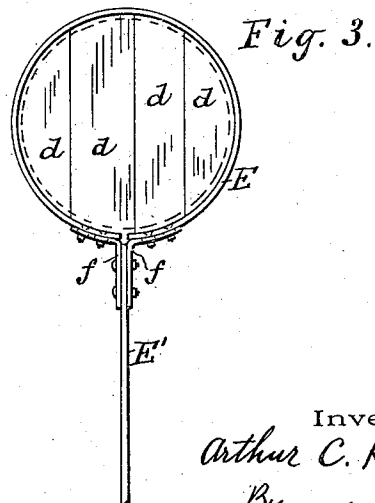
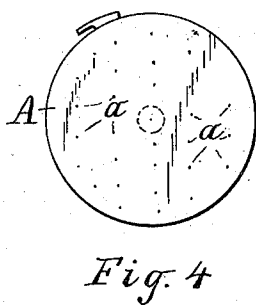
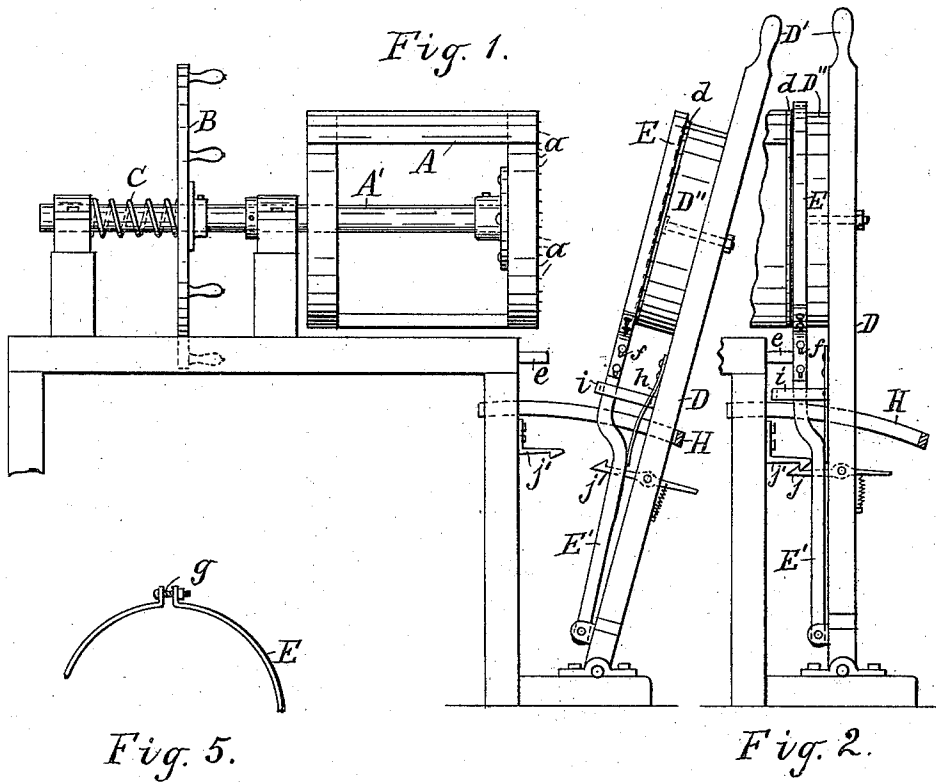


(No Model.)

A. C. HACKLEY.
BOX MAKING MACHINE.

No. 534,791.

Patented Feb. 26, 1895.



Witnesses:

Mark W. Dewey

A. S. Dewey

Inventor.

Arthur C. Hackley

By C. H. Druell
his Attorney.

UNITED STATES PATENT OFFICE.

ARTHUR C. HACKLEY, OF WEST WINFIELD, NEW YORK.

BOX-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,791, dated February 26, 1895.

Application filed July 16, 1894. Serial No. 517,629. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR C. HACKLEY, of West Winfield, in the county of Herkimer, in the State of New York, have invented new and useful Improvements in Box-Making Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to certain improvements in box-making machines, particularly those machines designed for making cheese boxes, and the object is, to provide means for receiving, properly holding, and carrying the pieces forming the ends of the box, to the drum, rapidly and accurately.

My invention consists in the combination with the rotatable drum, of a swinging support for the end of the box, a ring provided with a shank pivoted to the support, a spring to force the shank from the support, a stop to limit its movement, and a stop on the frame of the machine to engage the shank to force the ring toward the said support.

In the drawings, Figure 1 is a side elevation of a well known form of cheese box-making machine provided with my improvement. Fig. 2 shows a portion of the machine with my improvement moved to its opposite position. Fig. 3 is a side view of the means or rim for holding the pieces of a bottom or end of a box in position on the support. Fig. 4 shows the end of the drum provided with the pins or short spikes to hold the pieces of the end securely in place while the side is nailed thereto, and Fig. 5 shows one of the means that may be employed for adjusting the ring to the size of the bottom, head or end of the box.

Usually, nailing attachments of some kind are mounted on these machines, but, for the sake of simplicity and because such attachments form no part of my invention, I have not shown a nailing attachment on the machine shown in the drawings.

Referring specifically to the drawings, A is the bending drum mounted on one end of a horizontal shaft, *a'*, as usual.

B is the hand wheel on the shaft for rotating the drum, when bending or winding the sides of the box thereon, and C is a coiled spring on the said shaft between the wheel and one of the bearings for the purpose of

allowing the shaft or drum to yield or move slightly longitudinally when the end of the box, *d*, is brought up against the spiked end of the drum A.

a represents the small or short spikes projecting from the end of the drum against which the piece or pieces, *d*, forming the head or end of the box is brought and held during the winding and nailing operation.

My swinging support for holding and carrying the end, *d*, to the drum consists of a bar, D, placed opposite the spiked end of the drum, A, and pivoted at its lower end to the base of the machine to swing with its upper end toward and from the drum. The free end of the said bar is provided with a handle, D', by which it is moved.

Directly opposite the end of the drum and secured to the swinging bar, D, is a disk, D'', of about the same diameter as the drum upon which the pieces, *d*, of the end of the box are laid preparatory to being carried to and forced upon the spikes, *a*, of the drum. In order to center the said pieces, *d*, upon the disk quickly and accurately I provide a ring, E, or hoop, having its inner diameter slightly greater than the end of the box or the drum, for the pieces, *d*, forming the end to lie in. This ring also holds the pieces from sliding off the disk, and is made adjustable to the size of the end so that ends differing somewhat in size may be accommodated. This adjustment may be effected by separating the ends of the ring where it is divided more or less by means of a bolt, *g*, extending through the ends as shown in Fig. 5 of the drawings, or, by slots, in the pieces, *f*, *f*, securing the ends of the ring together by bolts extending through the said pieces and ring, in any suitable and well known manner as indicated in Fig. 3. If it is necessary at any time to raise or lower the ring on its shank, E', this may be done by loosening the bolts passing through the pieces, *f*, *f*, and said shank which may be also provided with short slots for the bolts to pass through, and changing the elevation of the ring as desired before tightening the bolts. I do not wish, however, to be limited to the means for the adjustment of the ring set forth, as this may be accomplished in many ways without departing from my invention.

The shank, E', extends downward nearly to

the pivot of the bar, D, and is pivoted to the latter so that the ring will swing toward the bar, D, and encircle the disk when its shank E', strikes the stop, e, on the frame of the machine. The ring with its shank is forced from the bar, D, by a spring h, secured to said bar and bearing with its free end against the shank. When the bar is in its inclined position, as shown in Fig. 1, the shank, E', is prevented from moving too far from the bar, D, by a guide and stop, i, secured to the bar, and, the bar, D, itself is held from moving a greater distance than is necessary from the drum by another guide and stop, H, secured to the frame of the machine, as shown.

In order that the end of the box may be held securely against the drum during the winding and nailing operation, I provide a pivoted lever, j, with a hook and a spring on the bar, D, to engage with a stationary staple or hook, j', on the frame of the machine when the end of the box is forced against the drum. After the sides of the box are nailed to the end, the said hooks are disengaged and the bar, D, is drawn away from the drum and end of the box.

With the machine open as shown in Fig. 1, the ring stands its width forward of the face of the disk D''.

In operation, the two or three pieces, as the case may be, composing the end are dropped quickly upon the face of the disk and in the ring. Bar, disk, and ring, with the end of the box, are then swung against the drum, latching in the usual manner. At about the point when the head reaches the spikes in the drum, the shank of the ring strikes the

stop, e, which arrests its further progress and leaves the edge of the end free to wind the hoop or side of the box upon and to nail the parts together.

Although the ring should perhaps be made capable of some adjustment where there is variation in the sizes of the boxes made, different sized rings may be used and quickly changed when a drum is changed.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a box-making machine, the combination with the rotatable drum, of a swinging support for the end of the box, a ring provided with a shank pivoted to the support, a spring to force the shank from the support, a stop to limit its movement, and a stop on the frame of the machine to engage the shank to force the ring toward the said support, as and for the purpose described.

2. In a box-making machine, the combination with the rotatable drum, of a swinging support for the end of the box, a ring provided with a shank pivoted to the support, a spring to force the shank from the support, a stop to limit its movement, and a stop on the frame of the machine to engage the shank to force the ring toward the said support, and a latch, as and for the purpose described.

In testimony whereof I have hereunto signed my name.

ARTHUR C. HACKLEY. [L. s.]

Witnesses:

HARVEY EDICK,
H. H. WHEELER.