(No Model.)

E. B. ALLEN.

MACHINE FOR ASSORTING NAILS.

No. 374,387. Patented Dec. 6, 1887.

Fig: 1.

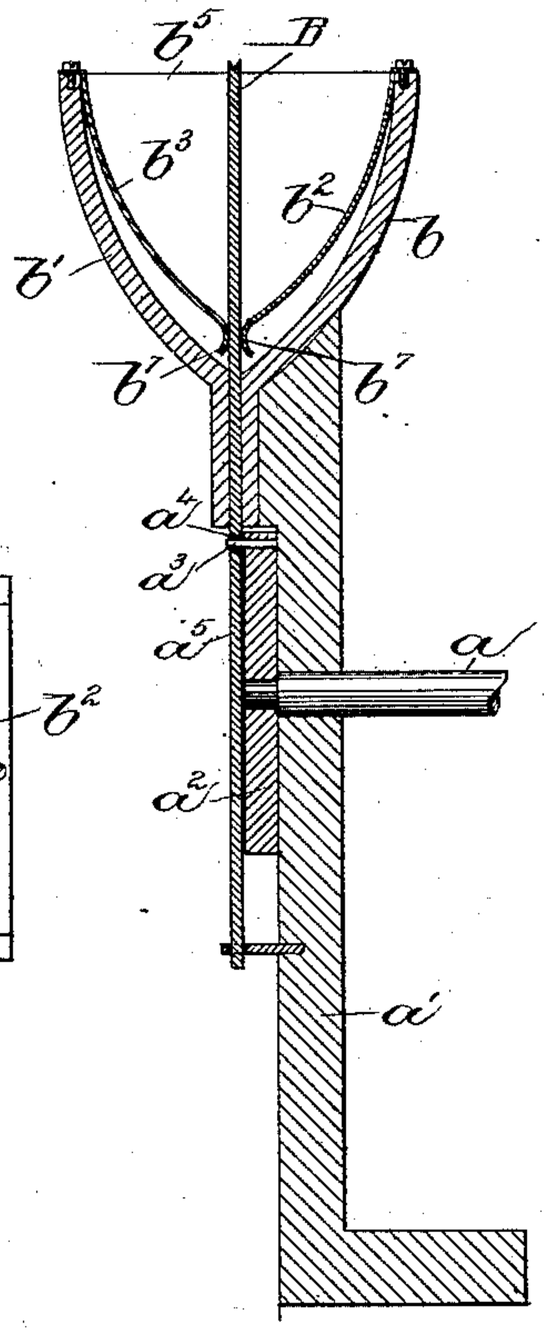


Fig: 2.

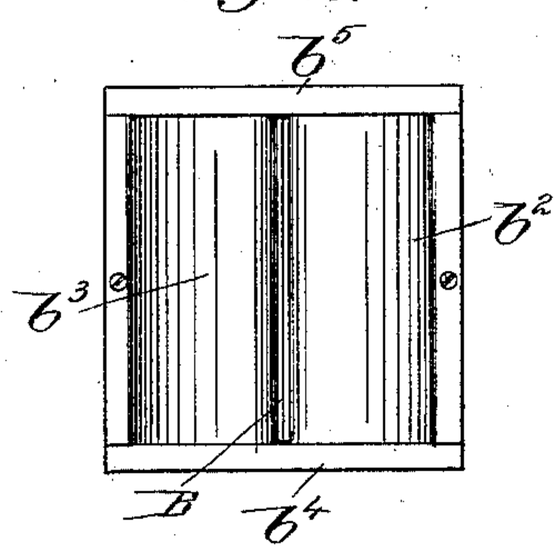
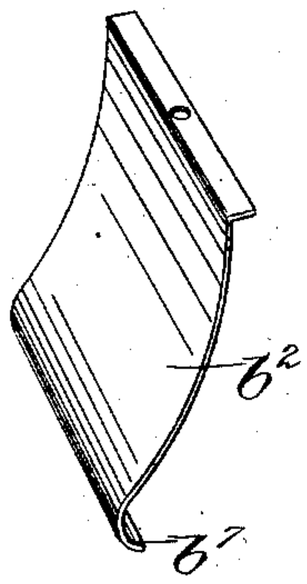


Fig: 3.



Witnesses.
Fred L. Emery.
Howard F. Eaton.

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UNITED STATES PATENT OFFICE.

EDWARD B. ALLEN, OF PORTLAND, MAINE, ASSIGNOR TO JAMES W. BROOKS, TRUSTEE, OF CAMBRIDGE, MASSACHUSETTS.

MACHINE FOR ASSORTING NAILS.

SPECIFICATION forming part of Letters Patent No. 374,387, dated December 6, 1887.

Application filed August 6, 1887. Serial No. 246,289. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. ALLEN, of Portland, county of Cumberland, and State of Maine, have invented an Improvement in Machines for Assorting Nails, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to nail separating or assorting machines of the class shown and described in United States Patent No. 138,783, dated May 13, 1873, it having for its object to provide the said machine with a hopper having yielding or spring sides, for a purpose as will be hereinafter described. In the patent referred to the sides of the hopper, therein shown are rigid and unyielding, it having at its bottom an aperture or passage, through which travels a carrier or lifter, which takes one of a quantity of nails in the hopper and lifts it up out of the said hopper. The aperture or passage referred to is of a constant width, and the lifter or carrier is made to fit the said passage.

It is the object of this invention to provide a hopper having spring or yielding sides to permit lifters or carriers of various widths to pass between them, so that a single machine may be employed for various size nails.

Figure 1 is a vertical section of a sufficient portion of a machine provided with my improved hopper to enable my invention to be understood; Fig. 2, a plan or top view of the hopper detached, and Fig. 3 a detail of one of the spring sides.

The main shaft a, supported by the standard a', and the disk or crank a^2, having the crank-pin a^3 inserted through a slot, a^4, in the carrier or lifter a^5, are all substantially as in the patent referred to. The standard a' has secured to it a case having its sides b b' prolonged, as herein shown, to form a guide for the carrier or lifter. The sides b b' have secured to them, as herein shown, two sheet-metal springs, b^2 b^3, which co operate with the front b^4 and back b^5 of the case referred to, to form the hopper proper, into which the nails are placed, the said springs forming the sides of the hopper. Each spring, as herein shown, is concaved and bent backward at its lower end, as at b^7, to be acted upon by the carrier to force the spring sides apart and permit the passage between them of the said carrier. It will thus be seen that the sides of the hopper are yielding and permit lifters or carriers of various sizes to be used on a single machine.

I claim—

1. In a nail separating or assorting machine, the combination, with a reciprocating carrier or lifter, of a hopper having yielding or spring sides, substantially as described.

2. In a nail separating or assorting machine, the combination, with a reciprocating carrier or lifter, of a hopper having yielding or spring sides b^2 b^3, bent at b^7, as and for the purpose specified.

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

EDWARD B. ALLEN.

Witnesses:
JAS. H. CHURCHILL,
C. M. CONE.