

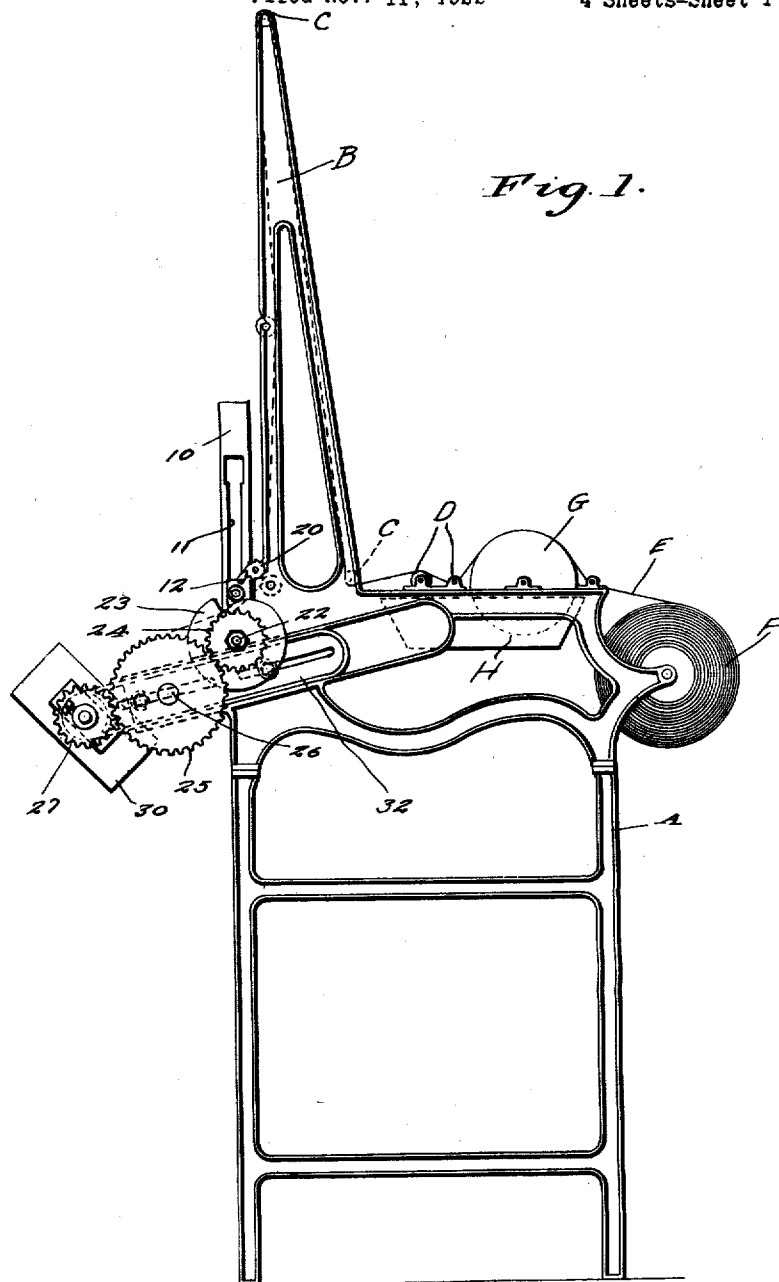
Aug. 12, 1924.

1,505,028

E. C. KARLSON
BANDING MACHINE ATTACHMENT

Filed Nov. 11, 1922

4 Sheets-Sheet 1



H. A. Thomas

E. C. Karlson

INVENTOR

BY *Victor J. Evans*

ATTORNEY

WITNESSES

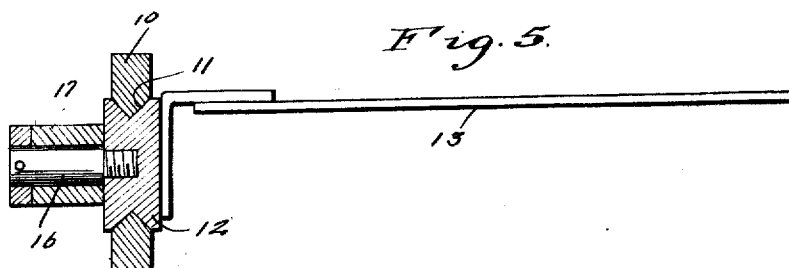
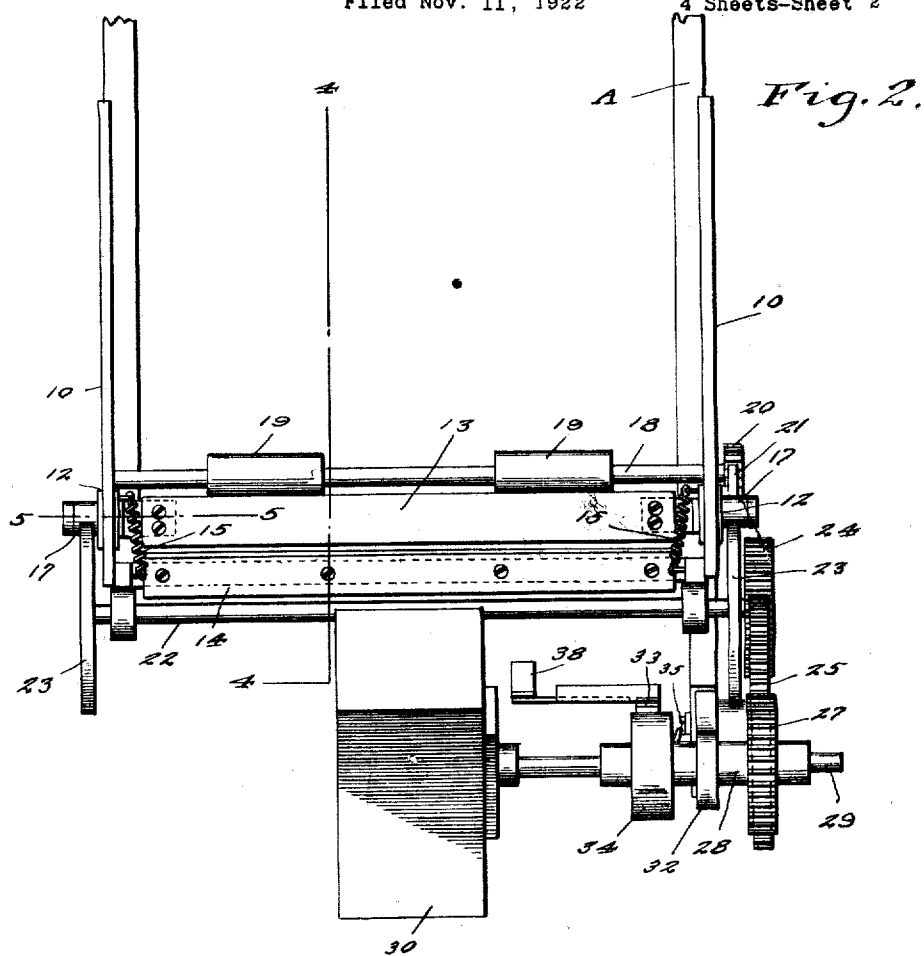
Aug. 12, 1924.

1,505,028

E. C. KARLSON
BANDING MACHINE ATTACHMENT

Filed Nov. 11, 1922

4 Sheets-Sheet 2



R. Q. Thomas

WITNESSES

E. C. Karlson

INVENTOR

BY *Victor J. Evans*

ATTORNEY

Aug. 12, 1924.

1,505,028

E. C. KARLSON
BANDING MACHINE ATTACHMENT

Filed Nov. 11, 1922

4 Sheets-Sheet 3

Fig. 3.

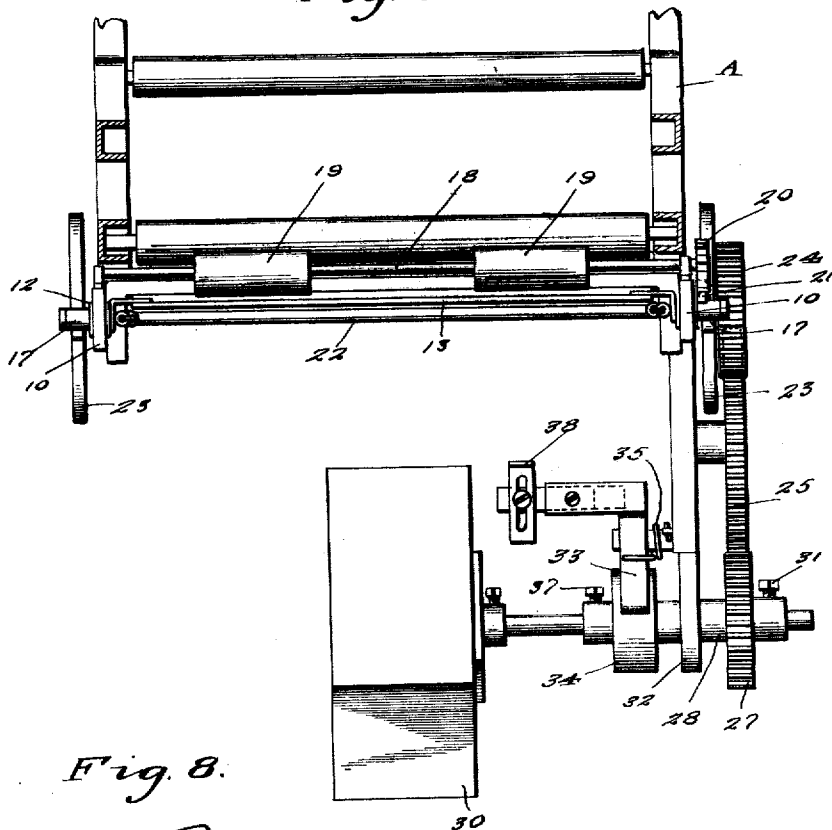
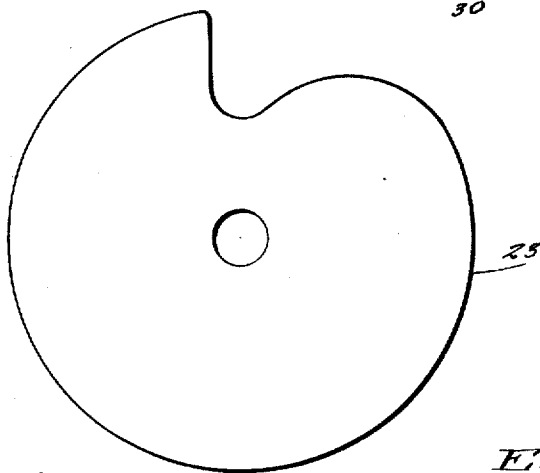


Fig. 8.



H. A. Thomas

WITNESSES

E. C. Karlson
BY Victor J. Evans
INVENTOR
ATTORNEY

Aug. 12, 1924.

1,505,028

E. C. KARLSON

BANDING MACHINE ATTACHMENT

Filed Nov. 11, 1922

4 Sheets-Sheet 4

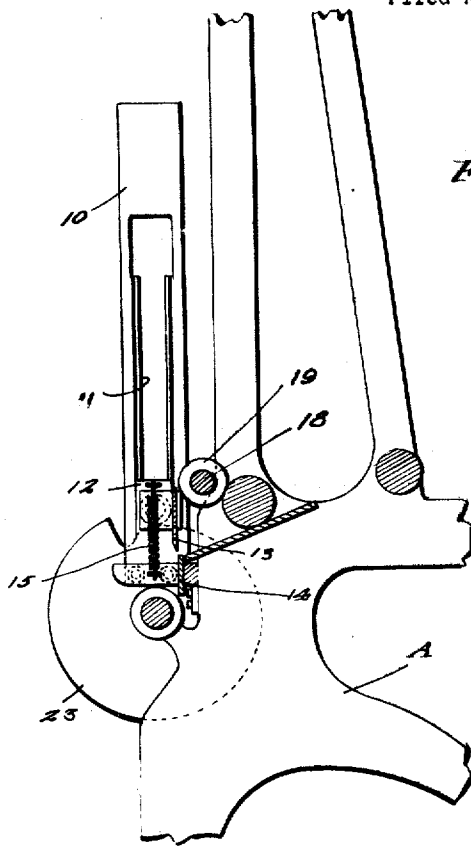


Fig. 4.

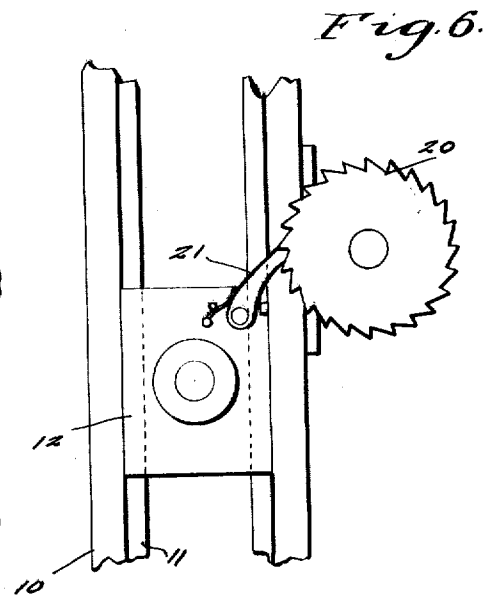


Fig. 6.

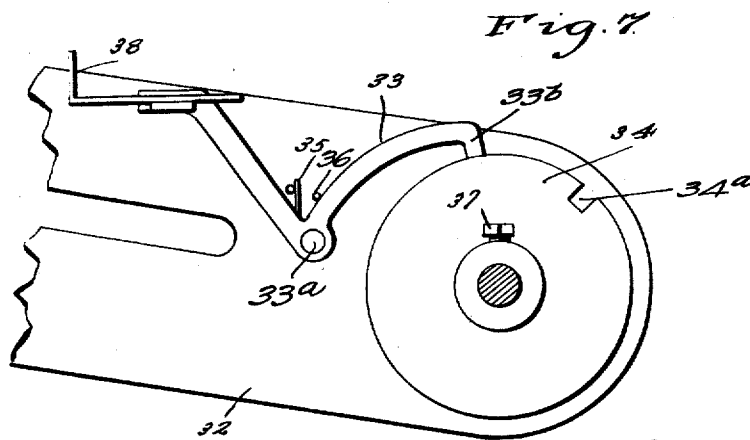


Fig. 7.

R. A. Thomas

E. C. Karlson

INVENTOR

BY Victor J. Evans

ATTORNEY

WITNESSES

UNITED STATES PATENT OFFICE.

EMIL C. KARLSON, OF LYNN, MASSACHUSETTS.

BANDING-MACHINE ATTACHMENT.

Application filed November 11, 1922. Serial No. 600,341.

To all whom it may concern:

Be it known that I, EMIL C. KARLSON, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Banding-Machine Attachments, of which the following is a specification.

This invention relates to banding machines used to cover paper boxes, and has for its object the provision of a novel attachment which may be set for any size box to cut the paper into pieces of the same length, the device operating as a great saver of paper.

An important and more specific object is the provision of a device of this character which replaces the usual swinging knife structure and which includes a slidably mounted knife operated by a novel cam mechanism.

Another object is the provision of a device of this character which is provided with a kicker roller which will operate to cause the cut edge of the remaining paper to be projected so that it may be grasped by the operator.

An additional object is the provision of a device of this character which will be simple and inexpensive in manufacture, easy to install, economical and positive in operation, durable in service and a general improvement in the art.

With the above and other objects and advantages in view the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a banding machine showing my device applied thereto,

Figure 2 is a front elevation,

Figure 3 is a plan view,

Figure 4 is a vertical section on the line 4-4 of Figure 2,

Figure 5 is a cross section on the line 5-5 of Figure 2,

Figure 6 is a fragmentary elevation showing the pawl and ratchet mechanism.

Figure 7 is a fragmentary view showing the trip mechanism,

Figure 8 is a detail view of the cam.

Referring more particularly to the drawings the letter A designates, broadly, a band-

ing machine of the type commonly provided with a swingably mounted knife operated by a control lever and treadle and having a certain spring mechanism associated therewith. In carrying out my invention the ordinary swinging knife structure is eliminated and replaced by the mechanism to be described. Machines of this type include an upstanding frame B carrying guide rollers C and D for the paper E which unwraps from a roll F and which passes over a roller G dipping into a tank or pan H of adhesive.

The numeral 10 designates a pair of supporting brackets suitably mounted upon the machine and formed with dove tailed runways 11 which constitute guides for blocks 12 which carry a knife 13 which extends transversely of the machine. Suitably mounted below this knife is a stationary knife 14 co-acting therewith. Ordinarily the knife 13 is urged toward the knife 14 by a pair of coil springs 15 connected with the supporting bracket 10 and with the blocks 12 as shown. Projecting outwardly from these blocks 12 are studs 16 upon which are journaled rollers 17 located outwardly of the supports 10.

Journaled through the supports 10 above the knife 13 is a shaft 18 carrying rollers 19 which co-act with the roller D for engaging and feeding the paper. At one end this shaft 18 carries a ratchet 20 which is engaged by a spring pressed pawl 21 on the adjacent block 12 for the purpose of partially rotating the shaft and rollers at every movement of the knife 13.

Journaled through the supports 10 below the stationary knife 14 is a shaft 22 which has its ends carrying cams 23 which engage the rollers 17 for the purpose of raising the knife 13 at fixed intervals. At one end the shaft 22 carries a gear 24 with which meshes an intermediate gear 25 journaled on a stud 26 peculiarly mounted as will be described. The gear 25 in turn, meshing with a gear 27 on a hub 28 mounted upon a spindle 29 which carries the support for the box to be covered, illustrated at 30. The stud 26 is carried by a slotted lever 32 adjustably mounted on the frame so that the gear can be raised and lowered.

The numeral 33 designates an angular lever pivoted at 33^a on the arm 32 and having an end 33^b bearing against the periphery of a disk 34 adjustably held on the spindle

29 by a set screw 37. The lever is engaged by a spring 35 which urges it in one direction, and its swinging movement away from the disk is limited by a stop pin 36. Carried by the lever 33 is a gage 38. The disk is formed in its periphery with a notch 34 designed to receive the end 35 of the lever.

In the operation it will be seen that when the spindle 29 is rotated by the act of turning the box and its support 30, the gear 27 will operate to drive the gear 25 and gear 24 whereupon the cams 23 engaging the rollers 17 will cause the movable knife 13 to have an upward movement against the tension of the springs. As the high points of the cams pass under the rollers, the springs pull the knife down. This knife 13 co-operating with the knife 14 will act to sever the paper at said spaced intervals. After the blocks 12 carrying the knife 13 descend, the one carrying the pawl 21 will, on the subsequent up stroke, cause partial rotation of the rollers 19 and as these rollers coast with the roller D, it will be apparent that the paper will be forced out so that its edge will project sufficiently that it may be grasped and pulled out ready for engagement upon the box.

From a study of the drawings taken together with the above description will make the operation thoroughly clear to one skilled in the art, so that further explanation will be unnecessary.

While I have shown and described the preferred embodiment of the invention it is of course to be understood that I reserve the right to make such changes in the form, construction and arrangement of parts as will not depart from the spirit of the in-

vention or the scope of the subjoined claims. 40
I claim:

1. An attachment for banding machines consisting of a vertically slidably mounted knife, cams for raising the knife, spring means urging the knife downwardly, gear operated means for driving said cams, a shaft journaled above the movable knife and carrying kicker rollers, a ratchet on said shaft, and a pawl associated with one end of the movable knife and co-operating with the ratchet for partially rotating the shaft and rollers at each upward movement of the knife. 45

2. An attachment for banding machines comprising slotted guides, a stationary knife mounted between said guides, blocks slidable in said guides, a movable knife carried by said blocks, rollers carried by said blocks, a shaft journaled below the stationary knife, cams on said shaft engaging said rollers, and gear operated means for rotating said shaft. 50

3. An attachment for banding machines comprising slotted guides, a stationary knife mounted between said guides, blocks slidable in said guides, a movable knife carried by said blocks, rollers carried by said blocks, a shaft journaled below the stationary knife, cams on said shaft engaging said rollers, and gear operated means for rotating said shaft, the drive means consisting of a train of gears, a driven spindle carrying the end-most gear, a slotted element carried by said spindle, and a stop lever having one end co-operating with said slotted element. 55 60 65 70 75

In testimony whereof I affix my signature.

EMIL C. KARLSON.