

G. B. GARDNER & A. H. HIGGINS.

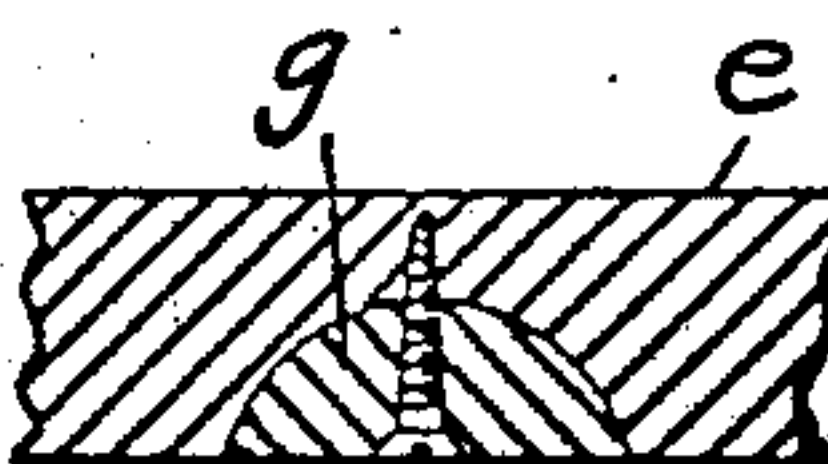
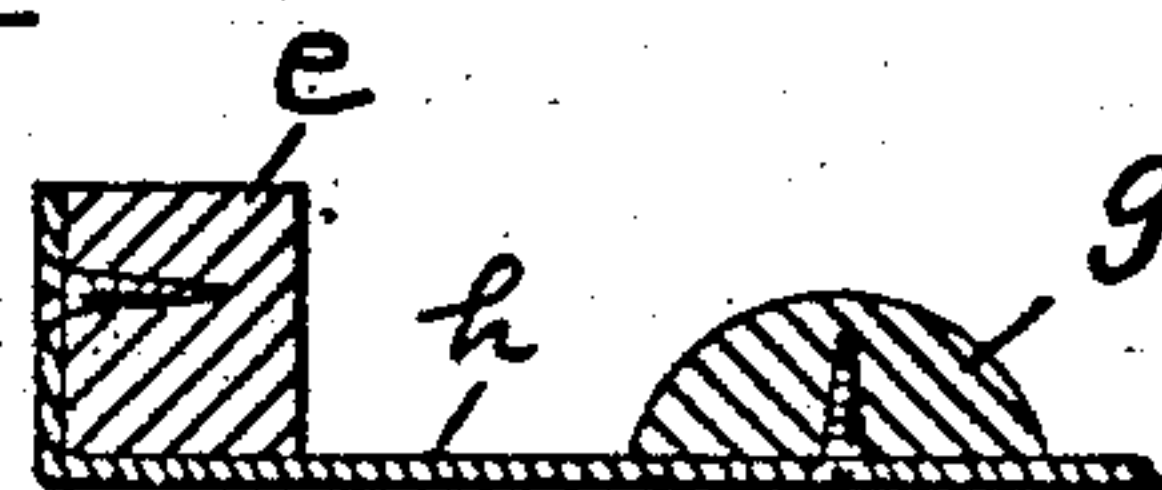
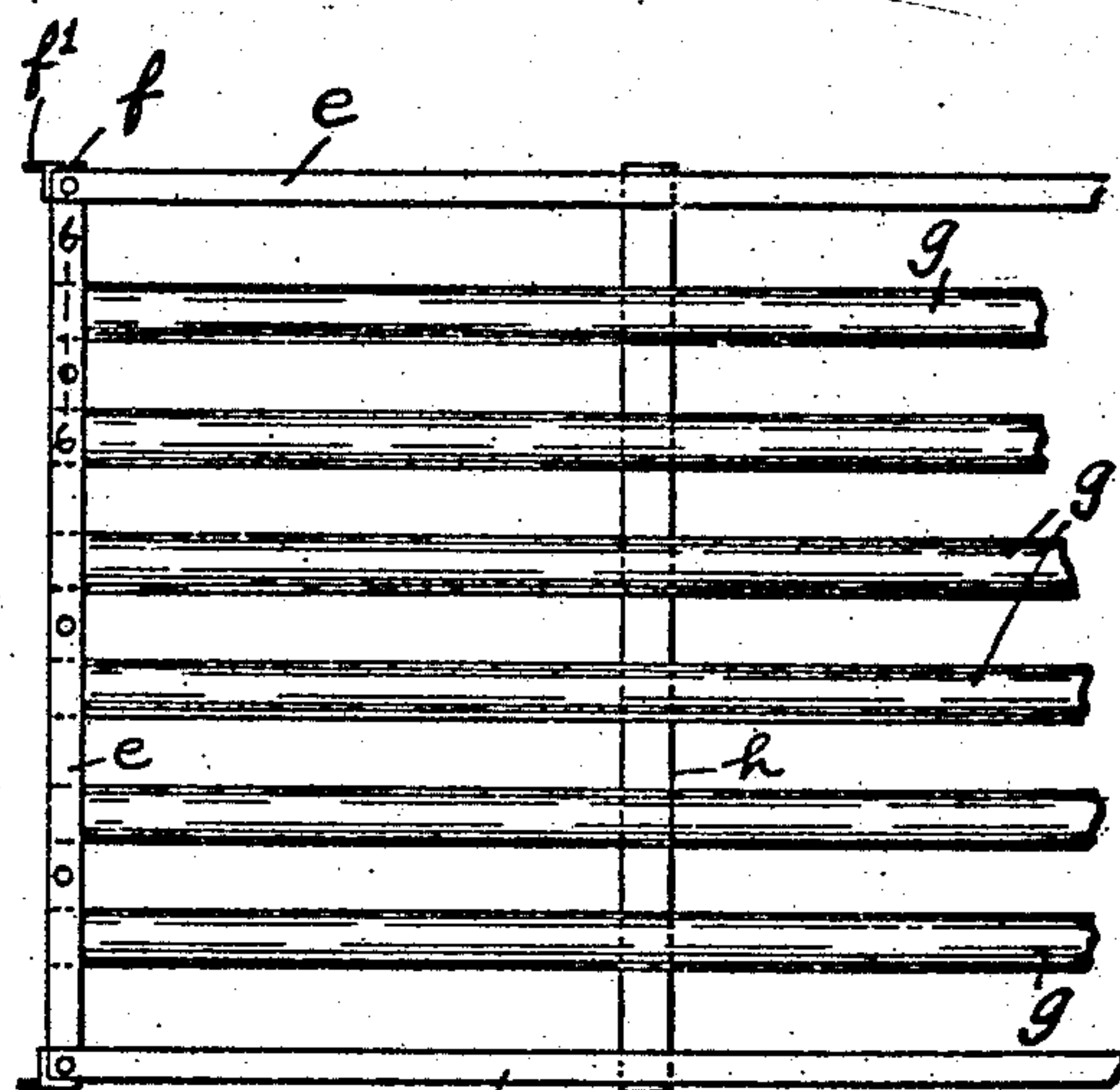
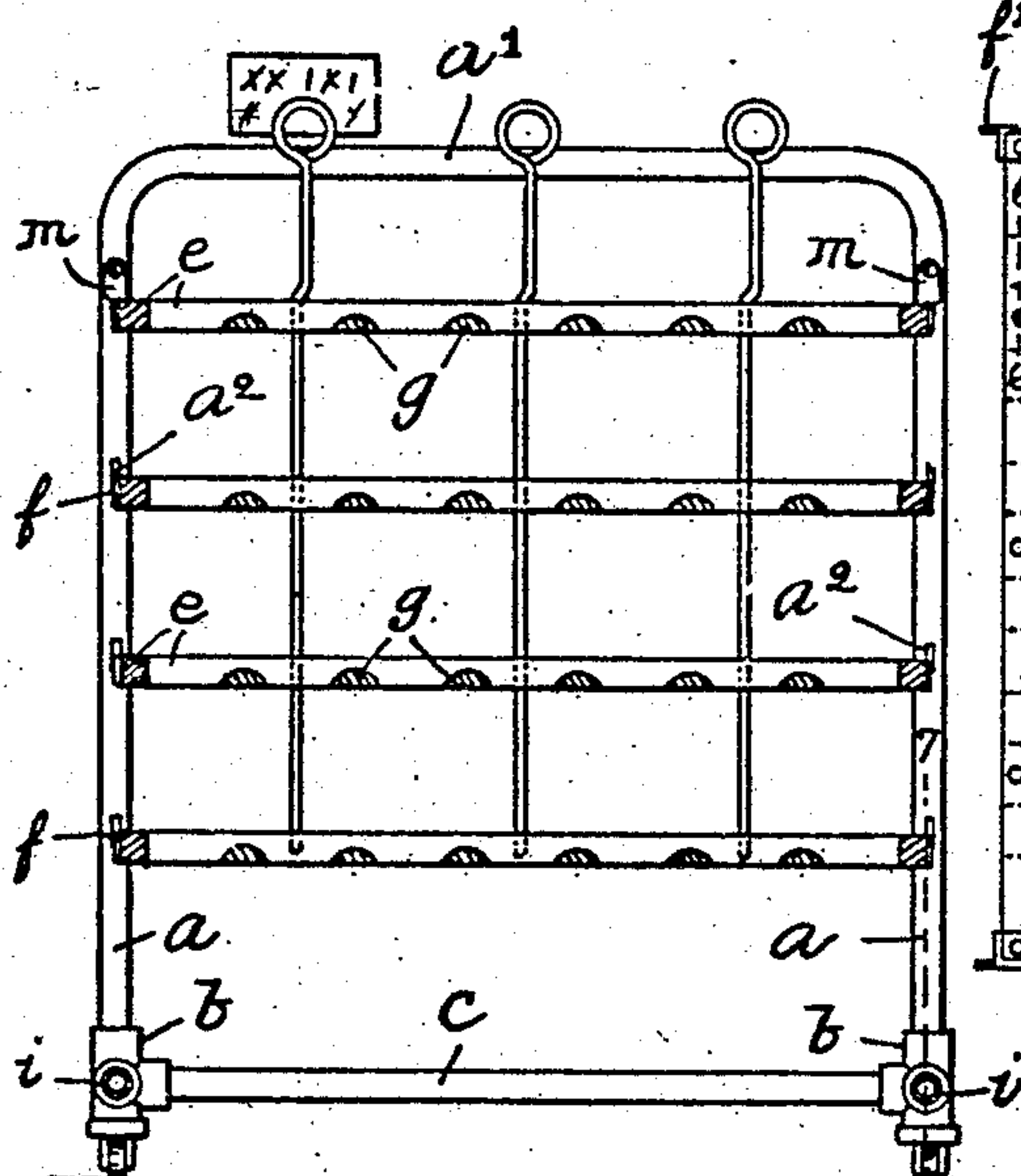
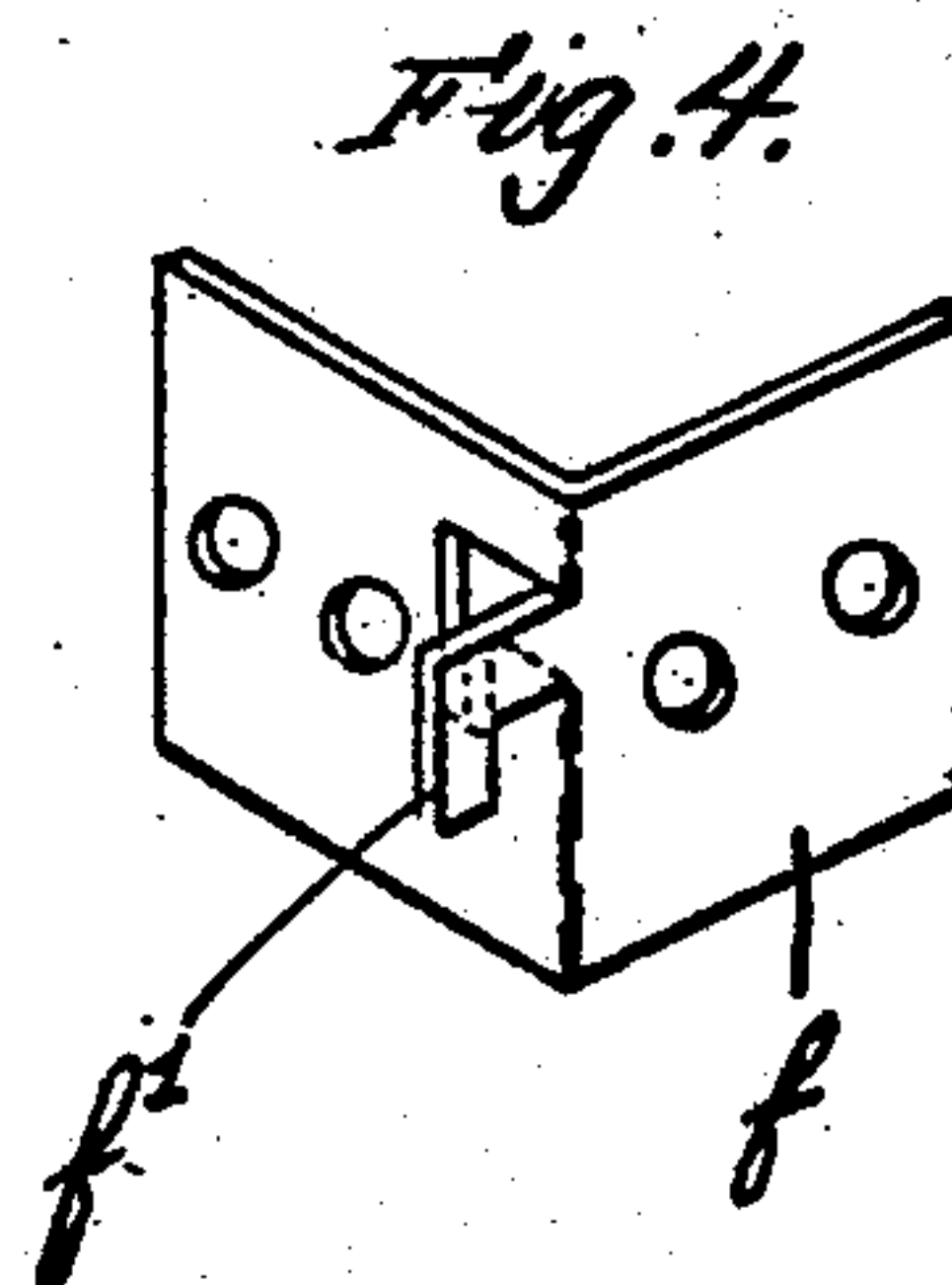
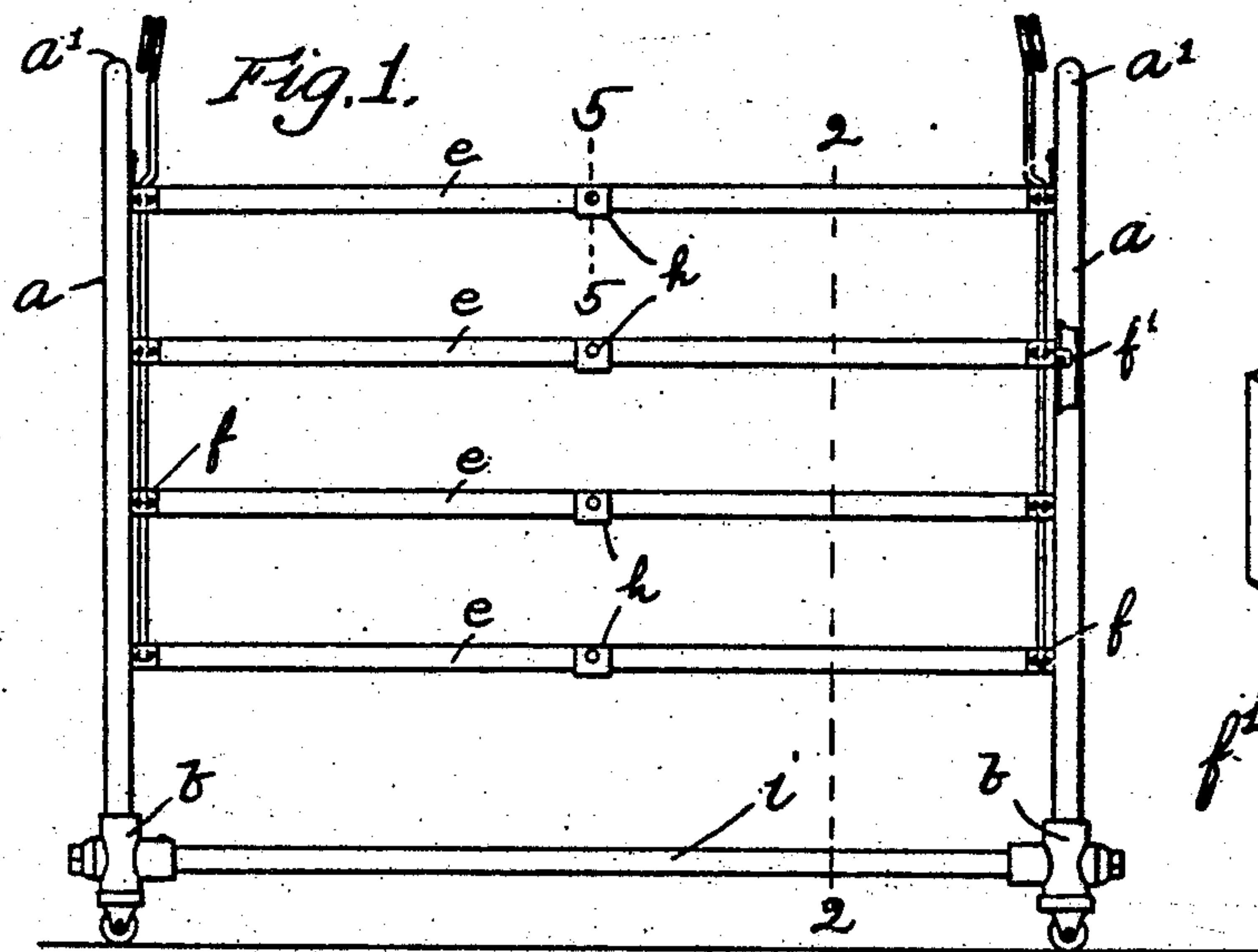
SHOE RACK.

APPLICATION FILED JAN. 14, 1908.

899,249.

Patented Sept. 22, 1908.

2 SHEETS—SHEET 1.



Witnesses:
H. B. Davis.
Cynthia Doyle

Inventors:
Geo. B. Gardner and
Albert H. Higgins
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Atty.

G. B. GARDNER & A. H. HIGGINS.
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2 SHEETS-SHEET 2.

Fig. 7.

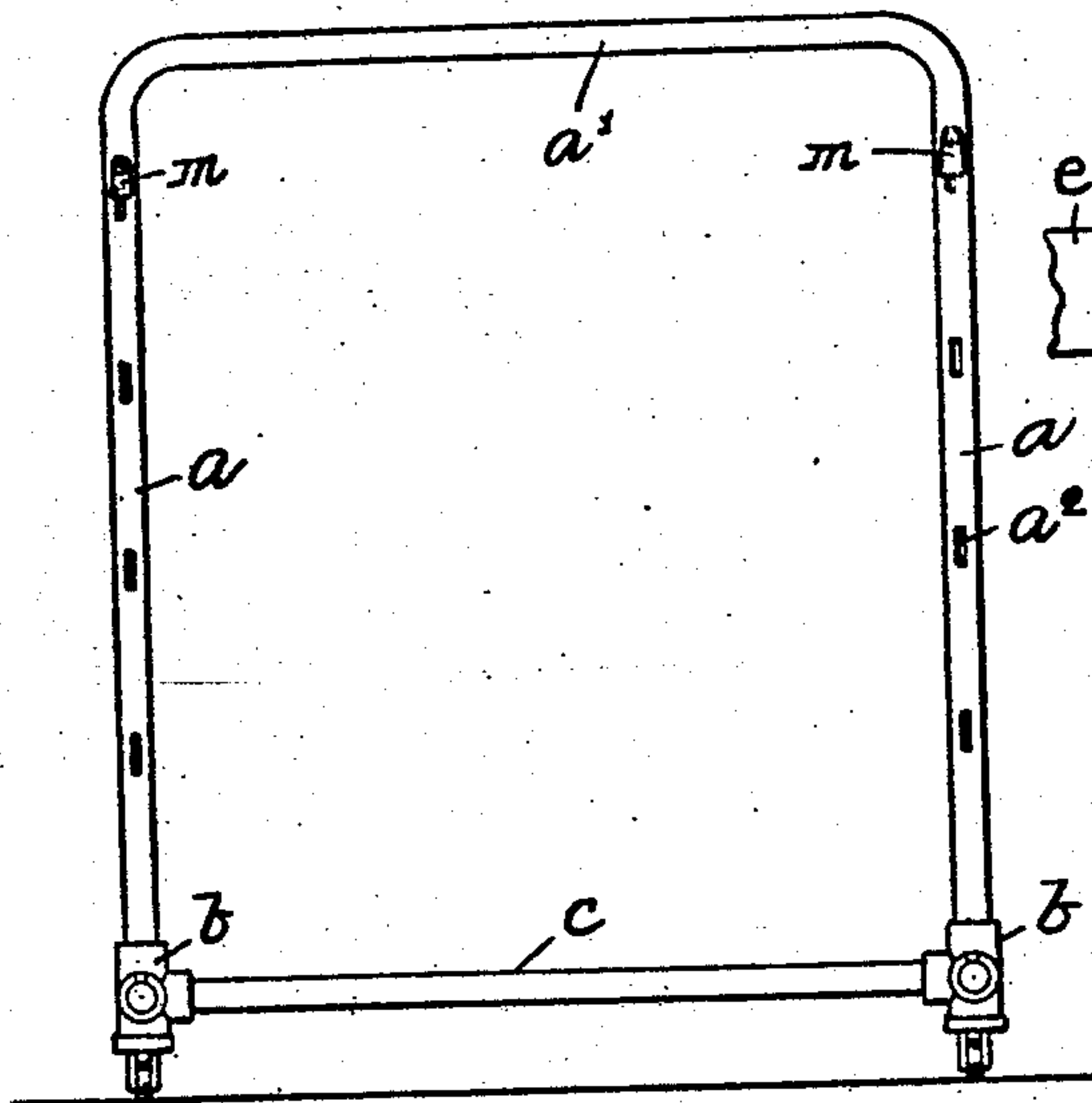


Fig. 10.

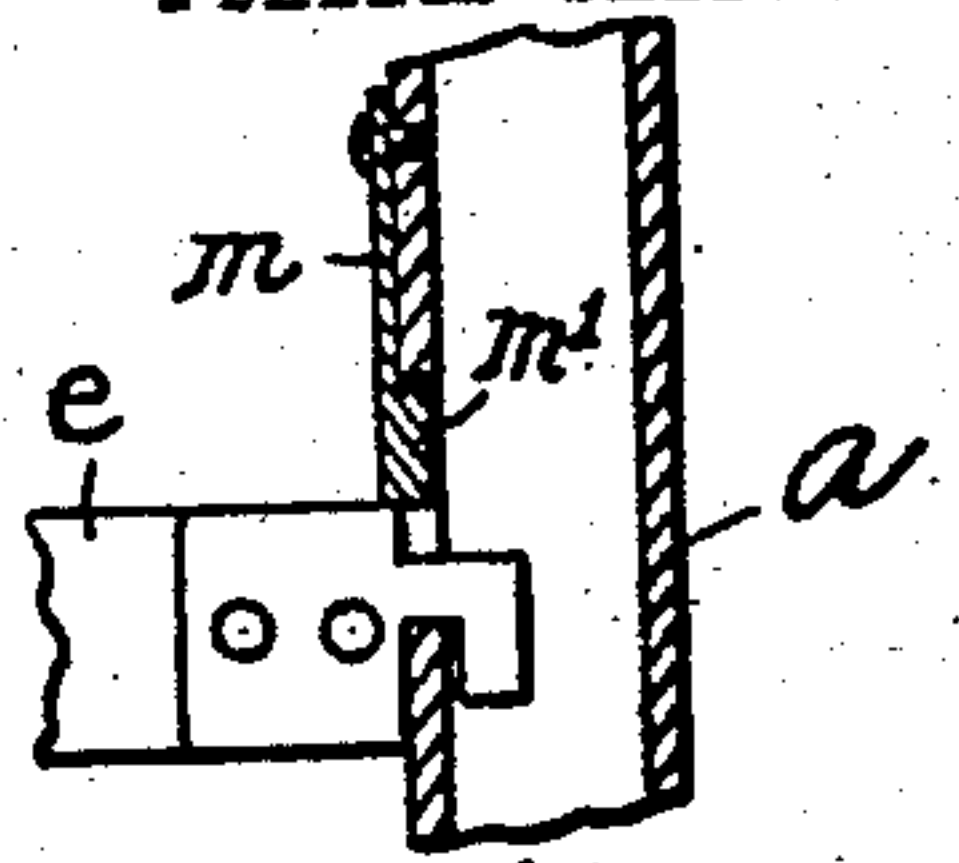


Fig. 11.

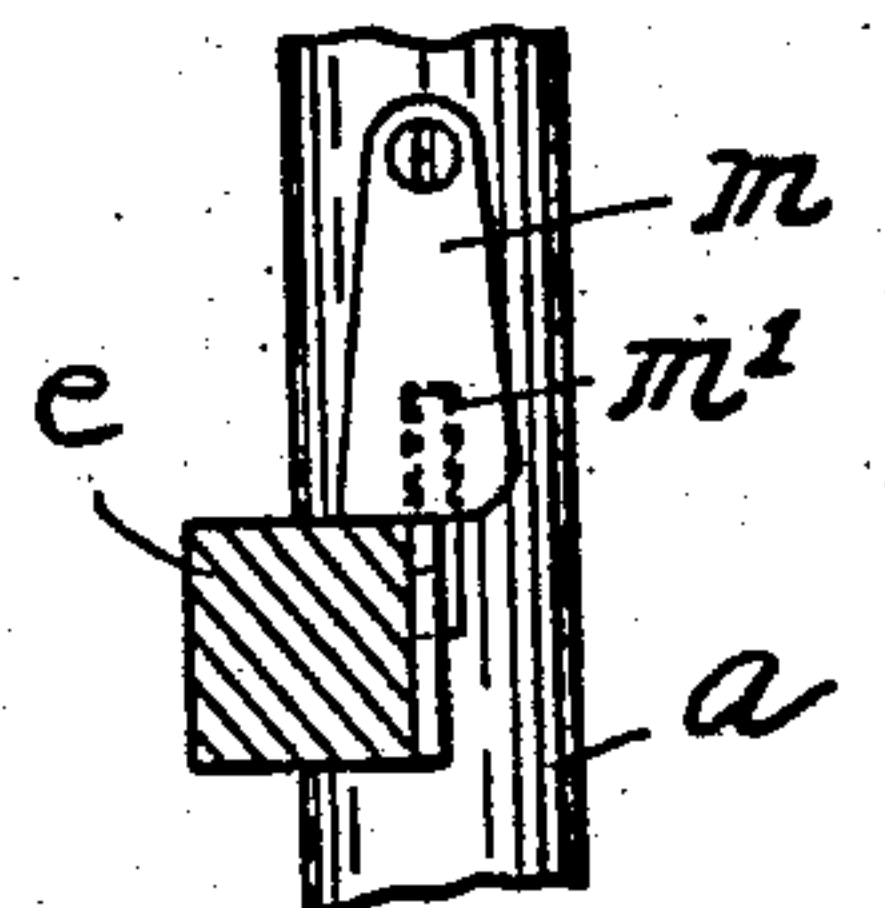
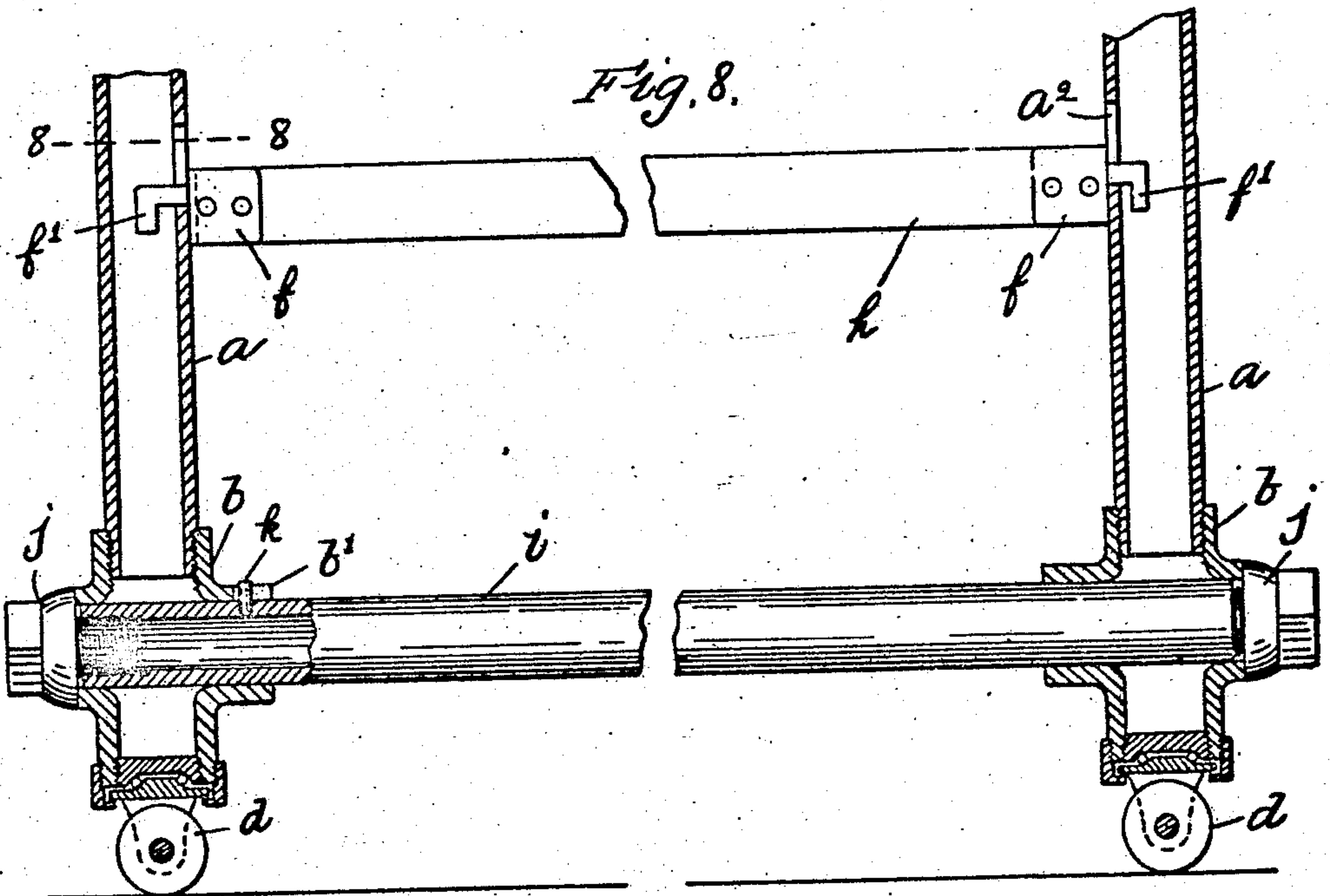


Fig. 8.



Witnesses:

H. B. Davis.
Cynthia Doyle.

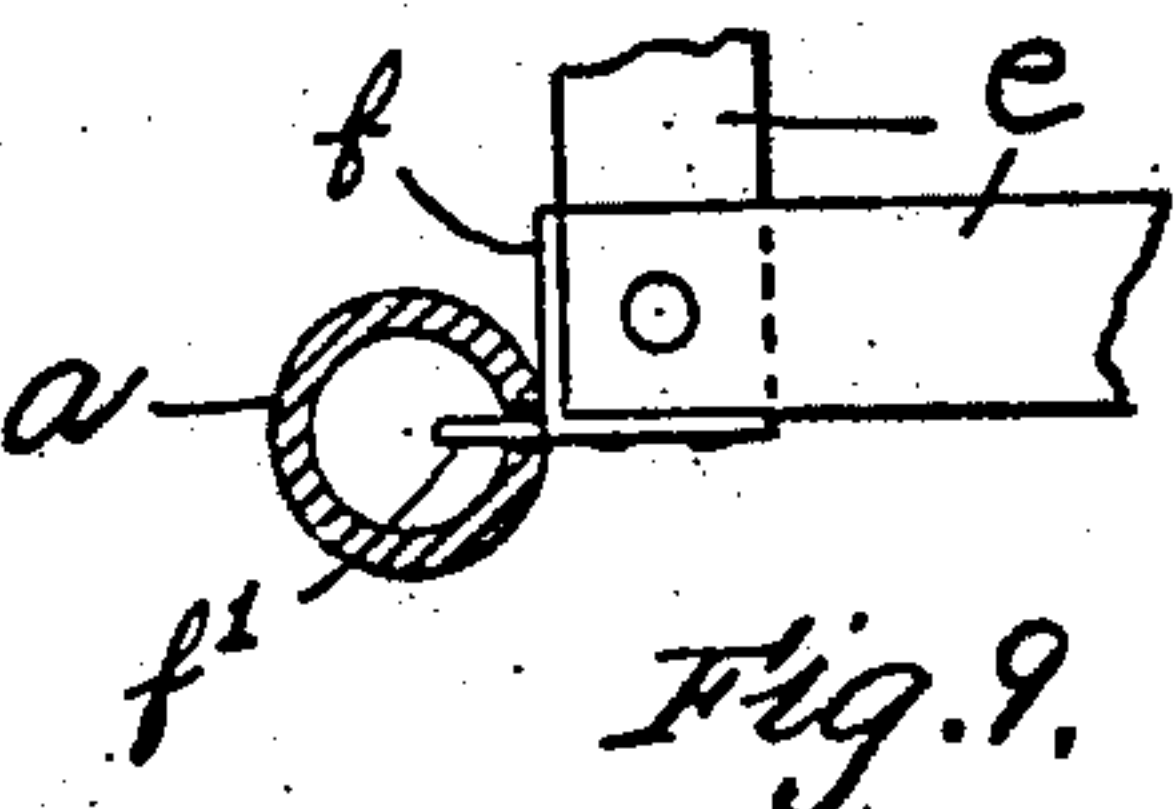


Fig. 9.

Inventors.

Geo. B. Gardner and
Albert H. Higgins
By Roy H. Bennett
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UNITED STATES PATENT OFFICE.

GEORGE B. GARDNER AND ALBERT H. HIGGINS, OF HAVERHILL, MASSACHUSETTS.

SHOE-RACK.

No. 899,249.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed January 14, 1908. Serial No. 410,756.

To all whom it may concern:

Be it known that we, GEORGE B. GARDNER and ALBERT H. HIGGINS, both of Haverhill, county of Essex, State of Massachusetts, have invented an Improvement in Shoe-Racks, of which the following is a specification.

This invention relates to certain improvements in racks which are especially designed to hold shoes in shoe factories. As these racks are bulky it is desirable to have them so constructed that they may be readily taken apart and packed in a comparatively small space, when not in use, and furthermore, as they are usually subjected to severe usage, a rack having greater durability than the ordinary wooden rack is desirable.

The principal objects of our invention are to provide a shoe rack which may be readily knocked down, so that it may be stored in a comparatively small space and in which all the parts are interchangeable, and also, to provide a rack which is durable and rigid, without being excessively heavy and expensive to manufacture.

For an understanding of our invention reference is made to the accompanying drawing, in which,

Figure 1 is a side elevation of a shoe rack made according to our invention. Fig. 2 is a cross section on line 2—2 of Fig. 1. Fig. 3 is a plan view of one of the trays. Fig. 4 is a detail perspective view of one of the corner irons. Fig. 5 is an enlarged detail sectional view on the line 5—5 of Fig. 1. Fig. 6 is an enlarged detail sectional view on line 6—6 of Fig. 3. Fig. 7 is a detail view of one of the end sections. Fig. 8 is an enlarged sectional view on line 7—7 of Fig. 2. Fig. 9 is a detail sectional view on the line 8—8 of Fig. 7. Figs. 10 and 11 are detail views of a locking means which is preferably employed.

As shown in the drawing, the device comprises two end sections, each of which are preferably constructed of iron tubing and comprise a pair of upright side rods *a*, which are respectively mounted at their lower ends in socket pieces *b*, connected by a cross-rod *a'* at their upper ends, said socket-pieces being also connected by a lower cross-rod *c*, the whole forming a rigid frame. Casters *d* are mounted in the lower ends of the socket pieces *b*, as shown, said casters being, so far as the present invention is concerned, of ordinary form. The upright side rods *a* of each end section are each provided with slots *a²* in

the middle and at the inner side thereof, said slots extending into the interior of the tube. A series of trays are provided, each tray comprising a rectangular frame *e*, the corners of which are reinforced by rigid angle plates *f* which are secured to the outer sides thereof. These angle plates are stamped from sheet metal and during, or as a part of this operation a hook-shaped tongue *f'* is cut out of one of the angle portions of the plate which is bent out in line with the other portion thereof. The hooks thus formed are adapted to enter the slots *a²* and engage the inner side of the tubes, so that the trays may be supported in said end sections.

Parallel supporting bars *g* are provided, which are shown as extending longitudinally of the trays, and connected to the under sides of the end portions of the frames thereof, by means of screws, so that each may be readily removed if broken, and a new one put in its place. Said bars are half round and seated in recesses formed in the under side of the frame, as shown in Fig. 6. As the bars *g* are of considerable length when extended longitudinally of the trays, and as shoe racks are often moved about by pulling or pushing on the trays at the middle of the sides thereof, we provide a rigid metal brace bar *h* which is extended across the tray at the middle thereof, and beneath the bars *g*, the ends of said bar *h* being upturned and secured to the sides of the frame *e*, as shown in Fig. 5.

The above construction is employed if the shoes are to be supported sole down on the rack, but in case they are to be supported sole up the bars *g* should extend crosswise of the trays.

A connecting side bar *i* is provided at each side of the rack, which is adapted to pass through one of the sockets *b* at each end, said bars *i* being internally threaded at each end to receive screw caps *j*, each of which is adapted to engage one end of the socket piece with which it is associated, to clamp the end sections together. Said side-bars *i* are each provided with a pin *k* which is adapted to enter a slot *b'* in one of the sockets *b* to hold the bar from turning.

In practice, in assembling the rack the bars *i* are first secured at one end in one of the end sections, the section is laid flat and the hooks *f'* are inserted in the slots *a²* while the trays are in a vertical position. The other section is then placed on the other ends

of the bars *c'* and the hooks at the opposite ends of the tray are inserted, and then the clamping plugs *j* are screwed in place, clamping the end sections firmly against the ends of the trays.

The hooks *f'* are made somewhat longer than the thickness of the tubes, so that there is sufficient lost motion to permit them to be easily arranged in place.

As the side bars *i* are below the trays, there is some tendency for the end sections to spring apart at their upper ends, so that, if the rack should be overturned, some of the trays might become partly disengaged from the end sections. For this reason a locking means for the upper rack is preferably provided, which will hold the tongues thereof against the bottoms of the slots or sockets in which they are inserted.

As shown in detail in Figs. 10 and 11, a button *m* is pivoted at the upper end to each upright *a* in such position that the lower end of each engages the upper edge of the corresponding angle plate *f*. Said buttons are made of spring metal and each are provided with a projection *m'* which is adapted to enter the slot *a²* above the tongue to hold them in place. It will be apparent that when said buttons are in position, it will be impossible for any of the hooks *f'* of the upper tray to become disengaged from the end sections, so that said tray will be firmly held in position under all conditions. As the hooks *f'* on the upper tray will prevent the end sections from springing apart, it will also be impossible for the lower trays to become disengaged so that the whole rack will be rigidly locked together.

In order to prevent the shoes from falling off at either end of the rack a series of wires *o*

are provided which are passed down through the end portions of the frames of the trays, said wires being preferably supported by forming a bend therein near their upper ends and at their extreme ends a coil is formed therein which may be employed as a tag holder.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A shoe rack comprising a pair of oppositely disposed end sections each having a corresponding series of pairs of sockets in the adjacent sides thereof, a series of trays each comprising a rectangular frame having a series of right-angular, sheet-metal plates, each plate extending about a corner of the frame and having one portion connected to a side and the other to an end thereof and provided at its middle portion with an integral tongue extending longitudinally of the tray beyond the end thereof in position to be received by a corresponding socket of said end sections, substantially as described.

2. A shoe rack comprising a pair of oppositely disposed end sections, a series of trays removably connected to said end sections and a series of vertical rods extending through the end portions of said trays and removably mounted therein, substantially as described.

In testimony whereof, we have signed our names to this specification, in the presence of two subscribing witnesses.

GEORGE B. GARDNER.
ALBERT H. HIGGINS.

Witnesses:

L. H. HARRIMAN,
H. B. DAVIS.