(No Model.)

E. S. WHEELER.

BUTTON.

No. 265,900. Patented Oct. 10, 1882.

fig 1.

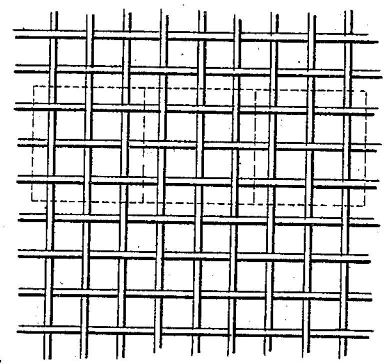


fig 4

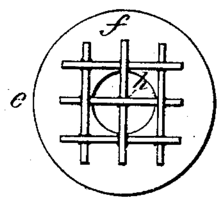


fig 2

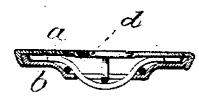


fig 3

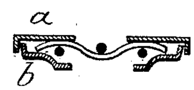
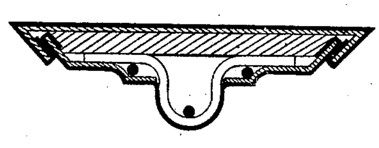


fig 5



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UNITED STATES PATENT OFFICE.

ELONZO S. WHEELER, OF SAUGATUCK, CONNECTICUT, ASSIGNOR OF ONE-HALF TO JONATHAN E. WHEELER, OF SAME PLACE.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 265,900, dated October 10, 1882.

Application filed August 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, ELONZO S. WHEELER, of Saugatuck, in the county of Fairfield and State of Connecticut, have invented new Improvements in Buttons; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a piece of wire-cloth from which the disks are cut; Fig. 2, a transverse section of the button; Fig. 3, a transverse section, and Fig. 4, a plan view, illustrating the method of manufacture of the button; Fig. 5, a transverse section as applied to tuft-buttons, all of said figures in substantially twice full size.

This invention relates to an improvement in the manufacture of buttons, with special reference to suspender-buttons, but applicable to tuft-buttons.

Suspender-buttons have been made with a bar or bars across the central opening, by which the button is stitched to the garment. These bars have been made in various shapes, bent from a single piece of wire, usually, however, so as to form a single bar diametrically across the opening; but in some cases it has been made with two bars crossing each other. In the latter case the wire has been bent from a single piece, or if otherwise made the wires at the crossing are simply laid one upon the other without any positive attachment. The result of this has been that the thread is so quickly cut by the wire that the cross-bar is very little used, and not at all with satisfaction. The single bar does not confine the thread at the center, but permits the bar to slide through the stitches from side to side, and this working of the button soon wears the thread and causes it to break. The bending of the single piece of wire to form the one bar or cross-bars requires special machinery, and is too expensive to be practicable for general work.

The object of my invention is to cheapen the construction and make practical the bar-button; and it consists in the employment of woven wire which has been "dipped," so as to solder the wires together at their crossing-point, and cutting from such woven wire disk-like blanks, which are introduced into the button, two wires crossing at the center, and as more fully hereinafter described.

I first procure woven wire the mesh of which is at least equal to half the opening through the button-back—say such as seen in Fig. 1—and which has been dipped or tinned, so as to unite the wires at their crossings. From this I cut blanks, as indicated by broken lines, Fig. 1, preferably square, the square being somewhat less than the inscribed square of the circle of the button, and so that the crossing of two of the wires comes at the center, as shown. These blanks are then ready for insertion into the button.

The front *a* and the back *b* of the button are made from metal disks having an opening in the center, in the usual manner. The disk of wire *d* is placed between the two parts, as seen in Fig. 3, the two central wires, *e f*, crossing each other at the center, as at *h*, Fig. 4. Then in the usual closing-dies the front is closed upon the back, as seen in Fig. 2. This leaves the two bars *e f* across the button-opening, as seen in Fig. 4, and firmly secured together by the previous tinning operation, which tinning operation fills the angles at the crossings, as indicated in Fig. 4, and thus forms a smooth union at the crossing, which prevents the wearing or cutting of the thread. The wires also offer a smooth surface, which will not wear the thread.

The woven wire is very cheap, and the bars thus produced cost much less than the specially-bent bars, and are much superior, in that it obviates all difficulties existing in previous construction of bar-buttons.

In the closing of the button the central part of the wire disk or bars may be forced downward, as in Fig. 2, which makes it more convenient to sew on the button.

In case of tuft-buttons, as seen in Fig. 5, the disk is introduced in the same manner between the outer fabric which forms the tuft and the filling. It is struck down in the center to give the proper projection, as shown in said figure.

I am aware that woven wire has been introduced across the opening in buttons, but in all cases this has been fine wire, not affording the

means of securing the button; but, on the contrary, the same diametrical bars have been employed, or the same perforations, as if the woven wire were not employed. The essential feature of my invention is forming the bars complete from woven wire, and without the necessity of other material upon which to make the stitches in securing the button.

In making the tuft-button the outer fabric which covers the tuft may be omitted, the wire being sufficient to secure the button, and if the fabric is added it is simply for the appearance of the button before it is attached to the garment.

I claim—

The herein-described button, consisting of the front and back combined with the inner disk, *d*, cut from woven wires the mesh of which is substantially half the diameter of the opening in the button-back, the wires soldered together at their crossings, and arranged between the front and back of the button, the two central wires crossing each other at the center of the button-opening to form bars across the said opening for the attachment of the button, substantially as described.

ELONZO S. WHEELER.

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