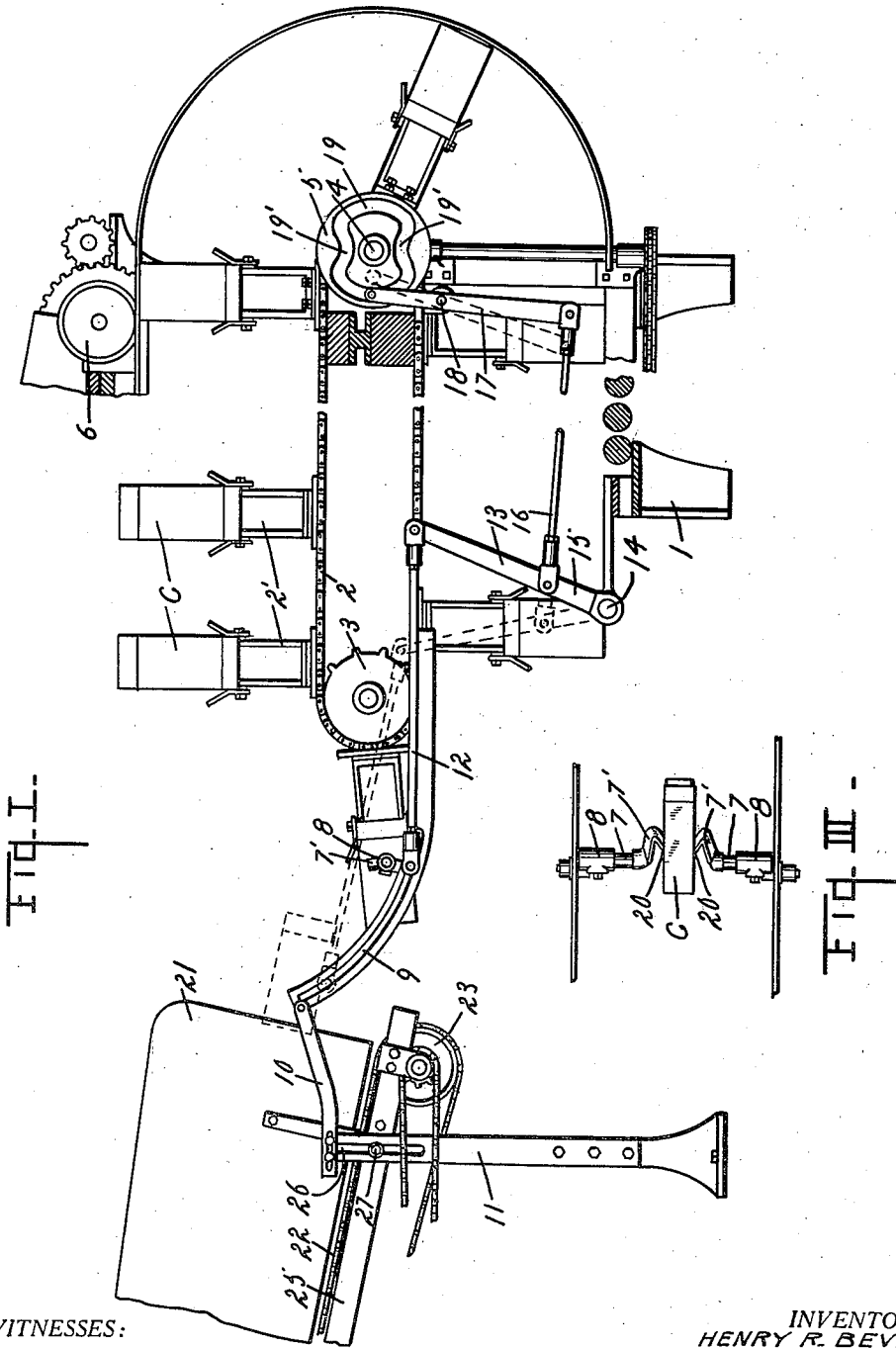


H. R. BEVIER.  
 SEALING MACHINE.  
 APPLICATION FILED FEB. 5, 1917.

1,306,573.

Patented June 10, 1919.  
 2 SHEETS—SHEET 1.



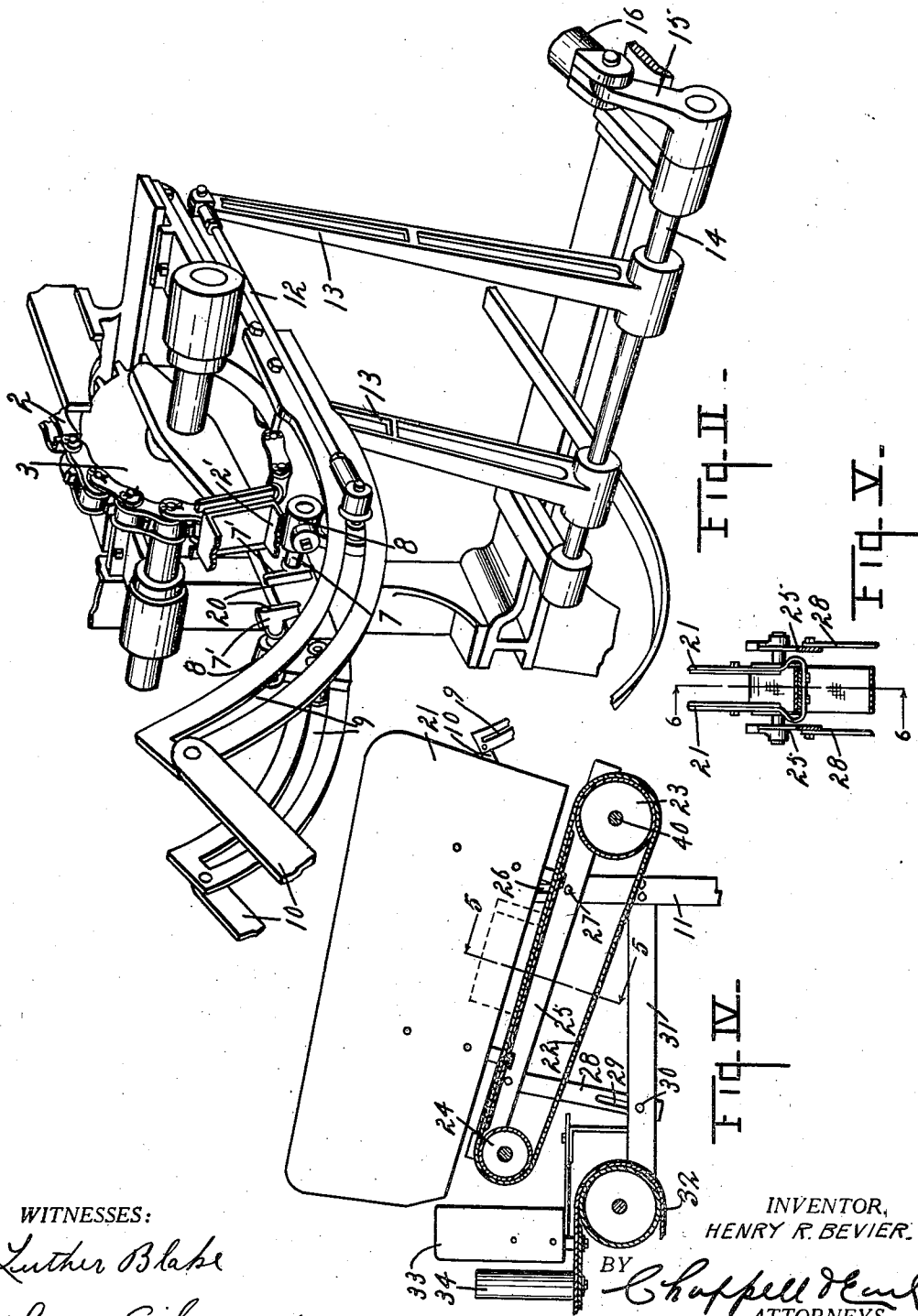
WITNESSES:  
*Luther Blake*  
*Lena Gilman*

INVENTOR,  
 HENRY R. BEVIER.  
 BY *Chappell & Earl*  
 ATTORNEYS.

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 ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HENRY R. BEVIER, OF BATTLE CREEK, MICHIGAN, ASSIGNOR TO JOHNSON AUTOMATIC SEALER CO., OF BATTLE CREEK, MICHIGAN.

## SEALING-MACHINE.

1,306,573.

Specification of Letters Patent. Patented June 10, 1919.

Application filed February 5, 1917. Serial No. 146,732.

To all whom it may concern:

Be it known that I, HENRY R. BEVIER, a citizen of the United States, residing at Battle Creek, Michigan, have invented certain new and useful Improvements in Sealing-Machines, of which the following is a specification.

This invention relates to improvements in sealing machines.

I have embodied my improvements in practice in a machine of the type shown in the Patent No. 1,052,667, February 11, 1913, to Johnson, and I have accordingly illustrated the same herein in such embodiment.

My improvements are, however, desirable and capable of embodiment in other mechanisms of this class.

The main objects of this invention are:

First, to provide in a carton sealing machine an improved means for discharging or ejecting sealed cartons from the forms.

Second, to provide a mechanism having these advantages which is simple and durable in structure.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a detail view, partially in longitudinal section, of a structure embodying certain features of my invention.

Fig. II is a perspective view showing details of the carton ejecting mechanism.

Fig. III is a detail plan view of the ejector.

Fig. IV is a detail central longitudinal section through the delivery mechanism.

Fig. V is a detail transverse section through such delivery mechanism on a line corresponding to line 5-5 of Fig. IV.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are

taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, the numeral 1 designates the frame which is designed to support the operative parts. I have only shown such of the operative parts as will illustrate an application or adaptation of my invention. The conveyer 2 is provided with forms 2' adapted to receive the cartons C. The conveyer is carried by sprockets, the rear sprocket 3 only being shown, the front sprocket being mounted on the shaft 4 beyond the cam 5. A portion only of the sealing mechanism is shown at 6. The cartons C are placed upon forms and carried through the sealing mechanism and discharged as the forms are carried over the wheels 3.

The discharge mechanism comprises a pair of ejectors 7 mounted on the slides or carriages 8 which travel in the curved groove-like ways 9. The front ends of these ways are mounted on the sealer frame 1 while their rear ends are supported by the brackets 10 carried by the pedestals or supports 11. The ejector grips 7' are V-shaped and disposed to face rearwardly, as shown in Fig. V, and are designed to grip opposite sides of the carton on the retracting movement of the ejectors and carry the same from the forms on the ejecting movement thereof. The ejectors are given a quick return or reverse movement which discharges the cartons therefrom. The ejector slides or carriages are connected by the links 12 to levers 13 mounted on the rock shaft 14 which is provided with an arm 15 connected by the link 16 to the cam actuated lever 17. The lever 17 is pivoted at 18 and engages the cam groove 19 of the cam 5.

It will be noted that the ejector grips 7' have forwardly inclined sharp edges 20 which effectively engage the cartons.

When the parts are in the position shown in Fig. I the ejector members are substantially at rest but as soon as the portions 19' of the cam groove act upon the lever 17 it is given a quick movement and actuates the ejectors with a quick jerk-like movement carrying the cartons from the flights and

discharging them between the delivery side plates 21 so that they fall upon the conveyer belt 22. This conveyer belt 22 is carried by pulleys 23 and 24 mounted upon the frame 25 carried by the pedestal 11.

The pedestal 11 is vertically slotted at 26 to receive the supporting bolts 27 for the frame 25 while the other end of the frame is supported by the uprights 28 slotted at 29 to receive the bolts 30 on the horizontal pieces 31 on the pedestal. This permits of the adjustment of this delivery conveyer.

The cartons are delivered by the delivery conveyer upon the discharge conveyer 32 which may carry them to a suitable filling and weighing machine or otherwise, as desired. As the cartons are delivered from the delivery conveyer belt 22 which overhangs the front end of the discharge conveyer 32 they drop between the guide plates 33 which assist in bringing their sealed ends downward. To prevent their tipping over when they strike the belt 32 I provide a pair of rollers 34 located at the rear of but adjacent to the guide plates 33.

The details of the driving mechanism for the conveyer 32 form no part of present invention and are not described in detail.

My improvements are very effective for the purpose and deliver the cartons in an upright position to the delivery conveyer 32.

I have, as stated, illustrated my improvements in the form in which I have embodied them in practice. I have not attempted to illustrate or describe certain modifications in structural details which I contemplate as I believe the disclosure made will enable those skilled in the art to which my invention relates to embody or adapt the same as may be desired.

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

1. In a structure of the class described, the combination of spaced shafts, a conveyer belt provided with a carton form mounted on said shafts, means for removing the carton from said form comprising ejectors for gripping the opposite sides of a carton, carriages for said ejectors, upwardly curved guide ways for said carriages, means for moving said ejectors forward for removing a carton from said form and for quickly returning said ejectors to discharge the carton therefrom, comprising a cam secured to one of said shafts and connections between said cam and said ejector carriages whereby the throw of the cam is multiplied.

2. In a structure of the class described, the combination of spaced shafts, a conveyer belt provided with a carton form mounted on said shaft, means for removing the carton from said form comprising ejectors for

engaging a carton, carriages for said ejectors, upwardly curved guide ways for said carriages, means for moving said ejectors forward for removing a carton from said form and for quickly returning said ejectors to discharge the carton therefrom.

3. In a structure of the class described, the combination of spaced shafts, a conveyer belt provided with a carton form mounted on said shaft, means for removing the carton from said form comprising ejectors for gripping the opposite sides of a carton, carriages for said ejectors, guide ways for said carriages, means for moving said ejectors forward for removing a carton from said form and for quickly returning said ejectors to discharge the carton therefrom, comprising a cam secured to one of said shafts and connections between said cam and said ejector carriages whereby the throw of the cam is multiplied.

4. In a structure of the class described, the combination of spaced shafts, a conveyer belt provided with a carton form mounted on said shaft, means for removing the carton from said form comprising ejectors for engaging a carton, carriages for said ejectors, guide ways for said carriages, and means for actuating said ejectors with variable speed having a jerk-like reverse at the end of the forward stroke for discharging the cartons from the ejectors.

5. In a structure of the class described, the combination with movable forms for the cartons, of means for removing the sealed cartons from said forms comprising ejectors for gripping the opposite flat sides of the carton, and means for giving said ejector a quick forward and return movement, whereby the carton is removed from between said ejectors.

6. In a structure of the class described, the combination with a conveyer provided with forms for holding the cartons, of means for ejecting the cartons comprising V shaped ejectors for engaging opposite sides of the cartons, carriages for said ejectors, guide ways for said carriages extending above one end of said delivery conveyer, and means for suddenly reciprocating said carriages along said guide ways comprising a cam, connections between said cam and said carriages, and means for synchronizing the movements of said cam with the movements of said forms.

7. In a structure of the class described, the combination with a conveyer provided with forms for holding the cartons, of means for ejecting the cartons comprising V shaped ejectors for engaging opposite sides of the cartons, carriages for said ejectors, guide ways for said carriages extending above one end of said delivery conveyer,

and means for suddenly reciprocating said  
carriages along said guide ways.

8. In a structure of the class described,  
the combination with a conveyer provided  
5 with forms for holding the cartons, of  
means for ejecting the cartons comprising  
V-shaped ejectors for engaging opposite  
sides of the cartons, carriages for said-ejec-  
tors, rearwardly and upwardly inclined  
10 guide ways for said carriages extending

above one end of said delivery conveyer,  
and means for suddenly reciprocating said  
carriages along said guide ways.

In witness whereof I have hereunto set  
my hand and seal in the presence of two wit- 15  
nesses.

HENRY R. BEVIER. [L. s.]

Witnesses:

BALLARD J. OWEN,  
EDNA G. GOUCHER.