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INVENTOR:
J. Houck
BY *Mum & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN HOUCK, OF TOBYHANNA MILLS, PENNSYLVANIA, ASSIGNOR TO HIMSELF, NATHAN HOUCK, AND CHARLES HOUCK, OF SAME PLACE.

FEED MECHANISM FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 223,736, dated January 20, 1880.

Application filed November 17, 1879.

To all whom it may concern:

Be it known that I, JOHN HOUCK, of Tobyhanna Mills, in the county of Monroe and State of Pennsylvania, have invented a new and useful Improvement in Feed Mechanism for Lathes, of which the following is a specification.

My improvements relate to the feeding mechanism for tubular cutter-heads used for turning broom-handles, curtain-rollers, umbrella-handles, and other wooden articles of cylindrical form. Such machines have heretofore been fitted with feed-rollers fixed at the front and back of the hollow mandrel to carry the sticks through, and in case of the sticks breaking, or when for any reason access was required to the mandrel, considerable time and labor were involved, as the rollers or the mandrel had to be removed from their bearings.

The object of my invention is to fit the feed-rollers so that access may be had to the cutter readily without disconnection of the parts; and the invention consists in mounting the feed-rollers upon a frame that is fitted to swing to and from the mandrel and cutter, whereby the frame and rollers may be swung with the rollers clear of the cutter-head.

The construction and operation will be more particularly explained with reference to the accompanying drawings, wherein—

Figure 1 is a plan view of a rotary cutter-head and feeding mechanism constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same on line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the bed-plate of the machine; *a*, the hollow mandrel, fitted with cutters *b* and supported in the bearings *c*. These parts may be of any usual or desired character.

d d are the feed-rollers in front of the cutters, which rollers are fitted on shafts in bearings in the frame B, that is pivoted on the cross-shaft *e*, that is sustained in the short standards *f* on bed A, so that the frame B may swing on shaft *e* to and from the cutters and in the direction of the axis of the mandrel *a*.

When the rollers are in position for operation the frame B rests on a screw, *g*, that projects from bed A, by which screw the frame may be adjusted to bring the rollers in line with the mandrel.

The frame B will be preferably made in the form shown—that is, with the vertical standards *h*, which are fixed upon the horizontal arms *i*, that are attached on the shaft *e*. The shaft of the lower roller, *d*, is held in fixed bearings in standards *h*, while the shaft of the upper roller is sustained in boxes that are fitted for vertical movement in the standards, and with a spring to give the pressure required to hold the stick. The shafts of rollers *d* are geared together, and are driven through an intermediate gear-wheel on the arm *i* at that side from a gear-wheel, *k*, on the shaft *e*, which shaft also carries a bevel-gear, *l*, that meshes with a similar gear on the driving-shaft, *m*, which is mounted on bed A at the side of frame B. By this arrangement the frame B can be swung back without disconnection of the gearing; but I do not limit myself to any special mechanism for driving the feed-rollers.

The driving-shaft *m* carries also a bevel-gear, *n*, for driving the feed-rollers at the back of the cutter-head, which will be mounted upon a swinging frame similar to B, as shown by dotted lines in Fig. 2.

In operation the sticks of wood to be turned are carried forward through the hollow mandrel and held against the action of the cutters by the rollers *d*, and are drawn out by the rollers at the back of the mandrel. By having the feed-rollers mounted as described they may be set up closely to the mandrel and the sticks fed in short lengths instead of long strips. In case of a stick breaking the frame B may be swung back, the piece driven out, and the rollers returned to place without disconnection of any of the parts; or, if it is desired to get at the cutters, it may be done in the same manner, thus saving the time and labor heretofore required in such cases.

I am aware that it is not broadly new to pivot the bearing-pieces of the feed-rolls so that they may be turned; but

What I claim is—

The frame B, having vertical standards *h h*, that carry the feed-rolls, and, conjoined therewith at the bottom, horizontal arms *i i*, pivoted at their ends on the counter-shaft *e*, as shown and described.

JOHN HOUCK.

Witnesses:

E. H. HOLMES,
MATTHIAS MARTIN.