

W. E. ELLIOTT.
METALLIC SEAL.
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942,315.

Patented Dec. 7, 1909.

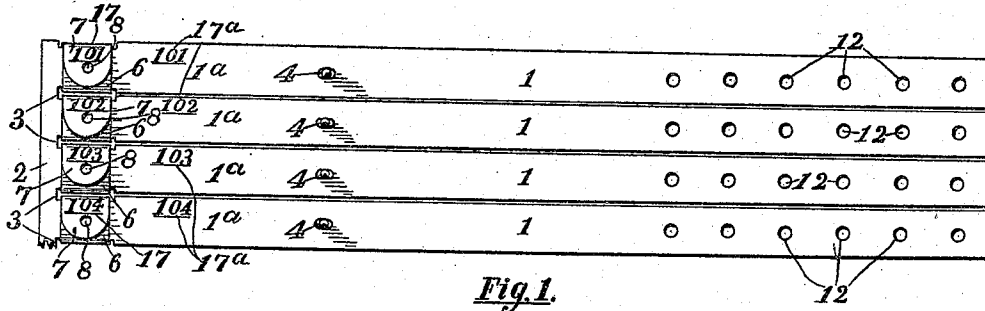


Fig. 1.

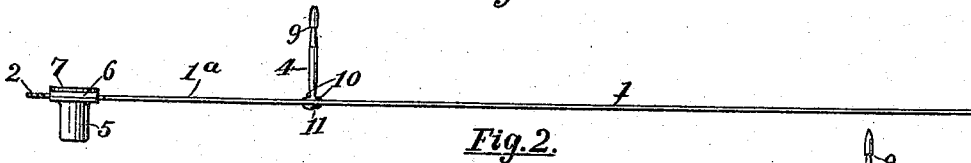


Fig. 2.

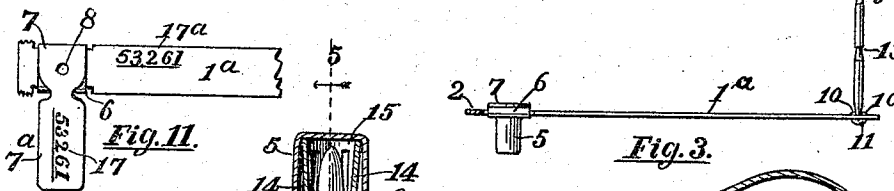


Fig. 3.

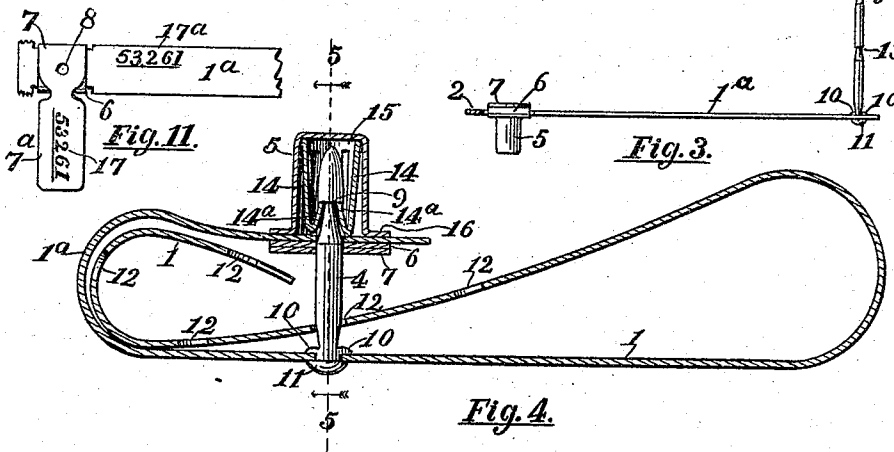


Fig. 4.

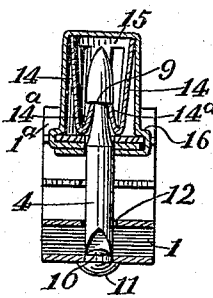


Fig. 5.

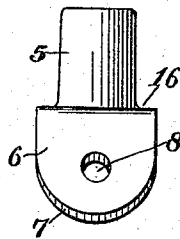


Fig. 6.

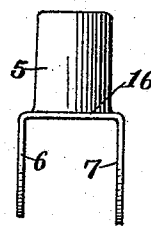


Fig. 7.

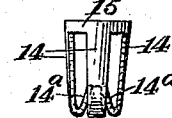


Fig. 8.

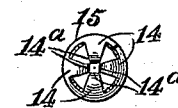


Fig. 9.

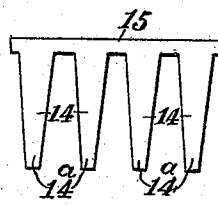


Fig. 10.

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METALLIC SEAL.

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Specification of Letters Patent.

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Application filed March 20, 1907. Serial No. 363,363.

To all whom it may concern:

Be it known that I, WILLIAM E. ELLIOTT, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Metallic Seals; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in metallic seals; and its object is to provide seals that may be variously applied for use; to provide a seal not easily tampered with without detection; to improve the locking means; and to provide a device having various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:

Figure 1 is a plan view of a series of seals embodying my invention; Fig. 2 an elevation, or edge view of one of the same; Fig. 3 a modification of one of the same; Fig. 4 an enlarged view in longitudinal section showing the device in locked position; Fig. 5 a section at right angles to Fig. 4 on the line 5-5 of Fig. 4; Figs. 6 and 7 enlarged details of the housing before attachment; Figs. 8 and 9 details of the retainer; Fig. 10 a plan view of the blank to form a retainer; and Fig. 11 a modification of one of the seals shown as in Fig. 1.

Like numbers refer to like parts in all of the figures.

The device consists of a series of strips 1 of sheet metal, preferably formed from a sheet of metal of proper dimensions, and severed except for a short distance whereby a number of these strips remain attached by a small portion 2 of the sheet, the number preferably being 10, or multiples of 10, four being shown. Close to the connected ends of these strips they are reduced in width as at 3 forming shoulders in the edges of each strip, and at this reduced portion the housing is attached. Each housing consists of a short tubular portion 5, closed at one end and having a flange 16 at the other end, and provided with extensions 6 and 7 at opposite sides adapted to fold around the narrowed portion of the strips, and thus secure the housing in place. These extensions and the strip 1 have alined openings 8 to receive

a projection 4 arranged in line with the axis of the housing 5. This projection is preferably in the form of a pin 4 and consists of a portion of wire, of any convenient length having a head at one end and inserted in an opening in the strip 1 at a distance of about one-fourth of its length from the end having the housing attached and extending at right angles from said strip being secured in place by spurs 10 cut from the opposite sides of the wire and turned down upon the surface of the strip 1 opposite to the head 11. The end of this projection is pointed to adapt it to enter between the spring members of the retainer and at a proper distance from its end to be engaged by the ends of these spring members is a circumferential shoulder 9 formed in the pin whereby the same is provided with an end adapted to be engaged by the retainer hereafter described. A series of openings 12 are formed in these strips near the end opposite that having the housing attached, through any one of which openings the projection may be inserted before inserting the same within the housing 5.

The member for retaining the projection within the housing consists of a device formed from a blank cut from sheet metal, as shown in Fig. 10. This blank consists of a series of tapered fingers 14 connected at their broader ends by a transverse integral portion 15, which portion is bent in tubular form with its ends abutting, and the fingers 14 are bent near their free ends to form inwardly turned hooks, as at 14^a, which hooks yieldingly engage the shoulder 9 on the projection and retain the same within the housing 5. This retainer is of truncated conical form. The base portion formed by the connecting member 15 substantially fits the closed end of the housing and the flexible fingers 14 converge and turn inward, as shown. The total length of this retainer is substantially the same as the length of the interior of the housing 5, and engages the bottom of the housing at one end and the side of the strip 1 at the other end, whereby it is securely retained in place within the housing when the end of the pin 4 is inserted therein and forms a very strong and reliable fastening for the same. The pin 4 is of such relative diameter as to fill the openings 8, and thus when inserted in place effectually prevents access to the retaining means. It will be noted that the

material for forming this retainer consists of blanks of such outline that they can be cut from sheet metal with practically no waste, the space between one series of fingers being substantially the shape and size of a corresponding series of the same.

In using this device, the portion 1 of the strip can be passed around any object or through any suitable opening, the pin inserted in one of the openings 12 and then secured therein by folding the other portion 1^a of the strip to properly insert the end of the pin through openings 8 and within the housing. The shorter portion 1^a of the strip may also be used without the longer portion 1 as suggested in Fig. 3. For this purpose I prefer to make the pin 4 somewhat longer as indicated in Fig. 3, and for some purposes I also prefer to provide the pin with a circumferential groove 13 whereby the same may be readily broken. This pin and the portion 1^a of the strip can thus be adapted to surround an object and locked around the same or through any suitable opening.

In the event that an opening is too small to receive the strip, the pin 1 may be inserted therein and secured in place, as stated by inserting its end in the housing 5.

For the purpose of registering these seals, and also for detecting any tampering with the same, I prefer to number the same consecutively, as shown at 17 and 17^a. I also prefer to number the strips and the housings in duplicate, whereby if any part is destroyed and replaced, the numbers will not correspond and thus such tampering with the seal will be detected.

To adapt the case to receive the higher numbers, I provide an extension, or tag, 7^a, as indicated in Fig. 11 on which to place the number for the housing.

The unsevered portion 2 serves to connect a series of seals in consecutive order, which serves as a great convenience in counting, packing or handling the same, and forming a convenient trade package.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:

1. In a car seal, the combination with a strip, of a housing secured to said strip at one end thereof, a projection also secured to said end of the strip, and means for locking said projection within said housing, the projection and housing and the free end of the strip being so constructed and arranged that the free end of the strip may be received between the housing and the projection so as to lock it to the other end of the strip.

2. In a car seal, the combination with a strip, of a projection secured to one end of said strip, a housing also secured to said end of the strip adjacent said projection, and means for locking said projection with-

in said housing and coincidentally locking the opposite end of said strip between said projection and housing.

3. In a car seal, the combination with a strip having an opening in one end thereof, of a projection secured to the other end of said strip adapted to extend through said opening, a housing also secured to the latter end of said strip adjacent said projection, and means for locking said projection within said housing with the projection inserted through said opening thereby uniting the opposite ends of said strip.

4. In a car seal, the combination with a strip, of a housing secured to one end of the strip, a projection also secured to said end of the strip, and a catch fixed within said housing adapted to engage said projection and lock the same within said housing the free end of the strip being constructed and arranged to be received between the projection and the housing so as to be locked thereby to the opposite end of the strip.

5. A metallic seal comprising a strip of sheet metal having an opening to receive a locking pin, a housing attached to the strip and with its axis in line with said opening, a separate retainer of truncated conical form and of substantially the length of the interior of the case and located within the same, said retainer having yielding fingers bent inward to form hooks, and a locking pin secured to said strip and having a circumferential shoulder engaged by the inwardly bent ends of the fingers.

6. A metallic seal comprising a strip having an opening near one end and a series of openings near the other end, a locking pin secured in said strip intermediate its ends and having a shoulder near its end, a housing attached to the strip, and retaining means in the housing adapted to engage the shoulder of the pin.

7. In a metallic seal, a strip of sheet metal having an opening, a housing attached to said strip and with its axis in line with said opening, a locking pin having a head at one end and a shoulder near the other end and adapted to be inserted in the opening in said strip and at substantially right angles thereto, said pin also having spurs engaging the strip opposite the head, and retaining means in the housing adapted to engage the shoulder of the pin.

8. A metallic seal consisting substantially of a flat strip of metal having openings near its respective ends, a housing attached to said strip and with its axis in line with one of said openings, a locking pin inserted in said strip, intermediate said openings, and having a head engaging one side of the strip, spurs engaging the other side of the same and a circumferential shoulder, and a separate retaining member in the housing comprising a series of fingers integrally con-

nected at one end and having their free ends bent inward forming hooks to engage the shoulder of the pin.

5 9. In a seal, the combination with a metallic strip having end apertures and an intermediate aperture, of a pin secured to said strip through one of said apertures, a housing secured over another of said apertures, and a sheet metal retaining member secured within the housing, said strip bendable with its apertures over the pin to interlock therewith.

10 10. In a seal, the combination with a metallic strip having end apertures and an in-

intermediate aperture, of a pin secured to 15 said strip and projecting through the intermediate aperture, a housing secured over one end of the strip, and a sheet metal retaining member secured within the housing, said strip bendable over with the free end 20 over the pin and the housing end over the free end and pin.

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

WILLIAM E. ELLIOTT.

Witnesses:

GEORGIANA CHACE,
LUTHER V. MOULTON.