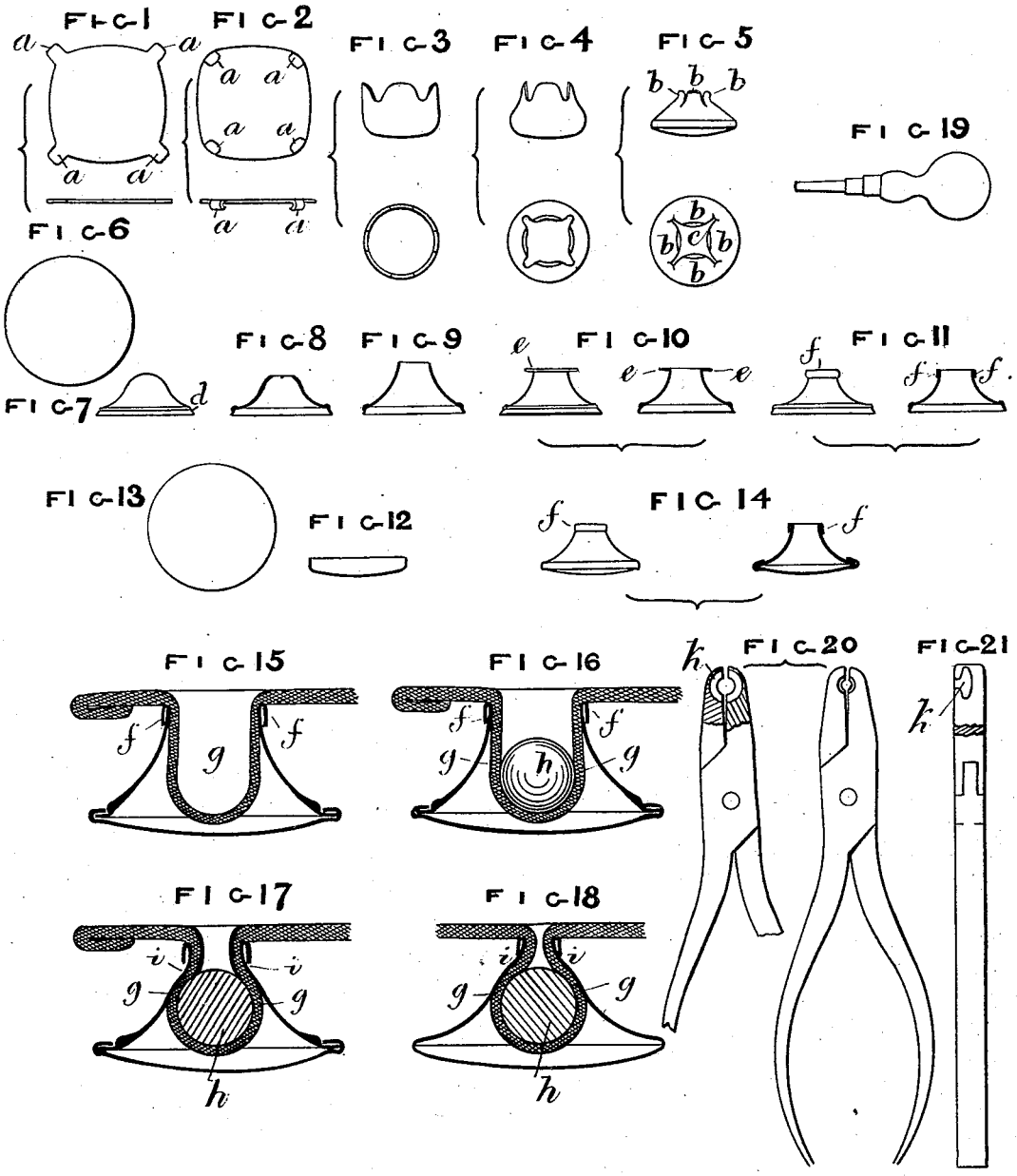
(No Model.)

# J. CADBURY.

## BUTTON AND METHOD OF ATTACHMENT.

No. 261,204. Patented July 18, 1882.

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# UNITED STATES PATENT OFFICE.

JOEL CADBURY, OF BIRMINGHAM, COUNTY OF WARWICK, ENGLAND, ASSIGNOR TO GREEN, CADBURY & RICHARDS, OF SAME PLACE.

## BUTTON AND METHOD OF ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 261,204, dated July 18, 1882.

Application filed May 18, 1882. (No model.) Patented in England September 21, 1880, No. 3,823, and in France November 27, 1880, No. 139,880.

*To all whom it may concern:*

Be it known that I, JOEL CADBURY, a subject of the Queen of Great Britain, and a member of the firm of Green, Cadbury & Richards, of Birmingham, in the county of Warwick, England, manufacturers, have invented certain new and useful Improvements in Buttons and in Attaching Buttons to Articles of Dress and other Articles, (for which I have received Letters Patent in Great Britain, No. 3,823, dated 21st September, 1880, and in France, No. 139,880, dated 27th November, 1880,) of which the following is a specification.

My improvements in buttons and in attaching buttons to articles of dress and other articles consist of the methods hereinafter described of constructing buttons for the purpose of facilitating their attachment to articles of dress and other articles, and of the method hereinafter described of attaching such buttons to gloves and articles of dress and other articles without perforating the material of the glove or article.

I will describe my invention in connection with a glove-button either made from a single blank or from two blanks.

In making a button according to my invention from a single blank or piece of sheet metal I take a blank of the form represented in Figure 1, the said blank having at its corners ears or projections *a a a a*, which are folded inward upon the blank in the manner represented in Fig. 2, the said folded projections giving a rounded or non-cutting edge to the opening in the back of the finished button. The blank, Fig. 2, is first cupped into the form represented in Fig. 3, whereby the serrated figure is given to the open end of the cup. The partly-made button is next operated upon so as to give a conical figure to the back of the button, as represented in Fig. 4, the front or closed end of the button being unoperated upon. By a further process the conical back of the button is further contracted and the serrated edge closed, as represented in Fig. 5, where the closed serrated edge is marked *b b* and the central opening is marked *c*. A button is thus made from one piece or blank, the said button consisting of a closed front and a conical back open at its middle.

In making a button according to my invention from two blanks or pieces of sheet metal I proceed as follows: In making the conical open back of the button I take the circular disk represented in Fig. 6 and operate upon it so as to give it the coned figure represented in elevation in Fig. 7, the wide end of the cone being shouldered at *d* for the reception of the front of the button. The partly-made back, Fig. 7, is next pierced at its small end, as illustrated in section in Fig. 8, and the said pierced end is next opened out and elongated into the form represented in section in Fig. 9. A flange is next made around the edge of the small end of the conical back by turning the metal of the said edge outward, as illustrated in elevation and section in Fig. 10, where the flange is marked *e*. The flange *e* is next closed upon the outside of the conical back, so as to provide a rounded edge and a strengthening-collar, *f*, at the narrow end of the said back, as represented in elevation and section in Fig. 11. The back of the button is thereby completed.

The front of the button is represented in Fig. 12, and is made from the disk, Fig. 13. The front part, Fig. 12, of the button is secured to the wide, open end of the conical back part, Fig. 11, by a closing process, performed in the usual way.

Fig. 14 represents in elevation and section a complete button made from the back, Fig. 11, and the front, Fig. 12.

My method of attaching the buttons to the glove without perforating the glove is illustrated in the enlarged sectional views, Figs. 15, 16, 17, and 18, Figs. 15, 16, and 17 representing a button of the kind represented in Fig. 14, and Fig. 18 a button of the kind represented in Fig. 5.

In attaching the button to the glove the button is laid upon a table or level surface with its open conical back uppermost, and the front of the glove, at the place where the button is to be fixed upon it, is laid upon the said open back. By means of a peg of the kind repre-

sented in Fig. 19 a portion of the material of the glove is pressed into the interior of the button through the open back, as illustrated in Fig. 15, so as to cup the material, the cupped part being marked *g*. A metallic sphere, *h*—such as a leaden shot—is now placed in the pocket or cupped part *g* in the interior of the button, as illustrated in Fig. 16. That part of the conical back of the button immediately behind the strengthening-collar *f* of the button is next compressed or forced inward, so as to close it upon the material *g* of the glove and cause the latter to be bound firmly around and grip the upper half of the sphere *h*, as illustrated in Fig. 17, where the closed or compressed part of the back of the button is marked *i*. The sphere *h* is thereby prevented from rising out of the cupped part *g* of the glove. The said cupped part of the glove is thus retained in the interior of the button and the said button securely attached to the glove.

The button, Fig. 18, is attached to the glove in the manner described with respect to Fig. 17.

Although I find it convenient to force the material of the glove into the interior of the hollow button by means of the peg, Fig. 19, yet the material of the glove may be pressed into the interior of the button by means of the sphere *h*.

The compression or closing of the part *i* of the conical back of the button may be conveniently effected by the use of the pair of pliers represented in side elevation and section in Fig. 20 and a front elevation of one of the jaws of the pliers in Fig. 21. The said jaws of the pliers have in them depressions, which, when brought together, have a size and form suitable to hold the button without operating upon it, except at the part to be closed, the closing being effected by a shoulder at *k* in the pliers.

Instead of the sphere or shot described and represented, a disk or other shaped piece may be employed.

My invention is applicable to buttons of various kinds.

Metal buttons may be conveniently made according to my invention in the ways herein described with reference to a glove-button.

In making covered buttons according to my invention I dispense with the ordinary back-shell and substitute therefor a back the central part of which has the figure of the back of the glove-button hereinbefore described; and in applying my invention to other kinds of buttons I modify the back of the button, when practicable, so as to make it similar to the back of the glove-button hereinbefore described, or I affix to the button a back of that kind.

Having now described the nature of my invention and the manner in which the same is to be performed, I wish it to be understood that I claim as my invention—

1. The method of making and attaching buttons to gloves and other articles by forming the button with a metallic back conical in shape and provided with a central opening pressing a portion of the fabric to which the button is to be attached through the conical open back, inserting a sphere, disk, or other shaped fixing-piece into the pocket or cupped part of the fabric, and finally closing or contracting the opening upon the said fixing-piece, thereby attaching the button to the glove or other article, substantially as described.

2. The method of attaching a hollow button of the character described to a glove or other article by pressing a portion of the material into the interior of the button through a suitable opening, placing a disk, sphere, or other fixing-piece in the cupped portion of the material, and closing the opening upon said fixing-piece and the material held thereby, substantially as described.

3. The combination of the hollow button, the fabric having a portion pressed into the interior of the button, and the fixing-piece placed in the cupped portion of the fabric inside the button, the back of said button being closed tightly upon the said fixing-piece, preventing its escape, substantially as described.

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Witnesses:
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