

(No Model.)

T. R. HYDE, Jr.
BUTTON.

No. 452,572.

Patented May 19, 1891.

Fig. 1

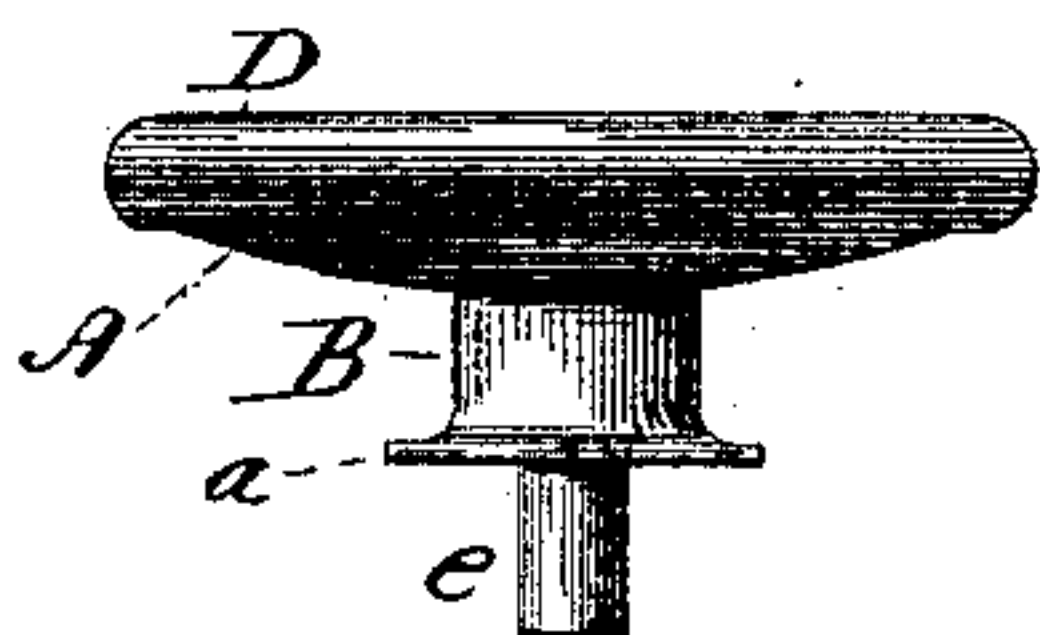


Fig. 2

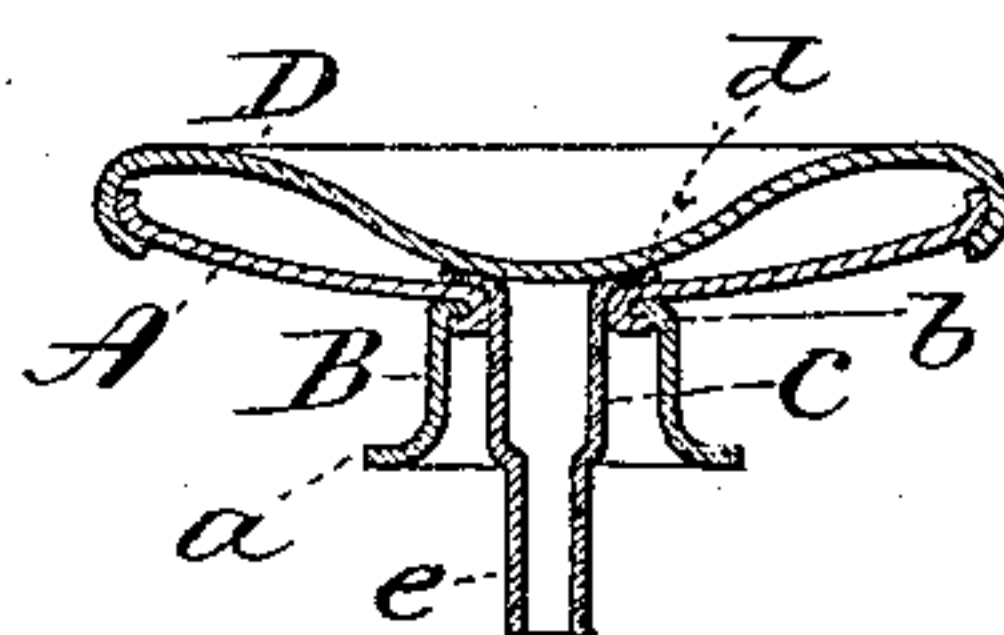


Fig. 3

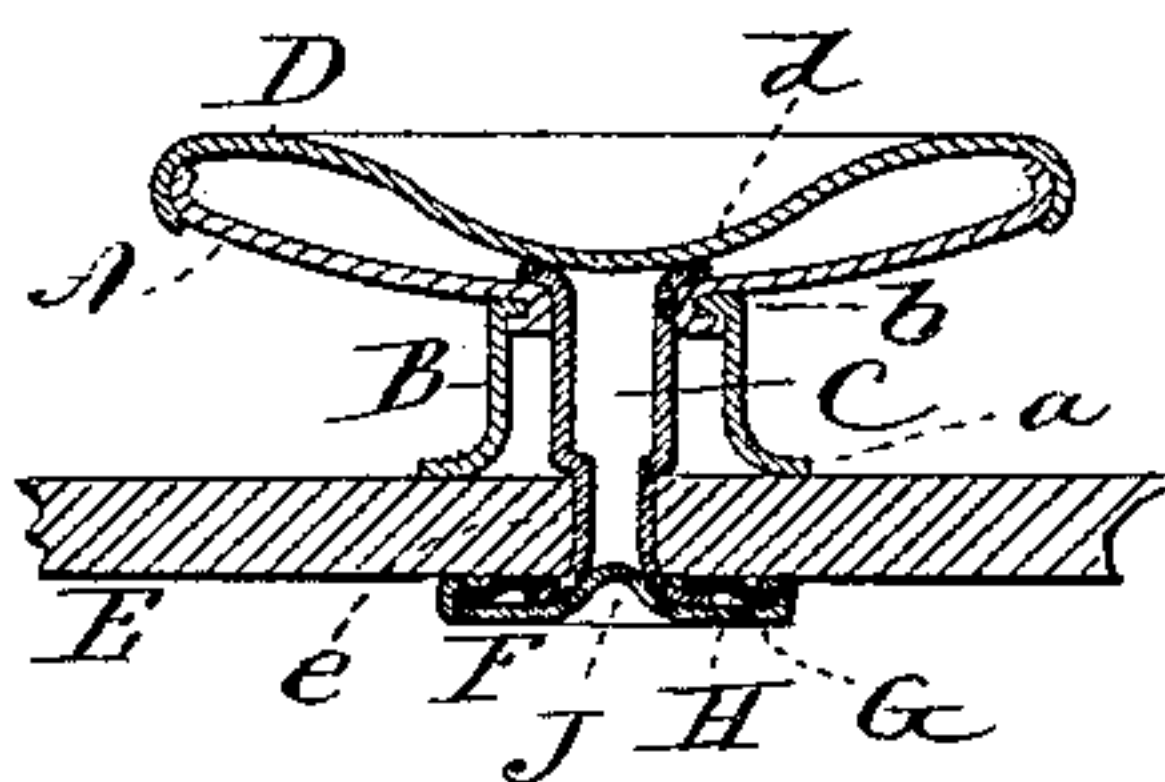


Fig. 4

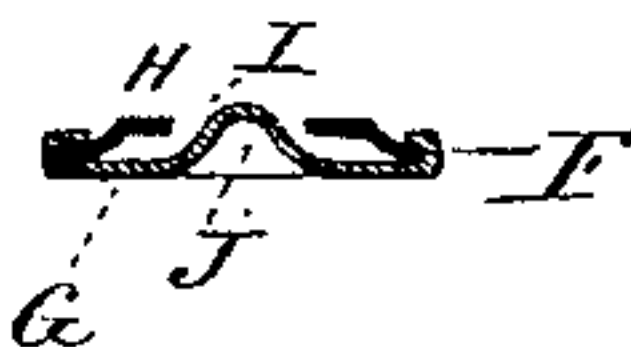
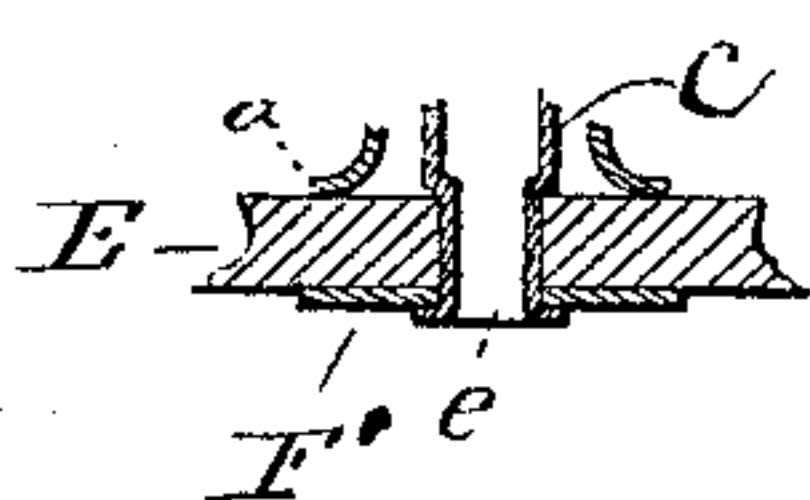


Fig. 5



Witnesses:
J. H. Shumway
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By Atty. Inventor
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UNITED STATES PATENT OFFICE.

THEOPHILUS R. HYDE, JR., OF WATERBURY, CONNECTICUT, ASSIGNOR TO
THE SCOVILL MANUFACTURING COMPANY, OF SAME PLACE.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 452,572, dated May 19, 1891.

Application filed November 10, 1890. Serial No. 370,963. (No model.)

To all whom it may concern:

Be it known that I, THEOPHILUS R. HYDE, Jr., of Waterbury, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Buttons; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and
10 which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the button complete, enlarged; Fig. 2, a vertical section of the same; Fig. 3, a vertical central section showing the
15 button as applied; Fig. 4, a central section of the collet for upsetting the end of the fastener; Fig. 5, a modification.

This invention relates to an improvement in that class of buttons which are provided
20 with a shank projecting from the back and so as to form a firm bearing on the surface of the material to which the button is to be attached and leave a space between the back of the button and the said material, the object of the
25 the invention being to provide such a button with a fastening device within the said shank as a permanent part of the button itself, but projecting through the shank, so that while the shank takes its firm bearing upon the sur-
30 face around the hole through which the said fastening passes the fastening device will project through the hole in the material to which the button is to be secured, and so that the fastening of the button being secured upon
35 the reverse side will clamp the material upon the extended bearing-surface of the shank, and in the construction of such a button, as hereinafter described, the invention consists.

A represents the back of the button, which
40 is made of metal, and preferably concavo-convex in shape, so as to present the convex surface outward.

B represents the shank, which is of the usual eyelet shape, made from metal, and so as to pre-
45 sent an annular projecting flange *a* around its base end, and so as to form a bearing for the shank upon the surface to which the button is attached. The shank B is permanently and rigidly attached to the back of the but-
50 ton or made a part thereof, the back having a

central opening through it into the shank. As here represented, the attachment between the back and the shank is made by constructing the shank with an internal flange *b* at its
other end somewhat larger in diameter than 55 the diameter of the hole through the back and the metal around the hole of the back turned into that end of the shank and closed upon the flange *b*, as seen in Fig. 2, and so as to firmly unite the back and shank; but this
60 is a common construction for uniting the back and shank, and for which other known means of connection or construction may be employed.

The flanged or flaring end of the shank gives 65 a broad bearing for the button upon the surface of the material to which it is to be applied, and the shank is of a length corresponding to the space required between the button and the surface to which the button is to be
70 applied.

The fastening device consists of a tube C of an external diameter corresponding to the diameter of the hole through the back, but of considerably less diameter than the diameter 75 of the flange or base of the shank. This tubular fastener is constructed with a flange *d* around one end, and so that it may be set through the back from the front, and so as to bring the flange *d* to a bearing upon the in-
80 side of the back. The length of the tube C is as much greater than the length of the shank as is required to permit the tube to pass through a hole in the material to which the button is to be attached and gives sufficient 85 length for the upsetting of the said tube upon the reverse side. Preferably the upsetting end of the fastener C is contracted in diameter, as at *e*. The face D of the button is made from metal and closed upon the edge of the back, 90 or the back upon the face, as the case may be, and so as to firmly unite the two. In the construction shown the center of the face is depressed toward the back, so as to take a bearing upon the flanged end of the fastener, and 95 so as to hold the fastener in place; but the button may be filled in a common and well-known manner between the back and the front, so as to avoid the necessity of the depression in the face, it only being necessary that there 100

shall be some support to rigidly hold the tubular fastener as a permanent part of the button.

In applying the button a hole is first made 5 through the material E corresponding to the tubular fastener C, and so that, the button being placed upon one side, as seen in Fig. 3, the fastener will extend through this opening in the material, and the flange of the shank E 10 will come to a bearing upon the material surrounding the hole. Upon the reverse side the fastener is upset, so as to clamp the material between the flange of the shank and such upsetting of the fastener. This upsetting is best 15 produced by means of a collet F. This collet is constructed as seen in Fig. 4, and consists of a cap G, of sheet metal, and a back H, also of sheet metal, the two closed together at their edges after the usual manner of closing the 20 front and back of a button. The back H is constructed with a central hole I, corresponding to the end of the tubular fastener C, and the cap G is constructed with a central depression J toward the said hole I in the back 25 H, as clearly shown in Fig. 4. This depression J forms a conical projection toward the hole, the center of which is substantially the center of the hole I, and so as to form a deflecting-surface between the front and back 30 of the collet. This collet is preferably of a diameter substantially corresponding to that of the diameter of the flange *a* of the shank B of the button.

In applying the button it is set upon the 35 material, as before described, with the fastening-tube C projecting through the hole in the material. Then the collet is set upon the projecting end of the fastener C, so as to bring the end of the fastener into the hole I of the 40 collet, the conical projection J standing within the end of the tube. Then pressure is applied to force the collet onto the tube, in doing which the end of the tube is expanded by the conical projection of the collet and the 45 end of the tube forced between the back and front of the collet. The collet as thus constructed is composed of two pieces only, is very simple in its construction, and securely 50 holds the button. The material to which the button is applied is thus clamped firmly between the flange of the shank and the collet

on the back, and so that a bearing is had to such an extent around the hole through the material that the strain of the button is taken outside the hole, and so that there is little or 55 no liability of the fastener so working upon the hole as to make it possible to accidentally detach the button.

Instead of a collet such as I have described, a collet F' may be applied, as seen in Fig. 5, 60 having a hole through it corresponding to the end of the tubular fastener and upon which that end will be upset, as clearly seen in Fig. 5, and substantially the same result accomplished. 65

In some cases the tubular fastener may be upset directly upon the material without the interposition of a collet, and substantially the same as an eyelet is upset, the material being 70 so firm as to make such an upsetting practicable; but a collet of some character is desirable.

By this construction of button a broad bearing-surface is provided, and the button contains within itself means for fastening, while 75 the flange around the shank, surrounding, as it does, the hole through which the fastener passes, serves to support the material to which the button is applied and give it a firmness to prevent the easy withdrawal of the fast- 80 ener.

I claim—

A button composed of the metal back A, united to one end of a tubular shank B, the other end of said shank expanded to form an 85 annular projecting flange *a*, the back constructed with a central opening into said shank, combined with a tubular fastener C, extending through the opening in the back and through the said shank, the fastener per- 90 manently secured to the button and of a length to project beyond the flanged end of the shank, substantially as and for the purpose described.

In testimony whereof I have signed this 95 specification in the presence of two subscribing witnesses.

THEOPHILUS R. HYDE, JR.

Witnesses:

JOHN E. EARLE,
FRED C. EARLE.