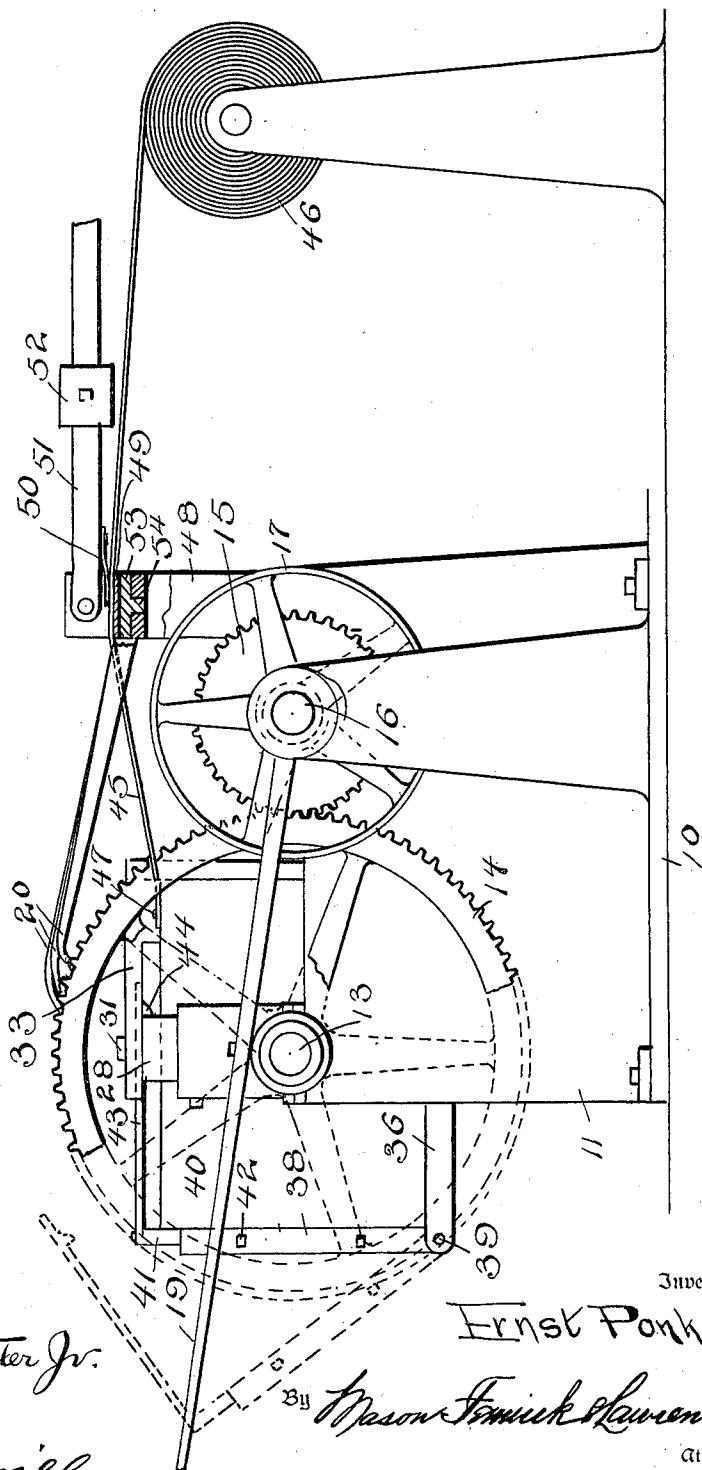


1,029,509.

3 SHEETS—SHEET 1.



Witnesses

Witnesses
J. M. Fowler Jr.

Le Morrell

Inventor

Ernst Ponkowi.

By *Mason Fennick Lawrence,*

Attorneys

E. PONKOW.
BOX BINDING MACHINE.
APPLICATION FILED JULY 17, 1911.

1,029,509.

Patented June 11, 1912.

3 SHEETS—SHEET 2.

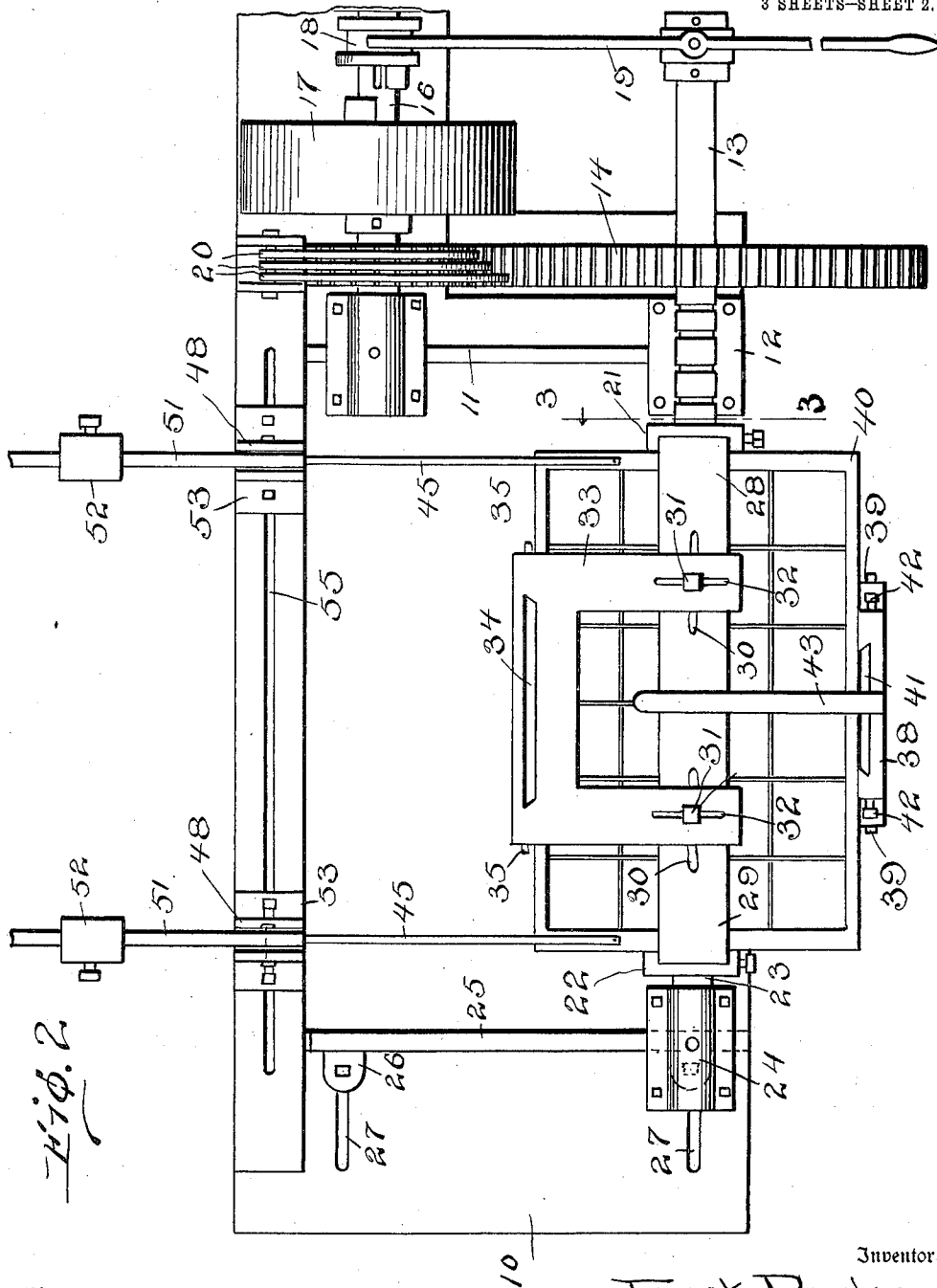


Fig. 2

Witnesses

J. M. Fowler Jr.
L. Morril

Inventor

Ernst Ponkow.

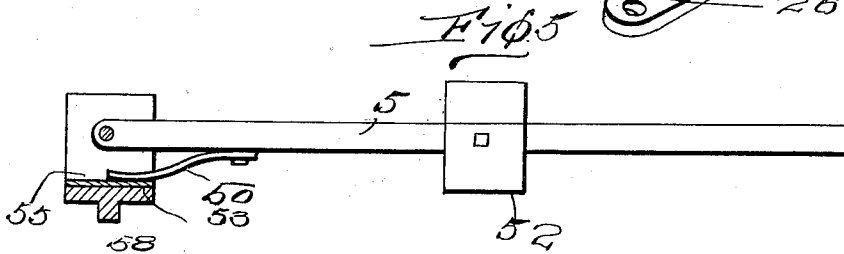
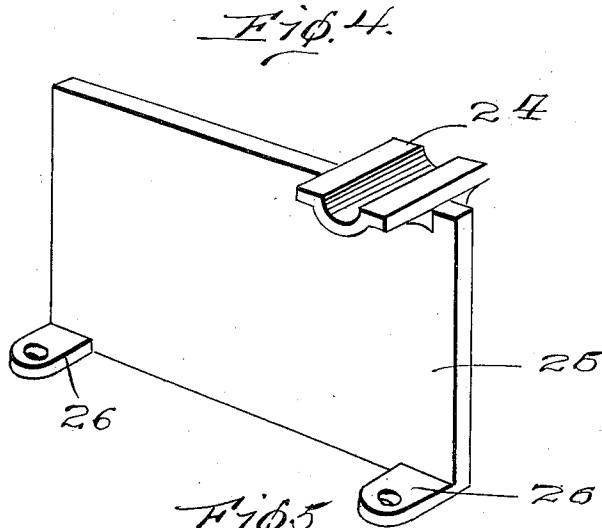
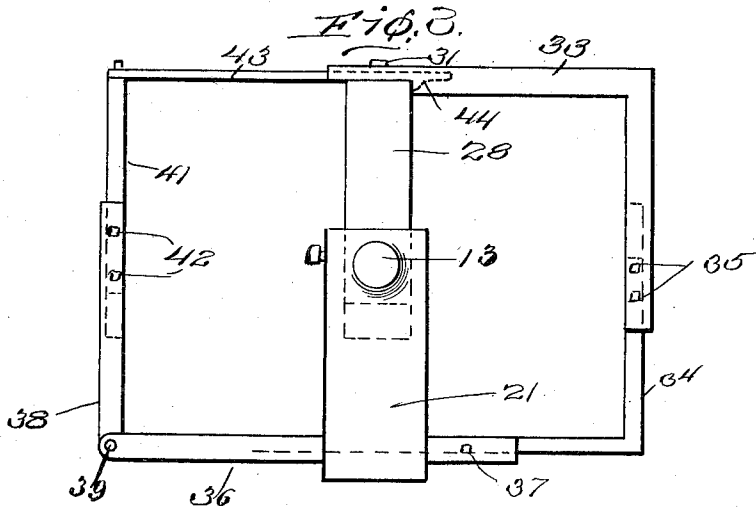
By *Mason F. Lawrence,*
Attorneys

E. POKKOW.
BOX BINDING MACHINE.
APPLICATION FILED JULY 17, 1911.

1,029,509.

Patented June 11, 1912.

3 SHEETS-SHEET 3.



Witnesses

J. M. Fowler Jr.
L. D. Morrill

Inventor

Ernst Ponkow,

By *Mason Finck Lawrence,*
Attorneys

UNITED STATES PATENT OFFICE.

ERNST PONKOW, OF BALTIMORE, MARYLAND.

BOX-BINDING MACHINE.

1,029,509.

Specification of Letters Patent.

Patented June 11, 1912.

Application filed July 17, 1911. Serial No. 638,998.

To all whom it may concern:

Be it known that I, ERNST PONKOW, a citizen of the United States of America, and resident of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Box-Binding Machines; and I 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 appertains to make and use the same.

This invention relates to machines for applying binding strips to boxes, as for instance strips of metal to wooden boxes and the like.

A further object of the invention is to provide a rotating frame with means for rotating the same and with means for feeding a metal or other strip of material to the frame in position to be applied to a box held by such frame.

A further object of the invention is to provide a frame adjustable for receiving and retaining a box and to rotate the same for receiving a binding strip.

A further object of the invention is to provide a frame adapted to rotate and carry a box therewith and with a tension means for exerting stress upon a binding strip applied to the frame as it rotates.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter more fully described and claimed.

In the drawings:—Figure 1 is a view of the machine in end elevation with certain parts broken away. Fig. 2 is a top plan view of the machine. Fig. 3 is a view in end elevation of the rotating frame as indicated by the line 3—3 at Fig. 2. Fig. 4 is a perspective view of one of the bearing frames. Fig. 5 is a detail view of the tension means.

Like characters of reference indicate corresponding parts throughout the several views.

Upon a base, as 10, is erected a bearing plate 11 having a bearing 12 journaling a shaft 13 which receives power through the medium of a spur gear 14 and a pinion 15, the latter being carried upon a shaft 16 driven by a loose pulley 17. The pulley 17 is adapted to rotate the shaft 16 by means of a clutch 18 splined upon the shaft and controlled by means of a lever 19. It will

be apparent that when the members of the clutch 18 are in engagement the shaft 16 and the pinion 15 will rotate and will rotate therewith the spur gear 14 and shaft 13. To prevent return movement of the gear 14 and shaft 13, pawls 20 are employed, as shown.

The shaft 13 carries a block 21 and a similar block 22 is carried by a shaft 23 in alignment with the shaft 13 and journaled in a box 24 carried by a plate 25 similar to the plate 11 and longitudinally adjustable upon the base 10 by means of ears 26 formed upon said plate and slots 27 formed in the base. The block 21 carries a frame section 28 in the shape of an elbow extending toward the block 22 which carries a similar frame section 29 provided with slots 30 by means of which the two frame sections 28 and 29 are longitudinally adjustable relative to each other.

The frame sections 28 and 29 are held in rigid adjustment by any approved means as the bolts 31 which also extend through slots 32 in frame section 33, the slots being so proportioned that the frame section 33 may slide laterally relative to the frame sections 28 and 29. The frame section 33 is formed in the shape of an elbow, as shown at Figs. 1 and 3, and a frame section 34 is slidably connected therewith by being dovetailed in the slot, as shown at Fig. 2, and retained in adjusted position by binding means as the bolts 35. The frame section 34 in turn carries a frame section 36 also slidable relative to the section 34 with bolts as 37 to retain the parts in adjusted relation.

To the extremity of the section 36 a keeper section 38 is pivoted as at 39, to swing outwardly, as indicated in dotted lines at Fig. 1, but to a greater extent to permit the insertion of a box, indicated at 40 in Figs. 1 and 2, into the frame between the top frame section and the bottom frame section 33 and 36. The keeper is also adjustable by the employment of a section 41 dovetailed into the section 38 and the adjustment locked by any approved means as the bolts 42. The section 41 is continued by a spring or resilient member 43 rigidly secured to and extending at right angles from the section 41 and provided with a detent 44 which catches over the frame section 29.

To insert a box the frame is positioned as shown at Figs. 1 and 2 and the keeper member released by releasing the detent 44 from

engagement with the section 29. The keeper then swings down out of position and permits the insertion of a box into the frame when the keeper is swung back into position and automatically locked by the detent engaging the frame piece 29.

A binding strip 45 carried upon a spool 46 is now secured to the upper edge of the box as by the nail shown at 47. The strip passes over an upright 48 and over a wear plate 49, where it is engaged by a tension spring 50 carried by lever 51 and the tension stress adjusted by means of slidable weights 52. The wear plate 49 is mounted upon a block 53 which is provided with a tongue 54 slidable in slot 55 formed in the top of the upright, such sliding adjustment being to compensate for different sized boxes.

The strip of binding material attached to the box as before said and passed over the wear plate 49 is subjected to the tension and the box rotated by throwing into action the clutch 18. The tension resists the feeding of the binding strip so that the same is applied to the box under tension at all times and is applied upon the box by an operator operating the machine.

The device is intended for attaching binding strips of metal to such boxes as beer cases and the like where it is not necessary to pass the binding strip entirely around the box so that the strip is started from the point shown at Figs. 1 and 2 and continued around the sides and bottom of the box and completed by being attached to the end of the box opposite the beginning.

The adjustment of the frame for holding boxes varying in size will be perfectly apparent from the foregoing description.

I claim:

1. In a box binding machine, a shaft, a

frame carried by the shaft and adapted to surround a box in one direction said frame being made up of telescoping sections adjustable in two directions and a second frame carried by the first mentioned frame adapted to surround a box in a direction at right angles to the first mentioned frame said second mentioned frame being made up of telescoping sections adjustable in two directions.

2. In a box binding machine, a shaft, a frame carried by the shaft adapted to surround a box in one direction said frame being made up of telescoping sections permitting adjustment to vary the internal capacity of the frame in two directions, a second frame carried by and at right angles to the first mentioned frame said second frame being made up of telescoping sections upon one side and a hinge section upon another side said hinged section being provided with a latch and said telescoping sections permitting the varying of the said frame in two dimensions.

3. In a box binding machine, a shaft, a frame carried by the shaft said frame being made up of telescoping sections permitting the varying of the internal area of the frame in two directions, means carried by the frame for holding a box within the frame, a guide member, and tension means adjustable longitudinally upon the guide member to correspond to the adjustment of the frame.

In testimony whereof I affix my signature in presence of two witnesses.

ERNST PONKOW.

Witnesses:

RUDOLPH J. MOTZ,
GEORGE C. WIEDERSEIM.