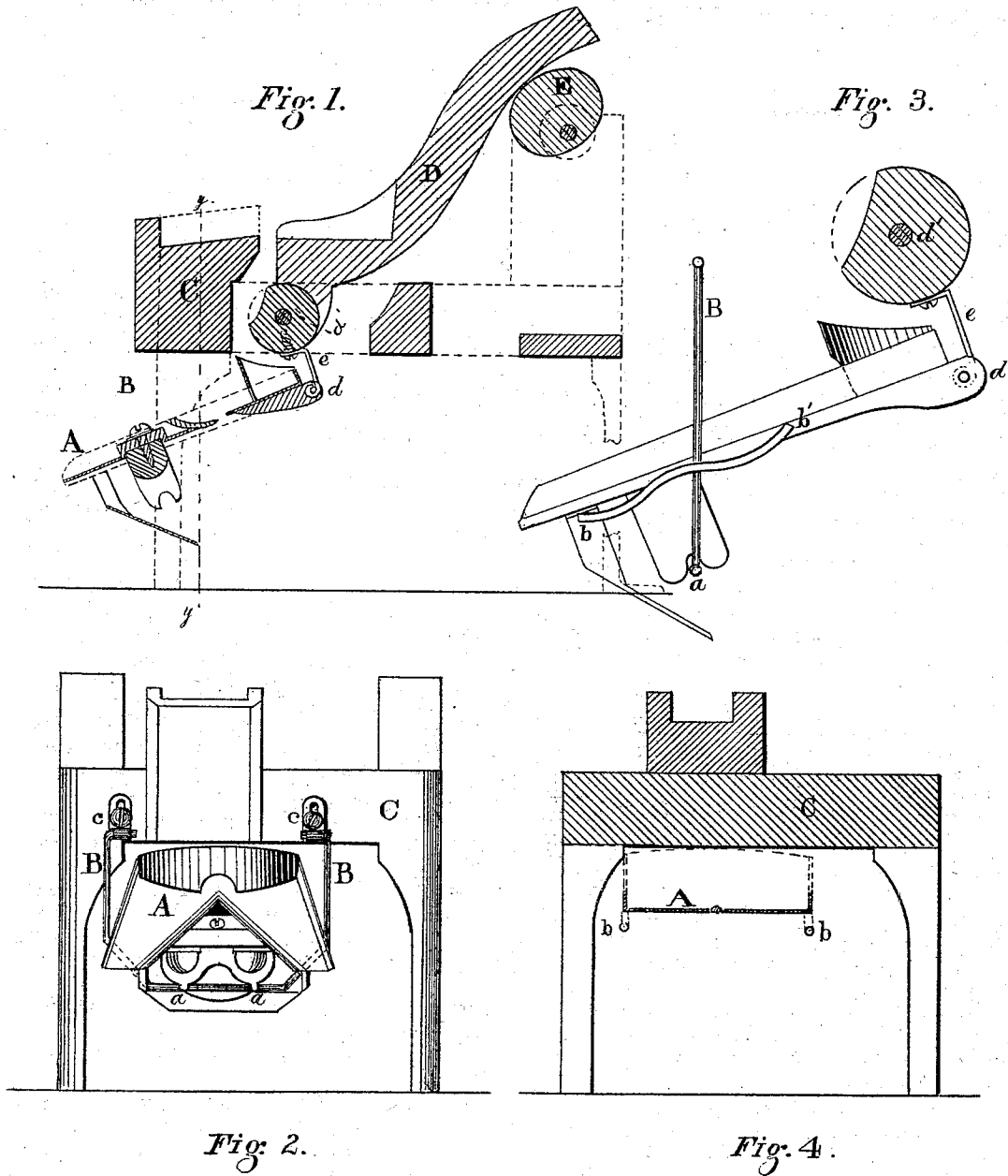


H. B. CHESS.  
Nail-Separating Devices.

No. 147,823.

Patented Feb. 24, 1874.



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# UNITED STATES PATENT OFFICE.

HARVEY B. CHESS, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN NAIL-SEPARATING DEVICES.

Specification forming part of Letters Patent No. 147,823, dated February 24, 1874; application filed February 9, 1874.

To all whom it may concern:

Be it known that I, HARVEY B. CHESS, of Pittsburg, Pennsylvania, have invented a new and useful Improvement in Machines for Sifting Nails and Tacks, of which the following is a clear, full, and exact description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a longitudinal section of my invention. Fig. 2 is a front view. Fig. 3 is a detail view of the separator enlarged. Fig. 4 is a cross-section through *yy* of Fig. 1.

My invention relates to that class of nail and tack machines in which sifters are used for separating the perfect goods from the slivers and dirt which necessarily accompany the manufacturing of nails and tacks, and is an improvement on the device described in my patent of December 23, 1873, No. 145,720; and it consists in the combination and arrangement of devices for giving motion to the separator or sieve, as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, the device is shown as resting upon legs; but this arrangement is only designed to display my invention. A represents the sieve, having secured to its under side two lugs, *a a*, slotted so as to rest snugly on the stirrup B. This stirrup is suspended from the front of the frame by means of the adjustable eyes *c c*, as in Fig. 2, and has an easy swinging motion forward and backward. To the bottom of the separator A is secured the bifurcated strip *d*, with a slotted head, into which is hinged the pendent lever *e*, rigidly attached to the under side of the griping-lever D, which is operated by the cam-shaft E.

It is evident from this description that the griping-lever moving on its shaft *d'*, will, by means of the pendent lever *e*, give a back-and-forward motion to the separator, riding on the swinging stirrup B, and also a slight vertical motion alternately at either end, or a motion slightly oscillating. All this is accomplished by utilizing the motion incident to the underneath part of the griping-lever, which is found in all nail and tack machines, and which assists in moving the goods over the surface of the separator and along the grooves, and prevents their clogging and accumulating. It will

be noticed that, as the lines of the slots in the separator are oblique to the direction of this motion, the nails or tacks are subjected to a peculiar double motion, resulting in giving them a sort of rotative action, which causes them to move more freely along the slots, and also causes the slivers and imperfect nails to fall through.

On each side of the stirrup B I secure rigidly the tappets *b b'*, which alternately strike with their extremities the under side of the separator. This, when the machine is in action and making, say, two hundred revolutions per minute, gives twice that number, or four hundred blows, per minute, securing a very perfect and positive jarring of the separator during the process of sieving or cleaning of the goods, without the employment of any extraneous or independent knocking device.

It is evident that the arrangement of the tappets may be varied without departing from the spirit of my invention. Fixed tappets may be used, against which the separator, in its back and forward movements, may be thrust. Therefore, I do not confine my invention to the particular arrangement of the tappets *b b'*.

I am aware that a separator has heretofore been attached to the upper side of the heading-lever, so as to give the separator a vertical motion; but this I do not claim.

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

1. In a nail or tack machine, the pendent hinged lever *e*, attached to the bottom of the knuckle of the griping-lever, in combination with the lever D and separator A, substantially as and for the purpose set forth.

2. The stirrup B, in combination with the separator A, pendent lever *e*, and griping-lever D, substantially as and for the purpose set forth.

3. The stirrup B, in combination with the tappets *b b'* and separator A, substantially as and for the purpose set forth.

4. The stirrup B, tappets *b b'*, and separator A, in combination with the pendent lever *e* and griping-lever D, substantially as and for the purpose set forth.

HARVEY B. CHESS.

Witnesses:

WALTER CHESS,  
WM. C. CHARLTON.