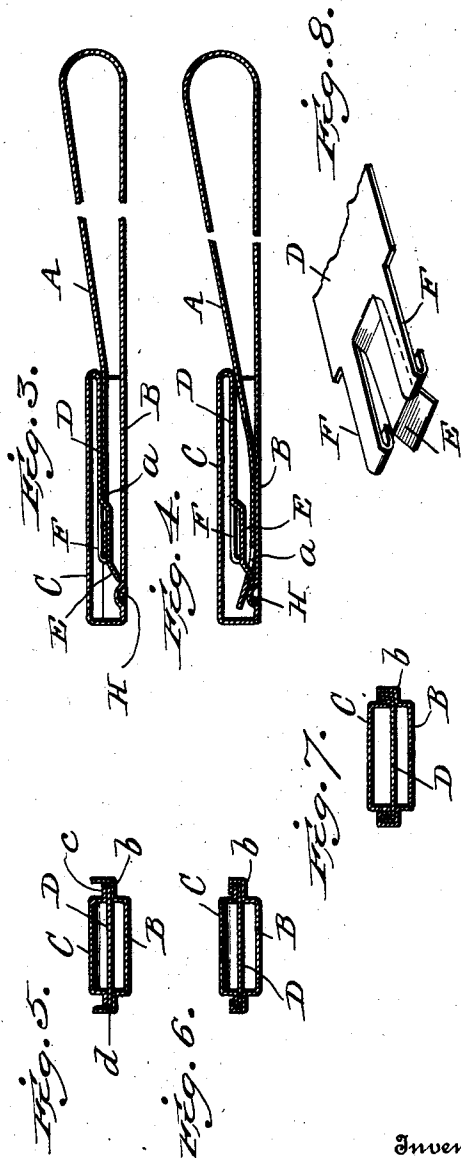
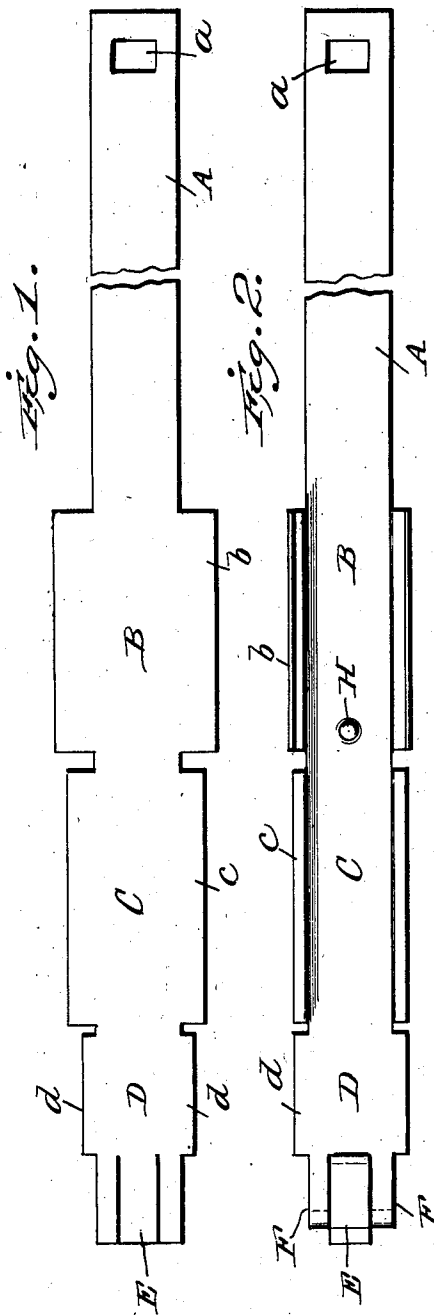


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CAR SEAL.

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To all whom it may concern:

Be it known that I, OTTO C. BUSSE, of Vincennes, county of Knox, State of Indiana, have invented a certain new and useful Improvement in Car-Seals; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to car seals of that type wherein a metal strap or tie is passed through the door securing staple, the two ends of the tie being fastened together in such manner as to clearly indicate if the seal has been broken at any time subsequent to the sealing of the door.

More specifically, the invention relates to the type of car seal last above referred to, in which one end of a metal strap tie is provided with a housing having within it locking devices for the opposite end of the strap such locking devices being designed to automatically engage with the said end when inserted in the housing and to prevent the withdrawal of said end without rupturing or destroying the parts in such manner that the fact that the seal has been tampered with is at once apparent to an observer. This type of car door seal is well known at the present day and hence various details of construction made use of in the present invention and at present known need not be specifically referred to.

The objects of the invention are to simplify the construction of such a seal and provide a device which will lock the end of the tie more securely and in such wise that it cannot be released by the introduction of a pick or other instrument without the destruction of the seal itself.

Referring to the accompanying drawings—Figure 1 is a plan view of a blank from which the seal of the present invention is formed, portions of the tie being broken away; Fig. 2 is a similar view with the portion of the blank which is to form the body of the housing partly flanged up; Fig. 3 is a sectional elevation of the device showing the parts in the positions occupied by them when the end of the tie is secured by the locking devices; Fig. 4 is a similar sectional elevation showing the end of the tie in the position occupied by it immediately before its engagement with the lock-

ing tongue; Fig. 5 is a section in a transverse plane with the parts in the positions occupied by them before the edges are bent down to lock them together in the formation of the body; Figs. 6 and 7 are views corresponding to Fig. 5 but showing respectively the edges of the body portion partly and completely folded to form the locking joint between them; Fig. 8 is a perspective view of the locking tongue and hooks.

Like letters of reference in the several figures indicate the same parts.

The blank from which the seal of the present invention is formed is preferably made of relatively light but strong sheet metal. As shown in Fig. 1, there is a long narrow tie portion A and transversely widened portions B, C and D, respectively. The portions B and C constitute the top and bottom of the housing or body of the seal while the flanges b and c are adapted to be bent up and folded together as shown in Figs. 5, 6, 7, to unite the two parts and inclose the locking devices which will be presently described. The portions B and C of the blank are preliminarily flanged up so that when folded one upon the other, the flanges c will rest upon seats formed by the intermediate portions of the flanges b, as shown clearly in Fig. 5 and with the extremities of the flanges b projecting upwardly in position to fold over the flanges c as indicated in Fig. 6. The joint is given final form by bending both flanges to the form illustrated in Fig. 7. The top and bottom of the body portions of the seal are thus united by a double fold of the metal and constitute in effect a rigid and secure housing which cannot be opened without the destruction of the device or such deformation of it as will be readily detected upon a casual inspection. The portion D of the blank is formed with flanges d throughout part only of its length. These flanges d are, as indicated in Figs. 5, 6 and 7, clamped firmly between the flanges c and d, while the end of the part D is free within the housing formed by the parts B and C and is formed into the locking tongue and hooks of the seal. The central portion of the end forms the locking tongue E and is offset and adapted to extend down in proximity to the flat inner face of the part B, while the two side portions are doubled back upon themselves in a downward direction to form the locking hooks F. As thus constructed the locking tongue pro-

jects downwardly and forwardly beyond the hooks F and the hooked ends of the latter lie in a plane which will intersect the upper plane of the intermediate portion of the locking tongue, whereby an object drawn over the tongue and back past the hooks will spring the hooks upwardly and the tongue downwardly, but will be caught and prevented from reverse movement by engagement with the hooks.

The free end of the tie strap A is provided with a rectangular aperture *a*, and said free end is adapted to be pushed into the body of the seal between the portions B and D, until the tongue E springs through the aperture *a*. To facilitate and insure the proper entry of the tongue E into the aperture, a projection H is formed on the body portion B immediately beyond the end of the tongue E the said projection having an inclined face up which the end of the tie will travel, as it is forced inwardly, and whereby the end of the tie will be elevated sufficiently above the end of the locking tongue E to insure the engagement of the latter therewith when the tie is drawn outwardly into position to engage the locking hooks. The position assumed by the end of the tie in being entered as last described, is illustrated in Fig. 4, and the position of the parts when the tie is fully locked and the seal secured is clearly indicated in Fig. 3.

With this construction of seal it is obvious that the introduction of any instrument into the only aperture left in the body portion of the seal, to wit, the aperture through which the end of the tie passes, will not release the tie by deflecting the locking tongue or hooks, inasmuch as a movement in a direction to release the tongue will necessarily cause the tie to be more securely held by the hooks. It thus becomes practically impossible to release the end of the tie without such mu-

tilation of the seal that the fact that it had been tampered with is apparent upon a casual inspection.

Of course it will be understood that the usual means are employed for indicating if the tie has been cut and the cut end introduced into the body of the seal, but as such means form no part of the present invention, a description of the same is unnecessary.

What I claim is:—

1. A car seal formed of a sheet metal blank embodying a tie having an apertured end, an integral housing and locking mechanism formed by flanging and uniting the edge portions of the blank, the locking mechanism consisting of two retaining hooks having their hooked ends bent down and then backwardly in a horizontal plane and a downwardly and inwardly projecting locking tongue having its body portion in the same plane as the ends of the hooks and intermediate the same, the extremity of the tongue projecting downwardly beyond the extremities of the retaining hooks whereby the apertured end of the tie is, when moved outwardly, guided upwardly into a locked position inside the retaining hooks.

2. A car seal formed of a single integral sheet metal blank embodying a tie having an apertured end, body portions seamed together along their opposite edges, a tongue portion having its base clamped within the seam of the body portion, said tongue portion having three inwardly projecting resilient tongues, the end of the intermediate tongue being extended inwardly and downwardly and the ends of the side tongues being formed into retaining hooks.

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