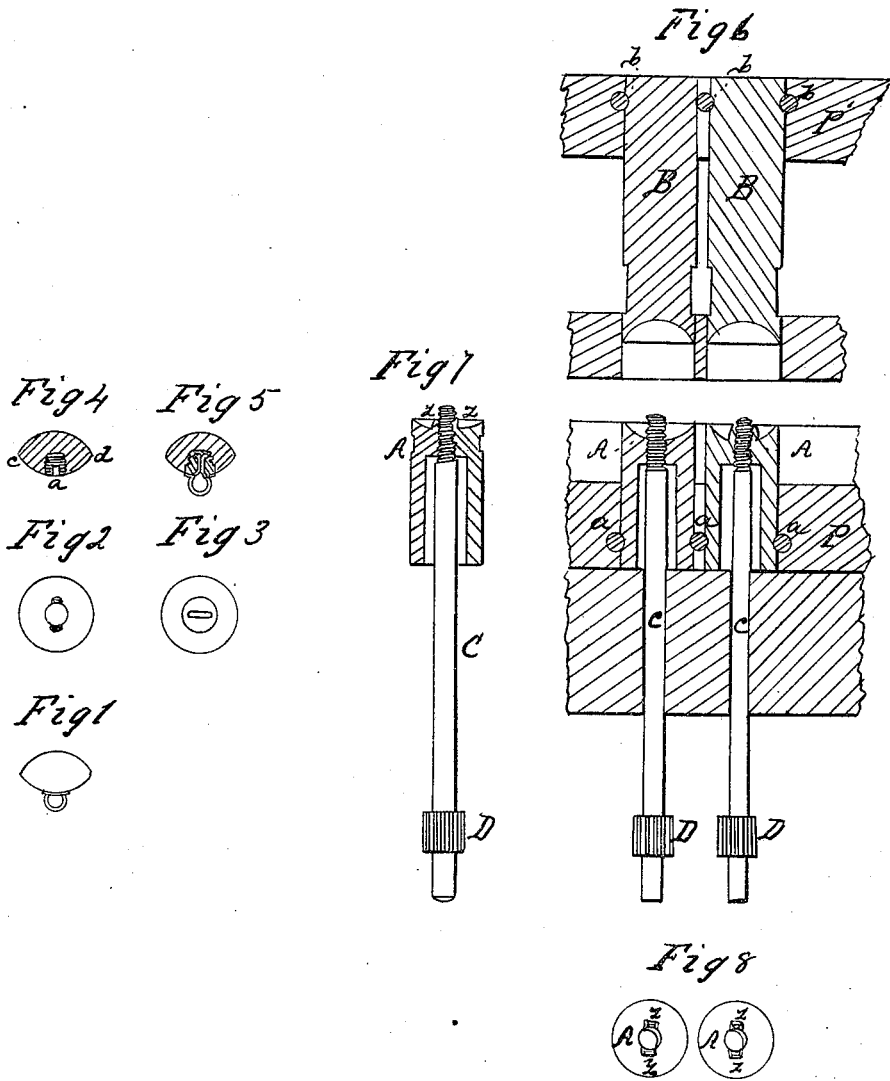


J.F. Bapterosses.

Button Mach.

N^o 19120.

Patented Jan. 19. 1858



UNITED STATES PATENT OFFICE.

JEAN FELIX BAPTEROSSES, OF PARIS, FRANCE.

BUTTON.

Specification of Letters Patent No. 19,120, dated January 19, 1858.

To all whom it may concern:

Be it known that I, JEAN FELIX BAPTEROSSES, of Paris, in the Empire of France, manufacturer, have invented new Shank-Buttons and new Improved Mechanical Processes for Making Them, and that the following is a full, clear, and exact description of the said invention, reference being had to the drawings hereunto annexed and to the letters and figures marked thereon, that is to say—

This invention relates to an improved system or mode of making shanked buttons of all sizes and shapes and of porcelain or enamel.

The main feature of this invention consists in fixing a shank in a simple and economical manner to a button composed of enamel or of some other suitable hard substance or of any material susceptible of being cast so that even when exposed to a high temperature there will be no fear of the shank becoming detached. The making a cavity for the reception of the shank is effected by forming a tapped cylindrical hole in some portion of the button, a process which is performed during the casting of the button, by mechanical means hereinafter described.

Figures 1 to 3 of the annexed drawing represent different views of a shanked button with a tapped hole made therein and Figs. 4 and 5 of the same drawing, represent two sections of a button the one with and the other without its shank.

I may mention also, that although I have only shown my system as applied to buttons of a certain form it is equally applicable to all others.

In this arrangement the tapped hole is produced by means of screw spindles which are made to penetrate into the compressed material and make two or three revolutions therein. Into this cavity I cast the fusible metal by means of which I retain the shank in its place. This metal known under the name of "Arcets metal" is simply an amalgam of bismuth and lead in proportions varying according to the different degrees of temperature which the metal is required to stand. In the special purpose to which I apply them I combine these metals in such a manner as to fuse at a temperature of not less than about 350° Fahrenheit—which will enable the buttons to resist the effects even of boiling water. The

shanks are placed in the cavities of the buttons while full of this metal in fusion, which on cooling fixes them firmly in their places. The buttons thus finished are ready for market. As these buttons must of course be produced at a great economy of time and labor I make use of presses furnished with a great number of matrices and dies arranged so as to correspond respectively with each other. The matrices are fixed and receive the material for forming the buttons and the dies are movable and afford the pressure necessary in the process of shaping the button.

Fig. 6 of the annexed drawing represents two matrices and two dies together with the screw spindles passing through the matrices.

Fig. 7 is a detached sectional view of one of the matrices and Fig. 8 is a plan of those

It is at once apparent that the arrangement is composed of matrices and molding dies. The matrices A are adjusted in a plate P through the whole thickness of which they pass and to which they are retained by the pins *a* while the dies B are adjusted in the upper plate P' through which they also pass being fixed by the pins *b*.

The upper faces of the matrices A are cut hollow, corresponding to the form required for the lower side of the button *c*, *a*, *d*, (Fig. 4) that being the side which should be pierced to receive the shank; and the face B of the dies is cut in the same way to correspond to the top of the button. The upper face of the matrix A may be also furnished with small projections *z*, *z*, at the side of the hole to receive the shank. The notches which they produce assist the entrance of the shank, and prevent the small plug of metal from turning around or becoming unscrewed.

The matrices A instead of being solid like the dies B are hollow throughout their entire length in order to afford a free passage to the vertical spindles C which are prolonged beyond them on both sides, the upper end of such spindles being furnished with a screw thread and the lower end with a small spur pinion D. Each pinion gears with a rack which is so arranged as to actuate the whole range of spindles simultaneously. Thus when the enamel, or other suitable substance capable of being molded is confined between the two series of matrices and dies it is necessarily pressed around the screw

spindles C projecting from the upper face of the set of matrices A in such a manner that when they are turned to unscrew them they have their impression in the center of all the buttons, which are now withdrawn, each pierced with a tapped hole the size and depth of which is regulated to the dimensions of the buttons. The workman who directs the machine has no difficulty to overcome since after having given the blow by which the material is compressed he has merely to impart a rectangular motion to the rack, which through the intervention of the spur pinions simultaneously turns all the screw spindles. They then descend through the action of the upper part of the dies A which are screwed internally and are thus disengaged from the buttons.

In place of making tapped holes in the button heads a conical hole may be made therein larger at the bottom than at the top by means of a spindle furnished with a small plate in the shape of a dovetail. This plate is made to penetrate to the center of the button and there receives a rotatory motion and is then withdrawn through the passage that it made on its entrance.

A hole is thus obtained larger at the bot-

tom than at the surface for receiving the shank and the fusible metal.

It is advisable to make use of a small washer of thin metal together with the shank, in order to conceal the opening by which it has been introduced as shown in Figs. 3 and 5.

Having now described the nature of my said invention and the mode of carrying the same into effect,

What I claim as my invention and as a new article of manufacture is—

The button composed of porcelain enamel or of any material susceptible of being cast, wherein the neck or shank is fixed by means of fusible metal melted into tapped or conical holes or recesses, made during the process of casting of said button, by means of the mechanism described or its equivalent substantially as specified.

In witness whereof I have hereunto set my hand this fourteenth day of May one thousand eight hundred and fifty seven.

JEAN FELIX BAPTEROSSES.

In presence of—

A. POLLÁK,
P. MARTIN.