

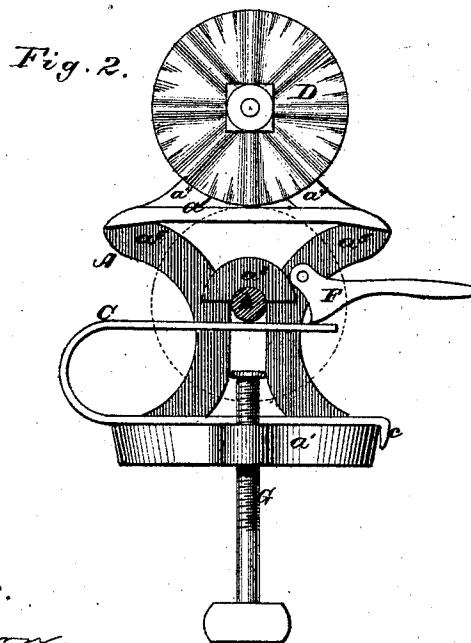
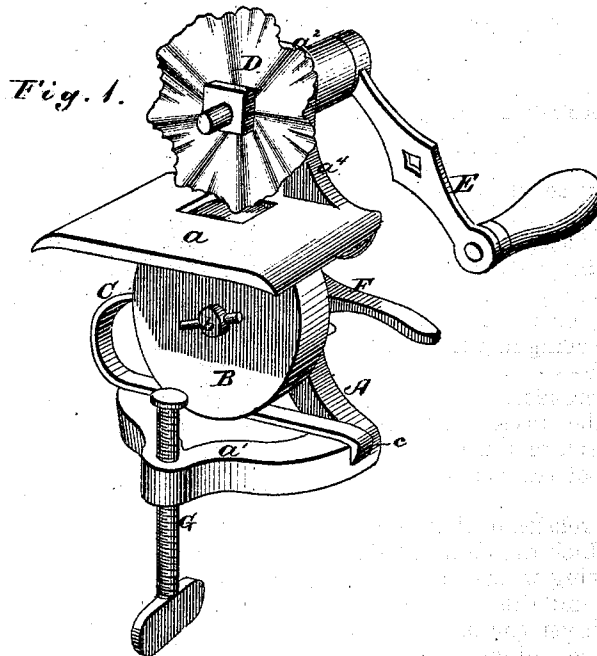
(38.)

THOMAS HAGERTY.

Improvement in Pinking Machines.

No. 122,008.

Patented Dec. 19, 1871.



Witnesses.
C. J. Brown.
Melville Church.

Inventor.
Thomas Hagerty
By H. T. Ellsworth
Att'y.

UNITED STATES PATENT OFFICE.

THOMAS HAGERTY, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN PINKING-MACHINES.

Specification forming part of Letters Patent No. 122,008, dated December 19, 1871.

To all whom it may concern:

Be it known that I, THOMAS HAGERTY, of Richmond, in the county of Henrico and State of Virginia, have invented certain Improvements in Pinking-Machines; and I declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view, and Fig. 2 is a front elevation, the anvil and a portion of its journal having been removed.

Similar letters of reference indicate the same parts.

This invention relates to that class of pinking instruments in which the cloth is fed through between two revolving wheels, one of which operates as an anvil, and the other as a cutter; and the object of the invention is to improve the construction of such machines in the following particulars, viz.: first, to prevent any accidental eccentricity of the wheels from interfering with their proper action upon the cloth; secondly, to enable the wheels to be thrown into or out of gear more quickly than heretofore; thirdly, to improve the construction of the frame so as to make it lighter, cheaper, and better adapted to the proper support of the cloth; fourthly, to make a sharper and better cutting-wheel; and, fifthly, to reduce the cost of the cutting-wheel, so as to bring the machine within the means of ordinary users. To this end the invention consists, first, in the construction of the frame; secondly, in the combination of the operating parts; thirdly, in the cutting-wheel made by my improved process; and, fourthly, in said process; all as hereinafter described.

In the drawing, A is the frame, cast in one piece, consisting of the horizontal cloth-table *a*, having a feed opening nearly at its center; a horizontal clamping-bracket, *a*¹, which also serves as a rest for the spring; an elongated horizontal socket, *a*², to support the shaft of the cutting-wheel; a half-socket, *a*³, to hold the shaft of the anvil; two curved arms, *a*⁴ *a*⁴, in the form of a quarter-circle, connecting the socket *a*² to the feed-table; and two semicircular arms, *a*⁵ *a*⁵, connecting the bracket *a*¹ and the half-socket *a*³ to the feed-table; all arranged as shown. The clamping-bracket is cast open at the rear end, and a space is left between the lower ends of the arms *a*⁵ *a*⁵ to save metal; render the frame

lighter; enable the journal of the anvil to be readily inserted and removed; and allow the anvil to be depressed to a greater extent than it could be were said parts cast solid. A space is also left between the half-socket *a*³ and the socket *a*² to save material, diminish the weight of the machine, and render the whole more ornamental in appearance. B is the anvil, which may be made of any suitable material. It is supported upon a journal, *b*, the upper side of which is held in the half-socket *a*³ by a bent spring, C, as shown in Fig. 2, the journal being provided with an enlarged head, which shoulders against the rear side of the frame, and also with a pin or nut which secures the anvil upon it. The anvil projects up into the feed opening, as represented, so as to come in contact with the cutting-wheel D. The cutting-wheel is secured upon its shaft in any suitable manner, so that it can be readily removed and another attached in its place, and it is rotated by a crank, E, fixed directly to its shaft. The spring C, by its peculiar form, remains in place without any fastening, a flange, *c*, being constructed upon its lower extremity, which bears against the edge of the bracket *a*¹ and prevents it from working endwise. An eccentric-headed lever, F, is employed for the purpose of instantaneously throwing the wheels B D into or out of gear, and of locking them out of gear, the lever being so constructed that when its handle is depressed it locks the end of the spring down, leaving the anvil to drop by its own weight as far as the spring is depressed; and G is a clamping-screw, by which the machine is secured to the work-table, the edge of the latter coming between the parts *a*¹ *a*¹, so that the feed-table *a* rests upon the work-table, their surfaces being nearly on a level, and no difficulty is experienced in holding the cloth upon it or feeding it properly over it in either direction. The cutter D is constructed from a thin plate of steel in the following manner. The blanks are first properly cut out and punched, either by hand or machinery, and they are then ground, filed, or milled to a sharp edge all around their periphery, after which they are subjected to the action of a die or a series of dies, successively, until they are radially corrugated and their edges curved or corrugated between the larger corrugations, if desired, in any pattern suitable for such cutters. They should be brought to a cherry red before

being submitted to the action of the dies, and care should be taken to construct the dies in such manner that they will not come in contact with the extreme edge of the cutters and thereby dull or break them. The heated steel edge of the cutter will bend to any desired curve without being in actual contact with the die. In this manner all filing or milling of the corrugated edges is avoided, and the cost of the cutter is reduced to such a degree that a whole set can be furnished at half the cost of a single one as heretofore manufactured, while the edge is sharper and more uniform than it is possible to get by any process of filing after the metal has been bent.

One great advantage secured by the construction of my improved machine arises from the fact that the cutter and anvil need no adjustment, the spring holding them together with a yielding pressure, which enables the operator to feed the heaviest or the lightest goods to the machine without stopping to adjust any of the parts. Another advantage resulting from the same cause is that the edge of the cutter is always held in contact with the anvil, however eccentrically they may happen to be hung, and however the edge of either may have worn away by use. The ease with which the several parts constituting the machine can be put together, or, when necessary, taken apart, is apparent.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a pinking-machine, a frame having a slotted feed-table adapted to rest directly on the surface of the work-table and form a clamping jaw, substantially as described.

2. In a pinking-machine, the combination of a circular revolving cutting-blade, D, with a circular revolving anvil, B, and a spring, C, that holds them together with a yielding pressure, substantially as described for the purposes specified.

3. The combination of the revolving cutting-blade D, anvil B, and spring C with the eccentric-headed lever F, a frame for supporting said parts, and a crank for operating the wheels, substantially as described for the purposes specified.

4. As an improved article of manufacture, the pinking cutter-blade D, made by the process herein described.

5. The process of manufacturing the blades D, substantially as described.

THOMAS HAGERTY.

Witnesses:

MELVILLE CHURCH,
W. L. SAVOY.

(38)