(No Model.)

P. L. SYLVESTER.

Manufacture of Buttons from Plastic Material.

No. 232,088. **Patented Sept. 7, 1880.**

Fig. 1.

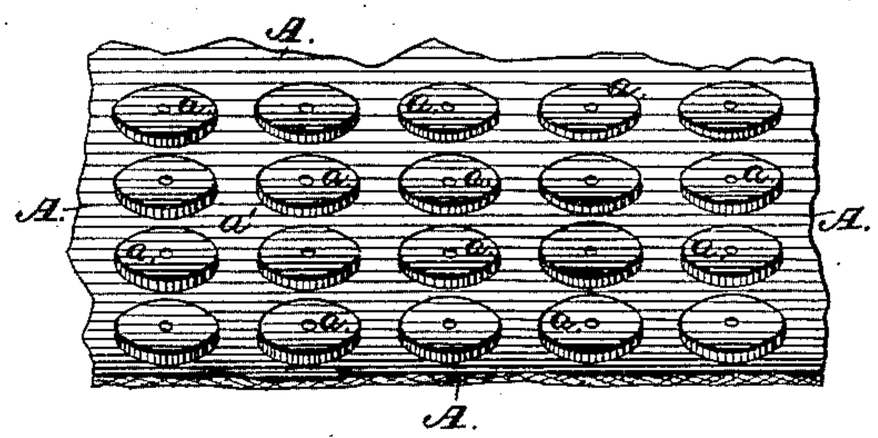
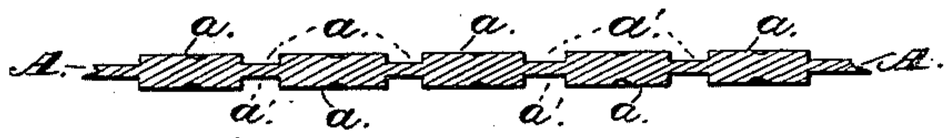


Fig. 2.

Fig. 3.



WITNESSES:

Jas. E. Hutchinson.

Henry C. Hazard.

INVENTOR.

P. L. Sylvester, by

Geo. S. Prindle, his Attij

UNITED STATES PATENT OFFICE.

PHILIP L. SYLVESTER, OF AUBURN, NEW YORK, ASSIGNOR TO WOODRUFF BROTHERS, OF SAME PLACE.

MANUFACTURE OF BUTTONS FROM PLASTIC MATERIALS.

SPECIFICATION forming part of Letters Patent No. 232,088, dated September 7, 1880.

Application filed July 31, 1880. (No model.)

To all whom it may concern:

Be it known that I, PHILIP L. SYLVESTER, of Auburn, in the county of Cayuga, and in the State of New York, have invented certain new and useful Improvements in the Manufacture of Buttons from Plastic Material; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a sheet of plastic material as prepared for the dies. Fig. 2 is a cross-section of the same, and Fig. 3 is a like view of a sheet having upon each of its sides protuberances or elevations.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to facilitate the filling of button-dies with plastic material, so as thereby to render practicable the employment of a large number of dies within one plate; and to this end it consists, as an improvement in the manufacture of buttons from plastic material, in a sheet of such material having upon one face or both faces protuberances or elevations that correspond in relative positions to the positions of the dies or recesses of the die-plates within which said material is to be pressed, substantially as and for the purpose hereinafter specified.

In the use of my invention the plastic material is cut into sheets A, that correspond in horizontal size and shape to the like features of the plates of dies within which said sheets are to be used, and have such thickness as may be necessary for the production of the buttons for which said dies are designed.

During or subsequent to the operation of rolling the material into sheets one face or both faces of each sheet A are given the form shown in Fig. 1, the same being a series of protuberances or elevations, *a*, separated from each other by depressions *a'*, that have such depth as to leave only such thickness of material as is necessary, in order that the said sheet may maintain its shape. Each elevation *a* corresponds generally to the size and shape of one of the recesses or dies of a plate, and the series of elevations have such number and relative arrangement as will cause them to coincide with and rest over or within each of the series of said dies when the sheet A is placed upon the said plate of dies.

The sheet A, being softened in the usual manner, is placed upon the face of the lower die-plate, with the elevations *a* over the dies and the depressions *a'* over the spaces or sprues between said dies, after which the upper die is placed in position and pressure applied, when it will be found that after filling said dies no more surplus stock is left than can be contained within the spaces or sprues of the said plates, and that the latter can be closed together, so as to produce a perfect button.

By means of the form of surface given to the sheet A the whole plate of dies can be filled as quickly and with no more time than has heretofore been required for the filling of one die or one row of dies, while the operation of the die-plates is greatly facilitated, better work is done, and no liability exists that some of the dies will have too much or too little material.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

As an improvement in the manufacture of buttons from plastic material, a sheet of such material having upon one face or both faces protuberances or elevations that correspond in relative positions to the positions of the dies or recesses of the die-plates within which said material is to be pressed, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 28th day of July, 1880.

PHILIP L. SYLVESTER.

Witnesses:

E. D. WOODRUFF,

P. C. WOODRUFF.