

(No Model.)

2 Sheets—Sheet 1.

H. W. LOOMIS.
SCREW BLANK FEEDER.

No. 264,040.

Patented Sept. 5, 1882.

Fig I,

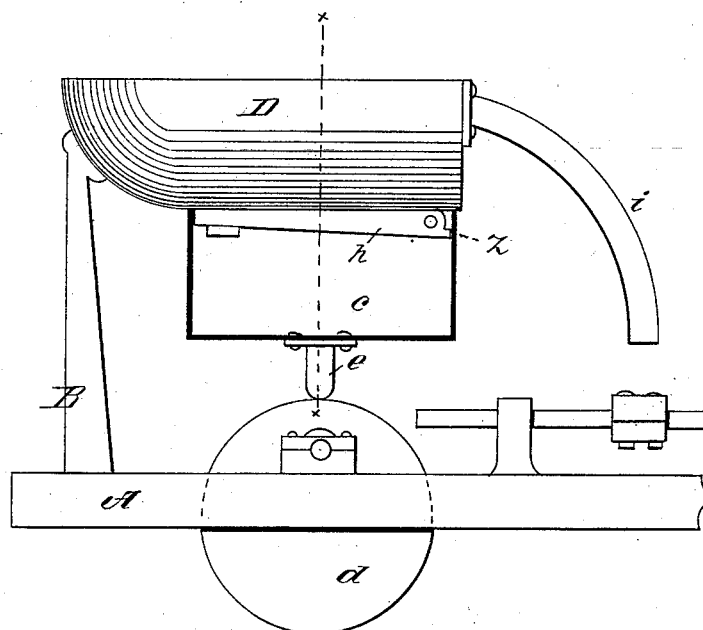
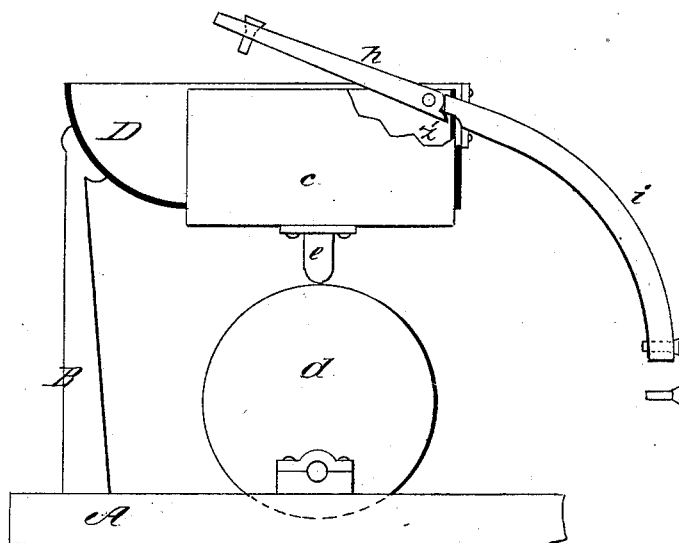


Fig II,



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By Henry A. Chapin
Atty*

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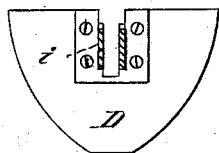
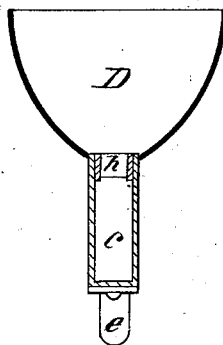


Fig III,

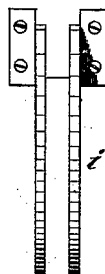


Fig IV,

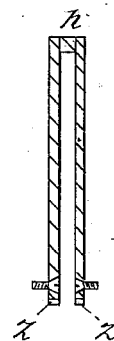


Fig V,

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UNITED STATES PATENT OFFICE.

HENRY W. LOOMIS, OF HOLYOKE, ASSIGNOR OF ONE-HALF TO RUFUS CRITTENDEN, OF NORTHAMPTON, MASSACHUSETTS.

SCREW-BLANK FEEDER.

SPECIFICATION forming part of Letters Patent No. 264,040, dated September 5, 1882.

Application filed April 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. LOOMIS, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Screw-Blank Feeders for Screw-Machines, of which the following is a specification.

This invention relates to the details of the construction of screw-blank-feeding devices for screw-machines, the object being to provide improved mechanism for taking at regular intervals a number of screw-blanks from a mass thereof, causing them to be arranged in a row, with their heads all in one direction, and to be deposited in like order in a suitable guide-track to be conveyed to the usual screw-finishing mechanism.

In the drawings forming part of this specification, Figure I is a side elevation, partly in section, of screw-blank-feeding devices constructed according to my invention, and shown in conjunction with a part of a screw-machine. Fig. II is a similar view to Fig. I, but showing parts of the machine in a changed position. Fig. III is an end elevation of the hopper. Fig. IV is a plan view of the pivoted slotted finger. Fig. V is a view of the track. Fig. VI is a transverse section of the lifter, finger, and hopper on the line *x x*, Fig. 1.

In the drawings, A indicates a part of the frame of a screw-machine. B is a post on frame A. D is the blank-hopper, supported on post B. *c* is the lifter. *e* is a cam-block on the bottom of said lifter. *d* is a cam fixed on a proper shaft on frame A. *h* is the slotted finger. *i* is the track.

The blank-hopper D is constructed of the form, in transverse section, shown in Fig. VI, and has an opening in the bottom of suitable width and length to permit the lifter *c* to be moved up and down therein. The lifter *c* is made of such depth as to allow it to be elevated within the hopper D, to carry its upper edge from the bottom of the latter up nearly to its top, having a cam-block, *e*, secured to its bottom, which rides on the periphery of a revolving cam-wheel, *d*, which is hung on a suitable shaft in frame A under said lifter. The upper edge of lifter *c* is adapted to receive upon proper supporting-blocks therein, in a horizon-

tal position, the slotted finger *h*, the latter being pivotally connected at one end to said lifter by the screws *v v* or other suitable means, and having its pivoted end extending slightly beyond the end of said lifter, as shown. The said projecting end of the finger *h* is provided with short arms *z z*, as and for the purpose hereinafter set forth. Said finger *h* is made with a slot adapted to the diameter of the wire from which the screw-blanks are made, which it is to operate upon. Thus in practice several fingers, each having slots therein of differing widths, are provided for each lifter and hopper, so that any sized screw-blank may be fed thereby. A curved slotted track, *i*, is properly secured by one end to the end of the hopper D, the width of the slot therein being adapted to the width of the finger *h*, which operates in conjunction with it, and its end, which is secured to said hopper, is located opposite the pivoted end of said finger *h*, and is provided with a short arm or projection, as shown, for engagement with the arms *z z* on the end of said finger, and the adjoining ends of said finger and track, when the lifter *c* is in an upward position, are slightly curved above said arms *z z*.

In practice the frame A of the screw-machine supports suitable screw-finishing devices adapted to receive and operate upon the screw-blanks which are conducted from the hopper by the track *i*.

The operation of my improvements is as follows: The screw-blanks are deposited in the hopper D in a mass, the lifter *c* being down, bringing the finger *h* to the bottom of the hopper, as in Fig. I, and the machine is set in motion, causing the cam-wheel *d* to be revolved against the block *e* and the lifter and finger *h* to be slowly forced up through the blanks within the hopper. As said finger moves up many of the blanks are encountered by it, which lie in a line with the slot therein, and the bodies thereof drop through said slot and said blanks hang in said finger by their heads, as shown in Fig. II. The lifter continues to rise and carries the arms *z* on the pivoted end of finger *h* against the arm or projection on the end of the track *i*, and thus causes said finger to swing to an inclined position, as shown, whereby the blanks in said finger are caused to slide therefrom into the coinciding slot in

the track *i*, by which they are conducted downward and brought to a suitable position for the aforesaid finishing-tools to seize them. The object of the above-mentioned curved form of the adjoining ends of the finger *h* and the track *i* is to prevent any of the said blanks from being caught therebetween when said finger is swinging up. The blanks having been discharged from said finger, the lifter moves down, and said finger swings back to a horizontal position therein, and the lifter having carried the finger down through the blanks to the bottom of the hopper again, the above-described operations are repeated.

It is obvious that other means than the above-mentioned ones may be employed for interposing a stop to the upward movement of the end of finger *h* when it arrives opposite the end of the track, and to cause said finger to be tilted, as described—such, for instance, as suspending a hook to said end of said finger, which shall engage with some suitable stud on the end of the hopper.

I am aware that it is not new to construct a hopper for screw-blank feeders with a lifter therein having a slotted finger pivoted at one end thereof, and both capable of a vertical movement within said hopper, combined with a track to convey blanks from said finger, substantially as shown in Patent No. 9,648, of 1853, and said devices are no part of my invention; but

What I claim as my invention is—

In a screw-blank feeder, the combination, with the track *i*, having its receiving end projecting into the hopper *D*, and the slotted finger *h*, pivoted to the lifter *c*, of the short arms *z z*, adapted to engage under said end of track *i*, substantially as set forth.

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Witnesses:

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