WILLIAM H. PRUDEN & JOHN P. BENJAMIN.

Shoe-Fitting Machines.

No. 128,065. Patented June 18, 1872.

Fig. 1.

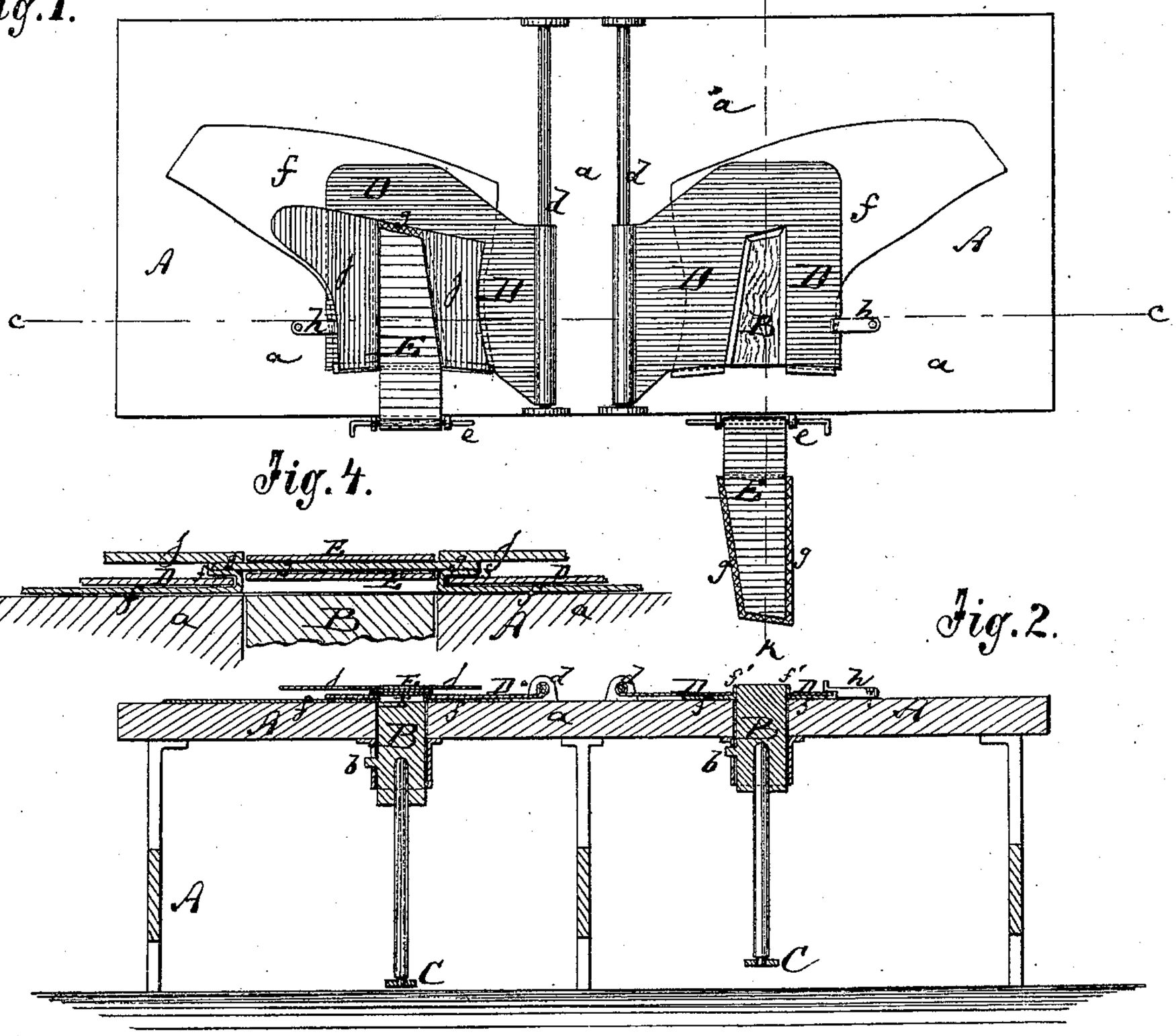


Fig. 4.

Fig. 2.

Fig. 3.

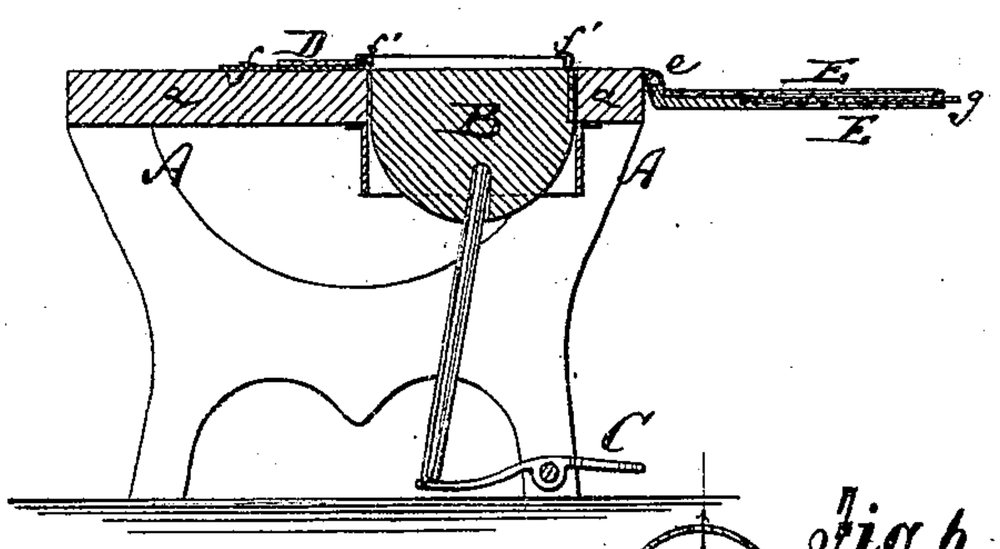


Fig. 5.

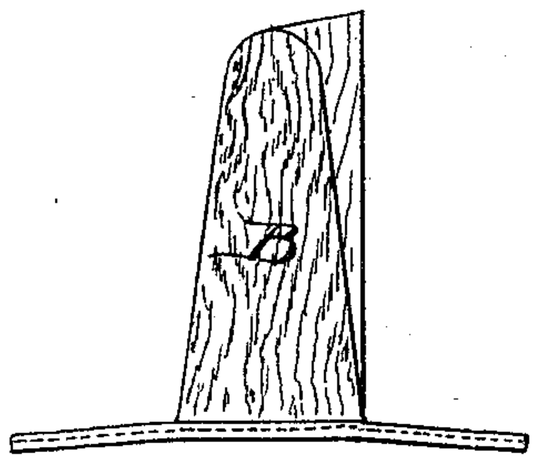


Fig. 6.

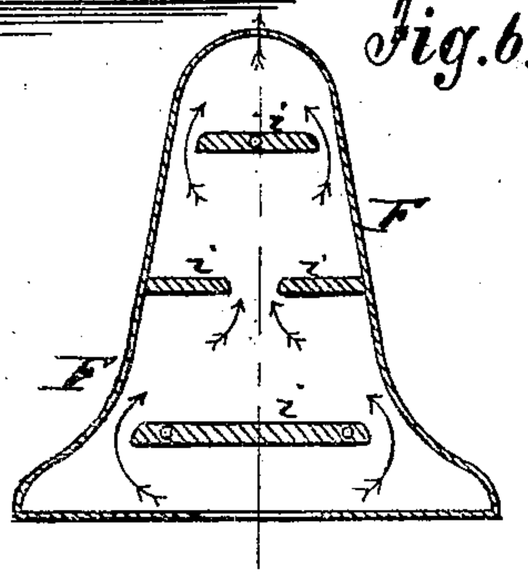
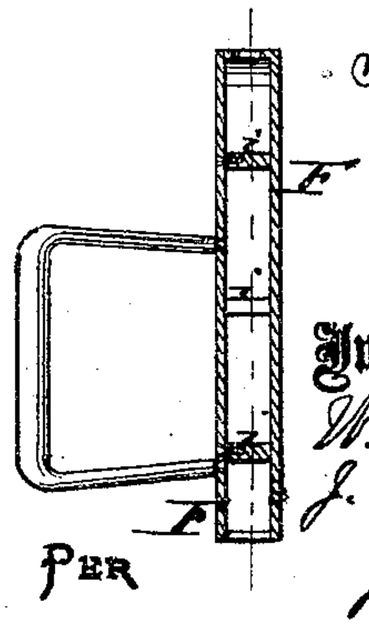


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM H. PRUDEN AND JOHN P. BENJAMIN, OF WILLIAMSBURG, N. Y.

IMPROVEMENT IN SHOE-FITTING MACHINES.

Specification forming part of Letters Patent No. 128,065, dated June 18, 1872.

Specification describing a new and Improved Shoe-Fitting Machine, invented by WILLIAM H. PRUDEN and JOHN P. BENJAMIN, of Williamsburg, in the county of Kings and State of New York.

Figure 1 represents a plan or top view of our improved shoe-fitting machine. Fig. 2 is a vertical longitudinal section of the same on the line *c c*, Fig. 1. Fig. 3 is a vertical transverse section of the same on the line *k k*, Fig. 1. Fig. 4 is a detail transverse section on an enlarged scale of the clamping-plates, showing the mode of connecting the lining, gore, and leather. Fig. 5 is a detail top view of the reciprocating punch; Fig. 6, a transverse section, and Fig. 7 a longitudinal section of the smoothing-iron.

Similar letters of reference indicate corresponding parts.

The invention consists in fitting together the inner lining, gore, and outer vamp of a shoe or gaiter by combining three hinged plates, one of which slides, with a punch and table, all constructed and arranged as hereinafter described.

A, in the drawing, represents the table on which the parts of our machine are arranged. In the top plate *a* of this table is an aperture of similar shape as, but somewhat smaller than, the largest sized elastic or gore to be used. B is a block or "punch," fitted from below through the hole in the table, and connected with a treadle, C, whereby it can be moved upward through said hole, but no further than a projecting lip, *b*, will allow. D is a sheet-metal plate, hinged by a fixed rod, *d*, to the top of the table, the rod *d* being of such length as to allow the plate D to slide on it. The plate D is notched, the opening being similar in shape and size to that in the table *a*. E E are two sheet-metal plates, hinged at *e* to the front of the table, and shaped similar to the aperture through *a*, also about as large. They are so placed that they can be folded over said aperture. The lining *f* of the shoe is first placed upon the table A so as to bring what is cut out for the admission of the gore *g* directly over the punch B. There will be a portion of the lining above the punch, as there is not as much cut out of it as there is surface on B. The plate D is next folded over the lining and fastened down by a catch, *h*. Then the punch is raised, turning up the edges *f' f'* of the lining, in the manner indicated on the right-hand side of Fig. 2. By means of a smoothing-iron, F, these edges are next laid flat over and upon the plate D. This smoothing-iron is hollow, as shown in Figs. 6 and 7, and has within it transverse partitions *i i*. The object is to place it on end over the flame of a lamp or other small light, and let the heated gases traverse it slowly, on the route indicated by arrows in Fig. 6, and finally escape on top. By this arrangement the iron can be properly heated at small expense. After the edges of the lining have been folded over and upon the plate D, in the manner indicated in Fig. 4, the gore *g* is put between the plates E E, and so much of its surface as projects beyond said plates is covered with gum, glue, or other adhesive matter. It is then, with the plates E E, folded down upon the folded edges *f'* of the lining and adheres thereto. The vamp or outer material *j* of the shoe is finally placed upon the projecting part of the gore, against the edge of the upper plate E, and also adheres to the gore. All parts are now in position indicated in Fig. 4. When they are properly united, the plate D is slid on the table A clear of the lining, the upper plate E is swung out of the way, and the connected lining, gore, and vamp can be easily removed. When, for a smaller gore, a smaller punch is required, we propose to use a rabbeted punch, as in Fig. 5, whose lower part is large enough to fit the aperture in the table, while its upper part is as small as required for the shoe. One table may be provided with a double such apparatus, one for the right the other for the left shoe, as shown.

We are aware that a machine is known to the public, consisting of an apertured table, two correspondingly apertured and hinged plates, two guides, two apertured clamps, and an iron that works upward through table to turn up edges, and afterward moves laterally under the plates to fold said edges. In that machine, however, there are two guides which we dispense with altogether; it folds edges by the punch-iron, while we do it by a separate instrument and much more efficiently, it uses two hinged plates at one operation, while we

use but one; to our clamps E E′ it has nothing to correspond; our hinged plate is moved laterally. The mode of operation or principle which distinguishes our machine is therefore different from the one alluded to.

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

The apertured plate D sliding on rod *d*, when combined with apertured table A, punch B, and hinged plates E E, to operate, as and for the purpose described.

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