

(No Model.)

A. J. PHELPS.
SEAL.

No. 461,523.

Patented Oct. 20, 1891.

Fig. 1

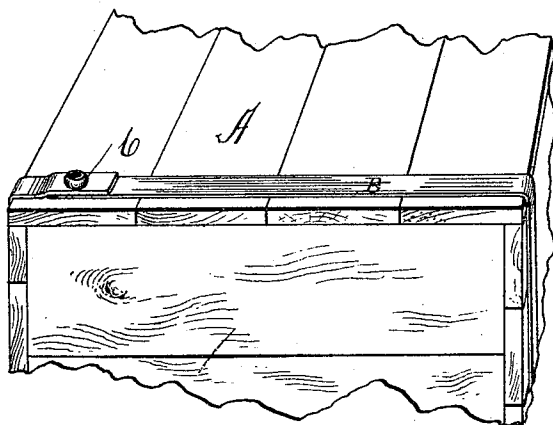


Fig. 4



Fig. 3

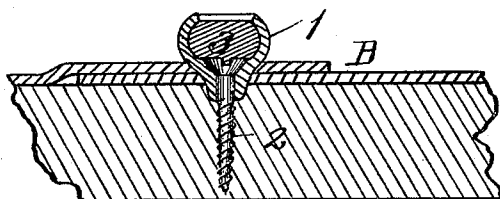
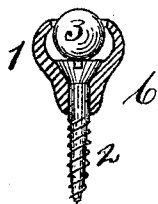


Fig. 2



WITNESSES:
H. A. Carhart
C. B. Kime.

Andrew J. Phelps INVENTOR

BY
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UNITED STATES PATENT OFFICE.

ANDREW J. PHELPS, OF SYRACUSE, NEW YORK.

SEAL.

SPECIFICATION forming part of Letters Patent No. 461,523, dated October 20, 1891.

Application filed April 27, 1891. Serial No. 390,609. (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 Seals, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to seals which are used for protecting the joints of the meeting ends of binding wires or bands around a box or package.

My object is to produce a simple and inexpensive seal, by the use of which security is attained against the unlawful opening of or tampering with the box or its contents during the transportation or storage, of such construction as to invariably show whether the seal has been tampered with, and comprising a more or less spherically-tubular body contracted at its ends, a fastener inserted through it longitudinally, and soft filling inserted into the top of the body and upon the head of the fastener, and by compression expanded so as to fill the body, means being also employed, if desired, to impress or emboss the outer end of said filling with such characters, signs, or symbols as may be desired.

My invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claim hereto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a plan perspective of part of a box having a binding-band and a seal applied to its overlapped ends. Fig. 2 is a vertical section of the seal detached and ready to be compressed to expand the soft filling. Fig. 3 is a vertical section of the seal as applied to a band and box and compressed. Fig. 4 is a top plan of the same. Fig. 5 is an elevation of the seal body or case detached, showing legs or prongs upon its lower end which are designed to pass through the band or to fit over the wire. Fig. 6 is a like view of the same with the legs cut off. Fig. 7 is a like view of the same with a side leg or sharp prong designed to enter the box and afford lateral support to the seal.

A is the box. B is an encircling band, the ends overlapping, as in Figs. 1 and 3.

C is the sealing device, comprising a more or less spherical hollow body 1, having its vertical ends open and smaller than the intermediate portions. In the lower end and within the body a seat is provided for the head of the fastener 2, Figs. 2 and 3.

A screw is shown as the fastener; but it is evident that any other equivalent device may be used.

In Figs. 2, 3, and 5 I show prongs or legs separated from each other, so as to stand on each side of the fastener and extend down, through the band and into the box below it, and these legs re-enforce the fastener against longitudinal strain upon the band.

In Fig. 6 I show the prongs cut off or shortened, so that they will only extend through one or two of the lapped ends of the band.

In Fig. 7 I show no legs or prongs on the bottom, but a sharpened spur or spurs projecting outward and downward from the outside of the body, which will enter the box beside the wire or band and stay the seal against lateral strains. In all of these forms I utilize the same more or less spherically-tubular body.

After the screw is inserted and the band secured I insert the filling 3 into the body through the open top of the same. This filling consists of some suitable plastic or semi-plastic or other compressible matter, such as soft metal or wax. I then by any ordinary means compress this filling and thus expand it, so as to fill the concavity within the body and above the head of the fastener. At the time of this compression, by means of a punch or suitable die, I can also impress or emboss the filling with any sign, symbol, letters, or other identifying device.

It will be readily seen that the screw cannot be removed without first removing the filling, that the filling cannot be removed without it is dug out and destroyed or the body damaged, so that any tampering can be easily detected. It will be further seen that the body from its form cannot be opened without great damage to it, and that even if opened it cannot be bent back again to its natural form, and that it has no unsecured flat sides which can be folded back and then bent back again without causing visible damage to the seals, but that the filling is inclosed

on all sides by the body. It will be seen, also, that the filling can be omitted, in which case the walls of the body can be flattened down right onto the head of the fastener, in
5 which case they will crimp or fold more or less.

What I claim is—

A package-seal consisting of a spherically-tubular body contracted at its upper and

lower ends and open thereat, a screw inserted 10 vertically through the open ends, and a filling inserted into the body and compressed to fill it.

In witness whereof I have hereunto set my hand this 24th day of April, 1891.

ANDREW J. PHELPS.

In presence of—

H. P. DENISON,

C. W. SMITH.