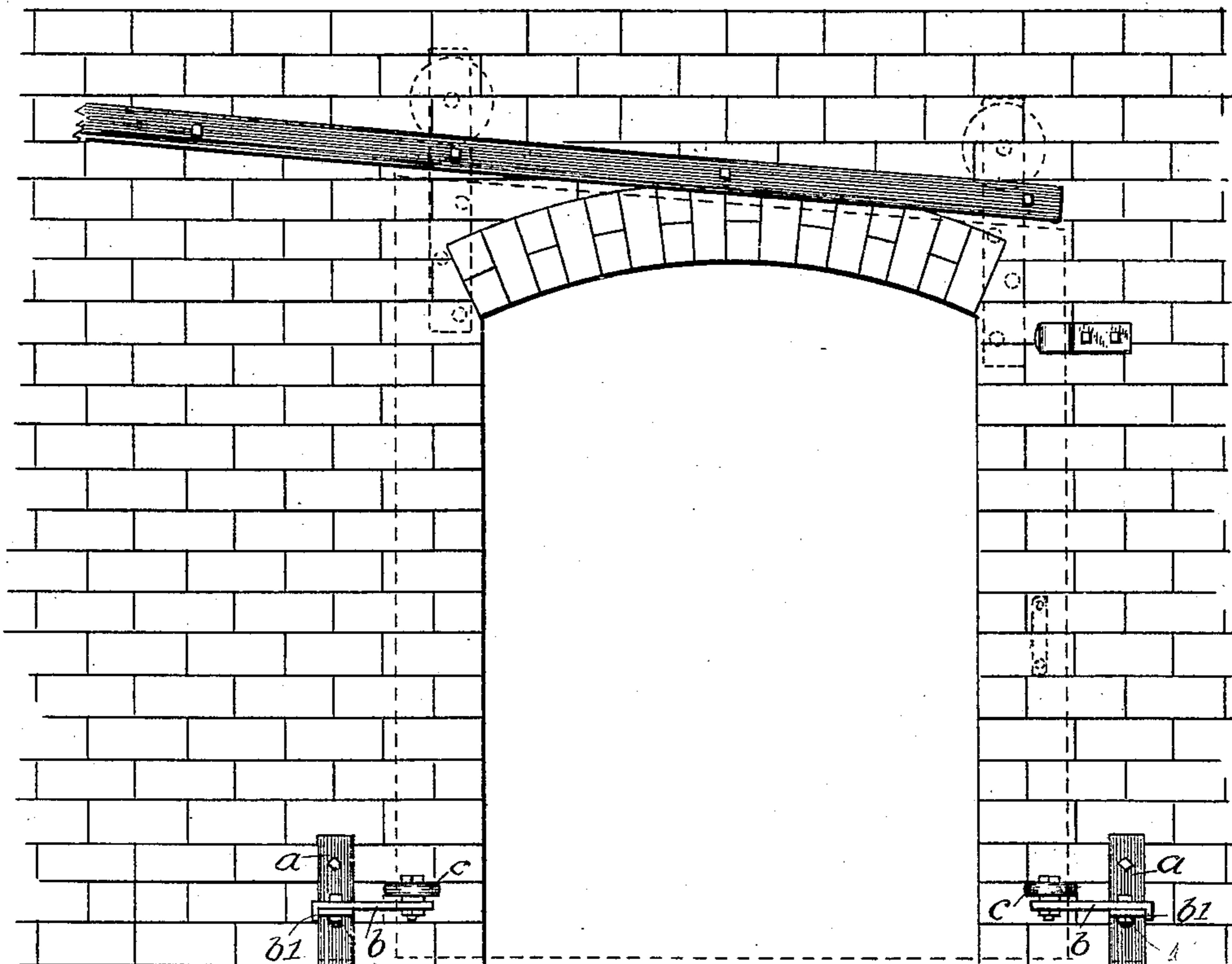
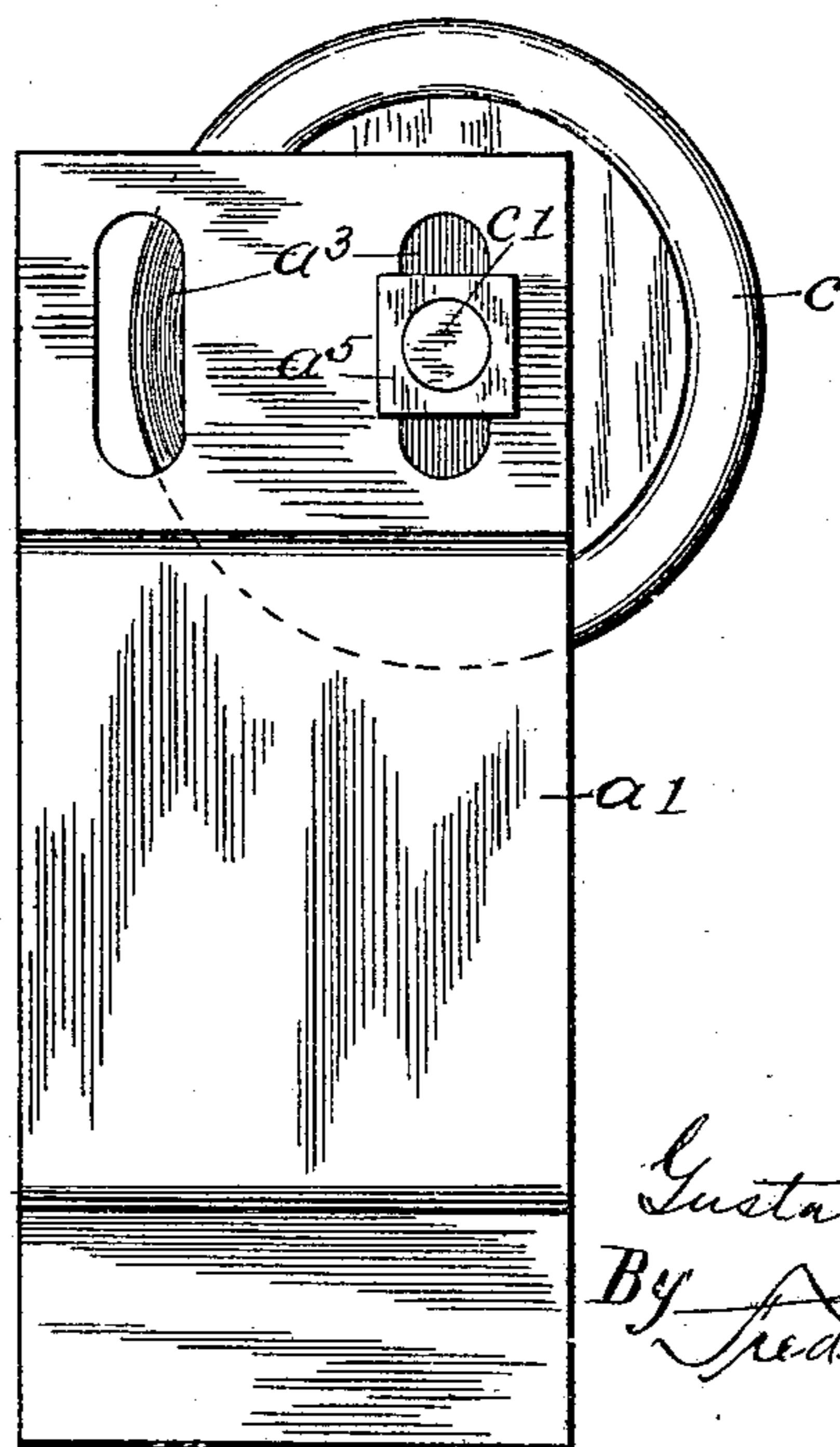


Fig. 6.



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UNITED STATES PATENT OFFICE.

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STAY-ROLLER.

No. 873,816.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed December 9, 1905. Serial No. 291,152.

To all whom it may concern:

Be it known that I, GUSTAVUS WIDEMAN, citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Stay-Rollers, of which the following is a specification.

This invention relates to improvements in the construction of stay or guide rollers used in connection with sliding doors, and is especially adapted to "fire-doors" used in closing openings in masonry walls where protection against fire is sought.

Under the rules of fire-insurance underwriters in many cities the sliding "fire-doors" are required to overlap the wall or door-frame on each side of the opening from 3 to 5 inches, and the stay-rollers, which must be hung from the brick or terra-cotta wall, are applied on one side of the opening to hold the door close against its frame or adjacent wall. Under these conditions, the guide-roller hangers or brackets at present are attached to the wall so that the center of the roller which is also the center of the hanger is not more than four inches from the edge of the door opening in the wall. Bolts are commonly used in securing the hangers in position and it has been found almost impossible to make a hole and insert a bolt of the required size so near the edge of a wall without loosening the adjacent brick and thus impairing the holding qualities of the connection.

This invention meets the difficulty above mentioned in that it permits the hanger to be attached to the wall at a distance of eight, ten or more inches, from edge of opening in wall and at the same time, brings the center of the roller within the four inches or less overlap of the door.

A further advantage incident to the construction of this invention is that the same pattern of design can be used at either the right-hand or the left-hand side of the doorway or opening, and the roller can be also mounted in line with the hanger.

In the accompanying drawing which forms a part of this application:—Figure 1 is a front elevation of a stay-roller constructed in accordance with an approved form of my invention; Fig. 2 is an edge view taken at the left-hand side of Fig. 1; Fig. 3 is a bottom plan view showing most of the device indicated in Figs. 1 and 2; Fig. 4 is a frag-

mentary view showing a slightly modified form of a portion of my invention; Fig. 5 shows two of my improved hangers applied to a door-way, and Fig. 6 shows a roller mounted directly on a hanger or bracket.

Referring to the details of the drawing, *a* represents the hanger or bracket portion of my invention and the same is of a well-known form. The bracket is made of a piece of flat metal bent as shown to provide a slide-way to receive a door, also to form an upright portion *a*¹ which is bent at its end to form a horizontal outwardly extending foot *a*², in which one or more slots *a*³ are formed. In the upper part of the hanger a bolt-hole *a*⁶ is formed to receive the bolt (not shown) by which the hanger is secured to a wall. This hanger with the exception of the two slots in the foot *a*², (shown in Fig. 4) is identical with hangers in common use in stay-rollers, the roller proper being ordinarily mounted on a bolt or pin as *a*⁴ passing through a hole in the foot.

b represents a piece of metal preferably of the same character and dimensions as that from which the hanger is made, and the same is secured to the hanger by the bolt *a*⁴ and nut *a*⁵, and constitutes an extension arm of the hanger. This extension is bent down at right angles at one end to form a flange *b*¹, which abuts against the adjacent side edge of the foot *a*², as shown in Figs. 1 and 3. In the other end of the extension *b*, a suitable opening is formed to receive a bolt *c*¹ which has rotatably mounted thereon a roller *c*, and is supplied with nuts *c*², *c*³, for securing the bolt in place.

The slot *a*³ permits a limited adjustability of the extension in the line of projection of the foot *a*² but it will be apparent that there would be a possibility upon either of the nuts *c*², *c*³, becoming loosened, of the extension turning on its axis represented by the bolt *a*⁴, were it not for the flange *b*¹ abutting on the foot, or for other means which would prevent such movement. In Fig. 4, I have shown two slots *a*³, *a*³, arranged parallel in the foot *a*², and each supplied with a bolt *a*⁴ which passes through a suitable hole in the extension *b*, thus preventing the turning of the extension referred to and rendering unnecessary the flange *b*¹. Other means might be provided for accomplishing this object, all within the scope of my invention.

When there is no need of having the roller

offset from the hanger, the extension b is not used, and the roller is mounted directly on the foot a^2 by passing the bolt c^1 through one of the slots a^3 , thus providing an attachment
 5 which brings the center of the roller at one side of the median line of the hanger if there are two slots provided as shown in Figs. 4 and 6.

From the construction shown, it is appar-
 10 ent that the plate b may be changed to extend to the left of the hanger, instead of to the right as shown in Figs. 1 and 2, so that the same hanger when equipped with said plate may be used either at the right-hand
 15 side of a door-way or the left-hand side, and the roller will extend over a door sliding to the right or to the left. It is also obvious that by changing the roller from one side of the
 20 hanger to the other the relative distance between the roller and hanger is not altered, hence the roller will in either case be in operative position.

What I claim is:—

1. In a stay-roller comprising a support-
 25 ing hanger having a door slide-way therein, a roller arranged to project into said slideway, and means for mounting said roller on the hanger offset to the median line of the hanger without changing the distance between the
 30 axis of the roller and the slideway.

2. In a stay-roller comprising a supporting hanger having a door slideway therein, a roller and means for rotatably mounting said roller offset to said hanger and projecting
 35 into said slideway, said means consisting of an extension detachably and reversibly secured to said hanger.

3. In a stay-roller comprising a supporting hanger and a roller, means for supporting
 40 said roller offset to said hanger, said means

consisting of an extension detachably secured to said hanger, and means for preventing the movement of said extension relative to said bracket.

4. In a stay roller comprising a bracket 45 and a roller means for supporting the roller offset to the bracket consisting of an extension detachably and reversibly secured to said bracket, and a bolt or pin carrying said roller and secured to said extension. 50

5. In a stay-roller comprising a hanger and a roller, means supporting said roller offset to said hanger, consisting of an extension detachably, reversibly and adjustably secured to said hanger, and means for mounting said 55 roller on said extension.

6. In a device of the character described, a hanger consisting of an attaching portion, a portion parallel with and spaced from the attaching portion, and a slotted foot at right 60 angles with said parallel portions, in combination with a roller and means adjustably connecting the roller with said slotted foot.

7. In a device of the character described, a hanger having an attaching portion and a 65 longitudinally slotted foot extending at right-angles to the attaching portion in combination with a roller, and means adjustably connecting the roller with said slotted foot, said means adapted to vary the distance between 70 the axis of the roller and the attaching portion of the hanger and to be locked in its adjusted position.

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

GUSTAVUS WIDEMAN.

Witnesses:

ANNA M. WIDEMAN,
 C. L. WIDEMAN.