H. M. ACLY & P. J. DANSEREAU.

IMPRINTING ATTACHMENT FOR ENVELOP FORMING MACHINES.

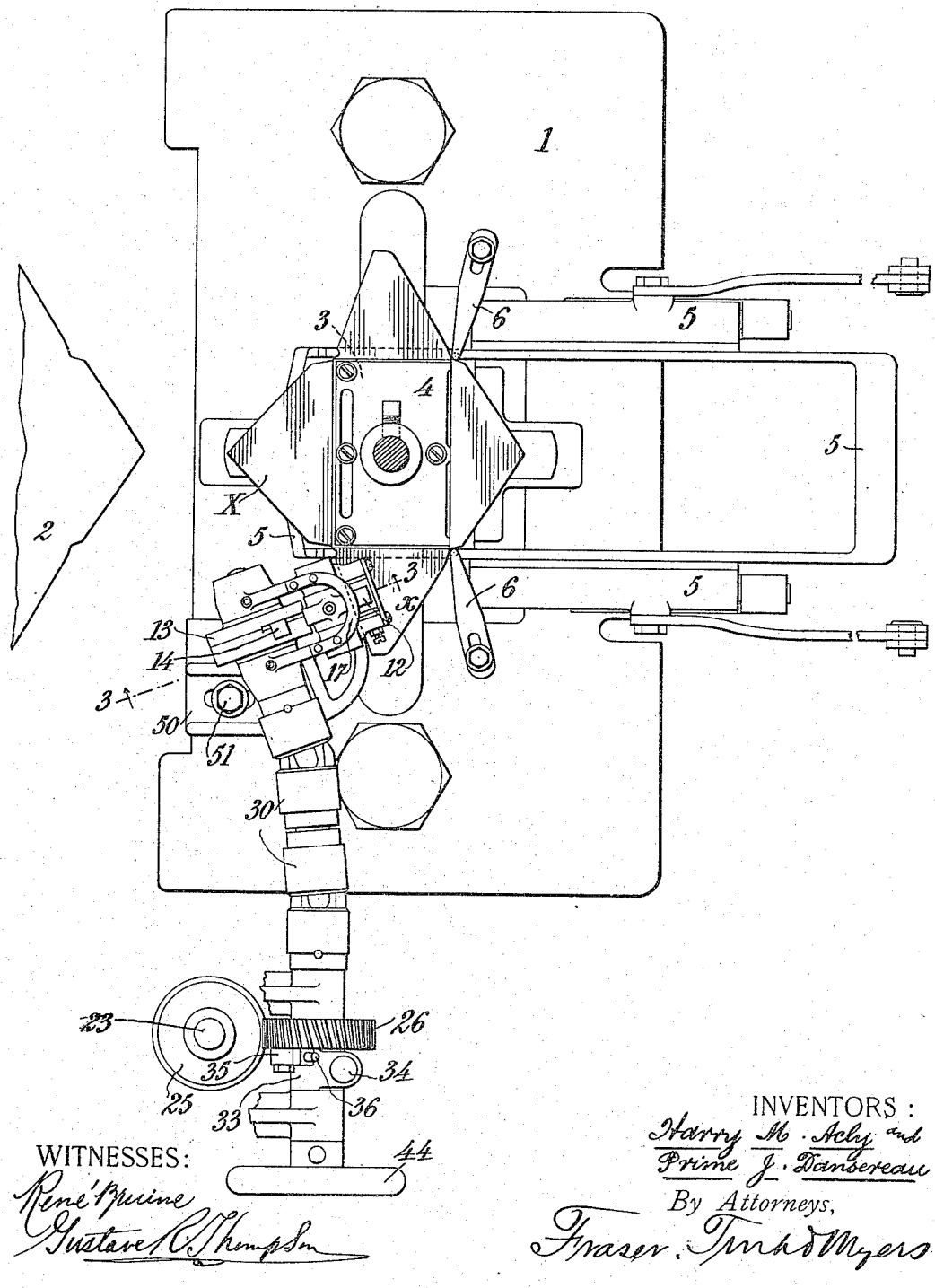
APPLICATION FILED DEC. 26, 1913.

1,177,222.

Patented Mar. 28, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

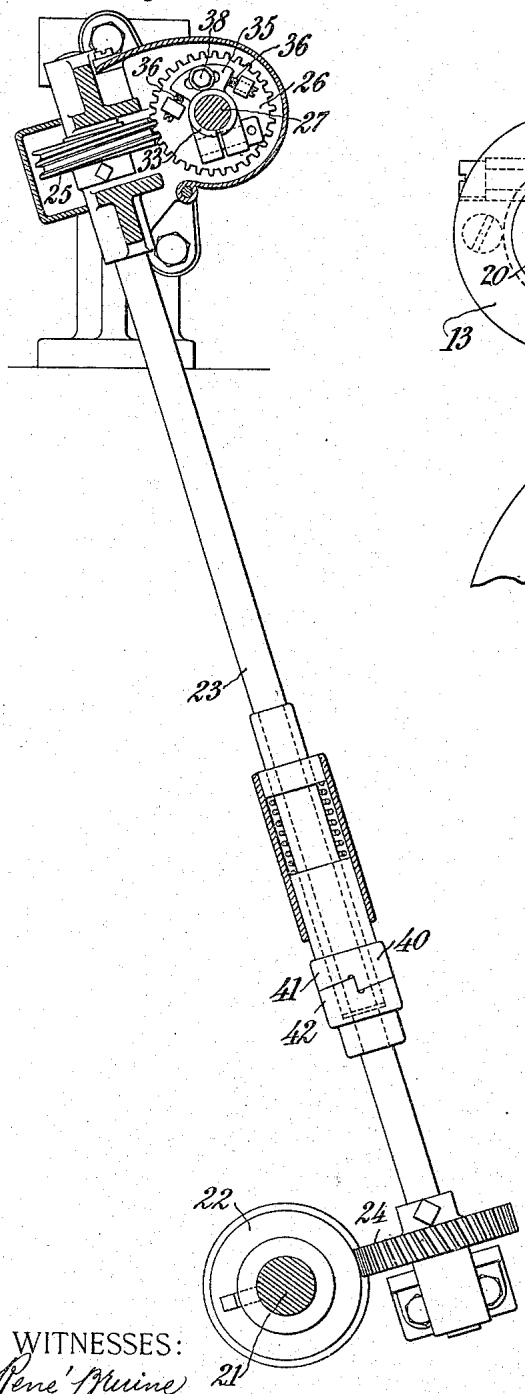


Fig. 3.

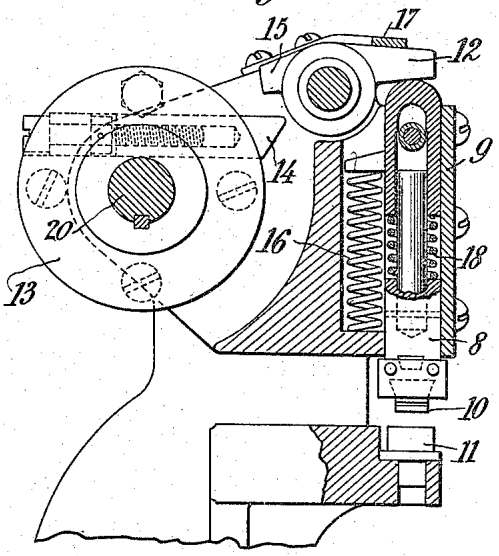
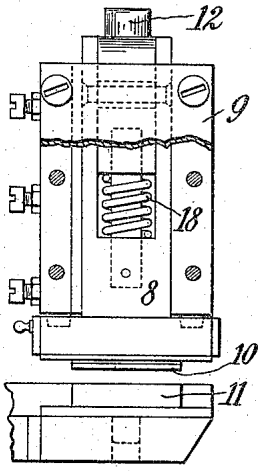


Fig. 4.



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IMPRINTING ATTACHMENT FOR ENVELOP-FORMING MACHINES.

1,177,222. Specification of Letters Patent. Patented Mar. 28, 1916.

Application filed December 26, 1913. Serial No. 808,860.

To all whom it may concern:

Be it known that we, HARRY M. ACLY, a citizen of the United States, and PRIME JOSEPH DANSEREAU, a subject of the King of Great Britain, both residing at Pittsfield, Berkshire county, State of Massachusetts, have invented certain new and useful Improvements in Imprinting Attachments for Envelop-Forming Machines, of which the following is a specification.

This invention relates to improvements in imprinting or embossing attachments for envelop forming machines, and particularly such as are quick acting.

The present improvement provides means whereby an envelop blank, in folding position in an envelop forming machine, may be imprinted or embossed with the name of the maker or the like.

The invention also provides means for adjusting the mechanism for operating upon envelop blanks of different size and shape.

Other features of improvement will be hereinafter set forth.

The accompanying drawings illustrate an embodiment of the invention, and the invention will be more fully explained in connection with said drawings.

Figure 1 is a top plan view of an envelop forming machine, showing the improved imprinting attachment applied thereto. Fig. 2 is a view in elevation, (with parts in section) of parts of the driving mechanism for the imprinting device. Fig. 3 is a vertical sectional view on the line 3—3 (Fig. 1) illustrating the imprinter head and certain associated parts. Fig. 4 is a front elevation of the imprinter head.

In said drawings, 1 designates a table of an envelop forming machine; 2 chute or the like for delivering envelop blanks X to the forming machine; 3 a mold or matrix into which the envelop blank is pressed; 4 a forming-die or plunger for pressing the blank into the mold, and 5 a reciprocatory carrier for moving blanks from the chute 2 into position beneath the plunger 4.

6, 6 are adjustable stops for limiting the advancement of the envelop blanks X.

The imprinting attachment is preferably adapted to operate upon one of the side tabs x of the envelop blank, being positioned obliquely with relation to the envelop mold, as shown in Fig. 1, and preferably operates upon the blank when it is in folding position beneath the plunger 4, and just prior to the action of the plunger 4 on the blank.

The imprinting attachment comprises a plunger 8 adapted to reciprocate in a head 9. The plunger 8 is adapted to carry a die or matrix 10, and a complementary part 11 may be mounted opposite the part 10. The head 9 preferably forms part of a casting 50 which is adjustable on the table 1 of the envelop machine. The die part 11 is preferably carried upon a part of this casting 50. A bolt 51 serves to fasten the casting in its adjusted position. The plunger is preferably pressed against a blank by a rock-arm 12 bearing against the upper side of the plunger, and actuated by a rotary disk 13 having a finger 14 for striking against a heel or projection 15 upon the rock-arm.

The finger 14 is preferably adjustably mounted in the disk 13 in such manner that the degree of its projection beyond the periphery of the disk may be regulated, and in consequence the time which it remains in contact with the heel 15, and the throw of the arm 12, may be regulated.

A spring 16 may be provided for lifting the plunger after each imprinting operation. A stop 17 may be provided for limiting the upward movement of the rock-arm 12. The plunger is also preferably made in two parts and resilient means, such as a spring 18, interposed between them. By this means the plunger is made slightly yielding in such manner that the machine may operate successfully upon one or more sheets of paper, or upon sheets of different thickness.

The disk 13 is mounted upon a shaft 20, which shaft 20 preferably receives its motion from the main shaft 21 (Fig. 2) of the envelop machine through a suitable transmission mechanism.

The transmission mechanism preferably comprises a worm 22 on the shaft 21, a shaft 23, a pinion 24 thereon meshing with the said worm 22, a worm 25 on the upper end of said shaft 23 and a pinion 26 on the shaft 27 meshing with said worm 25.

The shaft 27 is preferably connected to the shaft 20 carrying the disk 13, through a flexible shaft or connection 30. The pur-

pose of this flexible connection 30 is to enable the casting carrying the imprinter head to be adjusted on the table 1 without disturbing other parts of the transmission mechanism.

The pinion 26 is preferably adjustably mounted upon the shaft 27 in order that the action of the imprinting mechanism may be timed in relation to the folding mechanism. To this end the pinion 26 is loosely mounted upon a split hub or sleeve 33 and a screw 34 may be provided for drawing the ends of the sleeve together and clamping it upon the shaft 27. The hub or sleeve 33 may be provided with a projection 35, and set screws 36, 36 may be provided upon the pinion 26, adapted to bear against the projection 35, for securing a fine mechanical adjustment of the pinion upon the hub 33. A set screw 38 may be provided for binding the pinion to the hub or sleeve.

The shaft 23 is preferably constructed in two parts and provided with a slip connection 40. The slip connection may comprise two clutch parts 41, 42 adapted to interlock when the shaft is turned in one direction, and one of which, as the part 41, is adapted to yield when the shaft turns in the opposite direction. This construction enables the envelop folding machine to be run backward without producing a backward running of the printing mechanism. It also enables the imprinting mechanism to be operated independently of the envelop machine. A hand wheel 44 on the shaft 27 may be used for this purpose.

While one embodiment of the inventive idea has been illustrated and described, the invention is not to be understood as limited thereto, as the inventive ideas are capable of receiving other mechanical expressions.

What we claim is:—

1. In an envelop forming machine, an envelop blank folding mechanism, an imprinting mechanism operating in timed relation to said folding mechanism, driving means adapted to receive motion from a part of the envelop forming machine, and a slip-connection in said driving means adapted to give when said envelop forming machine runs backwardly and adapted to clutch when said envelop forming machine runs forwardly, the parts of said slip-connection having a single angular driving relation.

2. In an envelop forming machine, envelop-blank folding mechanism, drive gearing, including a shaft, an imprinting mechanism driven from said shaft, and means for timing the action of said imprinting mechanism with said folding mechanism, comprising a hub adapted to be fastened on said shaft of said drive gearing, and a pinion adjustably mounted on said hub.

3. An imprinting attachment for envelop forming machines, comprising a plunger head, a reciprocating die-plunger therein, a rock-arm mounted upon said plunger-head and adapted to actuate said plunger, and a rotary part mounted upon said plunger-head having a finger thereon adapted to operate upon said rock-arm, said finger and rock-arm being disconnected.

4. An imprinting attachment for envelop forming machines, comprising a plunger-head, a reciprocating die-plunger therein, a rock-arm mounted upon said plunger-head and adapted to actuate said plunger, and a rotary part mounted upon said plunger-head having an adjustable tappet finger thereon adapted to actuate said rock-arm, said finger and rock-arm being disconnected.

5. An imprinting attachment for envelop forming machines, comprising a plunger-head, a reciprocating die-plunger, a rock-arm mounted upon said plunger-head and operating upon said plunger, and a rotary part mounted on said plunger-head, having thereon a finger or tappet operating upon said rock-arm for actuating said plunger in one direction, and a spring for actuating said plunger in the other direction.

6. An imprinting attachment for envelop forming machines, comprising a plunger head, a reciprocating die-plunger therein, said plunger being made in two relatively movable parts having a resilient connection between them, a rock-arm mounted upon said plunger-head and adapted to actuate said plunger, and a rotary part mounted upon said plunger-head having a finger thereon adapted to operate upon said rock-arm, said finger and rock-arm being disconnected.

7. An imprinting attachment for envelop forming machines, comprising a plunger-head, a reciprocating die-plunger therein, said plunger being made in two relatively movable parts having a resilient connection between them, a rock-arm mounted upon said plunger-head and adapted to actuate said plunger, and a rotary part mounted upon said plunger-head having an adjustable tappet finger thereon adapted to actuate said rock-arm, said finger and rock-arm being disconnected.

In witness whereof, we have hereunto signed our names in the presence of two subscribing witnesses.

HARRY M. ACLY.
PRIME JOSEPH DANSEREAU.

Witnesses:
H. D. BRIGHAM,
W. A. REINHARDT.