(No Model.)

A. J. PHELPS.

APPARATUS FOR SEALING PACKAGES.

No. 358,879. Patented Mar. 8, 1887.

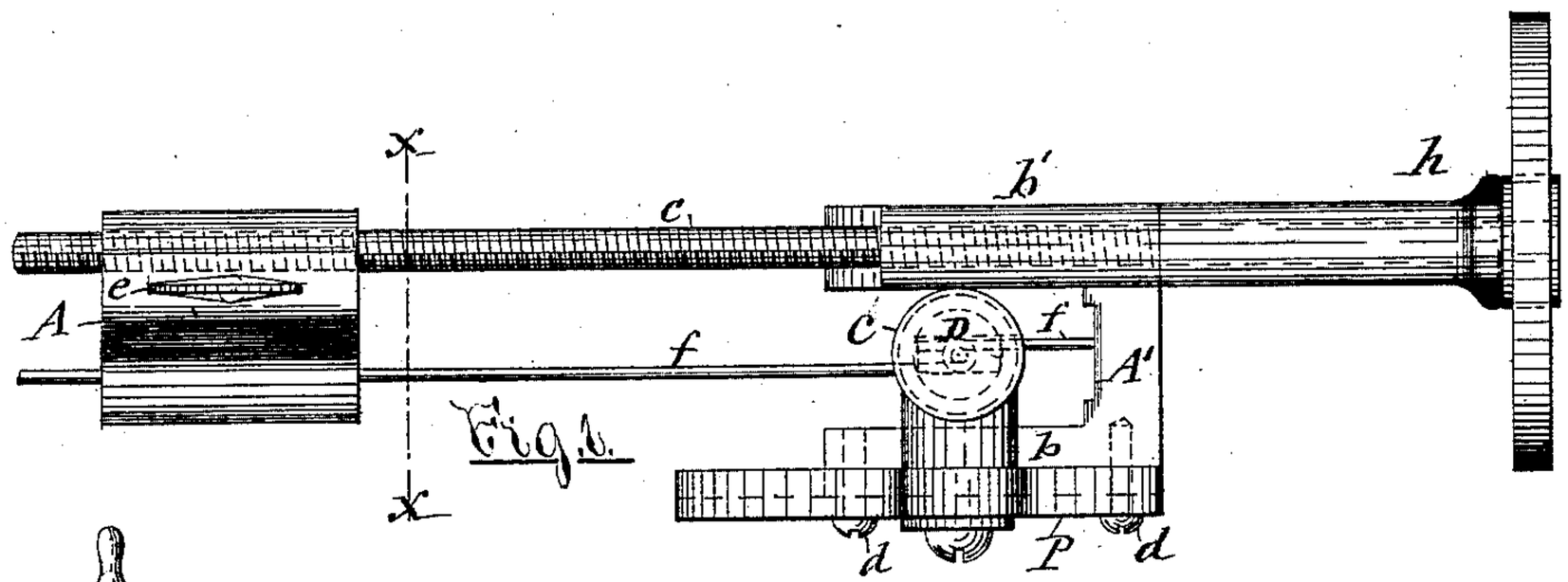

Fig. 1.

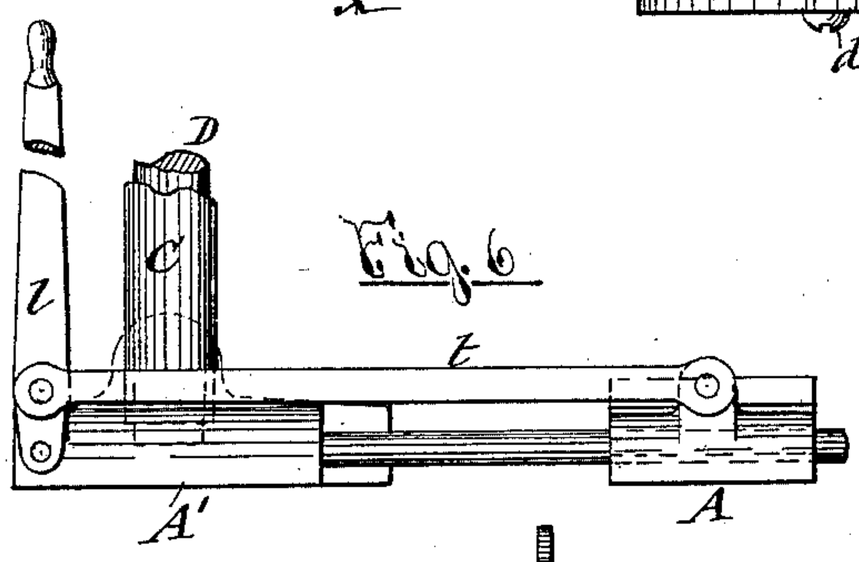

Fig. 6

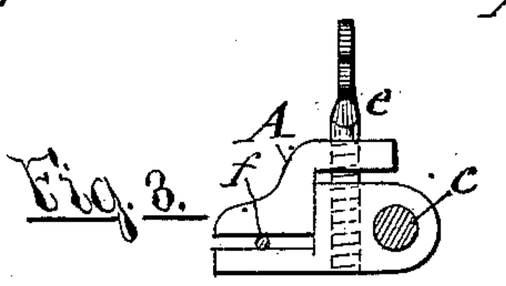

Fig. 3.

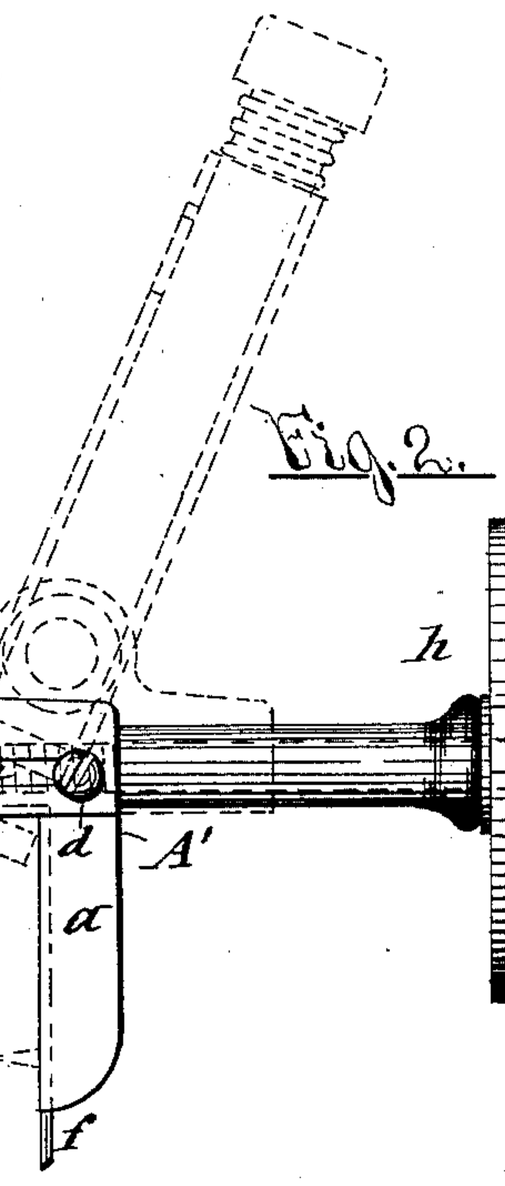

Fig. 2.

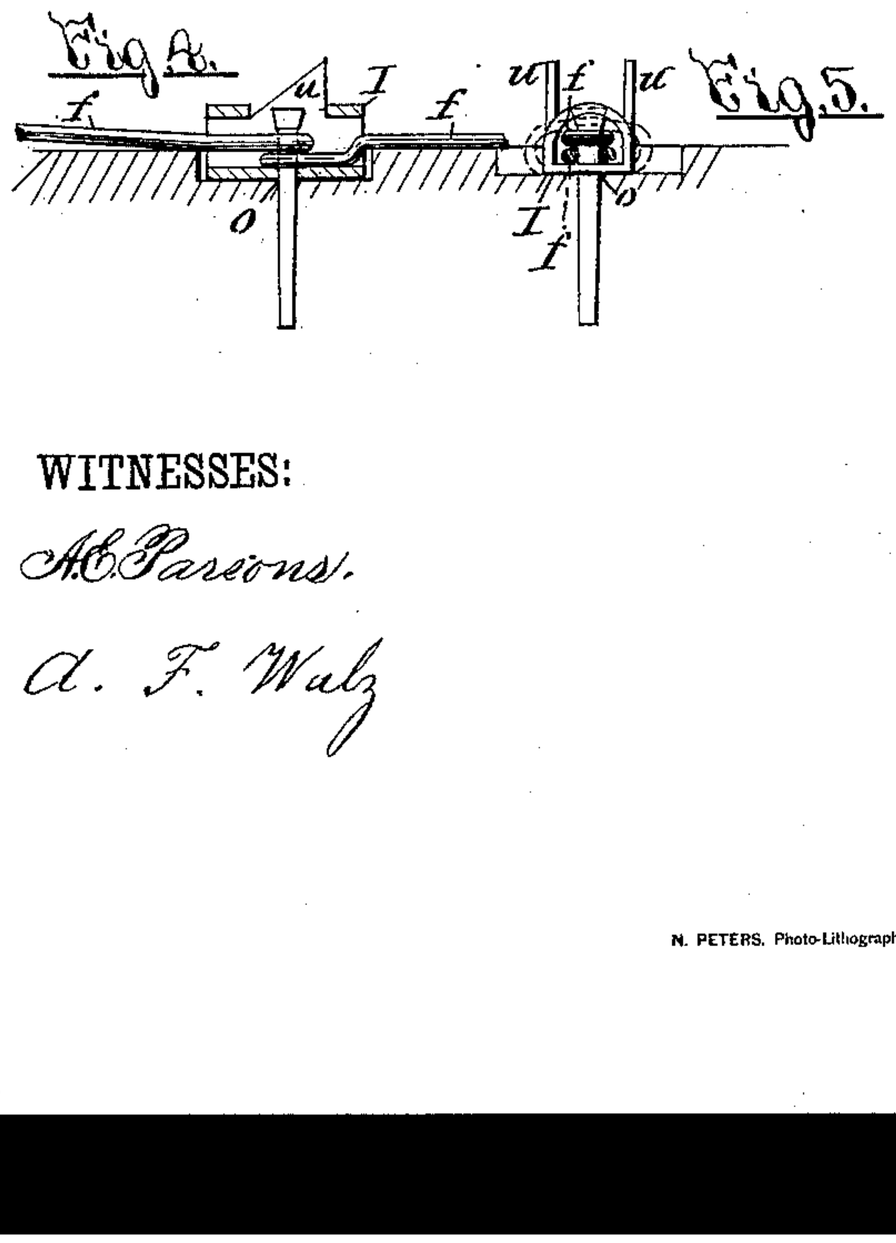

Fig. 4. Fig. 5.

WITNESSES:

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APPARATUS FOR SEALING PACKAGES.

SPECIFICATION forming part of Letters Patent No. 358,879, dated March 8, 1887.

Application filed September 2, 1886. Serial No. 212,442. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. PHELPS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Apparatus for Sealing Packages, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the application of seals to boxes and packages, for the purpose of protecting the same against tampering with the contents thereof during transportation or storage.

The object of this invention is to provide simple, inexpensive, and convenient means for applying the aforesaid seal in an expeditious and secure manner; and to that end it consists in the peculiar construction of the apparatus hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a plan view of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section on line *x x*, Fig. 1. Figs. 4 and 5 are respectively a longitudinal section and an end view of the seal, illustrating its application to the wire or binder which encircles the box or package; and Fig. 6 is a side elevation of a modification of my invention.

Similar letters of reference indicate corresponding parts.

A′ represents a gripper designed to take hold of one of the edges of the box to be sealed, said gripper consisting of a jaw, *a*, adapted to rest against the upper portion of one end or side of the box or package and provided with spurs or serrations on the side facing the box, so as to prevent it from slipping thereon. From the top of the jaw *a* project at right angles two arms, *b b′*, by which said gripper rests upon the top of the box. This gripper is connected with another gripper, A, by a suitable tightener, by which to draw the latter gripper toward the gripper A′, for the purpose hereinafter explained.

The gripper A consists of two jaws clamped together by a screw, *e*, or other suitable and well-known means.

The aforesaid tightener may either consist of a lever, *l*, pivoted on one of the grippers, and connected with the other gripper by a link or strap, *t*, as represented in Fig. 6 of the drawings, or it may be formed in various other ways.

However, I prefer to employ a screw-rod, *c*, working at one end in a screw-threaded channel in the gripper A and passing freely through a smooth-bored channel in the arm *b′* of the gripper A′, which latter channel is in range with the channel of the gripper A. Said screw-rod is provided with a manipulating-handle, *h*, which abuts against the gripper A′, and thus affords a hold for the screw-rod on said gripper. I prefer to employ the described screw-rod for the tightener because it is capable of retaining its hold after it has been tightened. On the other arm, *b*, I clamp a plate, P, having slots *n n* parallel with the screw-rod *c*, through which slots the clamping-screws *d d* pass. Said plate is thereby rendered adjustable, so as to allow it to be shifted on the arm *b* when required.

On the plate P is pivoted a guide, C, adapted to swing in a vertical plane, and in said guide slides a punch, D, which is of a uniform size throughout the length of the guide, so as to allow it to be readily withdrawn therefrom when required, as hereinafter explained. The punch is provided with a head on its upper end, and by means of a spring, *s*, interposed between said head and upper end of the guide the punch D is supported yieldingly and normally in a raised position. I denotes the seal employed in connection with the before-described apparatus, and constituting the subject-matter of another application for Letters Patent which I am about to make. Said seal I prefer to form of a tube of lead or other suitable ductile metal, which tube is provided in the bottom of its central portion with a nail-hole, *o*, and at the opposite side with incision forming folding lips *u u*, as shown in Figs. 4 and 5 of the drawings.

The operation of my invention is as follows: I first place the gripper A′ astride one of the edges of the box to be sealed and then withdraw the punch D from the guide C, and introduce into the latter an auger, by means of which I bore in the surface of the box an indentation of sufficient depth to countersink therein the seal I when compressed upon the wire or binder, as hereinafter explained. By

shifting the guide-supporting plate P on the gripper A′, I am enabled to bring the punch D into proper position to make the aforesaid indentation or countersink either on top or in the edge of the box, as may be desired, and as represented, respectively, by full lines and dotted lines in Fig. 2 of the drawings. After the indentation is made, I remove the grippers A A′ from the box and the auger from the guide C; then place the seal I into the indentation, drive a nail through the nail-hole of the seal and part way into the box; then pass one end of the wire *f* into one end of the tubular seal and wrap said wire around the nail and back through the end of the tubular seal, and twist said end of the wire around the main portion thereof, so as to insure the hold on the nail. Then I place the gripper A′ on the edge of the box and over the wire or binder *f*, and draw the latter around the box and secure it a short distance from the free end thereof to the gripper A. Then, by turning the screw *c′*, or depressing the lever *l*, I draw the gripper A toward the gripper A′, and thus tighten the wire or binder around the box. I then pass the free end of the binder *f* directly into the end of the tubular seal I, wind it around the nail and pass it back and out through the aforesaid end of the seal, and twist it around the external wire. I then introduce the punch D into the guide C, and drive said punch down onto the seal with sufficient force to close the lips *u u* over upon the wire and nail and effectually compress the seal around the same. In doing so the aforesaid lips become so united at their edges as to present a solid surface bearing the impression of the punch.

It will be observed that in this manner the nail with the wire ends around it is completely enveloped in the metal seal and is inaccessible without injuring or destroying the impression made by the punch. Furthermore, by countersinking the seal in the manner hereinbefore described the danger of the seal becoming knocked off during the transportation of the box is obviated.

Having described my invention, what I claim is—

1. An apparatus for sealing boxes or packages, comprising grippers adapted to seize, respectively, a portion of the box and the binder, a tightener connecting said grippers, and a sealing-punch adapted to impress the seal applied to the binder, all in one tool, substantially as shown.

2. An apparatus for sealing boxes or packages, comprising grippers adapted to seize, respectively, a portion of the box and the binder, a tightener connecting said grippers, and a sealing-punch supported yieldingly and normally in a raised position and adapted to impress the seal applied to said binder, substantially as set forth.

3. In combination with the grippers and a tightener connecting said grippers, a guide pivoted on one of the grippers, and a punch sliding in said guide, as and for the purpose set forth.

4. In combination with the grippers and a tightener connecting the same, a guide-support connected to one of said grippers adjustably in its position thereon, a guide connected to said support, and a punch sliding in said guides, substantially as described and shown.

5. In combination with the gripper A, the gripper A′, consisting of the jaw *a*, provided with the arms *b b′*, the plate P, adjustably connected to one of said arms, the guide C, pivoted on said plate, the punch D, sliding in said guide, and a tightener connecting the grippers, substantially as described and shown.

6. The combination of the gripper A, provided with a screw-threaded channel, the gripper A′, formed with arms *b b′*, and provided with a smooth-bored channel in range with the channel of the gripper A, the screw *c*, passing through the smooth channel and working in the screw-threaded channel, and having a handle abutting against the gripper A′, the punch D, adjustably arranged on the latter gripper, and a tightener connecting said grippers, substantially as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 21st day of August, 1886.

ANDREW J. PHELPS. [L. S.]

Witnesses:
C. H. DUELL,
A. E. PARSONS.