

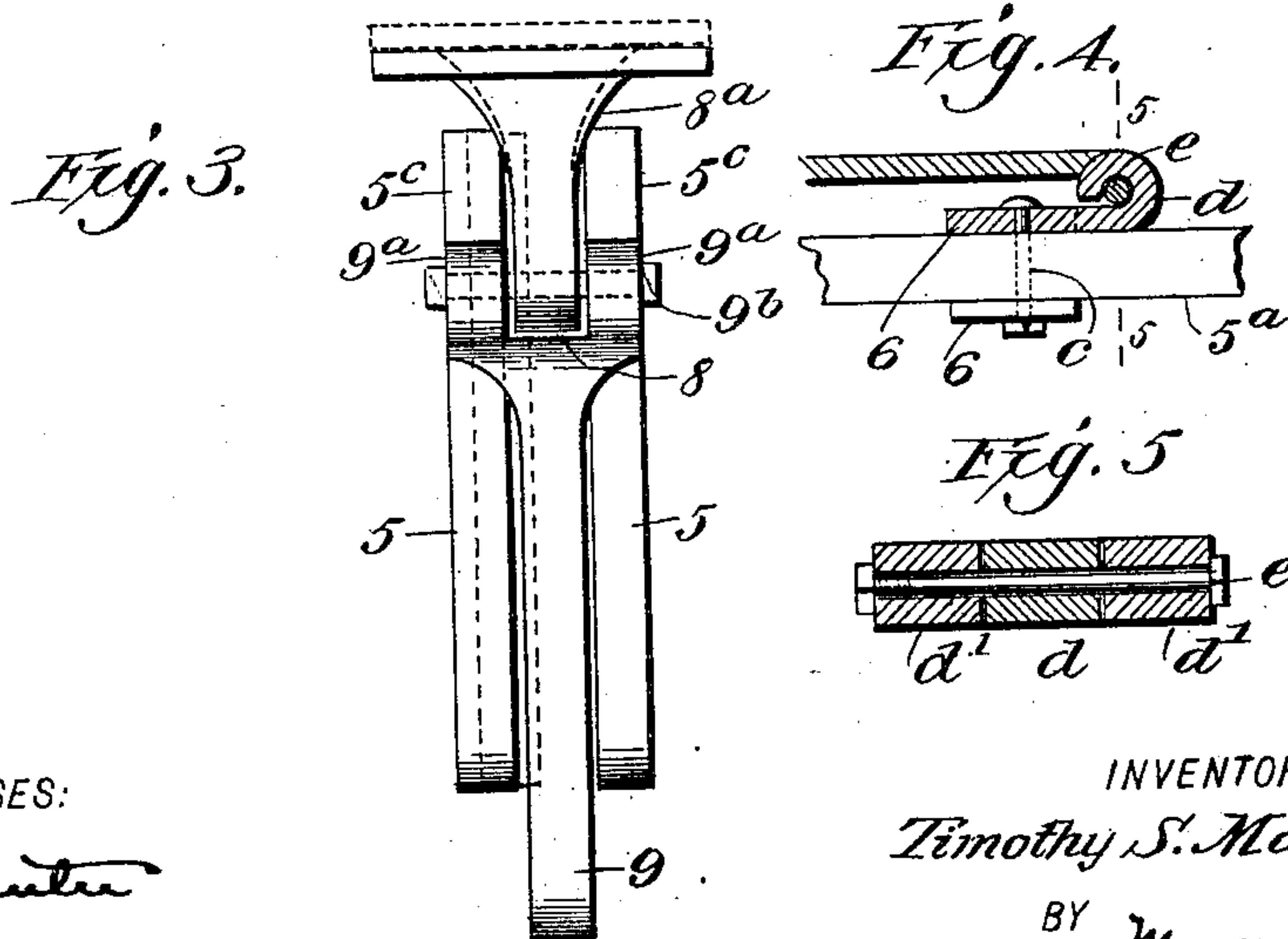
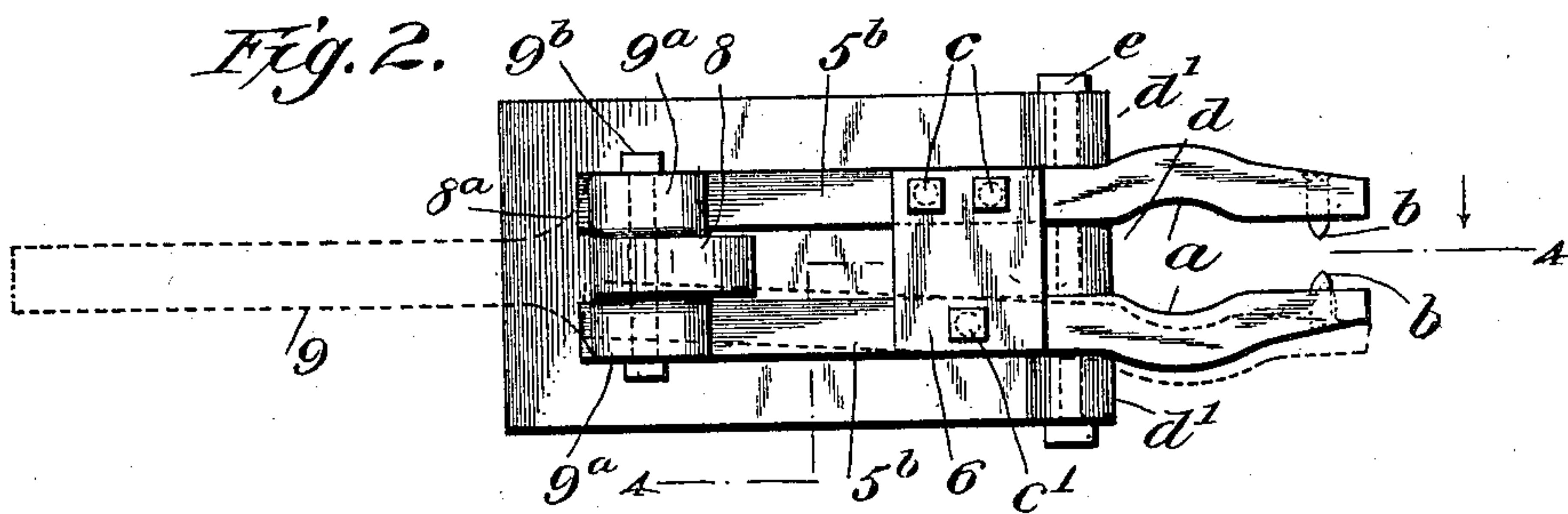
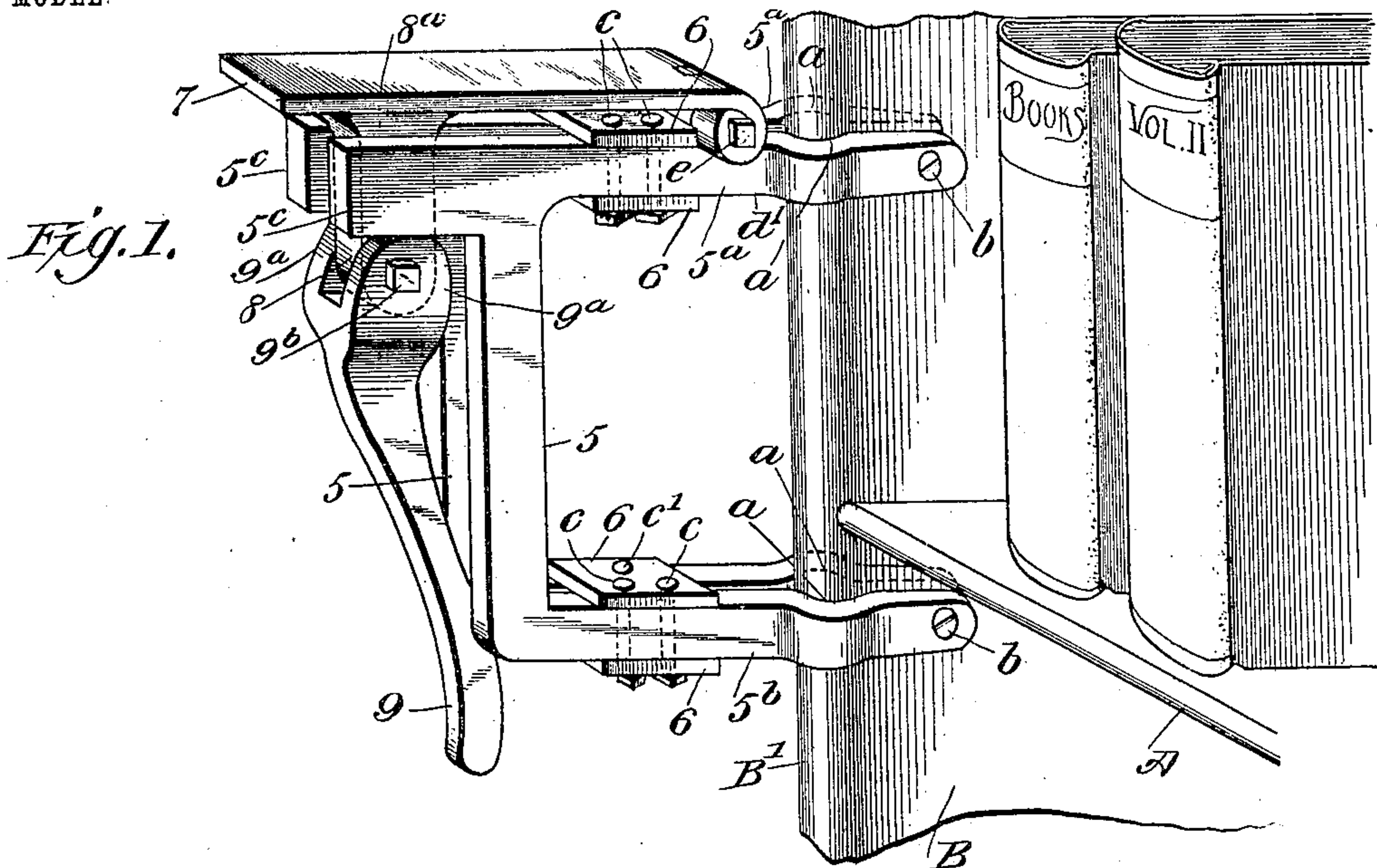
No. 763,299.

PATENTED JUNE 21, 1904.

T. S. MARTIN.
ADJUSTABLE STEP FOR BOOK SHELVES.

APPLICATION FILED SEPT. 2, 1903.

NO MODEL.



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TIMOTHY S. MARTIN, OF BUTTE, MONTANA.

ADJUSTABLE STEP FOR BOOK-SHELVES.

SPECIFICATION forming part of Letters Patent No. 763,299, dated June 21, 1904.

Application filed September 2, 1903. Serial No. 171,636. (No model.)

To all whom it may concern:

Be it known that I, TIMOTHY S. MARTIN, a citizen of the United States, and a resident of Butte, in the county of Silverbow and State of Montana, have invented a new and Improved Adjustable Step for Book-Shelves, of which the following is a full, clear, and exact description.

In public libraries and other depositories for books, where the tiers of shelves containing the books are of such height as to require a temporary foot-rest to enable one to reach the upper shelves, it is desirable to have such provision made that the foot-rest will always be in place and be adapted for such vertical adjustment as may be necessary.

The object of my invention is to provide novel details of construction for a device of the character indicated which afford a simple and convenient step or foot-rest capable of receiving vertical adjustment and clamped connection with upright portions of a tier of book-supporting shelves to enable one to readily reach books on high shelves by using the improvement.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improvement applied. Fig. 2 is a reversed plan view of the same. Fig. 3 is a front view. Fig. 4 is a longitudinal sectional view of details substantially on the line 4 4 in Fig. 2, and Fig. 5 is a transverse sectional view substantially on the line 5 5 in Fig. 4.

Two similar bracket-frames are main portions of the improvement, each comprising the following details: Upon the upright member 5, that is preferably in the form of a rectangular flat bar, two lateral clamping-arms 5^a 5^b are integrally formed and project from the upper and lower ends of the same at right

angles thereto and parallel with each other. The lower clamping-arms 5^b on the pair of bracket-frames are at a suitable distance from their free ends transversely concaved upon their adjacent inner sides by indenting them, as shown at *a*, and between the indents *a* and the extremities of the clamping-arms oppositely-disposed tapering prongs *b* are projected from the inner surfaces thereof, as shown in Fig. 2.

The upper clamping-arms 5^a are similar in construction to the clamping-arms 5^b, having opposite concavities *a* formed in their inner surfaces and prongs *b*, like those on the lower arms 5^b, formed or secured so as to project toward each other at points near the terminations of the arms.

The pairs of arms 5^a and 5^b are respectively hinged, so that the members of each pair are adapted to receive rocking adjustment, preferably by the provision of a pair of hinge-plates 6 for each pair of clamping-arms. The hinge-plates 6 are alike, and as represented in Fig. 2, where one plate is shown, which is the lowermost one of the pair furnished for the lower pair of clamping-arms 5^b, said plates are rectangular in contour and in duplicate are secured oppositely upon the upper and lower edges of one of the paired arms by screw-bolts *c* or their equivalents.

The pair of hinge-plates 6 for each pair of clamping-arms 5^a 5^b, which lap upon and have contact with the upper and lower edges of said pairs of clamping-arms, are pivoted thereto by a single pivot-bolt *c'*, whereby the two pairs of clamping-arms 5^a 5^b have one member of each pair held to rock near their longitudinal centers and are spaced apart equally a proper distance for effective service from the other members of the paired arms.

At the outer edges of the upright frame members 5 two similar jaw-plates 5^c project oppositely from the upper clamping-arms 5^a. These jaws, that are suitably spaced apart, may have their inner upper edges rounded slightly, as indicated in Fig. 3. Upon the upper hinge-plate 6, that is mounted upon the upper pair

of clamping-arms 5^a, a joint ear or boss *d* is formed at the transverse center thereof, and upon said boss or ear two spaced hinge-ears *d'* are pivoted by a cross-bolt *e*, the ears *d'* being integral formations on a foot-rest plate 7.

The plate 7, preferably rectangular in contour, is of sufficient area on its flat top surface to afford a reliable support for one or both feet of the user of the foot-supporting device.

At the transverse center and near the forward end of the rest-plate 7 an arm 8, that is wedge-shaped at and near its upper end, is formed or secured thereon, said arm passing down between the jaw-plates 5^c and extending below the lower edges of said jaw-plates, so that its wedge-shaped upper portion 8^a may be drawn down between said plates at their rounded upper edges. Upon the lower portion of the arm 8 the forked upper end 9^a of a cam-lever 9 is pivoted, the spaced members 9^a receiving this portion of the arm 8 between them.

The ovate curvature of the edges of the fork members 9^a and the relative position of the transverse pivot-bolt 9^b, that connects the cam-lever therewith, is such that when the lever is disposed in or near a horizontal plane, as indicated by dotted lines in Fig. 2, the foot-rest plate 7 will be capable of receiving upward movement, so that the clamping-arms 5^a 5^b will be free to rock apart at their ends, carrying the prongs *b*, ready for engagement with a stable object whereon these arms are to be detachably secured.

In Fig. 1 of the drawings, that represents the improvement in position for service, the portion of a book-shelf A is shown as connected at one end upon one side of a vertical wall or partition B, and to facilitate an attachment of the novel foot step and support upon the latter a rounded bead B' is secured upon the outer edge of the partition or upright wall whereon the shelves are supported at their ends.

To attach the improved foot-support upon the partition B, the cam-lever 9 is rocked into the position indicated by dotted lines in Fig. 2, so that the free ends of the clamping-arms 5^a 5^b may be spread apart sufficiently to permit them to be passed over the bead B' and loosely embrace the partition B.

It will be seen that if the cam-lever 9 is rocked downward the pressure of the cam-shaped edges of the members 9^a upon the jaw-plates 5^c at the lower edges thereof will draw the arm 8 downward, thus forcing the wedge-shaped upper portion 8^a of the depending arm 8 into contact with the jaw-plates 5^c, which will rock the free members of the paired clamping-arms 5^a 5^b toward the shelf B at its opposite sides, embedding the prongs *b* therein and at the same time clamping these arms

upon the bead B', that occupies the concavities or indents *a* in the pairs of clamping-arms, as clearly shown in Fig. 1.

It will be evident that the improvement may be readily applied and removed and be conveniently changed from one upright partition of a book-shelf tier or case to another or be raised and lowered, as occasion may require, and, furthermore, that when in clamped adjustment at a desired point on a stable partition B the foot-rest plate 7 will afford a very convenient step or foot-support whereon a person may readily mount, as upon a step, and thus be enabled to reach books on shelves that are not accessible from the floor of the room or library.

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

1. A step for reaching high shelves, comprising a supported foot-rest plate, and means for adjustably securing said foot-rest plate upon an upright wall forming the support for the shelves, comprising two spaced clamps that are parts of the rest-plate support, a wedge-shaped member extending down between the clamps, and a pivoted cam-lever engaging the clamps and adapted by its downward rocking movement to pull upon the wedge-shaped member and close the jaws of said clamps in engagement with the edge portion of the upright wall.

2. A step for reaching high shelves, comprising two bracket-frames having clamping-arms held in pairs to rock toward and from each other, a foot-rest plate held to rock on connections for one pair of said clamping-arms, a wedge-like arm depending from the foot-rest plate between the bracket-frames, and by depression pressing the clamping ends of the clamping-arms toward each other, and means for depressing the wedge-shaped arm.

3. A step for reaching high shelves, comprising two bracket-frames having clamping-arms, means for hinging opposite pairs of said arms together, and for spacing them apart so that the free ends of said arms may rock toward and from each other, prongs on the opposed faces of the clamping-arms near their free ends, a foot-rest plate held to rock upon the clamping-arms, and means actuated by the foot-rest plate, adapted to press the ends of the clamping-arms having the prongs thereon, toward each other in pairs.

4. A step for reaching high shelves, comprising two bracket-frames, each having two spaced clamping-arms thereon, means for hinging the clamping-arms together and spacing them apart, opposed indents in the clamping-arms near their free ends, opposed prongs on said arms near said ends, a foot-rest plate hinged at one end upon the hinged connection for one pair of said clamping-arms, spaced jaw-plates on the bracket-frames projected

opposite the upper pair of clamping-arms, a
depending arm, wedge-shaped near its upper
end that joins the foot-rest plate and extends
between the jaw-plates, and a pivoted, forked
5 lever having cam-shaped edges on its forked
end and adapted to pull upon the pendent
wedge-shaped arm.

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

TIMOTHY S. MARTIN.

Witnesses:

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