

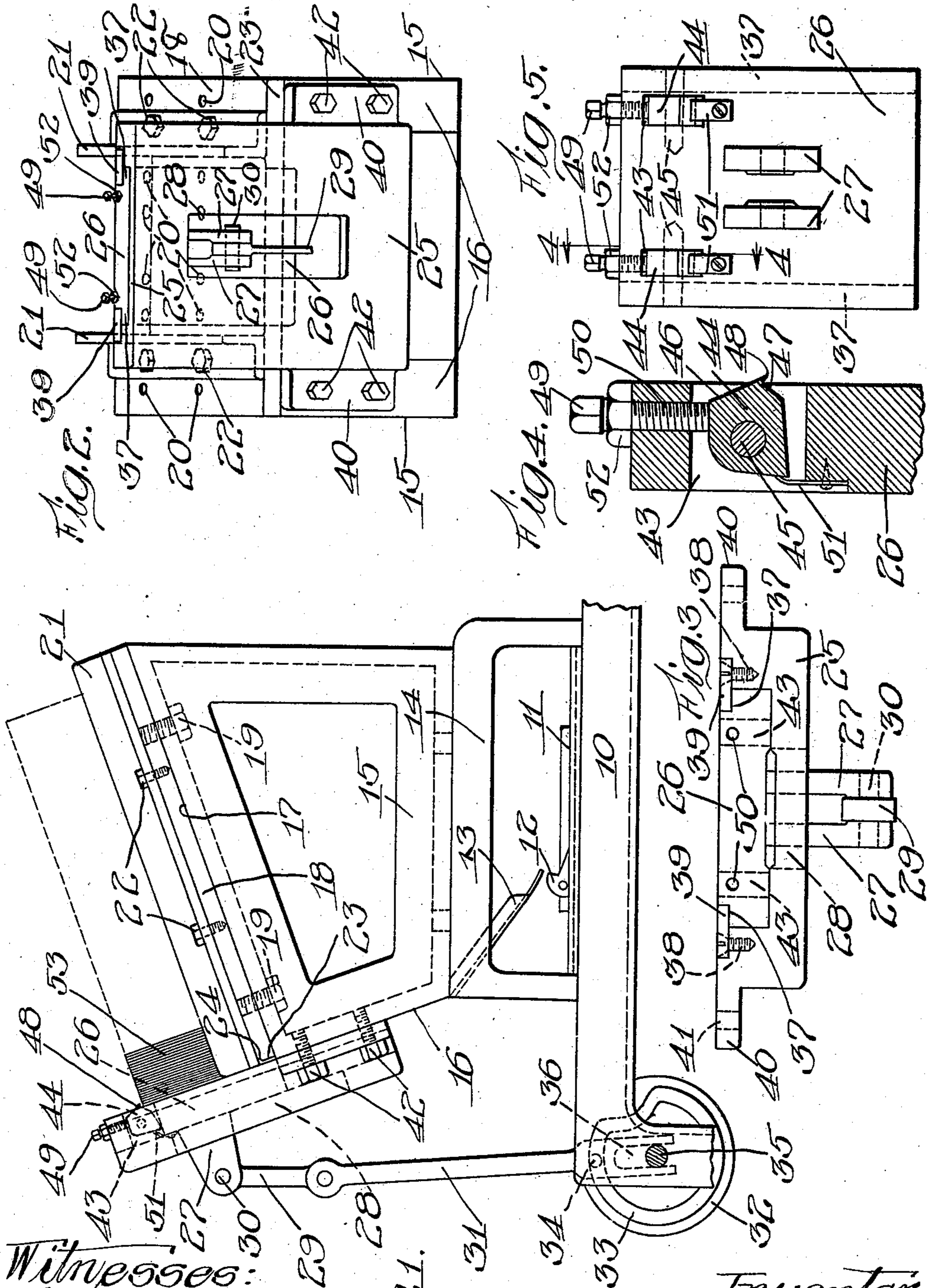
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A. VELK.

BLANK FEEDING ATTACHMENT FOR CAN MAKING MACHINES.

APPLICATION FILED AUG. 29, 1906.



Witnesses:
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FIG. 1.

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UNITED STATES PATENT OFFICE.

ADOLPH VELK, OF CHICAGO, ILLINOIS.

BLANK-FEEDING ATTACHMENT FOR CAN-MAKING MACHINES.

No. 847,625.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed August 29, 1906. Serial No. 332,442.

To all whom it may concern:

Be it known that I, ADOLPH VELK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Blank-Feeding Attachments for Can-Making Machines, of which the following is a full, clear, and exact specification.

This invention relates to improvements in blank-feeding attachments for can-making machines; and the object of the same is to provide an improved means for positively and automatically feeding the blanks to a machine.

A further object is to provide an improved device of this character so constructed as to accommodate and feed different sizes and thicknesses of blanks.

A further object is to provide an improved device of this character which will be simple and cheap in construction and effective and accurate in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination, and arrangement of the several parts hereinafter more fully described and claimed, and shown in the accompanying drawing, illustrating an exemplification of the invention, in which—

Figure 1 is a diagrammatic side elevation of an attachment constructed in accordance with the principles of this invention. Fig. 2 is a front elevation of the attachment. Fig. 3 is a top plan view of the slide with the ejector-dogs removed. Fig. 4 is a sectional view on line 4 4 of Fig. 5. Fig. 5 is a rear elevation of the slide with the ejector-dogs in position.

In this exemplification of the invention and for the sake of illustration the numeral 10 designates a portion of the framework of a machine upon which the slide 11 is adapted to reciprocate. This slide receives the blank and conveys it to the machine and is provided with suitable dogs 12, adapted to engage the blank as it passes from the guide 13. Any suitable means may be employed to reciprocate the slide, and the operating mechanism, together with the slide 11, form no part of this invention.

Resting upon and secured to the framework 10 is a base or support 14, to which the guides 13 are secured in such a position that

the delivery ends thereof will terminate at a point to permit the rear end of the blank being delivered thereby to drop upon the slide 11 just in advance of the dog 12.

Supported by and secured to the base or support 14 are frames 15, one at each side of the machine, and each of which is preferably hollow and constructed of any suitable material, such as metal or the like. These frames are each provided with an inclined front face 16 and an inclined upper face 17.

Secured across the inclined upper faces 17 of the frames is a plate 18, which is preferably held in position by means of suitable screws or bolts 19 passing through the frames 15 and into the plate 18. This plate is provided between its sides with a plurality of series of alined apertures 20. Angle-bars or guides 21 rest upon and extend entirely across the plate 18. They are spaced from each other to form a runway or galley extending, preferably, from the front to the rear of the plate 18 and are secured in position by means of suitable screws or bolts 22 passing through the angular base portions thereof and into the apertures 20 in the plate, the plurality of apertures 20 being provided for the purpose of varying the width of the runway or galley to accommodate blanks of various sizes, as will be understood. The front edge 23 of the plate 18 terminates just short of the front face 16 of the frames 15, and the upper corner thereof is beveled or inclined, as at 24, for a purpose to be set forth.

Mounted for reciprocal movement in a frame 25 is a slide 26, and projecting from the rear face of its body portion are ears 27, preferably spaced from each other and which extend through a suitable aperture or opening 28 in the frame 25, the aperture or opening being of a length to permit a full reciprocating movement of the slide. One end of a link 29 is pivotally supported between and connected to the ears 27 by means of a pin 30 and the other end is pivotally connected to an operating-link 31. This slide 26 may be reciprocated in any desired manner from the machine, and for the purpose of illustration there is shown a cam 32, provided with a cam-groove 33, into which a projection 34 on the operating-link 31 enters and travels. This cam is mounted on the axle 35, supported by the frame 10, and the lower end of the operating-link 31 may be forked or bifurcated, as at 36, so as to stand

astride of the axle 35. Motion may be transmitted to the cam in any desired manner, (not shown,) the rotation of which will cause the slide 26 to reciprocate. The specific manner of operating this slide 26 forms no part of this invention, but is shown for the sake of illustrating a simple and efficient manner of accomplishing this end.

The face of the slide 26 is flush with the face of the frame 25 and extends across the end of the runway or galley. It is preferably reduced at its sides, as at 37, to form a shoulder, and secured to the frame 25, by means of screws or bolts 38, are plates 39, which extend over and rest upon the reduced portion 37 of the slide 26 to form a guide and prevent displacement of the slide, the outer faces of these plates 39 being flush with the faces of the frame 25 and the slide 26. The frame 25 is preferably provided with laterally-projecting ears 40, having perforations or apertures 41, and this frame is secured to the supporting-frames 15, so as to project some distance above the plate 18 and with the slide 26 therein adjacent the galley or runway, by means of bolts or screws 42 passing through the apertures 41 therein and into the frame 15. In this position the front edge 23 of the plate will be located a short distance from the slide 26, so as to form a space therebetween of a size preferably equal to the greatest thickness of the blank to be fed.

The slide 26 is provided, preferably adjacent its upper end, with one or more apertures 43, (two being shown in this exemplification of the invention,) in which ejecting-dogs 44 are pivotally supported by means of suitable pins or bars 45. These dogs are preferably constructed of chilled or tool steel and are provided with faces 46 47, disposed at an angle to each other to produce a projecting lip or edge 48, which is preferably disposed at an angle of ninety degrees to the face 47 and is adapted to project beyond the front face of the slide 26. I preferably construct this lip or edge of sufficient length to provide for the varying thickness of the sheets or blanks, the distance to which this lip or edge 48 extends beyond the face of the slide being regulated in any suitable manner, preferably by means of an adjusting screw or bolt 49, which passes through suitable apertures 50 in the slide 26, so that its end will engage the dog 44. This lip or edge is normally held projecting beyond the face of the slide by means of a spring 51, which engages the dog 44, preferably at a point remote from the pivot thereof and on the opposite side of the pivot to the bolt or screw 50. The normal tendency of the spring is to raise the lip or edge 48 and throw or project it out of the aperture 43 and cause the dog to engage the end of the bolt or screw 49, and by adjusting the latter the projecting lip or edge 48 may be raised to any desired relation

with the face of the slide. The bolts or screws 49 may be held in their adjusted position by means of the jam-nuts 52.

The blanks 53 are placed on edge in the runway or galley, the bars 21 being adjusted to accommodate the blanks of the desired width and the dog 44 adjusted so that the lip or edge 48 will project beyond the face of the slide 26 a distance sufficient to correspond with the thickness of the blanks. The slide 26 is then reciprocated. Assuming the slide 26 and blanks 53 to be in the position shown in Fig. 1, the first movement of the slide would be downward. This movement would cause the edge 48 of the dog 44 to engage the top of the foremost blank and shove the same downward out of the runway or galley into and through the space formed between the edge 23 of the plate 18, which latter forms the support for the blanks and the bottom of the galley and the slide 26, the beveled edge 24 permitting the blank to freely enter the space. From there the blank will drop onto the guides 13 and be directed thereby onto the slide 11. When the foremost blank has been removed or ejected by the dogs 44, the remaining blanks will move forward by gravity, so that the next blank will be in a position to be ejected in the same manner. The slide will then move upward or back to its normal position. The weight of the blanks in the runway or galley against the foremost blank will hold the latter against the face of the frame 25 and plates 39 and prevent the same from being ejected or shoved out of position by the dog 44 when the slide is moved backward. On its ascent the edge 48 of the dog 44 will engage the lower edge of the foremost blank, the friction with which the latter is held being sufficient to cause the dog 44 to move about its pivot against the tension of the spring 51 to permit the lip or edge 48 to move within the aperture 43 in the slide to pass the foremost blank until the lip or edge 48 arrives at a point above and out of contact with the blank. In this position the spring 51 will return the dog 44 to its normal position to eject another blank when the slide descends. Obviously any number of these ejecting-dogs may be employed to meet the required necessity.

In order that the invention might be fully understood, the details of an embodiment thereof have been thus specifically described; but

What I claim is—

1. In a device of the class described, the combination of an inclined galley for the blanks, a reciprocating slide adjacent the end of the galley, a yielding ejector-dog pivotally supported by the slide, means for normally projecting the dog beyond the face thereof, an adjustable stop adapted to be engaged by the dog, and means for reciprocating the slide.

2. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end of the galley, means whereby the blanks will be advanced to the slide, means for moving the slide, a pivoted ejector-dog supported by the slide, means for yieldingly holding said dog in operative position, and adjustable means for varying the position of the dog.
3. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end of the galley, means whereby the blanks will be advanced to the slide, means for moving the slide, a pivoted ejector-dog supported by the slide, a spring for holding said dog in operative position, and an adjusting-screw for varying the position of the dog.
4. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end of the galley, means for moving the slide, means whereby the blanks will be advanced to the slide, said slide being provided with an aperture, an ejector-dog pivotally supported within the aperture, means for holding said dog in operative position, and means for adjusting the position of the active portion of the dog with relation to the slide.
5. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end of the galley, means for moving the slide, said slide being provided with an aperture therethrough, a dog pivotally supported within the aperture, said dog being provided with an active edge, means for normally holding said edge beyond the face of the slide, and means for varying the distance said edge projects beyond the face of the slide.
6. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end thereof, means for moving the slide, said slide being provided with an aperture therethrough, an ejector-

dog pivoted within the aperture, said dog being provided with an active edge, means adapted to hold said edge normally and yieldingly projected beyond the face of the slide for engaging and ejecting the blanks, and means for varying the extent of projection of said edge beyond the face of the slide.

7. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end thereof, means for moving the slide, said slide being provided with an aperture therethrough, an ejector-dog pivoted within the aperture, said dog being provided with an active edge, a spring supported by the slide and engaging the dog to hold the said edge normally and yieldingly projected beyond the face of the slide, for engaging and ejecting the blanks, and an adjusting-screw passing through the slide and into the aperture to engage the dog to vary the extent of projection of the said edge beyond the face of the slide.

8. In a device of the class described, the combination of a galley for the blanks, a slide adjacent one end thereof, means for moving the slide, said slide being provided with an aperture therethrough, an ejector-dog pivoted within the aperture, said dog being provided with two faces disposed at an angle to each other to form an edge projecting beyond one of the faces, means for normally and yieldingly holding said edge projected beyond the face of the slide, said edge being adapted to engage the edge of the blanks for ejecting the same and means for adjusting said edge with relation to the slide.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 25th day of August, A. D. 1906.

ADOLPH VELK.

Witnesses:

A. L. SPRINKLE,
FRANCIS A. HOPKINS.