S. M. SHERMAN.

Broom Machine.

No. 38,341. Patented April 28, 1863.

Fig 1.

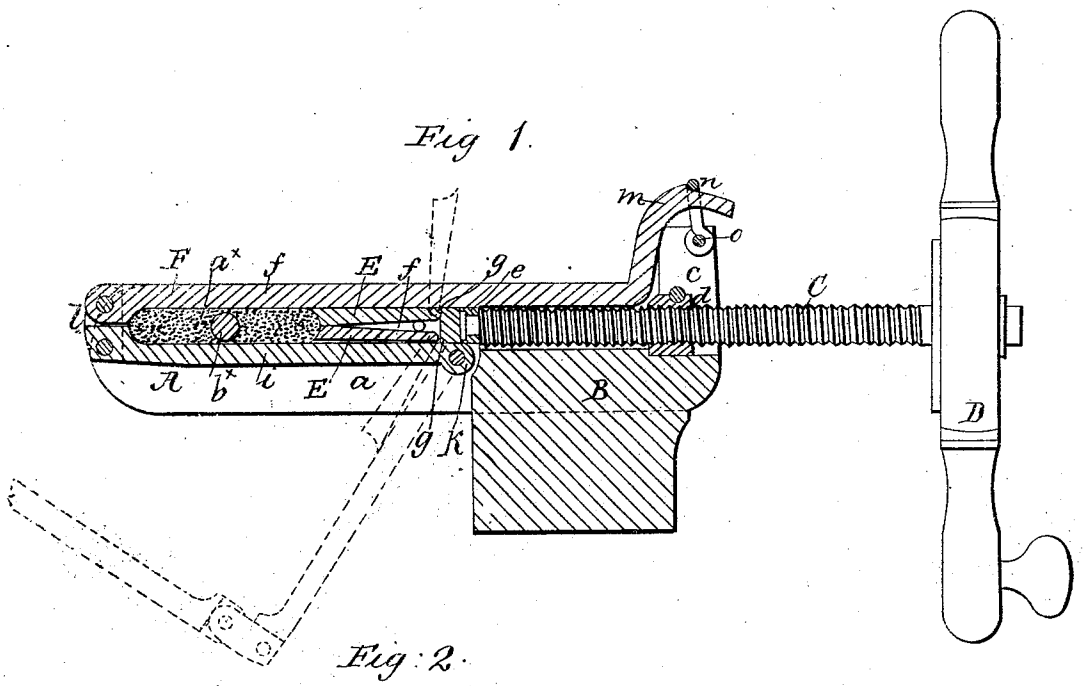


Fig: 2.

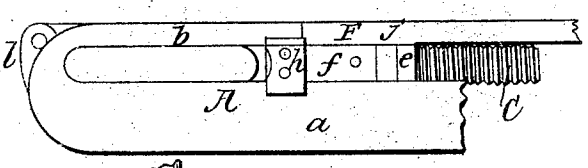
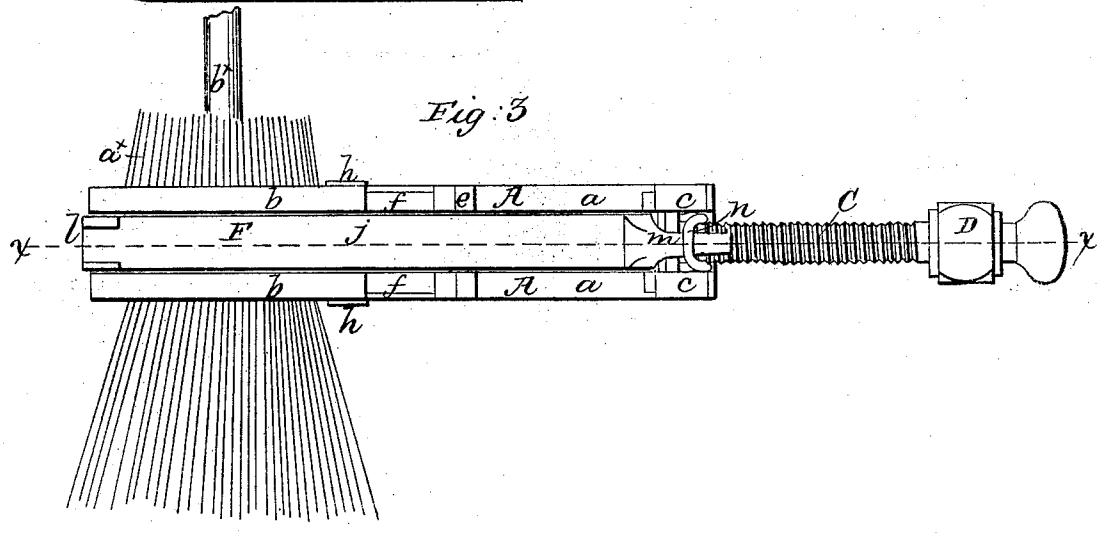


Fig: 3



Witnesses.

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S. M. SHERMAN, OF FORT DODGE, IOWA.

IMPROVED DEVICE FOR THE CONSTRUCTION OF BROOMS.

Specification forming part of Letters Patent No. **38,341**, dated April 28, 1863.

To all whom it may concern:

Be it known that I, S. M. SHERMAN, of Fort Dodge, in the county of Webster and State of Iowa, have invented a new and Improved Implement or Device for Making Brooms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 3; Fig. 2, a side view of a portion of the same; Fig. 3, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a device of simple construction, which will greatly expedite the making of brooms and diminish the labor attending the same, and also enable the brooms to be made in a superior manner to those made by the exclusive manual process.

The invention consists in the employment or use of a vise or clamp formed of two curved bars, a plunger or follower formed of or provided with two hinged jaws, and an adjustable cap piece, all arranged in such a manner as to effect the desired end.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A represent two curved bars, which may be of cast or wrought metal, the main portion *a* having a horizontal position, and the other portion, *b*, being bent so as to extend over and be parallel with *a*, as shown in Fig. 2. These bars A A have a block, B, fitted between them, which extends down a considerable distance, so that it may be inserted in a suitable vise, and the implement held firmly in proper position. This block B causes the bars A A to be held or retained at a suitable distance apart, and said bars, at the ends opposite to the ends where the parts *b* are bent over, are bent upward at right angles with *a*, as shown at *c*, in Fig. 1, and have a nut, *d*, fitted between them, through which a screw, C, passes. The outer end of the screw C is provided with a handle, D, and the inner end of the said screw is fitted in a cross-bar, *e*, which has two parallel side pieces, *f f*, attached to it, one at each end. The side pieces, *f f*, rest or work on the upper surfaces of the parts *a* of the bars A A, and between said side pieces there are secured by joints or hinges *g g* two jaws, E E, one jaw being directly over the other, and so arranged that one may be turned upward and the other turned downward, as indicated in red outline in Fig. 1, the jaws E E being equal in width to the space between the bars A A. Each side piece, *f*, has a plate, *h*, attached to its outer side to serve as a guide, said plates bearing against the outer sides of the bars A. (See Figs. 2 and 3.)

F represents a metal bar or cap-piece, which is composed of two parts, *i j*, the latter being attached by a hinge or joint, *k*, between the parts *a a* of the bars C C. The two parts *i j* of the bar F are connected together by a link-joint, *l*, and the free or disengaged end of the part *j* is bent or curved, as shown at *m*, in order to admit of a clasp, *n*, which is attached to a rod, *o*, between the ends *c c* of the bars A A, being fitted over it. The clasp *n* secures the bar in the position shown in Fig. 1, the point *i* being between the parts *a a* of the bars A A, and the part *j* between the parts *b b*, so as to inclose the space between said bars at top and bottom.

The operation is as follows: The implement being fitted in a vise, the bar F is disengaged and turned over and downward, as indicated by the red outline in Fig. 1. The screw C is then turned so as to bring the jaws E E back towards the nut *d*. The operator then grasps a suitable quantity of broom-corn, $a^{\times}$, and places it horizontally in the space between the two parts *a b* of the bars A. The end of the broom-handle $b^{\times}$ is then placed by the side of the broom-corn, and another quantity of broom-corn placed between the parts *a b* of the bars A, thereby leaving the handle in the center of the mass of broom corn. The bar F is then adjusted to its original position, (shown in Fig. 1,) and secured by the clasp *n* and the screw C, turned so that the jaws E E will move forward and compress the broom-corn firmly around the handle, as will be fully understood by referring to Fig. 1. When the broom-corn is fully compressed around the handle, the bar F is freed from the clasp *n*, and is turned over and downward, as indicated in red outline in Fig. 1, and the two jaws E E are turned, one

upward and the other downward, as also shown in red outline, the broom-corn being held or retained by the side pieces, *f f*, of the cross-bar *e*, which, in connection with the jaws E E, form a plunger. This turning down of the bar F, and the adjustment of the jaws E E, as described, exposes the broom-corn all around in the space between the bars A A. A strip of sheet metal is wound around the broom-corn within said space and firmly secured to it by nails. The jaws E E are then drawn back toward the nut *d*, the broom removed, and the operation repeated for the forming of a succeeding broom.

I would remark that by this invention the body of the broom is only formed, a covering or external portion being afterward applied in the usual or any proper way.

By this invention brooms may be very easily made, and with but little labor. They will also be constructed in a very durable manner, the broom corn around the handle being firmly compacted so as to form a solid mass, well calculated to hold the nails of the sheet metal which is placed around it.

The invention also admits of any portion of the broom-corn being at the point where it is attached to the handle.

In making brooms in the ordinary way, the butts of the corn are adjusted to the handle in order to obtain a firm resistance at that point, but as the broom-corn is firmly compacted around the handle by my invention, the sorting of the broom-corn for that purpose is not necessary.

I would remark that in drawing back the plunger a hook may be attached to the broom, so that the latter may be drawn out from between the two parts *a b* of the bars A.

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

The two bars A A, in combination with the jointed bar F and the plunger, the latter being formed of the jaws E E, side pieces, *f f*, and cross-bar *e*, and operated by the screw C, or its equivalent, all arranged for joint operation, as and for the purpose specified.

S. M. SHERMAN.

Witnesses:

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A. D. GIBBS.