

J. F. BAPTEROSSES.

Machines for Making Buttons.

No. 141,749.

Patented August 12, 1873.

Fig. 1.

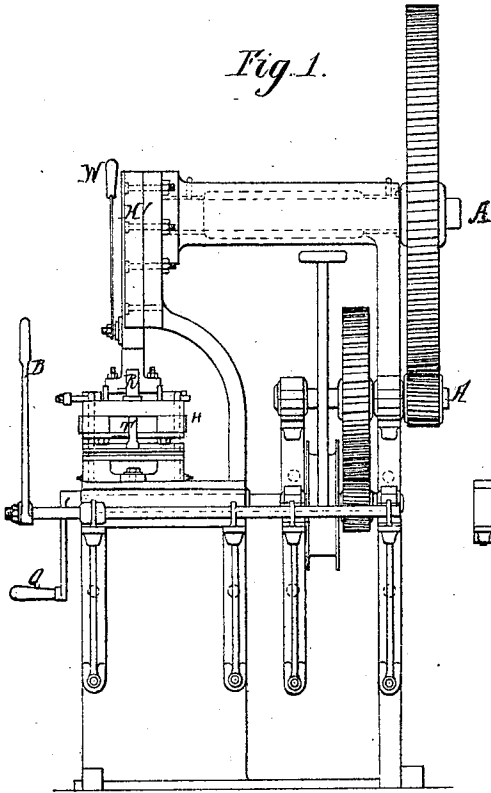


Fig. 2.

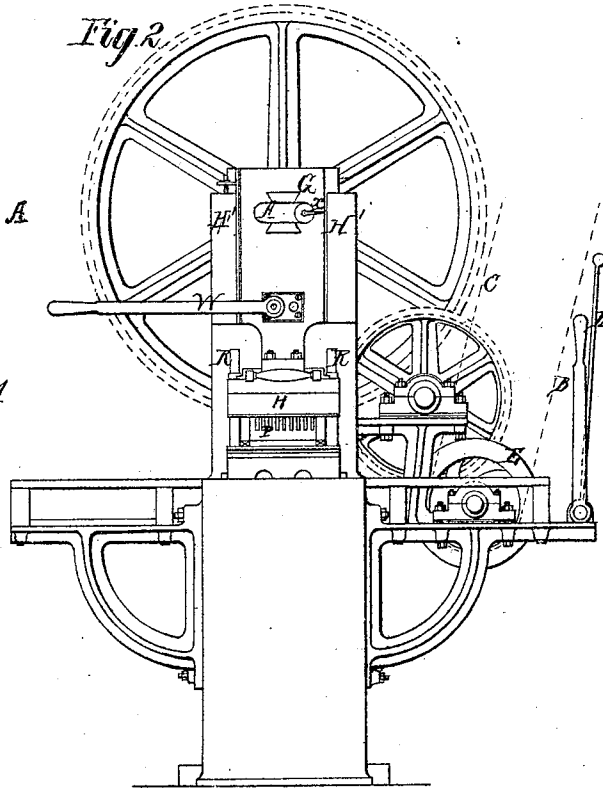


Fig. 3.

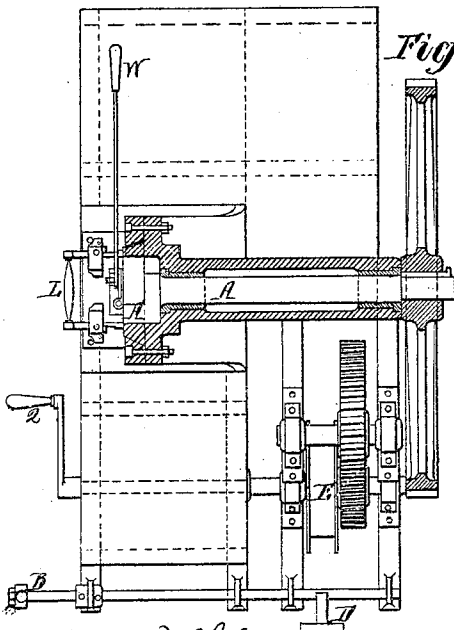
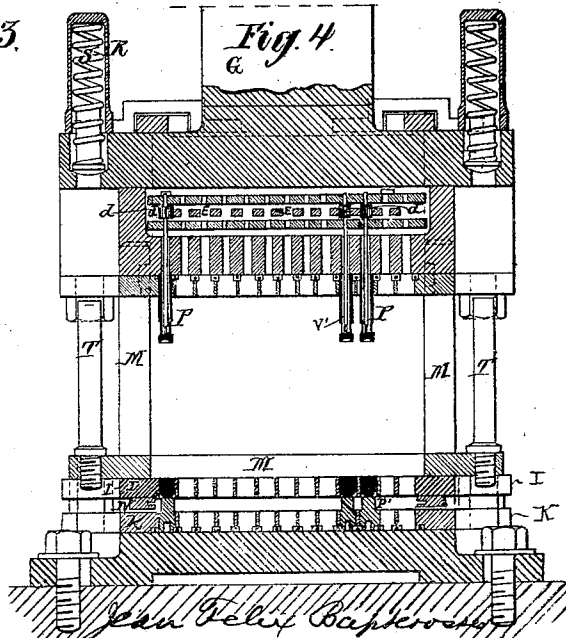


Fig. 4.



Witnesses } Geo. McChapin
Harry Smith

Jan Felix Bapterosses
by his attor.
Horson and Son

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Fig. 6.

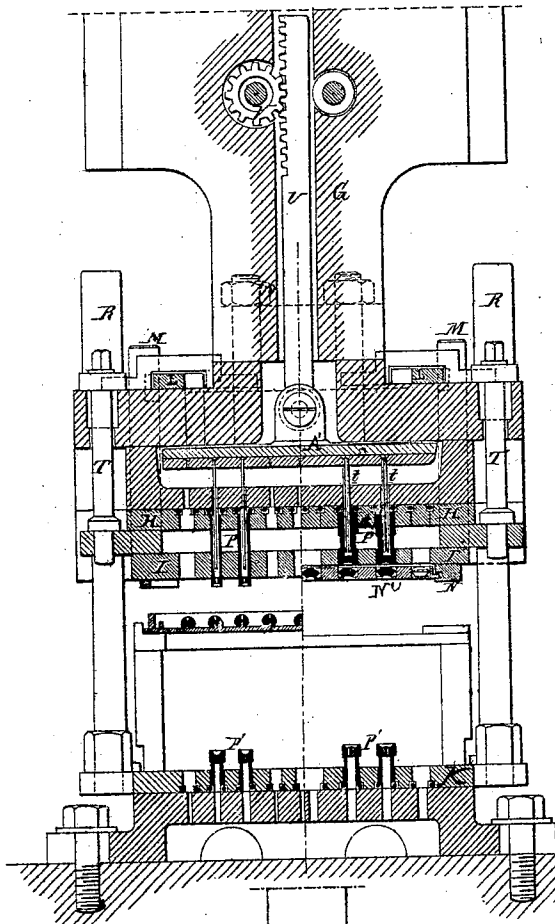


Fig. 5.

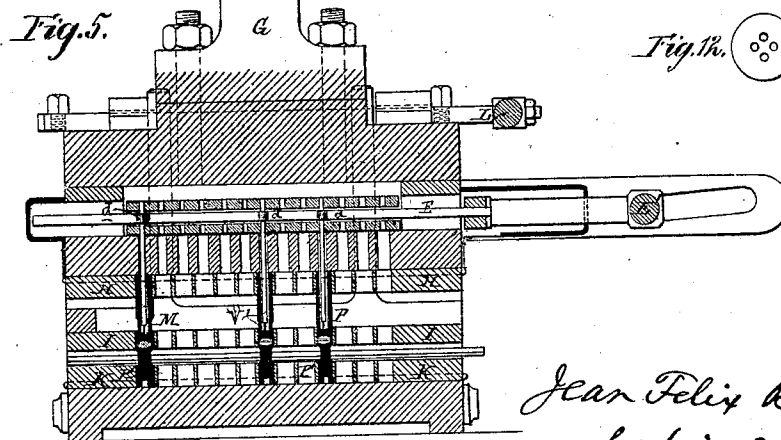


Fig. 7.

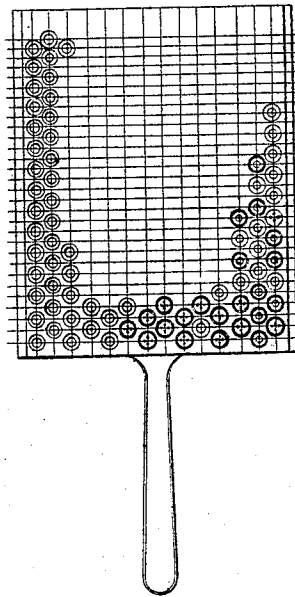


Fig. 8.



Fig. 9.



Fig. 10. Fig. 11. Fig. 13. Fig. 14.

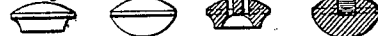


Fig. 12.



Fig. 15.



Fig. 16.



Fig. 17.



Jean Felix Bapterosses
by his Attn.
Hansen and Son

Witnesses
Harry Smith
Thomas McQuane

UNITED STATES PATENT OFFICE.

JEAN FELIX BAPTEROSSES, OF PARIS, FRANCE.

IMPROVEMENT IN MACHINES FOR MAKING BUTTONS.

Specification forming part of Letters Patent No. **141,749**, dated August 12, 1873; application filed September 25, 1872.

To all whom it may concern:

Be it known that I, JEAN FELIX BAPTEROSSES, manufacturer, of Paris, France, have invented Improvements in the Fabrication of Buttons, Pearls, and other Objects of Ceramic Matter, of which the following is a specification:

My improved press is used for making buttons, pearls, and other objects of ceramic matter, by mechanical appliances, with a precision and uniformity which hand machines can never attain; moreover, this machine is so arranged as to permit the transportation of the objects made on a plate, on which the baking process takes place, without the help of the workman, and without a medium which is destroyed by combustion during the baking—such as paper, for example.

The accompanying two sheets of drawings will clearly show the working of my apparatus and the several processes by which I make, with all desirable perfection, the above-mentioned objects, such as buttons, with shanks or with holes, pearls, and other objects of ceramic matter.

Figure 1, Sheet 1, shows an exterior side view of a goose-neck press, by means of which I mold the objects. Fig. 2 is an exterior front view of the same press. Fig. 3 is a general plan view. Fig. 4 shows, in a longitudinal section, the apparatus by means of which buttons with shanks are made. Fig. 5, Sheet 2, represents a transverse vertical section of the same apparatus. Fig. 6 is a longitudinal section, like that shown in Fig. 4, but the punching machinery is not the same, since it works in one part of the figure for the making of pearls, and in the other for that of buttons with holes. Of the remaining parts it may be remarked that, with the exception of the difference in the punches, the substantial parts of the press are identical with those shown in the other views. Figs. 7, 8, and 9 show the form and arrangement of the cellular plate for holding the buttons or other objects. Figs. 10 to 17 show exterior sectional and plan views of the different products, as buttons and pearls, made by my new process.

The pressing arrangement shown in these several plans consists, substantially, of a cast-iron frame-work with a goose-neck top, sup-

porting, at the higher part, a crank-shaft, A, which receives its motion at one end from a combination of wheels with helicoidal teeth. These are turned by a belt, C, which a belt-shifter, D, moved by the lever B, tends constantly to press against the flanged pulley E.

A block, G, sliding between guides H' H' of the frame, is operated by a crank-pin of the shaft A, which extends into a horizontal slot in the block, imparting a vertical reciprocating motion thereto, and to a die-plate, H, secured to the block or slide, and carrying the upper series of dies P. To the base-plate is secured the lower die-plate K, from which project dies P'; and between the two die-plates is what is termed a middle plate, I, consisting of a steel plate having a series of openings coinciding in number and position with the dies. Two standards, T T, of the plate I are so arranged that when the slide G descends springs S S in boxes R attached to the slide will bear upon the upper ends of the standards and hold the plate I against the die-plate K, this action of the springs being maintained as the slide ascends. Bars M M extend from the plate I through recesses in the slide, and are notched to receive a yoke-like retainer, L, by which plate I may be secured to the slide, so as to move with it. When the plate I is in the position shown in Fig. 4 its recesses are closed by the lower dies P', forming receptacles for the paste, which is deposited therein by any suitable instrument. As the slide G descends the upper punches enter the receptacles, and the paste is compressed and molded between the dies. When the slide reaches its lowest position the plate I is secured thereto by the yoke L, and is then carried upward with the slide, the newly-molded buttons remaining in the openings of the plate. After the slide G has ascended to a sufficient extent, supports are placed beneath the plate I, the yoke P is withdrawn, and a metallic slide, N', with recesses coinciding with those in the plate I, is passed beneath the latter, where it is retained by guides N. While the plate I is thus supported the machine is operated by hand, so as to depress the dies P sufficiently to force the buttons out of the openings in the plate I into the corresponding recesses in the slide N', which is then withdrawn. While the buttons

are confined between the dies they may be pierced with rods *t t*, sliding in openings in the dies, and connected to a plate arranged in a recess in the slide *G*, the plate being raised and lowered by a rack, *U*, and pinion *V*, operated by a lever, *W*. Where the buttons are to receive shanks, screw-rods *V'* are substituted for the bars *t*, the rods having pinions *d*, which gear with racks *E* connected to a slide, *E'*, so that as the latter moves back and forth the rods will be rotated, and at the same time carried longitudinally, (the dies *P* acting as nuts,) forming threaded recesses in the button. The button, as arranged on the slide *N'*, is in the proper position for baking—that is to say, having its lower face on the baking-plate. For pearls the punches must be made according to the form required, the special receiver which I employ being described in a separate application for a patent.

The advantages which result from all these new arrangements and improvements are, mainly, the doing away with the screw usually employed in hand presses for giving the ascending and descending motion, and the substitution, in the place of the same, of the devices described, whereby greater rapidity and uniformity of movement are obtained; considerable economy, by the doing away with the usual paper receiver for the buttons, which is burned in the baking operation; the use of the spring-boxes *R*, which give a uniform movement to the parts, and prevent the accidental fall of the middle plate upon the lower punches; the production of perfectly smooth buttons, by making them in cells which are open at the bottom, the dust thus

escaping, instead of being deposited on the receiver with the buttons and adhering to the latter; the diminution in the cost of manufacture by the very regular arrangement of the buttons on the baking-plate.

I claim as my invention—

1. The combination, substantially as described, of the sliding piece *G* carrying the upper dies *P*, the movable middle piece *I*, and the fixed lower dies *P'*.

2. The middle plate *I* and lower dies *P'*, combined and arranged, in respect to each other, to permit the introduction between them of a receiver or receivers for the buttons, as described.

3. The combination of the standards *T* with the sliding piece *G*, its spring-boxes *R*, and the movable middle plate *I*, all substantially as specified.

4. The combination of the punches of the upper die with rods *t*, to which an independent sliding movement, through the said punches, is imparted, substantially as and for the purpose specified.

5. The combination of the punches of the upper die with screw-rods *Y*, to which a combined rotary and longitudinal movement, through the said punches, is imparted, substantially as and for the purpose specified.

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

JEAN FELIX BAPTEROSSES.

Witnesses:

EDMOND THIBAUT, Jr.,
EMILE RICHARD.