No. 745,036. PATENTED NOV. 24, 1903.

F. W. BROOKS.

SHEET METAL SEAL.

APPLICATION FILED OCT. 30, 1902. RENEWED OCT. 23, 1903.

NO MODEL.

Fig. 1.

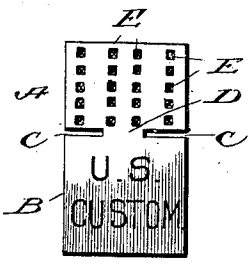


Fig. 2.

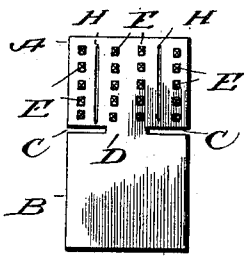


Fig. 3.

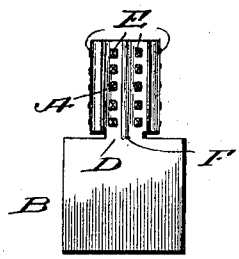


Fig. 8.



Fig. 5.

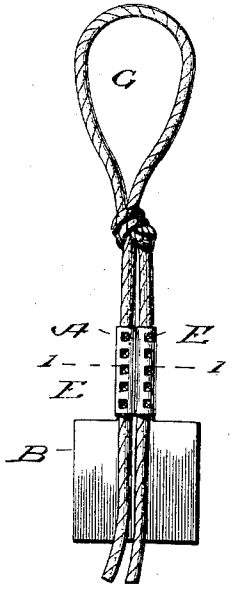


Fig. 7.

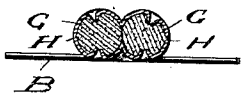


Fig. 4.

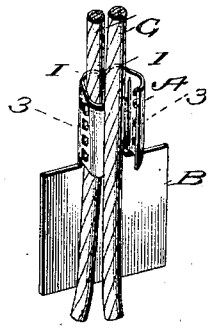


Fig. 6.

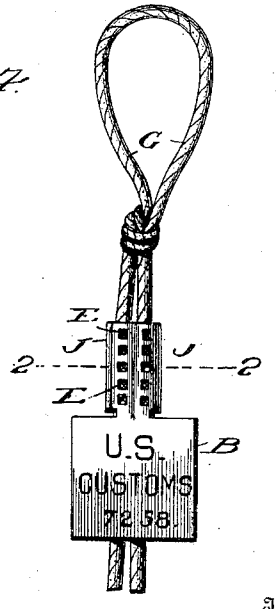


Fig. 9.



Witnesses

Jno. Imrie

W. A. Williams.

Inventor

Franklin W. Brooks

By Thos. C. W. Fenton

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 745,036. Patented November 24, 1903.

UNITED STATES PATENT OFFICE.

FRANKLIN W. BROOKS, OF WASHINGTON, DISTRICT OF COLUMBIA.

SHEET-METAL SEAL.

SPECIFICATION forming part of Letters Patent No. 745,036, dated November 24, 1903.

Application filed October 30, 1902. Renewed October 23, 1903. Serial No. 178,287. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN W. BROOKS, a citizen of the United States, residing at the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in Sheet-Metal 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 certain new and useful improvements in sheet-metal seals for use in protecting the contents of trunks, boxes, or packages of any kind against fraudulent handling or removal.

It has for its object to provide a seal which shall be simple and economic of construction, readily applied, and impossible to remove without defacement or destruction.

With these ends in view my invention consists in the construction and adaptability for use of a sheet-metal seal, as will be hereinafter and in detail explained.

In order that those skilled in the art to which my invention appertains may know how to make and apply my improved seal and fully understand its advantages, I will proceed to describe the same, referring to the accompanying drawings, in which—

Figure 1 is a front or face view of one of my improved seals in its flat or primary condition. Fig. 2 is a rear view of the same. Fig. 3 is a view similar to Fig. 1 with the upper portion bent into form suitable to readily receive the cord or other similar bale employed in fastening or binding a trunk, box, or package and with the lower flat portion devoid of any identifying character or letters. Fig. 4 is a rear perspective view of the seal in its secondary condition as shown at Fig. 3 and with the ends of the binding or fastening cord located within the partially-crimped upper portion of the seal and ready to be fastened tightly and against removal. Fig. 5 is a rear view of the cord and seal securely fastened together by the final closure of the crimped upper portion of the seal. Fig. 6 is a front view of the cord and seal after the final closure of the crimped portion of the seal and showing slight diametric tightly-compressed wings. Fig. 7 is a cross-section on the line 1 1 of Fig. 5. Fig. 8 is a similar section on the line 2 2 of Fig. 6; and Fig. 9 is a cross-section, on an enlarged scale, taken on the line 3 3 of Fig. 4.

Similar letters of reference denote like parts in the several figures of the drawings.

In manufacturing my improved seal I punch from a commercial sheet or strip of sheet metal the blank shown at Figs. 1 and 2, and consisting of the upper portion A and lower portion B, separated at their edges by slots or kerfs C, extending toward the center a given distance and leaving a central integral neck or bridge D. Preferably at the same time the upper portion A has a series of barbs or points E forced toward the rear in any well-known manner, and preferably four rows of such barbs are provided, as clearly shown at Figs. 1 and 2, so that when the seal is fixed upon a securing-cord G, as will be presently explained, such cord will be partially or wholly penetrated from opposite sides. Adjacent to each of the outer rows of barbs E and preferably midway between them and the next adjacent row of barbs a weakening-crease H is formed on the inside of the portion A, preferably stopping short of the upper and lower edges, as clearly shown at Fig. 2.

At the same time, or subsequently to striking up the blank into the form shown at Figs. 1 and 2, the upper portion A is crimped into the form shown in Figs. 3, 4, and 9 and in which condition the ends of the fastening-cord may be very expeditiously located within the two gutter-shaped recesses I I, (best shown at Fig. 9,) slightly forcing the cord into position, and the presence of the rows of barbs E each side of the center of these gutter-shaped recesses contact sufficiently with the cord to temporarily hold the seal in position for the application of the dies of a suitable small hand-press, which when pressure is applied compresses the crimped portion A into the condition shown at Figs. 5 and 7 or Figs. 6 and 8, according to the shape of the dies of the press, the modification shown at Figs. 6 and 8 differing from the form shown in Figs. 5 and 7, consisting in the slight diametric and lateral ribs or wings J J formed at that locality where the weakening-creases H exist.

When compressed into either of the conditions described, the barbs E E on opposite

sides of the cord G are driven into or through said cord, and the extreme lateral edges of the portion A are forced tightly between the adjacent parallel ends of the cord and about meet and contact with the central crimp K, (see Fig. 9,) which is simultaneously forced toward the inwardly-turned edges referred to, thus constituting two substantially cylindrical tubes, as clearly shown at Figs. 7 and 8.

In crimping the portion A into the form shown at Fig. 9 the weakening-crease H is unaffected, and when said portion is finally compressed by the action of the dies of the hand-press to clasp and retain the ends of the cord G said weakening-crease aids in the uniform bending at that locality without in any manner affecting the integrity or homogeneity of the outside surface of the blank; but having been once bent, as described, any effort to reverse the movement for the purpose of opening the portion A to release either one of the ends of the cord will cause the metal to break on the line of the weakening-crease H, and hence the fraudulent effort will be exposed. Any desired characters or words, such as shown at Figs. 1 and 6, may be impressed upon the surface of the portion B to indicate ownership or responsibility, and, if deemed desirable, said portion may also be provided with serial numbers, as shown at Fig. 6.

While I have shown the blanks A B of rectangular shape and prefer to so make them to economize in the use of material, it will be understood that they may be made in other distinctive forms so long as the portion A is integral longitudinally and centrally with the portion B and is adapted in the manner described for securement to the cord G, and while I prefer to provide the portion A with the longitudinal weakening-creases H they may be dispensed with when the quality and character of the material used is such that the outward or opening movement of said portion will cause a rupture of the material.

The weakening-creases are shown and described as terminating a short distance from the upper and lower edges of the portion A, and, as stated, I prefer this construction; but, if desired, said creases may extend to the extreme limits of said portion A.

With the seal having the general characteristics described it will be seen that the waste in material is substantially *nil*, being that quantity only which is punched out to form the slots or kerfs C. Such seals being composed of sheet metal are necessarily cheap and light, and the tool or hand-press required for securing them upon the cord G may consequently be of cheap and light construction and small proportions, so that they may be carried within the pocket of the sealer without inconvenience.

Having described the construction and advantages of my improved seal and the mode of securing it upon the ends of the ordinary cord or shackle, what I claim as new, and desire to secure by Letters Patent, is—

1. A seal composed of a single piece of sheet metal, having lateral slots or kerfs, and a series of barbs or spurs above the slots or kerfs, said barbed portion partially crimped to form longitudinal recesses for the ends of a cord or shackle, and adapted to final compression to secure permanent and fixed relation with such cord or shackle, substantially as described.

2. A seal composed of a single piece of sheet metal having lateral slots or kerfs, and with a series of barbs or spurs above the kerfs, and also with longitudinally-disposed weakening-creases, substantially as and for the purpose described.

3. A seal composed of a single piece of sheet metal, provided with lateral slots or kerfs, and inwardly-projecting barbs or spurs above the slots or kerfs in combination with and compressed upon a shackle composed of cord or similar fabric, substantially as and for the purposes set forth.

4. In combination with the shackle-cord such as described, a sheet-metal seal provided with inwardly-projecting barbs or spurs, and with intermediate kerfs or weakening-grooves and compressed upon the shackle-cord in the manner described to form external lateral ribs or wings J, folded upon the lines of the weakening kerfs or grooves, substantially as and for the purpose set forth.

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

FRANKLIN W. BROOKS.

Witnesses:
D. G. STUART,
JNO. J. HARROWER.