H. H. HEALD.

Machine for Cleaning and Sifting Tacks.

No. 207,178. Patented Aug. 20, 1878.

Fig. 1

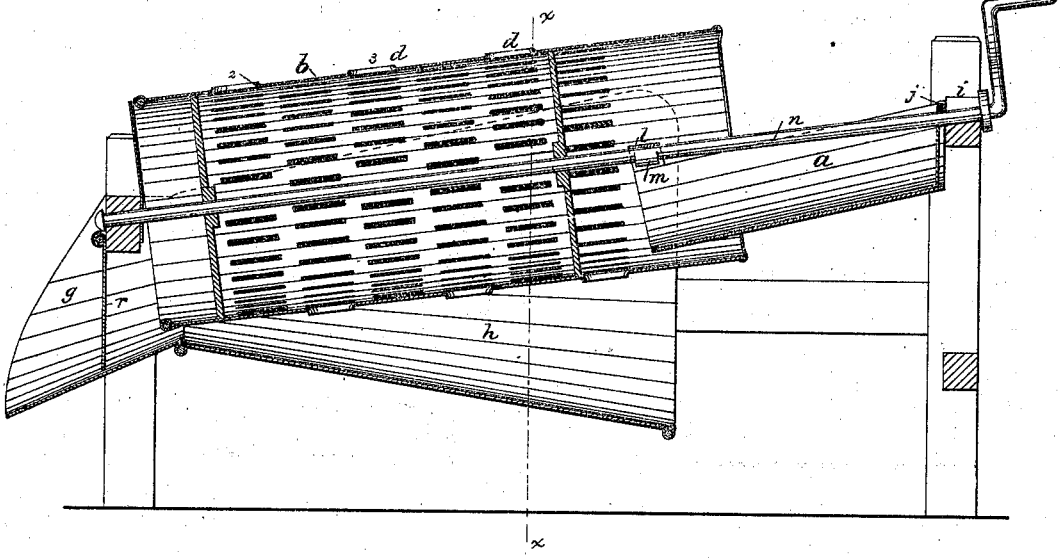


Fig. 2.

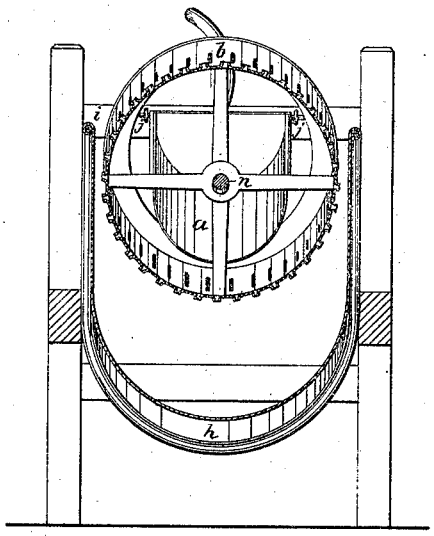
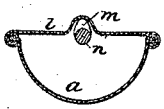


Fig. 3.

Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

HIRAM H. HEALD, OF SANDWICH, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR CLEANING AND SIFTING TACKS.

Specification forming part of Letters Patent No. **207,178**, dated August 20, 1878; application filed July 5, 1878.

To all whom it may concern:

Be it known that I, HIRAM H. HEALD, of Sandwich, county of Barnstable, State of Massachusetts, have invented an Improvement in Machines for Cleaning and Sifting Tacks, of which the following is a specification:

This invention has reference to mechanism for cleaning and sifting tacks, or separating perfect tacks from imperfect tacks, iron slivers, and scales.

This invention consists in an inclined rotary cylinder, made of solid sheet metal and of uniform diameter throughout, open at its receiving end, and having slots punched from its inside outwardly, in connection with a vibrating feed-chute, a discharge-chute, a gate, guard, or fender arranged in the latter, and a sliver and dirt-escape chute.

The perfect tacks which enter the slots at the lower side of the cylinder are stopped by their heads, and are held until such tacks, as the cylinder rotates farther, approach a point near or above the central line of the cylinder, when they fall from such slots back into the cylinder. The cylinder, made of sheet metal, has the slots punched in it from the inside outward, as shown in the drawings, to thereby form rounded edges or inclined surfaces leading to the exterior of the cylinder, the slot so shaped being better than the square-edged slots common to other machines, because they greatly facilitate the passage of slivers and scales from the cylinder and insure the quick release of the tacks from the slots as the cylinder is rotated.

The inclination of the cylinder causes the tacks to move steadily toward its lower or discharging end.

Figure 1 represents, in longitudinal section, a tack-cleaning machine constructed in accordance with my invention; Fig. 2, a cross-section thereof on the line *x x*, Fig. 1; Fig. 3, a detail of the cylinder, showing the slots on a larger scale; and Fig. 4, a detail of the device for shaking the feeding-chute.

The tacks to be cleaned are placed in the feeding-chute *a*, from which they pass into the receiving or elevated end of the cylinder *b*, which is rotated at the desired speed in any usual or suitable manner. This cylinder is provided with a series of slots, which may be made in the direction of the length of the cylinder, as at *d;* or they may be inclined, or be made across the cylinder, through which the slivers, dirt, &c., fall as the mass of tacks, dirt, &c., is rolled or tumbled about in the cylinder. These slots are punched through the metal cylinder by means of a punch worked from the inner side thereof outward, the punch operating to make the area of the slots greater within the cylinder at 2 than at the end 3 outside, and rounding the metal at 2, so that the slivers, scales, &c., settle readily into the tapering spaces leading out of the cylinder, the slots so shaped being more readily entered than if square at these edges, as heretofore common. In this way the slivers, dirt, &c., are discharged through the slots, while the perfect tacks are passed from the receiving to the lower or delivering end of the rotary cylinder. The cleaned tacks fall into the chute *g*, from which they are led into a suitable receptacle. The slivers and dirt fall into the chute *h*, and are by it conveyed to a proper receptacle.

The feeding-chute is hinged to the frame *i* at *j*, and at its lower end is provided with a cross-piece, *l*, which rests upon a cam, *m*, on the rotating shaft *n*, which imparts motion to the cylinder *b*.

A hinged door, *r*, prevents the perfect tacks from rebounding and jumping over the sides of the chute *g*.

In practice, the upper end of the chute *g* will extend along the under side of the cylinder only to the last row of slots near its lower end.

Instead of the devices herein shown for moving the feeding-chute, I may employ any other well-known or suitable devices.

I claim—

1. In a tack cleaner and sifter, the inclined rotary cylinder *b*, constructed of solid sheet metal and of uniform diameter throughout, open at its receiving end, and combined with a gate, guard, or fender and a chute at its discharging end, and provided with slots punched from its inside outwardly, substantially as shown and described.

2. The combination of the inclined, rotary, slotted, sheet-metal cylinder *b*, vibrating feeding-chute *a*, discharge-chutes *g h*, and gate, guard, or fender, *r*, subtantially as described.

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

Witnesses: HIRAM H. HEALD.

G. W. GREGORY,

N. E. WHITNEY.