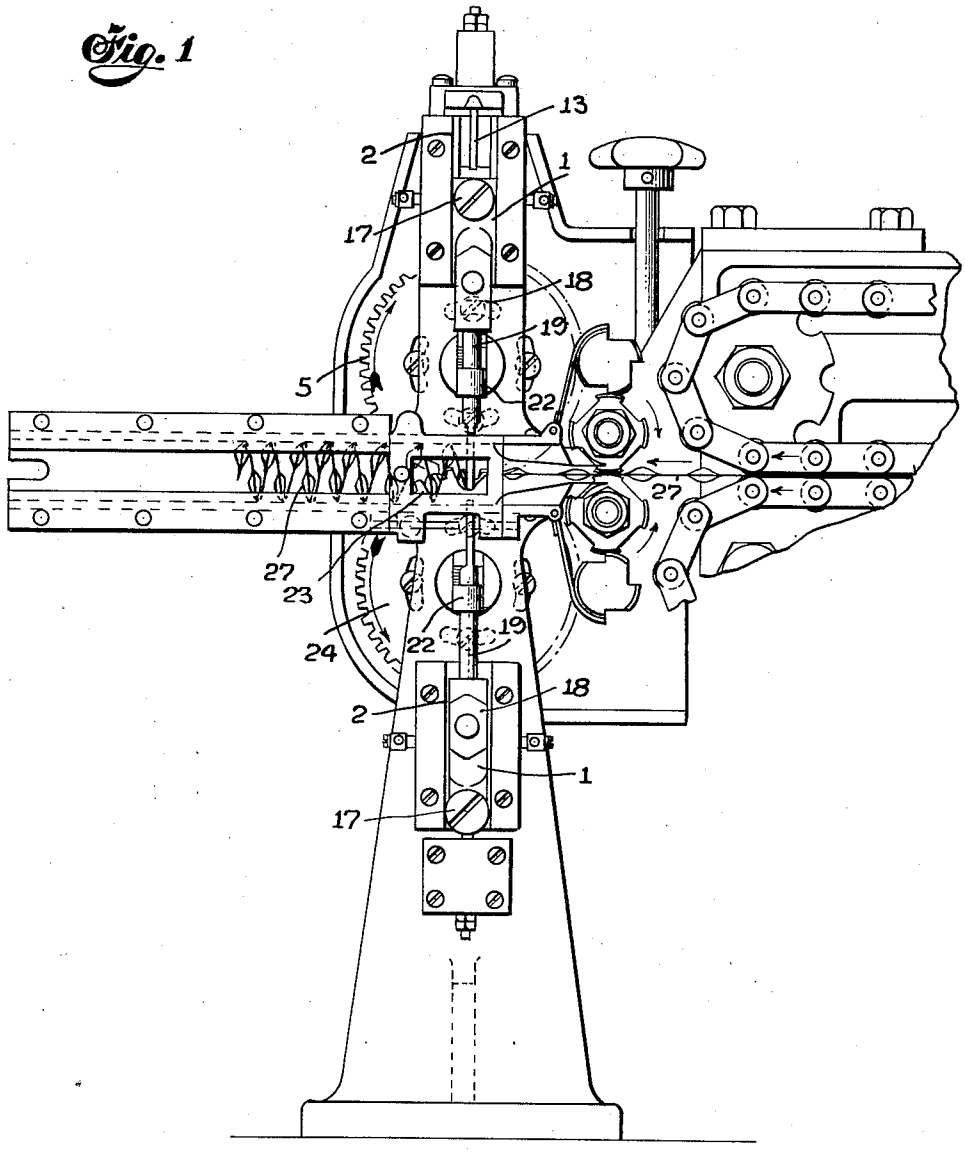
June 17, 1924. 1,498,206

L. L. SALFISBERG

MECHANICAL MOVEMENT

Original Filed June 5, 1920 2 Sheets-Sheet 1

Fig. 1



Leroy L. Salfisberg Inventor

By his Attorneys

Emery Varney Blair and Hoguet

June 17, 1924.

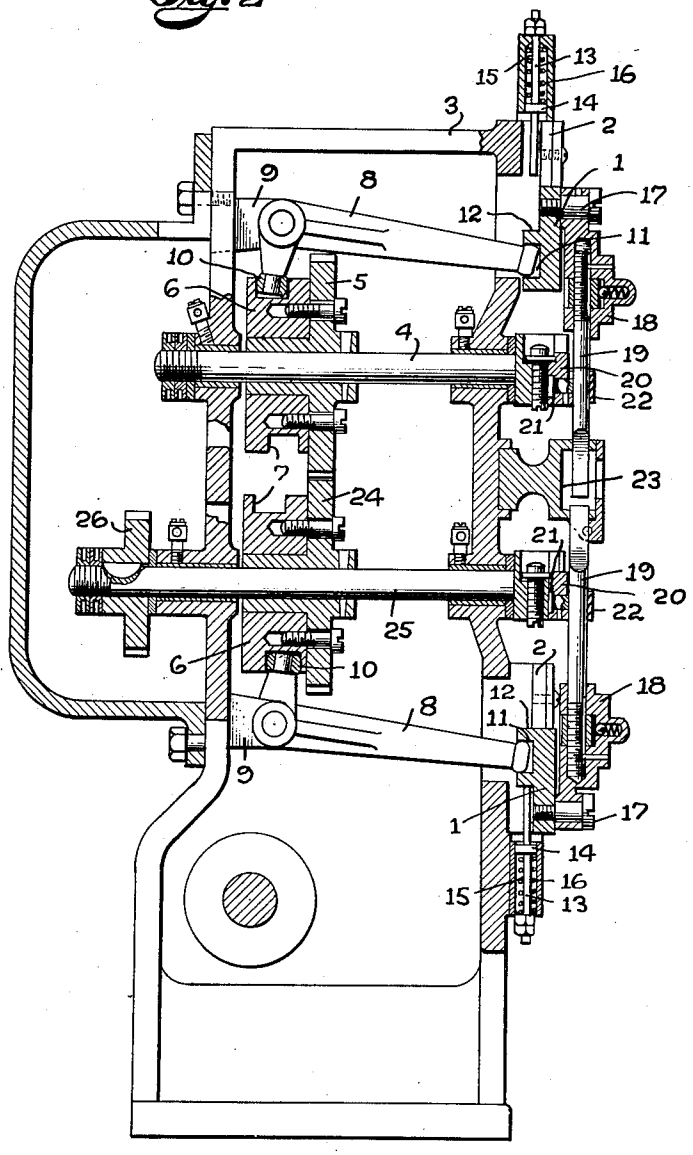
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MECHANICAL MOVEMENT

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Fig. 2



Inventor

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Patented June 17, 1924. 1,498,206

UNITED STATES PATENT OFFICE.

LEROY L. SALFISBERG, OF NEWARK, NEW JERSEY, ASSIGNOR TO IVERS-LEE COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF DELAWARE.

MECHANICAL MOVEMENT.

Application filed June 5, 1920, Serial No. 386,829. Renewed November 28, 1923.

To all whom it may concern:

Be it known that I, LEROY L. SALFISBERG, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Mechanical Movements, of which the following is a specification.

The present invention relates to an improvement in mechanical movements which may conveniently be applied to packaging machines of the type adapted to form packages with layers arranged in contiguous zigzag relation or which may be used independently of another machine to accomplish a folding or bending operation.

An object of the invention has been more particularly to provide reliable and effective means for bending or folding into compact package form an article carrier in strip form and with the articles arranged therein in spaced relation, the bending or folding to take place between said spaced articles.

One embodiment of my invention is illustrated in the drawings accompanying the present specification, and in which—

Figure 1 is a front elevation, and

Figure 2, an enlarged view partly in transverse vertical section.

Referring to the drawings, a mechanical movement embodying my invention may include a reciprocating head 1 slidably mounted in suitable guideways 2 forming a part of or secured to a supporting frame 3. A shaft 4 is journaled in the frame 3 and carries a gear 5 to which is secured a cam member 6 having a peripheral cam groove 7. A bell crank lever 8 is pivotally mounted on a bracket 9 in such a position that one end of the lever will operatively engage the cam groove 7, said end being preferably provided with a roller bearing 10. The other end of the lever 8 engages a recess 11 in the reciprocating head 1. Thus, when the shaft 4 is rotated, the peripheral cam groove 7, by means of its interior cam surfaces engaging the roller bearing 10, will impart a reciprocating movement to the bell crank lever 8, said movement being imparted in turn and in greater degree to the reciprocating head 1. The head 1 may be provided with a stop 12 positioned to engage a plunger 13 having a collar 14 secured thereto, said collar and plunger being positioned to reciprocate within a recess 15 and against resistance of a compression spring 16 surrounding said plunger and having one end engaging the inner surface of the collar 14.

The head 1 is also provided with a pin 17 upon which is pivotally supported a carrier 18 having a longitudinal recess adapted to receive and hold a finger 19, said finger preferably being longitudinally adjustable within said holding recess. Thus, the carrier 18 and the finger 19 are mounted to oscillate with respect to the reciprocating head 1. To effect controlled oscillation of the finger 19, the shaft 4 is provided with a terminal member 20 having a recess adapted to receive the headed end of a pin 21 secured to or forming a part of a guide 22 which embraces or operatively engages the finger 19. The pin 21 is offset from the center of the shaft 4 and is free to rotate in its recess. Thus, when shaft 4 is rotated, the guide 22 will be revolved, giving a throw to the free end of the finger 19. Simultaneously, the interior surfaces of the cam groove 7 are actuating the bell crank lever 8 to impart reciprocating motion to the head 1, said motion being obviously transmitted to the finger 19.

Where the mechanical movement is to be used as a part of a folding device, the parts will be duplicated and arranged in such a manner that the fingers 19 will be pivoted in substantially vertical alignment and with their free ends extending through opposed perforations or guide slots in a guiding box 23 through which passes the strip to be transversely folded. In this arrangement, the gear 5 will mesh with a gear 24 mounted on a shaft 25 similar in construction and function to the shaft 4 and carrying at one end a pinion 26 by means of which the shaft 25 is rotated, said rotation being transmitted through the gears 24 and 5 to shaft 4.

Referring more particularly to Figure 1, a package 27 in strip form is shown extending into and through the guiding box 23 and in the path of motion of the free ends of both of the fingers 19. These fingers operate alternately and in opposed directions except that the effective strip moving motion is forward or in the direction of movement of the strip in the case of each finger. The reciprocating movement of the fingers accomplishes the bending of the strip and the oscillating movement feeds the bent portion forward in such a manner that the

next increment of strip is drawn into proper position for the succeeding bending stroke.

The mechanical movement hereinabove described has operated successfully as a folding device, permitting the accurate and rapid folding of packages of the character hereinabove referred to. Although the foregoing description has been made more particularly with this use in view, it is obvious that a movement of this character may be adapted to other analogous uses either in the exact form shown or with the substitution of equivalent parts obviously contemplated as being within the scope of the invention described.

I claim as my invention:

1. In a mechanical movement, the combination of a reciprocating member, an oscillating member pivoted thereto and means for actuating said reciprocating and oscillating members simultaneously, comprising a rotatable cam and a bell crank lever having one end in operative engagement with said cam and the other end in engagement with the reciprocating member, a crank pin mounted to rotate with said cam, a guide embracing the oscillating member and operatively secured to the crank pin, and means for rotating the cam and revolving the crank pin.

2. In a mechanical movement, the combination of a reciprocating member, an oscillating member pivoted thereto, a rotatable shaft mounted adjacent to said oscillating member, a crank pin mounted to revolve with the rotation of the shaft and having a guide engaging the oscillating member, and means for driving said shaft and for actuating the reciprocating member during oscillation of the oscillating member.

3. In a folding device, the combination of a guideway for the material to be folded, opposed material bending and moving members operatively arranged with respect to said guideway, and means for imparting simultaneous reciprocating and oscillating motion to each of said members, including a rotatable shaft, a cam on said shaft, a slidable head having a pivotal support for the material bending and moving member, a bell crank lever operatively arranged between the cam and the slidable head, a crank pin carrier secured to the shaft and having a crank pin revolubly mounted therein and guiding means in sliding engagement with the material bending and moving member and revolvable with the pin carrier.

In testimony whereof, I have signed my name to this specification this second day of June, 1920.

LEROY L. SALFISBERG.