O. C. BUSSE.

CAR DOOR SEAL.

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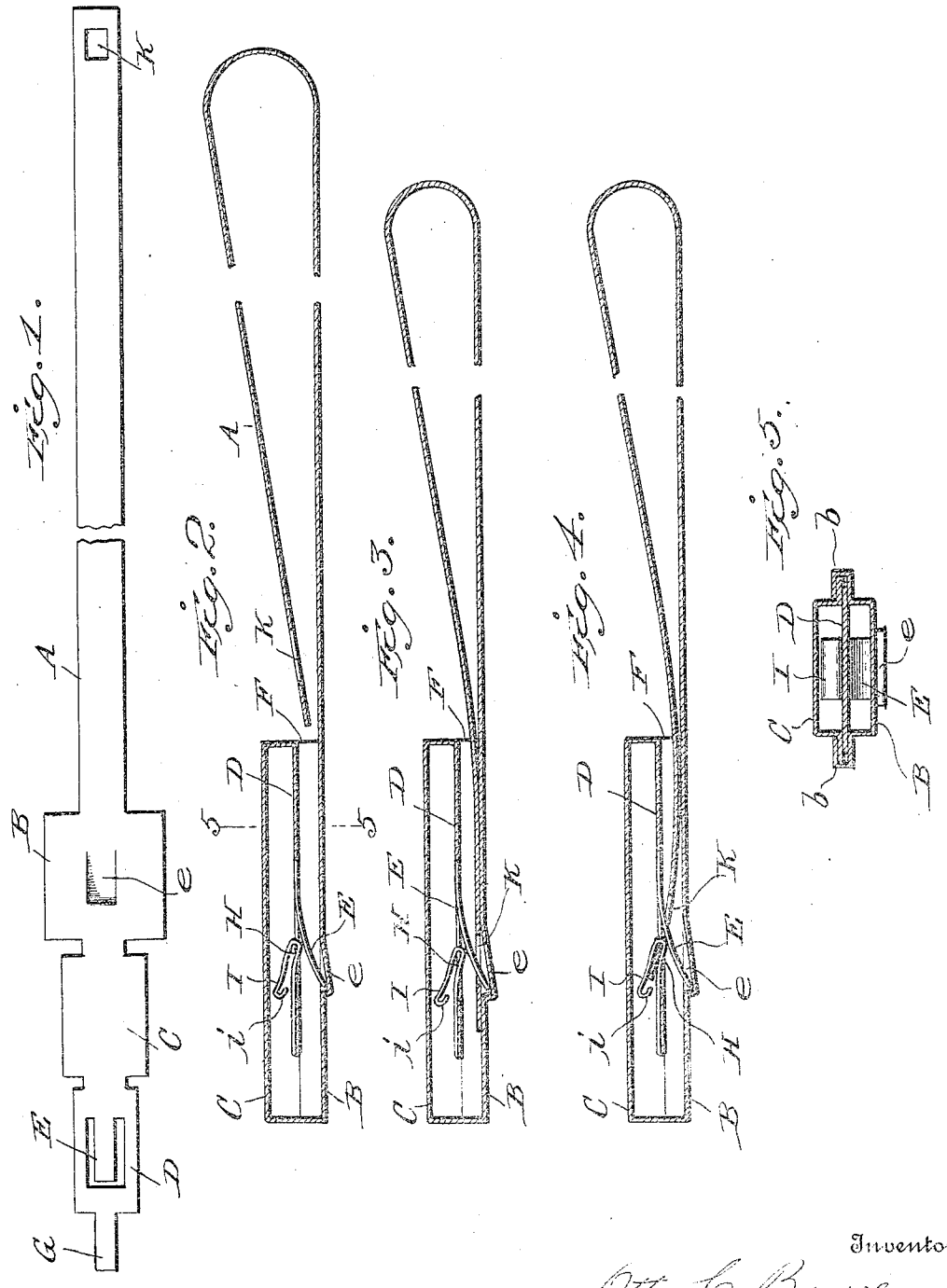

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CAR-DOOR SEAL.

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To all whom it may concern.

Be it known that I, OTTO C. BUSSE, a citizen of the United States, residing at Vincennes, in the county of Knox and State of Indiana, have invented certain new and useful Improvements in Car-Door 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 part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to car door seals such as are adapted for being constructed of sheet metal, usually but not necessarily a single integral piece cut to form a blank of proper shape to be bent into a suitable housing and locking mechanism for the free end of the strap which is permanently connected with the housing.

The objects of the invention are to provide a seal of simple construction which will automatically engage and lock the end of the strap so as to retain the same in such manner that it cannot be released without the practical destruction of the seal or such mutilation of it as will be apparent upon a casual inspection.

Referring to the accompanying drawings,—Figure 1 is a plan view of a blank from which a seal embodying the present invention may be formed; Fig. 2 is a sectional elevation longitudinally of the device before the end of the strap is inserted; Fig. 3 is a similar view with the end of the strap moved into engagement with and held by the first locking tongue; Fig. 4 is a similar view with the end of the strap moved into engagement and held by the final locking tongue; Fig. 5 is a section in a transverse plane showing the formation of the housing members with the edges of the parts from which the locking tongues are cut, secured therebetween.

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

For illustrating the invention, a form has been adopted which may be entirely constructed from a single integral blank of sheet metal shown in Fig. 1, this blank having an extended strap portion A, two laterally widened housing forming portions B and C, and a locking tongue portion D. The lateral extensions on the part B are adapted to clamp around the lateral extensions on the part C when the two parts are folded together, as indicated in Figs. 2, 3, etc., to thereby form a housing with side seams *b* as best seen in Fig. 5, said seams, of course, being of such character that the two housing members B and C cannot be separated without destroying the device. The locking tongue portion D is bent reversely with relation to the part C, and its edges are adapted to be clamped between the lateral extensions of the parts B and C, whereby the locking tongue part D is held firmly in an intermediate plane with spaces in the housing above and below it. The locking tongues are cut from the part D, there being one tongue E which projects downwardly and inwardly with relation to the entrance opening at F so as to extend across the entrance passage leading into the housing from said opening F, the end of the tongue being preferably received in a depression *e* in the bottom portion of the housing itself. An extension G on the part D is adapted to form two other locking tongues, said tongues in the completed device being located one above the other and in position to successively engage with the free end of the strap, as will be presently explained. The tongue E, as before described, projects downwardly in a diagonal direction across the entrance passage, and the second tongue projects downwardly in the opposite direction, this second tongue, indicated by the reference letter H, being formed by doubling the projection G back over the part D, and bending its intermediate portion downwardly into contact with or into close proximity to an intermediate portion of the tongue E.

The third locking tongue I is formed by the extremity of the projection G which is doubled back upon itself and projects inwardly or away from the entrance opening. At its extremity it is provided with a hook-shaped portion *i*—adapted to confine the end of the strap beneath the tongue. The extremity of the strap A is provided with an aperture K of such width or dimensions that it will receive the locking tongues and the total width of the strap is preferably approximately the width of the interior chambers or passages of the housing, there being sufficient space left, or openings of sufficient size formed, on each side of the locking tongues, for the side portions of the strap extremity, whereby the extremity of

the strap may extend up through the part D, where it will be held by the final locking tongue.

The construction described, it will be noted, provides two inwardly projecting locking tongues and a reversely arranged locking tongue located between said two inwardly projecting locking tongues, and in operation the end of the strap having the aperture therein is passed into the entrance passage until the first locking tongue is encountered and passed, said tongue dropping through the aperture in the strap end, whereupon the end of the strap is drawn outwardly until its extremity beyond the aperture passes the second locking tongue, and the latter drops down in front of said extremity, when the strap is again thrust inwardly and its extremity rides up over the third locking tongue which passes entirely through the aperture, and then an outward movement of the locking tongue draws the extremity beneath said third locking tongue and the hook retains it in such position. In this position it will be noted that two of the locking tongues project through the aperture in opposite directions, and that the extremity of the strap has been transferred from the entrance channel or passageway into the chamber above the part D of the device. Owing to the construction it is quite impossible to insert a tool of any character whatsoever through the entrance aperture and release the extremity of the strap from its engagement with the locking tongues.

With a device of this construction, a thin blade or piece of sheet metal cannot be introduced into the entrance passage in such manner as to release the secondary locking tongues, and in fact the device having been once closed cannot be again opened by any means short of the destruction of the device itself.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. A car seal embodying a housing having an entrance passage, two spring tongues, one above the other and both projecting in a direction away from the opening to said passage, a tongue intermediate said first mentioned tongues and projecting downwardly in the opposite direction therefrom, and a strap connected with the housing at one end and having an aperture at the opposite end for the reception of said tongues in succession when the strap end is moved inwardly and outwardly a plurality of times in the housing.

2. A car seal formed of sheet metal embodying a strap having an apertured end, a housing permanently connected with one end of the strap and formed of superposed sections secured together and a strap end locking mechanism within the housing embodying a downwardly and inwardly projecting imperforate spring tongue intersecting the entrance passage of the housing, a second spring tongue projecting downwardly and toward the base of the first mentioned tongue and having its end in proximity to an intermediate portion of the first mentioned tongue, and a third spring tongue above and projecting toward the base of the second tongue, said tongues all being adapted to pass into said aperture when the seal is locked.

3. A car seal embodying a sheet metal housing formed of sections seamed together, an intermediate tongue section clamped between the housing sections separating the space at the top of the housing and entrance passage at the bottom of the housing, a spring tongue projecting diagonally downwardly and inwardly across the entrance passage, a second spring tongue projecting diagonally downwardly and toward the base of the first mentioned tongue, and a third spring tongue formed as an extension of the second mentioned spring tongue projecting diagonally upwardly and away from the entrance passage, said third spring tongue having a hook shaped end, and a strap secured at one end to the housing and having an aperture at its opposite end for the reception of the spring tongues in succession.

4. A car seal embodying a housing having an entrance passage at the bottom thereof and a chamber extending a portion of the length of the housing above said passage with an opening between the passage and chamber guarded by oppositely extending spring tongues and a strap permanently secured to the housing at one end and having a substantially flat straight apertured free end adapted to pass into said entrance passage and to be guided by said tongues into the chamber above said passage where it is retained by the tongues.

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