

T. SEELY & J. N. CHILCOTE.
MACHINES FOR TURNING HANDLES.

No. 179,068.

Patented June 20, 1876.

Fig. 1.

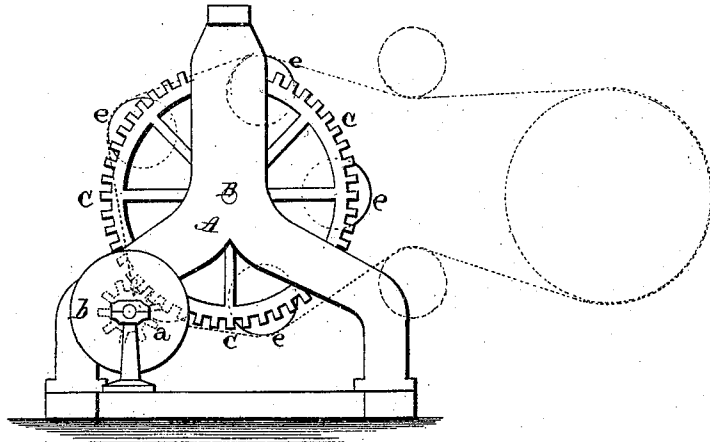


Fig. 2.

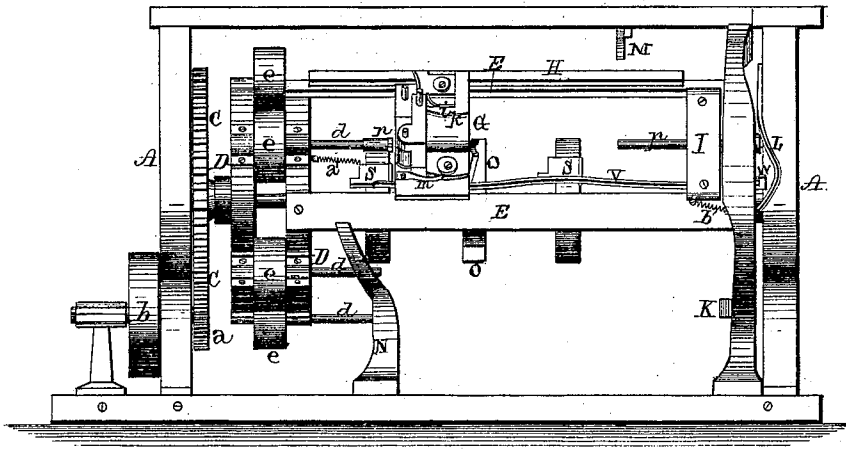
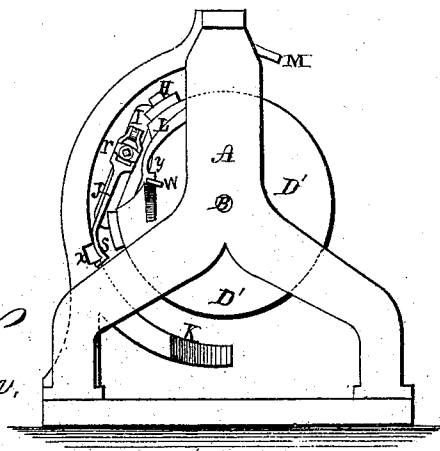


Fig. 3.



WITNESSES.

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F. A. Schmann, Atty

2 Sheets—Sheet 2.

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Fig. 4.

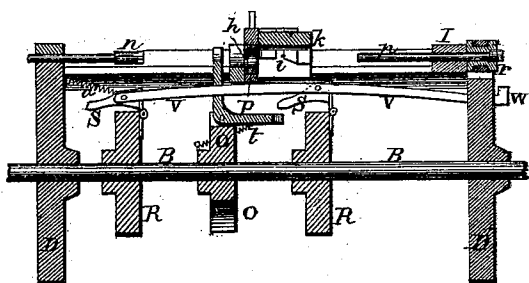


Fig. 5.

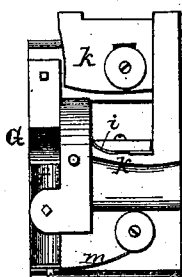


Fig. 6.

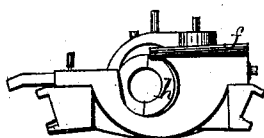


Fig. 7.



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UNITED STATES PATENT OFFICE.

THOMAS SEELY AND JOHN N. CHILCOTE, OF EDGERTON, OHIO.

IMPROVEMENT IN MACHINES FOR TURNING HANDLES.

Specification forming part of Letters Patent No. **179,068**, dated June 20, 1876; application filed October 19, 1875.

To all whom it may concern:

Be it known that we, THOMAS SEELY and JOHN N. CHILCOTE, of Edgerton, in the county of Williams and State of Ohio, have invented certain new and useful Improvements in Machine for Turning Handles; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of our invention consists in the construction and arrangement of a machine for turning handles for brooms, hoes, spades, or other articles, as will be hereinafter more fully set forth.

The accompanying drawings, to which reference is made, fully illustrate our invention.

A represents a frame of any suitable construction, in which is mounted a shaft, B, provided at one end with cog-wheel C, said cog-wheel receiving its motion from a pinion, *a*, mounted upon a short shaft having a pulley, *b*, connected by a belt with a pulley on a counter-shaft. On the shaft B, near the cog-wheel C, are mounted two circular wheels or disks, D D, which have suitable journal-boxes attached to their outer edges, at equal distances apart, to contain five spindles, *d*, and each spindle is, between the disks, provided with a pulley, *e*. In a full-sized machine these pulleys are all to be run by a single belt from a pulley on the counter-shaft, said belt being so arranged with belt-tighteners that four of the pulleys will be revolved at a time and one remain stationary; and as soon as the stationary pulley, by the revolution of the disks D, comes in contact with the belt, the next pulley in the series will pass away from the belt and cease revolving, and so on each pulley, in turn, remains stationary for a short time. On the opposite end of the shaft B is secured another wheel or disk, D', and this disk is connected with the inner one of the two disks D by bars E E, which form guides for the movable knife-blocks G, of which there are one for each spindle.

In the drawing we have shown only one of these knife-blocks, and one set of devices to operate in connection therewith; but it must

be understood that in a full-sized machine there are a series of such blocks and devices, corresponding in number with the number of the spindles.

f is the knife attached to the knife-block G for turning the stick, and back of said knife is a feed-ring, *h*. This feed-ring is constructed of two steel plates or rings screwed fast to an open ring in the knife-block, and sprung to form the thread required, the size of hole in the plates or rings being governed by the size of stick to be turned. The plates are thin and sharp on the inside, and are intended to cut into the turned stick sufficiently deep to form a thread and feed the knife-block forward. The feed-ring *h* is made fast by a set-screw, thus preventing it from turning and allowing the handle or stick to turn in it, making a screw-feed. Back of the feed-ring *h* are the finishing-knives *i*, made fast to a frame, *k*, and this frame held to the block G by bolts passing through slots in the frame, so that the frame may be held against a pattern, H, by means of a spring, *m*, said pattern being secured to one of the guides E, as shown. On the end of each spindle *d* is a dog, *n*, for revolving the handle, said dog being made by drilling a large hole in the end of a piece of metal, 1, the length and size required for the dog, and then placing pins 2 in the hole in their proper places, and the spaces between them filled in with hot metal, 3. In the other end is a smaller hole to connect it to the spindle. At the opposite ends of the guides E is a block, I, containing the tail-spindle *p* on a direct line with the head-spindle *e*. The outer end of the tail-spindle *p* is placed in a box, *r*, which is held in a pivoted lever, J, in the periphery of the disk D', the outer end of said lever having a hook or bend, *s*. Under the disk D' is an incline, K, with a slot or notch, *x*, at a suitable point thereon. At the side of said disk is another incline, L, having also a slot or notch, *y*. In the top of the frame A is a feed-bar, M, and in the bottom another feed-bar, N. On the shaft B, in the center, is a five-armed wheel, O, the outer end of each arm being forked, and having an L-shaped lever P pivoted therein, said lever being held to either side by means of a spring, *t*. On each side, and a suitable distance from the

wheel O, is secured a disk, R, on the shaft B, and on the same are hinged L-shaped rests S S, which are connected by a rod, *v*, said rod passing through the disk D', and having a hook, *w*, on its end. These rests are held down by means of springs *a' a'*.

The operation of the machine is as follows: The wheels D D' revolve to the left, and the spindles *d* to the right, the wheels making about two revolutions per minute in turning a broom-handle. The spindles *d* are revolved by the belt around the pulleys *e*, as described, the one pulley not touched by said belt ceasing to revolve while the wheels D D' make nearly one-fourth of a revolution, this being the time and place for taking the handle out and putting a new stick in the machine. When the stick has been placed between the head and tail spindles, the wheels D D' revolving at the same time brings the pulley *d* in contact with the belt which puts the stick in motion. Then the knife-block G is brought into action by the set-screw in the knife-block coming in contact with the feed-bar M, which starts the knife-block on the stick to be turned, the knife, in the advance of the knife-block, cutting the stick the proper size to screw sufficiently tight in the feed-ring *h* to carry the knife-block to the head-spindle. While the knife-block is performing this work the wheels D D' will make about one-half of a revolution, which brings the set-screw in the knife-block G against the feed-bar N, that forces the knife-block off of the handle. The handle then, being finished, is dropped out by the tail-spindle *p*, being disengaged by means of the lever J working against the incline K, which moves said spindle backward. This spindle is held back by the lever until the handle has dropped out and another stick placed in the rests S, when the lever J passes through the notch *x* in the incline K, and the tail-spindle is pressed against the end of the stick by the lever J working against the inner side of the incline, and held against the stick while being turned

by means of a spring, *b'*, connecting the lever with the block I. As soon as the handle has dropped out the knife-block G is thrown back to the tail-spindle by means of a belt, and the rests S are raised by the hook *w* on the end of the rod *v*, working against the incline L. While thus raised they center the stick, and as soon as the stick is fastened by the tail-spindle, as above described, the hook *w* passes through the notch *y*, and the rests S are thrown down by the springs *a'*. The L-shaped lever P forms a center or steady rest, and is thrown back and forth by the knife-block passing over it.

We are aware that the thread of a nut or screw has been used as a feeding device to force the material forward, and this we disclaim.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The dogs *n*, consisting of the bored-out cylinder 1, pins or plates 2, and filling of metal 3, substantially as specified.

2. The combination of the revolving disks D D and D', guides E E, connected thereto, and the knife-block G, movable on said guides, substantially as and for the purpose set forth.

3. The combination, with the movable knife-block G, of the knife *f*, feed-ring *h*, finishing-knives *i*, frame *k*, and spring *m*, substantially as and for the purpose herein set forth.

4. The combination of the rests S S, with springs *a'*, rod *v*, with hook *w*, and incline L, with notch *y*, for the purpose herein set forth.

5. The L-shaped lever or center rest P, with spring *t*, in combination with the knife-block G, for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 30th day of September, 1875.

THOMAS SEELY.
JOHN N. CHILCOTE.

Witnesses:

CHRISTIAN G. YACKEE,
JOHN L. TERPENING.