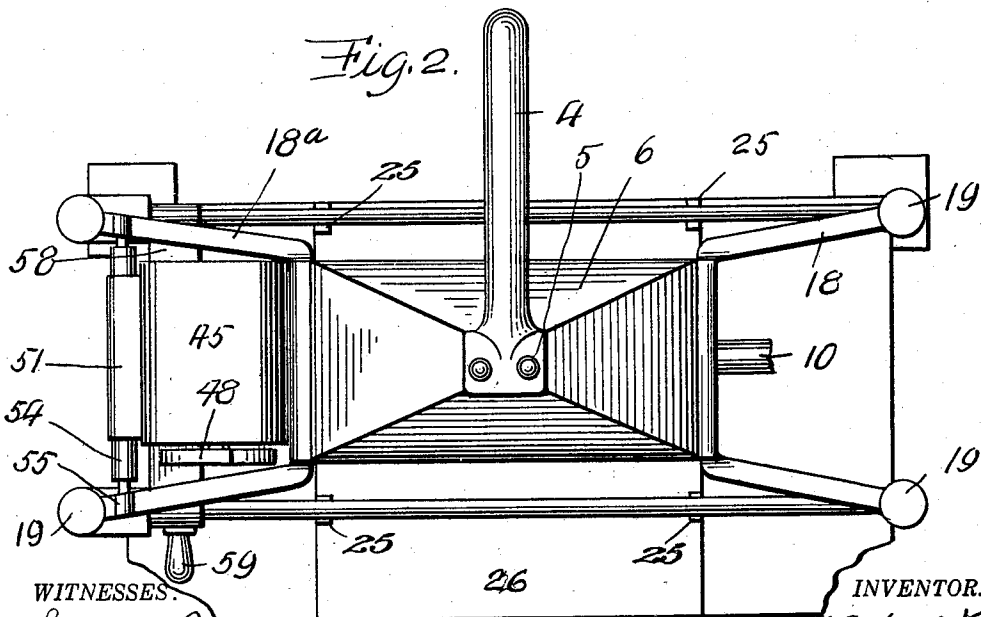
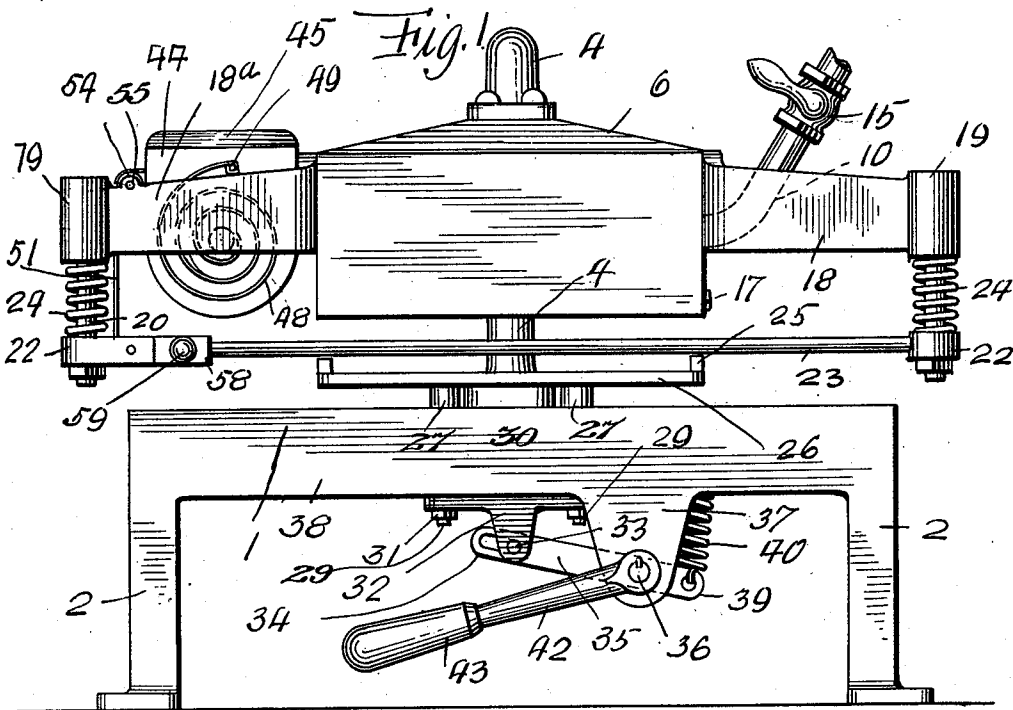


L. SADOWSKI.
 ENVELOP OPENING DEVICE.
 APPLICATION FILED JULY 10, 1911.

1,014,415.

Patented Jan. 9, 1912.
 2 SHEETS—SHEET 1.



WITNESSES.

Samuel Payne.
R. N. Butler

INVENTOR.
L. Sadowski
 BY *H. E. Overton*
 ATTORNEYS.

L. SADOWSKI.
ENVELOP OPENING DEVICE.
APPLICATION FILED JULY 10, 1911.

1,014,415.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 2.

Fig. 3.

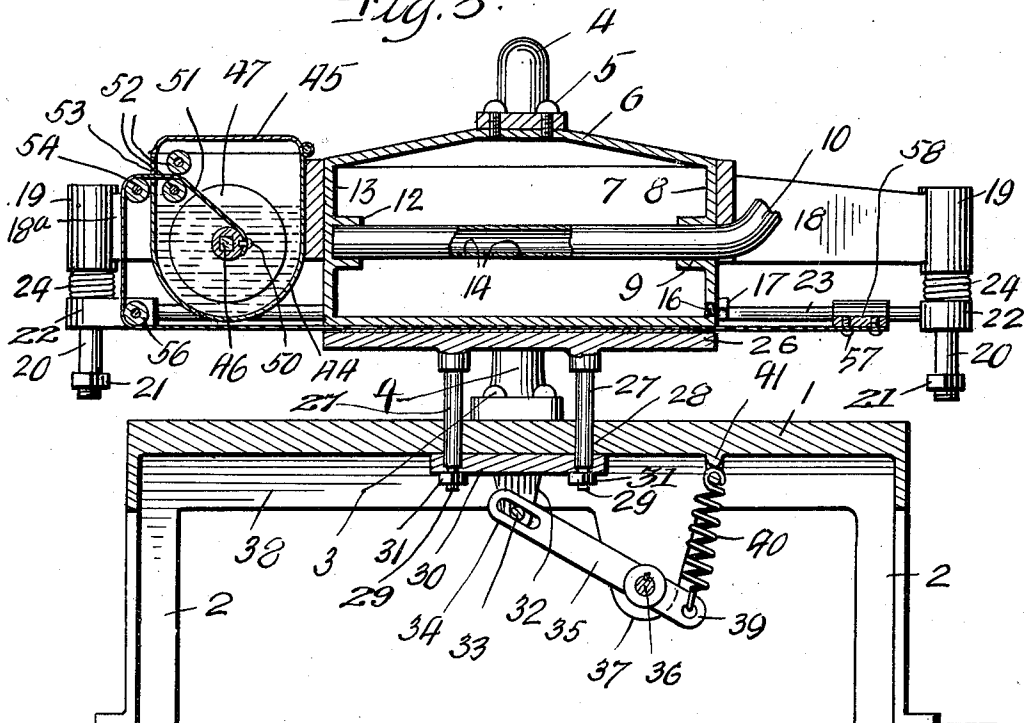
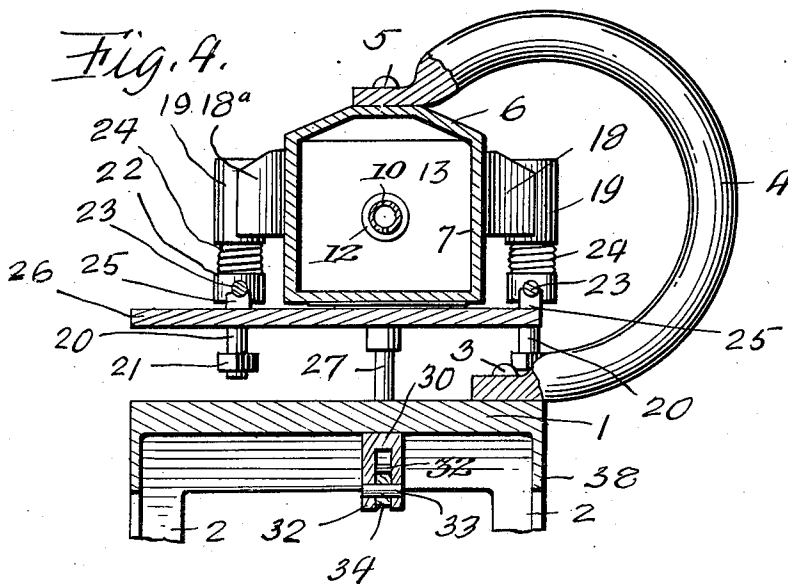


Fig. 4.



WITNESSES:

Samuel Payne
K. S. Butler

INVENTOR,
L. Sadowski.
BY *R. E. Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LUDWIK SADOWSKI, OF BALTIMORE, MARYLAND.

ENVELOP-OPENING DEVICE.

1,014,415.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed July 10, 1911. Serial No. 637,693.

To all whom it may concern:

Be it known that I, LUDWIK SADOWSKI, a subject of the Czar of Russia, residing at Baltimore, in the State of Maryland, have
5 invented certain new and useful Improvements in Envelop-Opening Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to envelop opening devices, and the primary object of my invention is to provide a machine embodying positive and reliable means in a manner as will be hereinafter set forth for opening the
15 sealed flap of an envelop without injuring the envelop or the contents thereof.

Another object of the invention is to provide a machine that can be advantageously used by the Dead Letter and Secret Service
20 Departments of the Government for opening envelops to ascertain the sender of an envelop or the contents thereof.

A further object of this invention is to utilize an application of water and steam
25 for softening adhesive material, whereby the pieces of material held by the adhesive material can be separated.

A further object of this invention is to accomplish the above results by a mechanical
30 construction that is simple, durable, and easy to manipulate.

With the above and other objects in view, the invention resides in the novel construction, combination, and arrangement of parts
35 to be hereinafter specifically described and then claimed.

Reference will now be had to the drawings, wherein like numerals denote corresponding parts throughout the several
40 views, in which:

Figure 1 is a front elevation of a machine in accordance with this invention; Fig. 2 is a plan of the same; Fig. 3 is a longitudinal sectional view of the machine; Fig. 4 is a
45 cross sectional view of a portion of the machine.

A machine in accordance with this invention comprises a table having a top plate 1 supported by legs 2, said top plate being
50 rectangular in plan. Secured to the rear longitudinal edge of the top plate 1, as at 3, is a goose neck support 4, having the upper end thereof secured, as at 5, to the top 6 of a steam chamber 7. The steam chamber 7
55 is rectangular in plan and is supported above the table top 1. The end wall 8 of

the chamber 7 has an opening 9 for a steam inlet pipe 10 that extends longitudinally of the chamber and has the inner end thereof mounted in a socket 12, carried by the end
60 wall 13 of the chamber. The pipe 10 within the chamber has the under side thereof perforated, as at 14, and the outer end of the pipe is provided with a valve and is adapted to be connected to a suitable supply
65 of steam. The end wall 8 of the chamber 7 has a small opening 16 normally closed by a detachable plug 17, this opening permitting of the steam condensate being drained from the chamber. Soldered, or otherwise con-
70 nected to the end walls 8 and 13 of the chamber 7, are sets of outwardly extending arms 18 and 18^a, having the outer ends thereof provided with enlargements 19 formed with depending guide pins 20, and
75 the lower ends of these pins are provided with detachable nuts 21 for purposes which will presently appear. Slidably mounted upon the depending guide pins 20 are the heads 22 of longitudinal rods 23. The
80 heads 22 normally rest upon the nuts 21 and encircling said pin between the enlargements 19 and the heads 22 are coiled compression springs 24. Adapted to engage the rods 23 are grooved posts 25 carried by
85 a platform 26 arranged transversely of the table top 1. The platform 26 is provided with two depending stems 27, extending through vertical openings 28 provided therefor in table top 1. The lower ends of
90 the stem 27 are reduced and screw-threaded, as at 29, for a coupling head 30, which is retained upon the lower reduced ends of the stems by nuts 31. The coupling head 30 has depending lugs 32 connected by a pin 33.
95 Engaging the pin 33 is the slotted end 34 of a lever 35 keyed or otherwise mounted upon a rock shaft 36, journaled in depending bearings 37 carried by the side walls 38 of the table top 1. The rock shaft 36 has a
100 crank 39 connected by a coiled compression spring 40 to an eye 41, carried by the underneath side of the table top 1. The end of the shaft 36 has a crank 42 provided with a handle 43, whereby the shaft can be easily
105 rocked.

Arranged between the arms 18^a is a receptacle 44 adapted to contain water, said receptacle having a hinged lid 45 whereby water can be easily placed therein. The
110 bottom of the receptacle is semi-cylindrical and journaled in the end walls of said re-

ceptacle is a longitudinal shaft 46 having a central rectangular portion upon which there is mounted a rewind reel 47. One end of the shaft protrudes from the end wall of the receptacle and has attached thereto the inner end of a spiral band spring 48, the outer end of said spring being attached to the end wall of the receptacle, as at 49. Attached to the hub of the reels 47, as at 50, is one end of an apron or piece of tape 51. This apron is preferably made of absorbent material, as linen, and said apron extends between two rollers 52 revolubly mounted in the receptacle adjacent to a longitudinal slot 53 in the front wall of the receptacle. The apron 51 passes through the slot 53 and over a roller 54, having the spindles thereof journaled in bearings 55 carried by arms 18^a. The apron passes downwardly under a roller 56 revolubly supported between the heads 52 adjacent to the receptacle 44. The end of the apron is attached, as at 57, to a cross head 58 slidably mounted upon the rods 23, said cross head having the ends thereof provided with barrels to receive the rods. One end of the cross head has a knob or handle 59 to facilitate the movement of the cross head. With the platform 26 in a lowered position, as shown in Fig. 1, an envelop is placed upon the platform with the addressed side facing the platform and the sealed flap facing the under side of the chamber 7. The handle 59 of the cross head 58 is then gripped and the cross head shifted beneath the chamber 7 to a position beneath the arms 18. This movement of the cross head unwinding the apron 51 from the reel 47, and placing the spring 48 under tension. The moistened apron is now stretched beneath the bottom of the chamber 7, and in moving the cross head, the barrels of said head readily pass over the posts 25. The handle 43 of the crank 42 is now elevated to rock the shaft 36 and elevate the coupling head 30, which, through the medium of the stems 27, raises the platform and places the sealed side of the envelop against the under side of the apron 51, and the apron against the bottom plate of the chamber 7. The platform is retained in an elevated position until the action of the steam within the chamber 7 and the moisture of the apron 51 has loosened the sealed flap of the envelop by softening the adhesive material. By releasing the handle 43, the spring 40 immediately restores the shaft 36, the coupling head 30 and the platform 26 to their normal position and the envelop can be removed from the platform and the

sealing flap peeled or opened. When the platform is lowered, the springs 24 immediately restore the slide rods 23 to their normal position, lowering the apron whereby the spring 48 can immediately rewind the apron upon the reel 47. It is preferable to admit steam to the chamber 7 for a period of time prior to using the machine, in order that the bottom plate of the chamber will be thoroughly heated before the apron is placed in engagement therewith.

From the foregoing, it will be observed that the steam chamber 7 serves functionally as a heating medium; that the slide rods are adjustable, whereby the spring wound apron can have the free end thereof correctly positioned beneath the heating apparatus; and that the platform is arranged whereby it can be elevated to hold the envelop of the apron in position beneath the heating medium until the adhesive material has been sufficiently softened to permit of a sealing flap being opened.

The apparatus in its entirety can be made of light and durable material, as metal, and of a sufficient size to open very large envelops or sealed packages.

What I claim is:—

1. An envelop opening device comprising a steam chamber, a liquid receptacle, a spring wound apron arranged in said receptacle and adapted to have one end thereof drawn beneath said steam chamber, and means including a platform adapted to simultaneously place a sealed envelop flap in engagement with said apron and retain said apron in engagement with the bottom of said steam chamber.

2. An envelop opening device comprising a table, a steam heated chamber supported above said table, a liquid receptacle arranged at one end of said chamber, a spring wound apron arranged in said receptacle and adapted to have one end thereof shifted beneath said chamber, movable slide rods adapted to guide an outward movement of the end of said apron, a platform arranged between said table and said chamber, and means adapted to simultaneously elevate said platform and said slide rods to place a sealed flap engagement with said apron and said apron in engagement with the bottom of said chamber.

In testimony whereof I affix my signature in the presence of two witnesses.

LUDWIK SADOWSKI.

Witnesses:

FRANK A. PAWLAK,
JNO. T. OCHS.