S. G. Pitts

Button Mach.

No. 82,243. Patented Sept. 15, 1868.

Fig: 1.

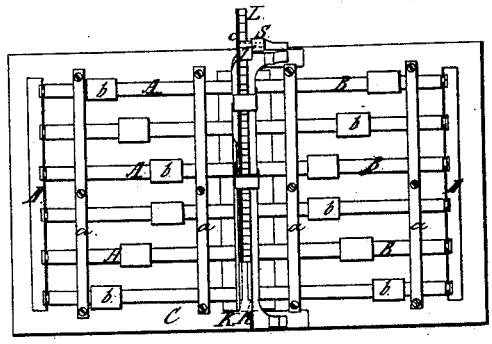


Fig: 2.

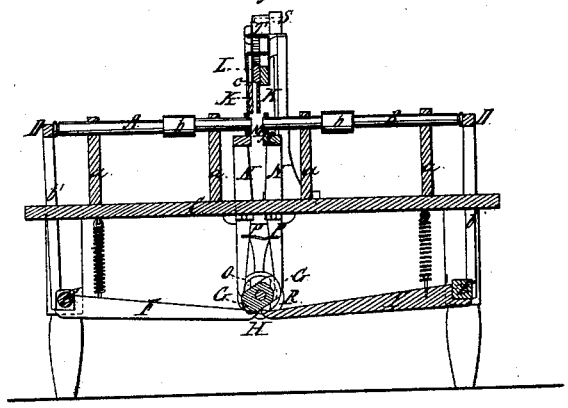
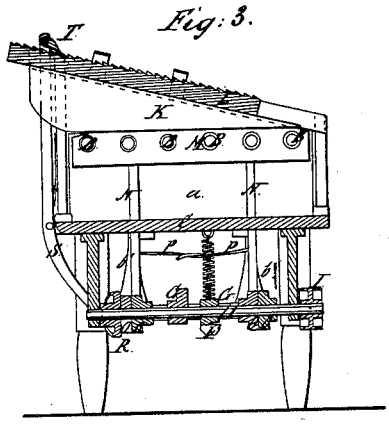


Fig: 3.



Witnesses.
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J. R. Snow.

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by his attorney
N. H. Eddy.

United States Patent Office.

SETH G. PITTS, OF LEOMINSTER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WILFORD L. PALMER, OF SAME PLACE.

Letters Patent No. 82,243, *dated September* 15, 1868.

IMPROVEMENT IN MACHINES FOR FORMING BUTTONS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, SETH G. PITTS, of Leominster, of the county of Worcester, and State of Massachusetts, have invented a new and useful Machine for Making Buttons, or other articles of like character, or for boring plates; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view,

Figure 2 a longitudinal section, and

Figure 3 a transverse section of it.

In such drawings, A A A, B B B denote series of mandrels, arranged parallel to one another, and with their axes in a horizontal plane.

The axis of each mandrel of one series is in line with that of a mandrel of the other series.

These mandrels are supported in four standards, *a a a a*, erected on the top of a table, C.

Each mandrel slides freely through or in its bearings, and has a driving-pulley, *b*, fixed on it.

Furthermore, the mandrels of each series, at their outer ends, are so connected to one of two cross-bars, D D, as to be movable simultaneously and lengthwise thereby, and still be capable of being revolved by belts going about their driving-pulleys.

The two bars D D are supported by arms, *b' b'*, projecting upward from two horizontal shafts, E E, from which other arms, F F, are extended towards and against two cams G G, fixed on another or central shaft, H, the whole being arranged as represented.

The said shaft H has a driving-pulley, I, fixed on one end of it, for the purpose of putting it in revolution.

Over the space between the two series of mandrels are two rails or ways, K K, which are arranged a short distance apart, and with their upper edges inclined at an acute angle to the plane of the axes of the two series of mandrels.

A long toothed rack, L, rests and slides on one of the said rails, there being a spring-clamp or plate, *c*, affixed to one side of the said rack.

The purpose of the said plate or clamp is to hold a sheet of horn, or other material, in connection with the rack.

Below or underneath the two rails or wings are two clamp-plates or clamps, M M, which are provided with holes for the passage of the mandrels through them.

These clamp-plates are supported by levers, N N, pivoted to the table, and having their lower arms resting against cams O O O O, fixed on the shaft H.

Springs, P P, are applied to the lower arms of the levers for keeping them in contact with the peripheries of the cams.

Furthermore, there is another cam, R, fixed on the shaft H, the said cam being to operate a lever, S, pivoted to the table, and provided at its upper end with a click or pawl, T, to engage with the rack L, the whole being arranged in manner as represented.

If, now, we suppose each of the mandrels of one series to be provided on its inner end with a cutter or cutters for forming one side of a button, and if we also suppose each of the mandrels of the other series to have on its inner end a cutter or cutters to form the other side of a button, and to cut the button out of the sheet of horn, the machine will be complete for making buttons or disks, and when at work, each pair of mandrels in line with each other will be made to successively cut through the stock in a range parallel to the rack.

Preparatory to each advance movement of the sheet of horn or steel, the clamps move apart, and after such movement may have been effected, they close upon the sheet, so as to hold it firmly while it is being cut by the cutters of the mandrels. One series of mandrels in revolution is next moved toward the sheet, so as to

form one side of the buttons or disks. Next, these mandrels are vibrated, and the other set brought up, so as to form the other sides of the buttons, and cut such buttons or disks from the plate.

With one set of mandrels only, the machine can be used for boring plates.

I claim the combination of as well as the arrangement of one or two sets of mandrels A B, the toothed rack or carrier L, and its supporting-rail K, and the clamps M M, the whole being provided with mechanism for operating the rack, mandrels, and clamps, substantially as described.

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Witnesses:

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