

No. 741,805.

PATENTED OCT. 20, 1903.

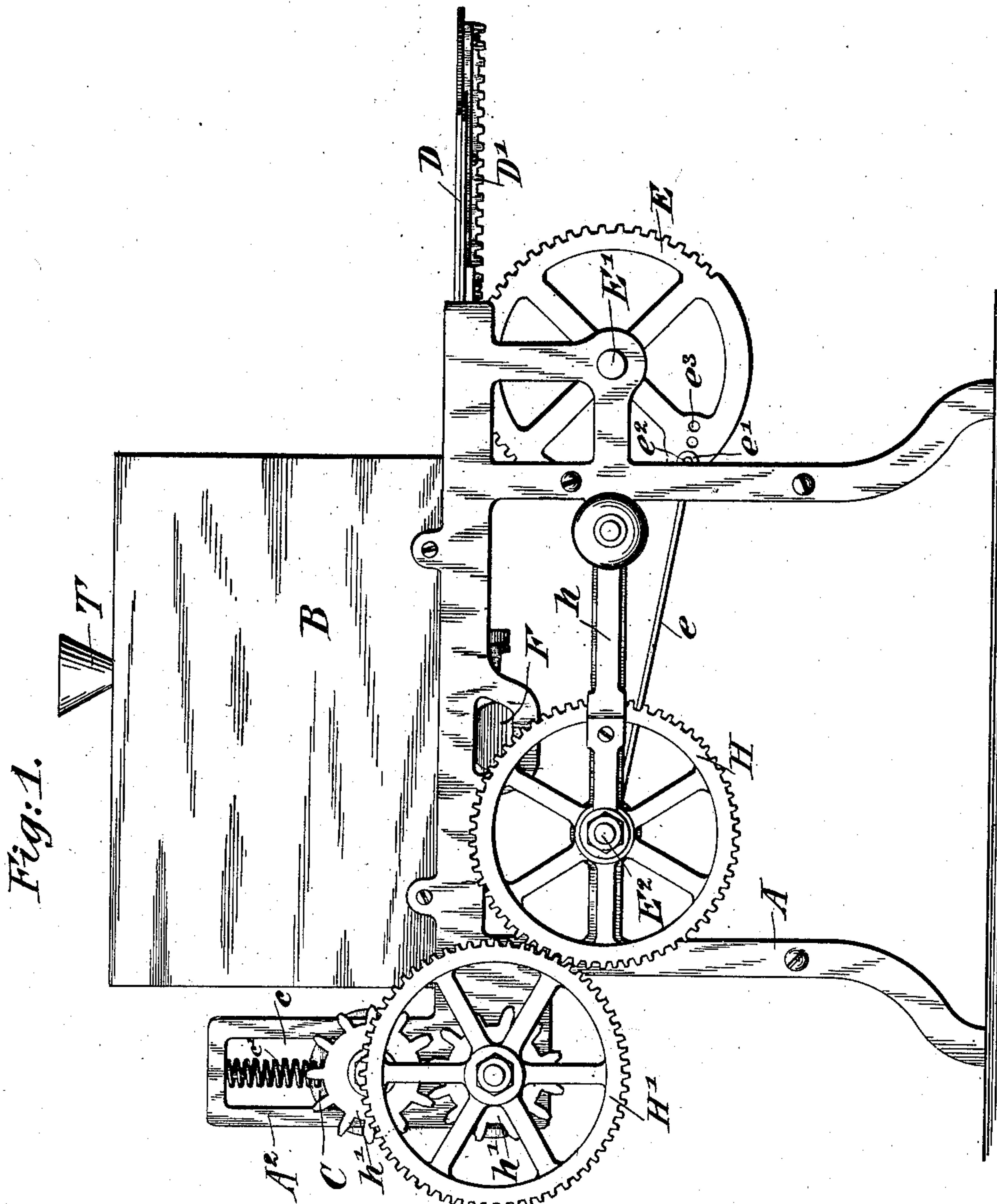
L. MADAS.

AUTOMATIC ENVELOP SEALING DEVICE.

APPLICATION FILED MAY 1, 1902. RENEWED FEB. 28, 1903.

NO MODEL.

6 SHEETS—SHEET 1.



WITNESSES:
Walter Waelheim
C. Bradway.

INVENTOR
Louis Madas.
BY *Green Viles*
ATTORNEYS.

No. 741,805.

PATENTED OCT. 20, 1903.

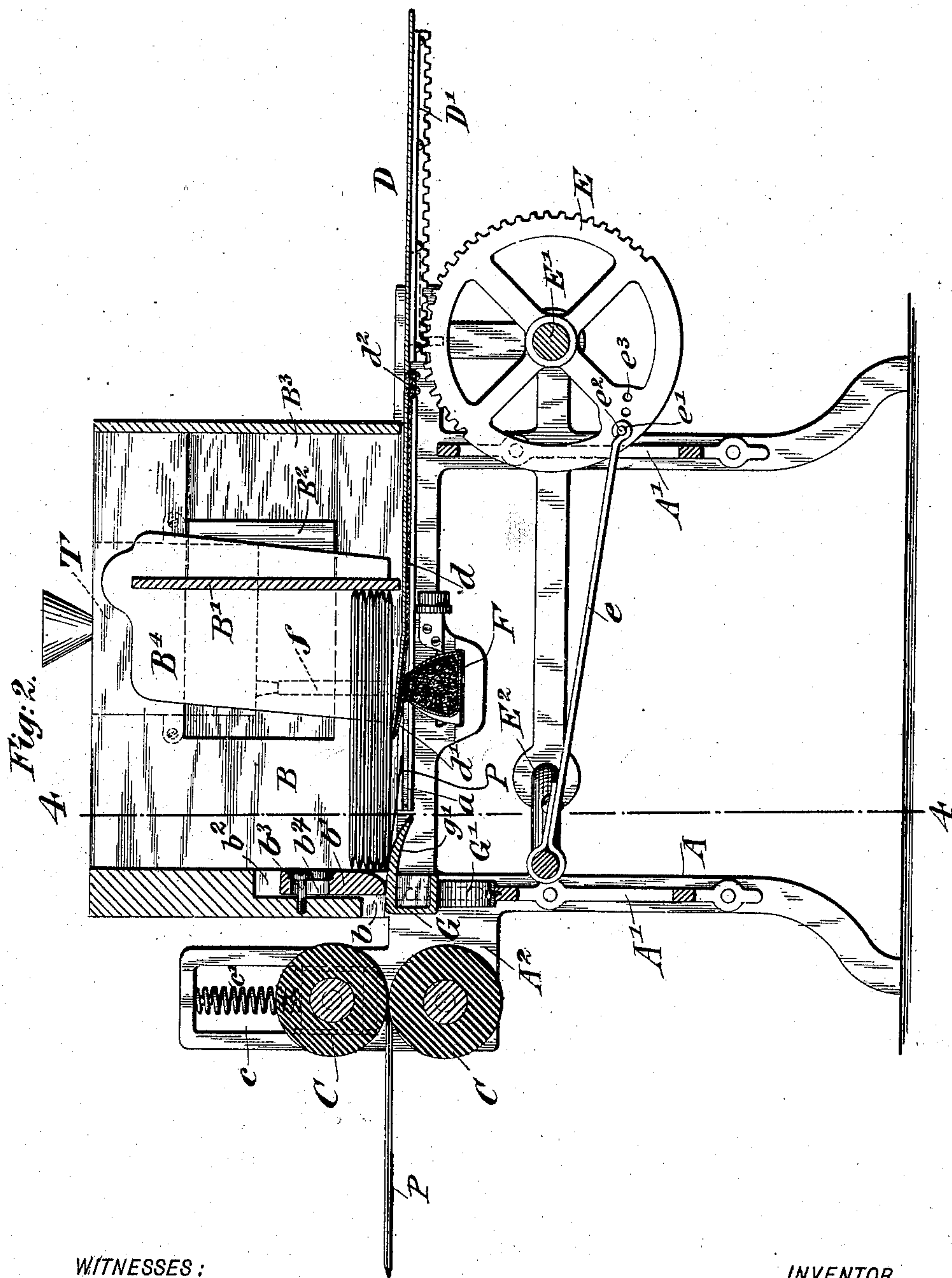
L. MADAS.

AUTOMATIC ENVELOP SEALING DEVICE.

APPLICATION FILED MAY 1, 1962. RENEWED FEB. 28, 1963.

NO MODEL.

5 SHEETS—SHEET 2.



WITNESSES:

Walter Wellheim

C. Broadway

INVENTOR

Louis Madas.

BY

BY *James Viles*

ATTORNEYS.

No. 741,805.

PATENTED OCT. 20, 1903.

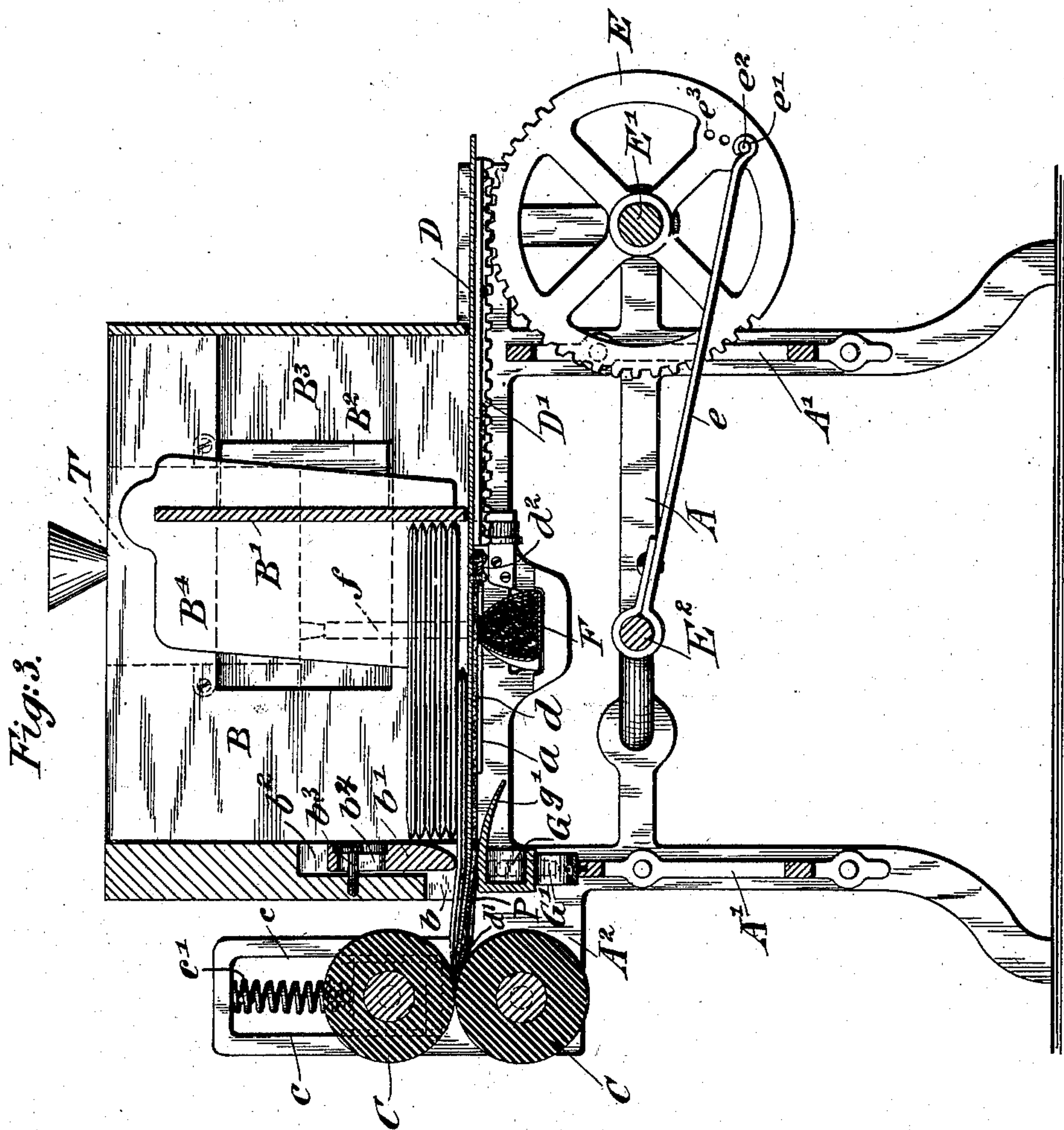
L. MADAS.

AUTOMATIC ENVELOP SEALING DEVICE.

APPLICATION FILED MAY 1, 1902. RENEWED FEB. 28, 1903.

NO MODEL.

5 SHEETS—SHEET 3.



WITNESSES:

Walter Wellheim
C. Bradway

INVENTOR

Louis Madas.
BY *James H. Miles*
ATTORNEYS.

No. 741,805.

PATENTED OCT. 20, 1903.

L. MADAS.

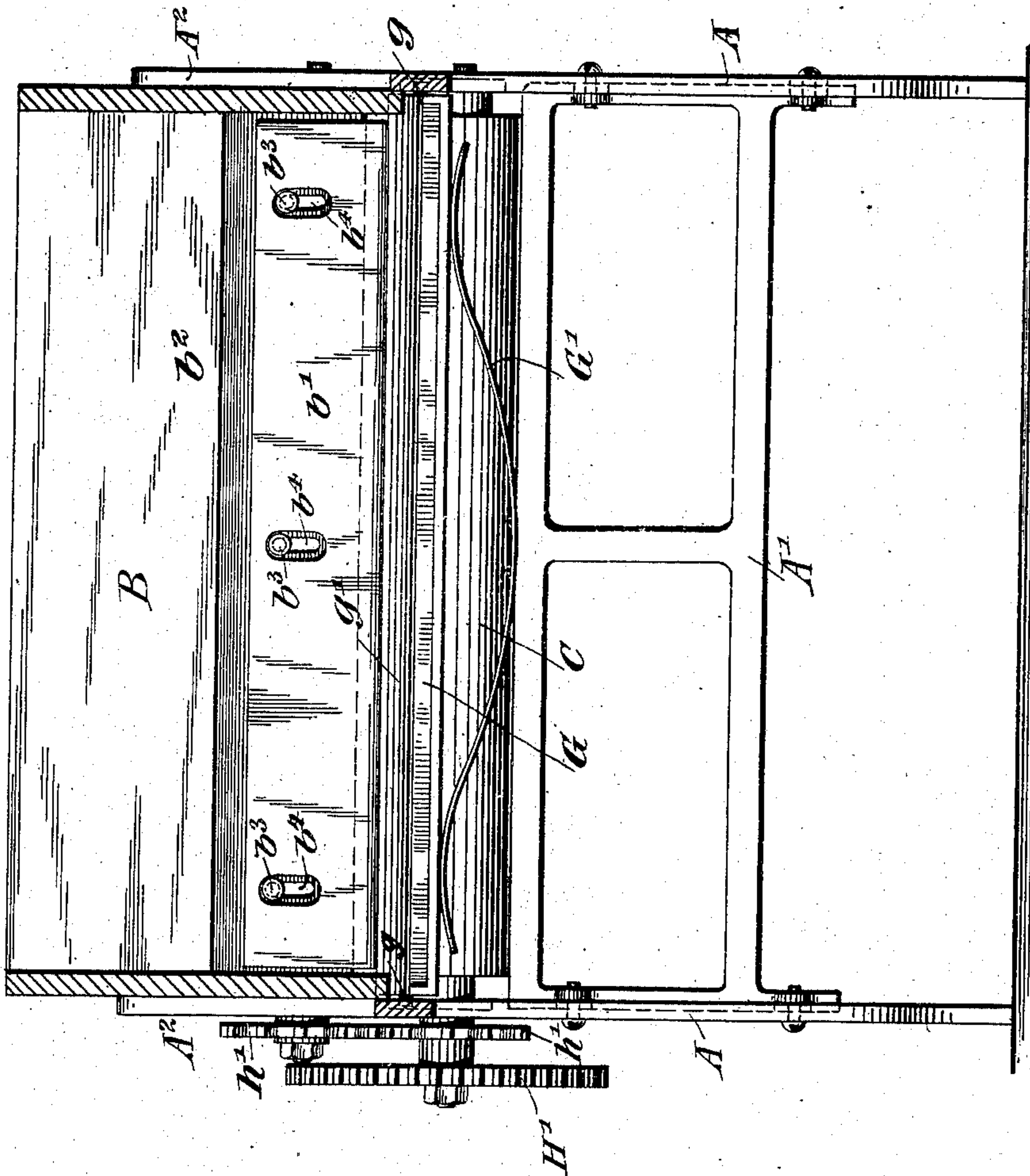
AUTOMATIC ENVELOP SEALING DEVICE.

APPLICATION FILED MAY 1, 1902. RENEWED FEB. 28, 1903.

NO MODEL.

5 SHEETS—SHEET 4.

Fig. 4



WITNESSES:

Walter Wallheim

C. Bradway

INVENTOR

Louis Madas.

BY

Sparks & Co.

ATTORNEYS.

No. 741,805.

PATENTED OCT. 20, 1903.

L. MADAS.

AUTOMATIC ENVELOP SEALING DEVICE.

APPLICATION FILED MAY 1, 1902. RENEWED FEB. 28, 1903.

NO MODEL.

5 SHEETS—SHEET 5.

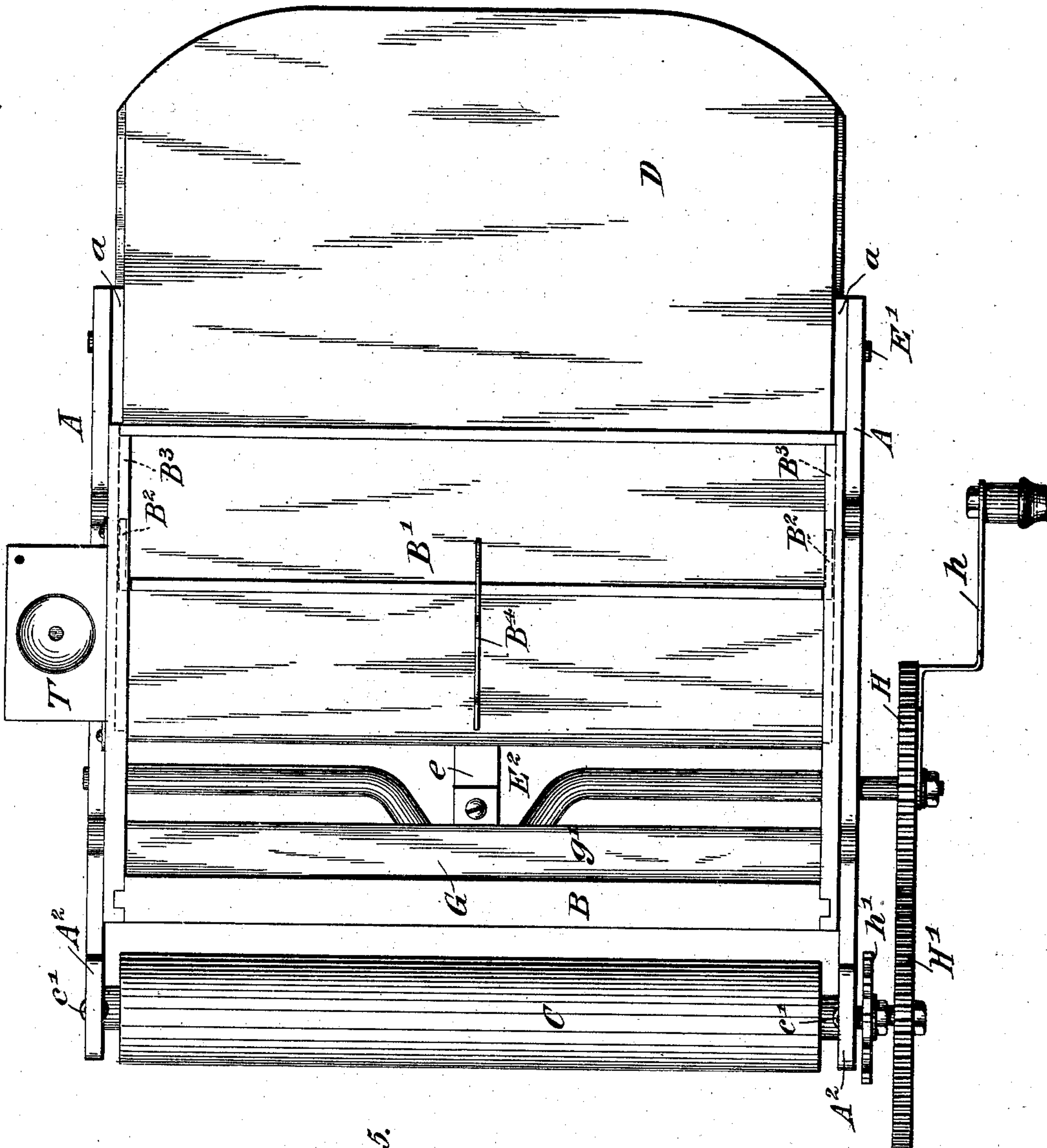


Fig. 5.

WITNESSES:

Walter Wallheim

C. Bradway

INVENTOR

Louis Madas.
BY
Bruce Viles
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LOUIS MADAS, OF NEW YORK, N. Y., ASSIGNOR OF SIXTY-FOUR ONE-HUNDREDTHS TO STEPHEN NEEDERMAN AND HOBART SEYMOUR GEARY, OF NEW YORK, N. Y.

AUTOMATIC ENVELOP-SEALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 741,805, dated October 20, 1903.

Application filed May 1, 1902. Renewed February 28, 1903. Serial No. 145,601. (No model.)

To all whom it may concern:

Be it known that I, LOUIS MADAS, a citizen of the Kingdom of Hungary, residing in New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Automatic Envelop-Sealing Devices, of which the following is a specification.

This invention relates to improvements in an automatic envelop-sealing device of that character in which the envelop-receiving box is provided to receive a number of envelopes to be sealed, and particularly relates to means for moistening and feeding the envelopes therefrom in a positive and reliable manner by means of a simple and inexpensive mechanism.

The objects of the invention are to provide means whereby the envelopes are singly engaged, moistened, fed, and sealed positively and without any possibility of miscarriage and to provide an envelop-receiving box which is adaptable for use in sealing envelopes of large size and by the insertion of a secondary partition for sealing two small-size envelopes simultaneously.

The invention therefore consists of an envelop-sealing device comprising standards, a reciprocating moistener and feeder, an envelop-receiving box, and sealing-rollers, said reciprocating moistener and feeder forming the bottom of said box and being adapted to convey the envelopes from said box to the sealing-rollers; and the invention consists, further, of an envelop-receiving box, the details of the construction of which and of other parts of the device will be more fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved envelop-sealing device. Figs. 2 and 3 are vertical longitudinal sections thereof, showing the apparatus in different positions incident to the operation of sealing envelopes. Fig. 4 is a vertical transverse section on line 4-4, Fig. 2, with parts omitted; and Fig. 5 is a plan view of the device.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the standards, and B the envelop-receiving box, of my improved envelop-sealing device, which is open at its top and bottom. The standards A are secured together by the transverse braces A', and the envelop-receiving box is supported at the upper ends of said standards and secured thereat in any suitable manner. Each standard A is provided at its front portion with an extension A², in which are mounted at their ends the compression or sealing rollers C, that rotate in opposite directions, the upper one of which being yieldingly journaled in guide-blocks that are adapted to move in the vertical ways c under the control of the compression-springs c'.

Along the upper edges of the standards A on the interior surfaces are provided the horizontal guideways a, in which the side edges of the reciprocating plate D are received. The reciprocating plate D is provided with the centrally-arranged rack D' at the rear end thereof on the under surface, that extends approximately one-half the length thereof. Meshing with the rack D' is the segmental gear-wheel E, that is supported on the transverse shaft E' at the rear portion of the device, which is adjustably connected with a crank-shaft E² by means of a connecting-rod e. The connection of the rod e with the segmental gear-wheel E is provided by means of the eye e' at the end of said rod engaging the pin e², that is adapted to be inserted into one of several apertures e³ of the segmental gear-wheel E, so that by adjusting the connection of these parts the length of the stroke of the reciprocating plate D may be changed to suit the requirements of sealing various kinds of envelopes, as will be explained hereinafter. The front half of the reciprocating plate D is provided on its under surface with a piece of absorbent material d, that extends the full width thereof and is bound to the reciprocating plate at its front by means of the turned edge d' of said plate and at its rear edge by the strip d². Thus the front portion of the reciprocating plate has the function of a moistener. The turned edge d' of the reciprocating plate D

is arranged at an oblique angle to the body of the plate and is adapted to engage the fold of the envelops and carry the same forward to the sealing-rollers to be engaged by the latter in a manner that will be explained hereinafter. This moistener is supplied with water from a stationary moistening-trough F, which extends transversely of the machine under the reciprocating plate and which is supported at its ends on the standards A, so as to be maintained in contact with the absorbent fabric *d*. The trough F is filled with sponge or similar material and is supplied with water from the tank T, supported upon the envelop-receiving box B and connected with the trough by means of a tube *f*. The front edge of the reciprocating plate D is bent upwardly at a slight angle with the main portion thereof, so that the edge of the plate will positively pass between the flap and body of the envelop and engage the fold thereof.

The front wall of the envelop-receiving box B is provided with a transverse opening *b* at the bottom edge that is high enough to permit the passage of envelops of average thickness. This opening *b* is closed by means of the keeper *b'*, that is arranged in the recess *b²* and is adapted to have free vertical movement therein. The keeper *b'* is rounded off at its lower inner edge and secured in said recess *b²* by means of the screws *b³*, that pass through the vertical slots *b⁴* in the keeper, the heads of said screws serving to retain the keeper. The envelop-receiving box is provided with a vertical transverse partition *B'*, which carries at its ends the guide-blocks *B²*, that are dovetailed in the recesses or ways *B³* in the side walls of said box. Centrally arranged on the transverse partition is a removable transverse partition *B⁴*, that divides the box into two compartments, so that envelops of small size can be placed in the envelop-receiving box in two piles and be fed therefrom and sealed at each stroke of the "reciprocating moistener and feeder," as the reciprocating plate may be termed. The centrally-arranged removable partition *B⁴* may be removed when the device is to be used for sealing large-size envelops.

Arranged below the keeper *b'* and in contact therewith is a yielding bar G, that is suitably guided at its ends *g* in the standards A and is supported upon the flat spring *G'*, secured upon the top of the front transverse brace *A'*. The yielding bar G is provided with a rearwardly-extending slightly-inclined lip *g'*.

The compression-rollers C are arranged to feed in the horizontal plane of the front edge of the reciprocating plate D, so that said edge can coöperate with the rollers in the feed of the envelops.

A crank-shaft *E²* is supported by the standards A, and at one end it is provided with a gear-wheel H, that meshes with a second

gear-wheel H' of equal size that is mounted on the shaft of the lower compression-roller, and the gear-wheel H is provided with a crank-handle *h*, so that by the turning of the latter the compression-rollers are rotated in opposite directions through said gear-wheels and the cog-wheels *h'*. Simultaneously with the rotation of the rollers the reciprocation of the reciprocating plate or moistener and feeder D takes place by means of the crank operating the segmental gear meshing with the rack D'.

The operation of the envelop-sealing device is as follows: The partitions of the envelop-receiving box are adjusted to the size of the envelops to be sealed, the partition *B⁴* being removed in case it is desired to seal large envelops and the longitudinal partition *B'* being moved toward or away from the front of the box, according to the width of the envelops and also according to the style of the envelops, having a wide or a narrow flap. The length of the stroke of the reciprocating plate is adjusted by means of the connection of the connecting-rod *e* with the segmental gear-wheel E. The envelops are taken up in suitable quantity and placed into the box with their flaps down and their flap edges or folds against the front wall of the box. The reciprocating plate or moistener and feeder D serves as a bottom for the box to support the envelops therein, and at the limit of the rearward stroke of the same the box is bottomless about one-half its width, so as to permit the flap P of the bottom envelop to project slightly into the opening in the bottom of the box, the front edge of the envelop being supported on the lip *g'*, as shown in Fig. 2. The limit of the forward motion of the reciprocating plate coincides with the contact of the compression-roller C, as shown in Fig. 3. From a rearward position the reciprocating moistener and feeder is moved forward by the turning of the crank *h* through the various members of the motion-transmitting mechanism, so that the front edge *d'* passes between the flap P and the body of the envelop until it engages the fold of the same, carrying the envelop forward between the yielding keeper *b'* and the bar G, the lip of said bar pressing the flap P of the envelop in contact with the moistener, so as to moisten the gummed surface of the flap, said reciprocating moistener and feeder proceeding forward until the same contacts with the compression-rollers, which engage the envelop. Simultaneously the reciprocating moistener and feeder returns upon its rearward stroke, while the envelop passes between the compression-rollers, becoming sealed and delivered therefrom. The second envelop is sealed in the same manner, and so, also, the remaining envelops. In this manner the reciprocating moistener and feeder is adapted to engage the envelops, feed them forward to the compression-rollers, which latter receive the envelop and yield to the thickness thereof,

sealing the same as it is passed between them, while the reciprocating moistener and feeder returns to engage the next envelop.

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

1. In an envelop-sealing device, the combination of an envelop-receiving box, a reciprocating moistener and feeder adapted to support a pile of envelops in said envelop-receiving box and to withdraw the envelops singly from the pile and simultaneously moisten the flaps thereof, and means for sealing the moistened flaps of the envelops, substantially as set forth.

2. In an envelop-sealing device, the combination of an envelop-receiving box open at the top and bottom, a reciprocating moistener and feeder forming the bottom for said box and adapted to withdraw the lowermost envelops successively from said box and simultaneously moisten the flaps thereof, and compression-rollers for sealing the flaps of the envelops, substantially as set forth.

3. In an envelop-sealing device, the combination of an envelop-receiving box, a reciprocating envelop moistener and feeder forming the bottom therefor, moistening means arranged independently of and in contact with said reciprocating moistener and feeder, and compression-rollers for sealing the flaps of the envelops, substantially as set forth.

4. In an envelop-sealing device, the combination of an envelop-receiving box, a reciprocating feeder and moistener, a stationary moistening-trough arranged under said reciprocating moistener and feeder and in contact therewith, and compression-rollers for sealing the flaps of the envelops, substantially as set forth.

5. In an envelop-sealing device, the combination of an envelop-receiving box having a longitudinal opening at the bottom side edge thereof, a yielding keeper closing said opening, a yielding bar arranged below said keeper, and a reciprocating moistener and feeder adapted to enter between said keeper and said bar, substantially as set forth.

6. In an envelop-sealing device, the combination of an envelop-receiving box having a discharge-opening at the bottom side edge thereof, a vertically-movable keeper closing said opening, a spring-supported bar below said keeper and in contact therewith, a supporting-lip on said bar, and a reciprocating moistener and feeder adapted to enter be-

tween said keeper and said bar, substantially as set forth.

7. In an envelop-sealing device, the combination of an envelop-receiving box having a discharge-opening at the bottom side edge thereof, a vertically-movable keeper closing said opening, a spring-supported bar below said keeper and in contact therewith, supporting-lip on said bar, and a reciprocating moistener and feeder having its front edge bent upwardly and adapted to wipe against said supporting-lip, said keeper and bar being adapted to receive said moistener and feeder therebetween, substantially as set forth.

8. In an envelop-sealing device, the combination of an envelop-receiving box having a discharge-opening at the bottom side edge thereof, a vertically-movable keeper closing said opening, a spring-supported bar below said keeper and in contact therewith, a supporting-lip on said bar, a reciprocating moistener and feeder adapted to enter between said keeper and said bar, a piece of absorbent material provided on the under surface of the front half of said moistener and feeder, and means for moistening the same, substantially as set forth.

9. In an envelop-sealing device, the combination of an envelop-receiving box having a discharge-opening at the bottom side edge thereof, a vertically-movable keeper closing said opening, a spring-supported bar below said keeper and in contact therewith, a supporting-lip on said bar, a reciprocating moistener and feeder adapted to enter between said keeper and said bar, a piece of absorbent material provided on the under surface of the front half of said moistener and feeder, and a transverse moistening-trough supported in contact with said moistener, substantially as set forth.

10. In an envelop-sealing device, the combination of an envelop-receiving box having a discharge-opening at the front side edge thereof, a movable longitudinal partition arranged therein, and a removable transverse partition carried by said movable longitudinal partition, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

LOUIS MADAS.

Witnesses:

PAUL GOEPEL,
C. BRADWAY.