

E. J. PRIME.
SHOE RACK.

APPLICATION FILED MAR. 19, 1909.

Patented Oct. 17, 1911.

1,006,127.

3 SHEETS-SHEET 1.

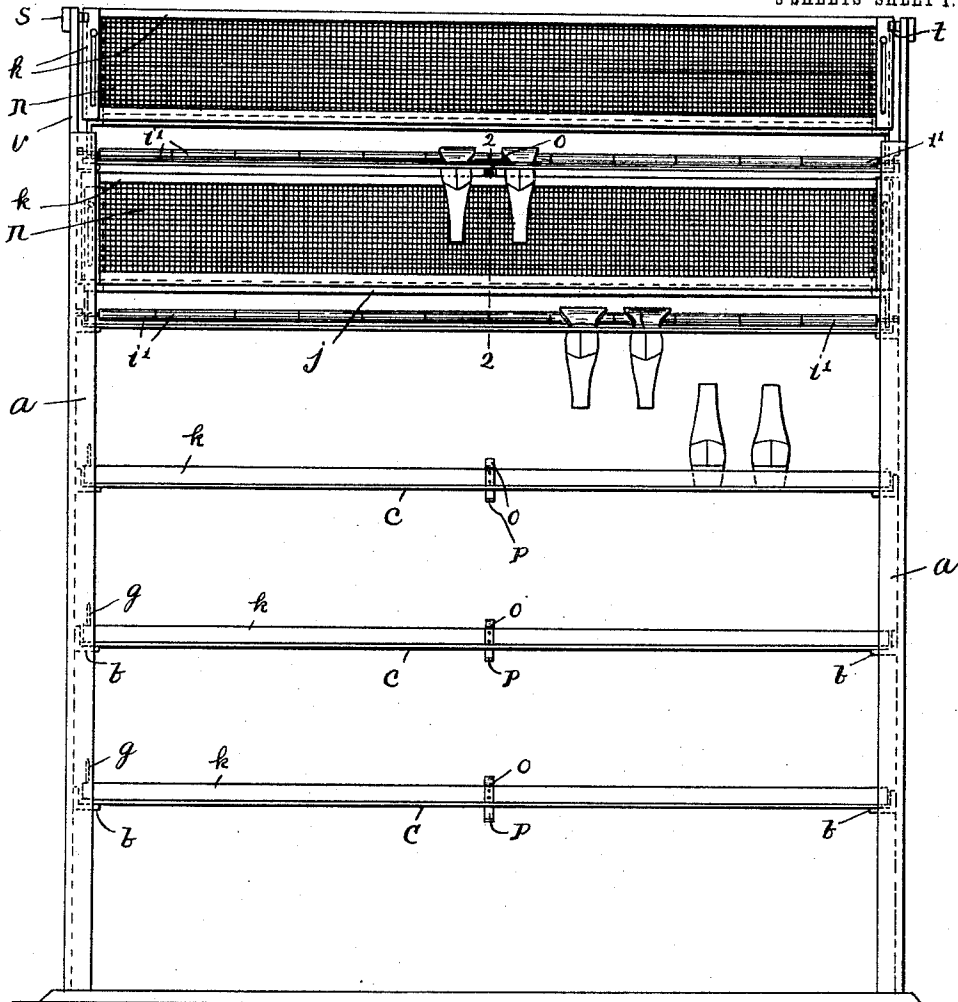


Fig. 1.

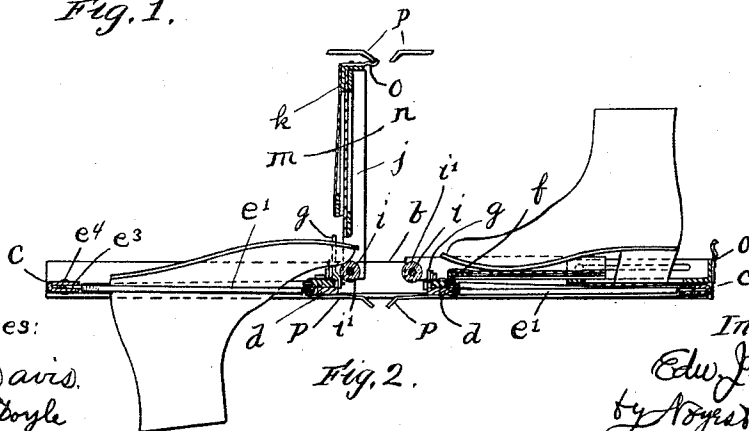


Fig. 2.

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3 SHEETS—SHEET 2.

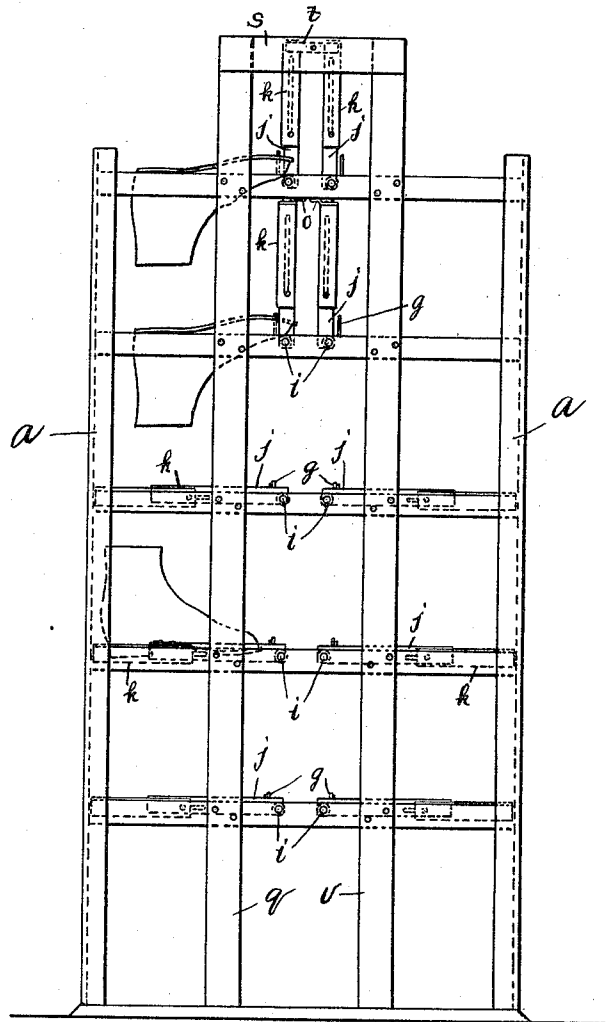


Fig. 3.

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3 SHEETS-SHEET 3.

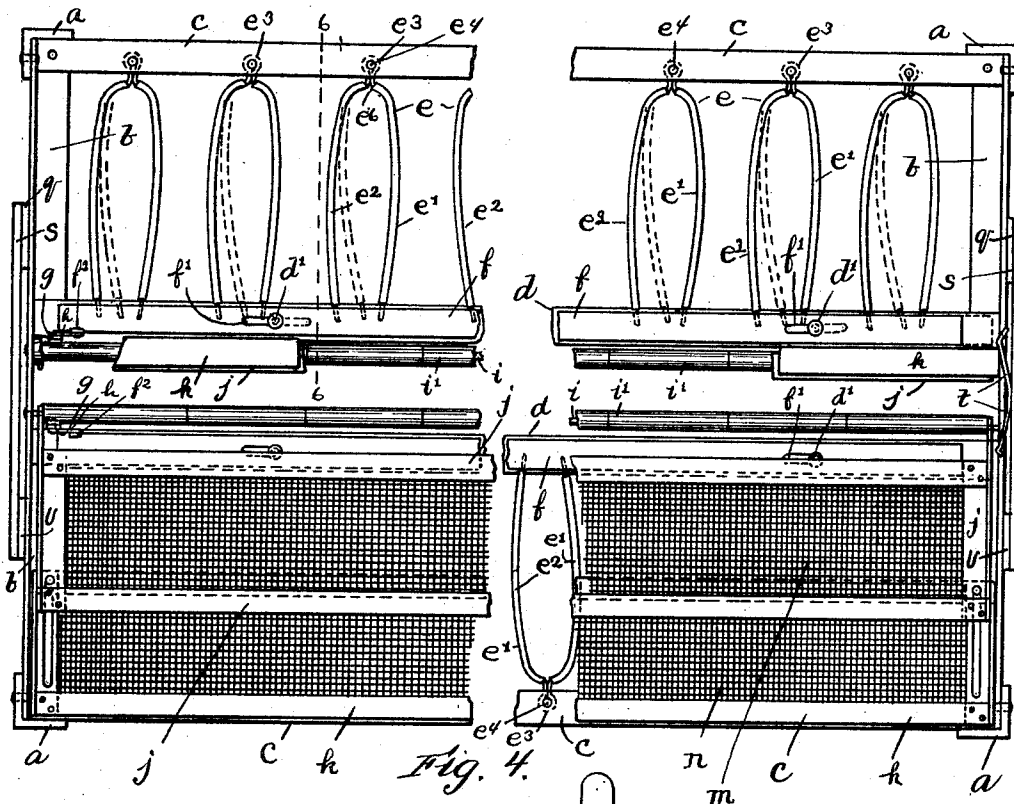


Fig. 4.

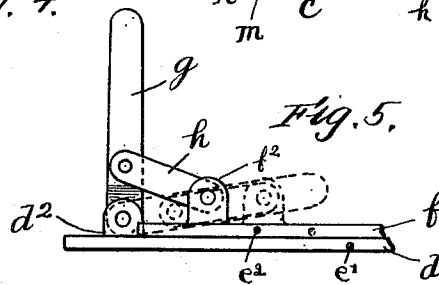


Fig. 5.

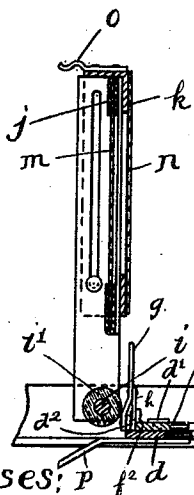


Fig. 6.

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UNITED STATES PATENT OFFICE.

EDWARD J. PRIME, OF GROVELAND, MASSACHUSETTS.

SHOE-RACK.

1,006,127.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed March 19, 1909. Serial No. 484,522.

To all whom it may concern:

Be it known that I, EDWARD J. PRIME, of Groveland, 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 shoe racks or racks which are used in shoe factories to support the shoes while they are being conveyed from one operator or department to another.

In practice, it is frequently desirable to place a certain lot of shoes on a certain rack, as soon as they are lasted, and keep them on the same rack, except as they are separately removed to be operated upon, until they are finally finished. During the earlier stages of the operation it is desirable to support the shoes with the sole up, and in the later stages of the operation it is desirable to support the shoes in the normal position or with the sole down, and as shoe racks of the kind most generally employed are provided with a series of pins or dowels between which the shoes may be suspended sole up, it is necessary to place cardboard or some other suitably stiff substance which may be conveniently employed, upon the pins or dowels, so that the shoes may be supported in upright position when they are nearly finished.

It is frequently desirable to place shoes of widely varying sizes on the same rack, but, this is impractical, as series of pins or dowels which are suitable to support shoes of one kind, for example men's shoes, are not suitable to support shoes of another kind, for example women's or children's shoes.

The object of my invention is to provide a shoe rack which may be conveniently adapted to support shoes of different kinds, and further, which may also be readily adapted to support shoes in either the inverted or upright position.

I accomplish these objects by the means shown in the accompanying drawings, in which,

Figure 1 is a side elevation of a shoe rack made according to my invention. Fig. 2 is a detail cross sectional view, taken at the line 2—2 of Fig. 1. Fig. 3 is an end view. Fig. 4 is a plan view of one of the trays on an enlarged scale, the middle portion thereof being shown as broken away. Fig. 5 is an enlarged detail view of a portion of one

of the trays. Fig. 6 is an enlarged sectional view at the line 6—6 of Fig. 4.

As shown in the drawing, the rack is composed of a frame of angle-iron, comprising four uprights *a* which are connected together by means of a series of rectangular trays, the corners of which are set into and are secured in the corners of the uprights *a*, as best shown in Fig. 4. Each tray comprises a rectangular frame, composed of angle-irons *b* at its ends, connected by flat metal side bars *c*, and a pair of intermediate bars *d*, each tray being made double, so that each half is identical with the other. A series of pairs of supports *e* are provided, which are adapted to hold shoes in the inverted position, each of which comprises a stiff, but flexible, and resilient wire, bent in U-shaped form, to provide two side members *e'* and *e''*, each member *e'* being connected at its end to one of the longitudinal bars *d*, and each member *e''* being connected at its ends to a bar *f*, one of which is mounted to slide longitudinally on each bar *d*, pins *d'* being mounted in each bar *d* which pass through slots *f'* in the bars *f*. The intermediate portion of each wire *e* is provided with an eye *e''*, which is connected by a rivet *e''* and a clip *e''*, or other suitable means, to a side bar *c*, the portions of the wire adjacent said bar being bent close together, and then divergently, so that a practically continuous U-shaped end portion is provided. Said wires are, in practice, preferably covered with canvas tubing *e''*. A lever *g* is pivoted on an ear *d''*, mounted on each bar *d* closely adjacent one end, and a link *h* is pivoted to each lever *g*, at its middle portion, and to a lug *f''* on each bar *f*, see Fig. 5, so that, by pushing said lever *g* forwardly, the bar *f*, which is connected thereto, may be moved longitudinally on its supporting bar *d*, and when these parts are moved so that the pivot of the lever and the pivots of the link are all in alinement, as indicated in the dotted position of Fig. 5, the bar *f* will be locked against return movement. Movement of the bar *f*, as above described, causes a corresponding swinging movement of the members *e''*, so that said members *e''* will be swung toward and from the members *e'*, thereby varying the width of the spaces between each pair of members, the members *e''* being moved from the full line position to the dotted line position of

Fig. 4, when the lever *g* is thrown forwardly to the dotted position of Fig. 5, and being moved back to the full line position of Fig. 4, when the lever is raised to the full line position of Fig. 5, the wires having sufficient spring tension to move the parts to the full line position of Fig. 4.

A rod *i* extends parallel to, and closely adjacent each bar *f* and is mounted at its ends in the corresponding end irons *b*. Said rods are covered with a series of sections of canvas tubing *i'*, and are adapted to provide a rest for the tip of the shoe when supported between a pair of members *e'*, *e''*, as shown in Fig. 3. Said rods *i* each provide a pivot for a frame *j*, which extends practically the entire length of the trays, in position to rest on the corresponding tray directly beneath it, and an extension frame *k* is slidably mounted on each frame *j* and connected thereto by a pin and slot connection, as indicated in Fig. 4, the combined width of said frames being sufficient to permit the outer edge of the frame *k* to be held flush with the outer edge of the tray above which it is placed when drawn out to the fullest extent. The frames *j* and *k* are each covered with a stiff wire netting *m*, *n*, to provide a convenient support for the shoe when placed sole down thereon.

Each outer section *k* is adapted to slide beneath its corresponding section *j* for its entire width, and, when moved to this position, the two sections may be swung to a vertical position beneath the tray above, in which position they may be secured by a spring arm *o*, which is adapted to engage a projection *p* on the under side of the tray above, as indicated in Figs. 2, 3 and 6.

To provide a means for supporting the frames *j*, *k* which are above the upper trays, and to strengthen the main frame and provide additional support for the trays, I preferably provide a pair of upright metal strips *q*, *v* at each end of the rack, spaced equally with relation to the uprights *a*, and connected at their upper ends by a cross bar *s*. Each strip *q* and *v* is connected to the end irons *b* of the trays, all as shown in Fig. 3. The inner side of one of the cross bars *s* is provided with a double spring catch *t*, see Fig. 4, which is adapted to hold the upper frames *j* and *k* in upright position, as shown in Figs. 1 and 2.

The manner in which the above described device is employed may be described as follows: When the rack is first used for a lot of shoes, the sliding sections *k*, which I may term the supplemental trays, are pushed back under the sections *j* and then both are swung up to an upright position, as shown with relation to the two upper trays in Figs. 1 and 3, the wire supports *e* being thus uncovered, so that shoes may be conveniently placed therein bottom up. If some of the

shoes are large, that is, for example, men's sizes, it will be necessary to move the lever *g* to the full line position of Fig. 5, in which position the members *e'*, *e''* of each series will be simultaneously moved apart, as far as possible, or to the full line position of Fig. 4. If some, or all the supports are to be used for small shoes, the supports *e''* will be moved to the dotted line position of Fig. 4. In either position of adjustment the members *e'*, *e''* will provide a support for a shoe on which the shoe may conveniently be placed in the inverted position and from which it may be readily removed, without injury thereto. When the shoes have been bottomed, so that they may be more conveniently placed bottom down, the supplemental trays will be swung down onto the main trays and the sections *k* being drawn out, as indicated with relation to the lower trays of Figs. 1 and 3. When the shoes are placed thereon, the heels will rest on the netting of the outer sections *k*, and the soles on the netting of the inner sections *j*, the edge of the latter preventing the shoe from being pushed over too far.

If desired, strips of paper may be easily placed on the netting to prevent possible marring of the soles. By having the supplemental trays extensible the main trays may be located at the desired vertical distance from each other, and yet the supplemental trays may be adjusted either to cover the main trays or to be raised, out of the way, to a vertical position therebetween.

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

1. A shoe rack comprising a series of pairs of shoe supports spaced apart to hold a shoe therebetween, and means for simultaneously moving one support of each pair to vary the width of the spaces between the supports of each pair, substantially as described.

2. A shoe rack comprising a series of pairs of shoe supports, an operating device connected to one support of each pair for moving the same transversely to and from its corresponding support, substantially as described.

3. A shoe rack comprising a frame having a series of pairs of shoe supports mounted on said frame at one end and an operating device connected to the opposite end of one of the supports of each pair for simultaneously swinging the same toward and from their corresponding supports to vary the width of the space therebetween, substantially as described.

4. A shoe rack comprising a frame having a series of pairs of shoe supports mounted therein, one of the supports of each pair being flexible and being connected to said frame at one end thereof, and an operating device connected to the opposite ends thereof

for simultaneously swinging their corresponding supports, substantially as described.

5 5. A shoe rack having a series of pairs of shoe supports, a longitudinally movable adjusting bar extending transversely of said supports adjacent corresponding ends thereof, and having corresponding supports of each pair connected thereto, said connected
10 supports being constructed to permit simultaneous transverse adjustment thereof when said bar is moved to vary the width of the spaces between said supports, substantially as described.

15 6. A shoe rack comprising a series of pairs of shoe supports having corresponding supports of each pair of resilient material and adapted to be swung toward and from the other supports, an operating device for
20 simultaneously swinging said resilient supports in one direction, and means for locking the same in the position to which they are moved, said operating device being movable to its initial position by said resilient supports when said locking means is released,
25 substantially as described.

7. A shoe rack comprising a series of main trays, a two section supplemental tray adapted to cover each main tray, the parts of said
30 supplemental trays being movable one on the other to permit them to be held in upright position between said main trays, substantially as described.

35 8. A shoe rack comprising a series of main trays, a corresponding series of supplemental trays each composed of two sections slidable one on the other, one section being pivotally

mounted in the rear of one of said main trays to permit the supplemental tray to be swung to an upright position, substantially as described. 40

9. A shoe rack comprising a main tray and an extensible supplemental tray connected thereto remote from the front edge thereof and adapted to be extended to cover
45 said main tray, substantially as described.

10. A shoe rack comprising a series of main trays having transverse supports spaced apart to hold shoes therebetween in inverted position, and a series of supplemental trays pivotally mounted thereon and adapted, in certain positions thereof, to rest on the main trays to cover the same, and said supplemental trays each comprising a frame and a wire netting supported thereby
50 for holding the shoes in upright positions, substantially as described. 55

11. A shoe rack comprising a series of main trays having a double series of transverse supports spaced apart to hold shoes
60 therebetween in inverted position, and a series of pairs of supplemental trays pivotally mounted on the main trays adjacent the middle thereof and adapted to rest thereon to cover the same, and to be swung to upright positions above their pivots to uncover
65 said main trays, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

EDWARD J. PRIME.

Witnesses:

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