No. 641,785. Patented Jan. 23, 1900.

R. M. MacCORMAC.

CAR SEAL.

(Application filed Apr. 17, 1899.)

(No Model.) 2 Sheets—Sheet 1.

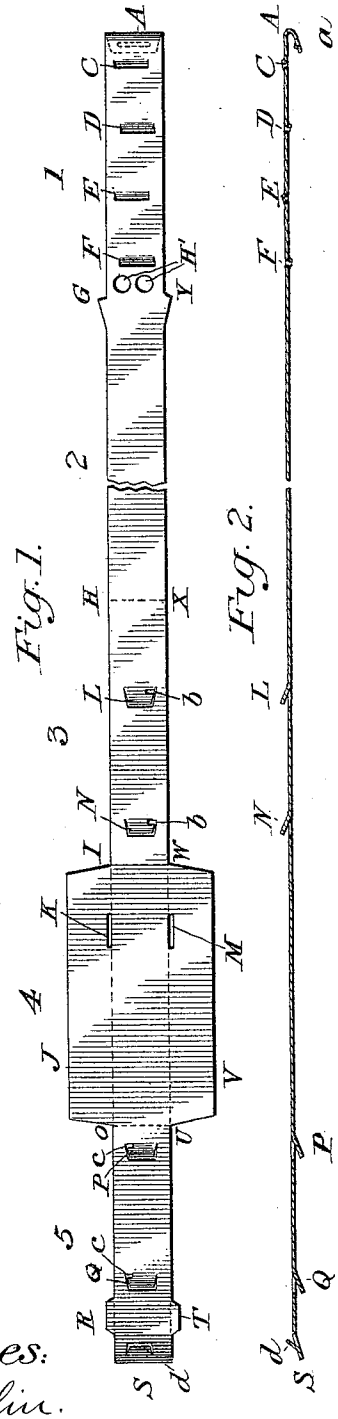


Fig. 1.

Fig. 2.

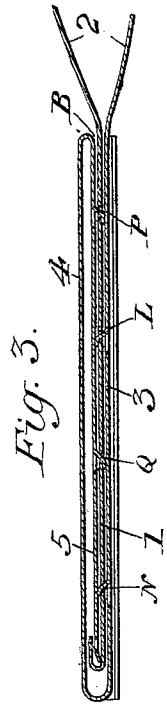


Fig. 3.

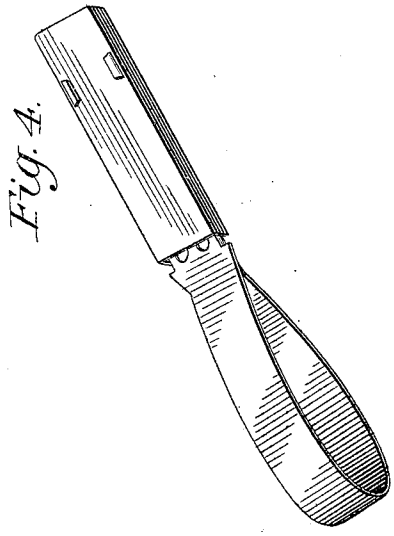


Fig. 4.

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Attys.

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

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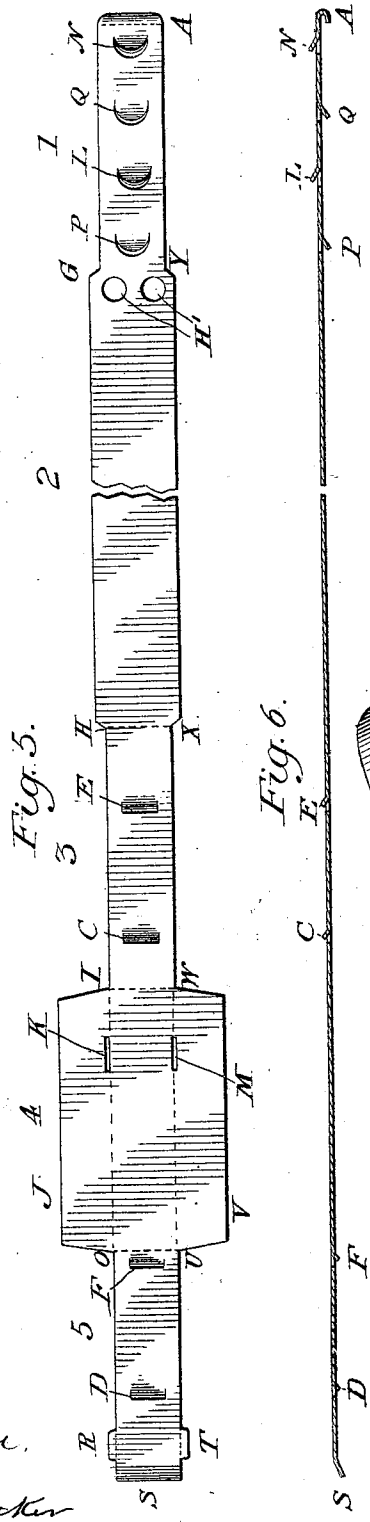


Fig. 5.

Fig. 6.

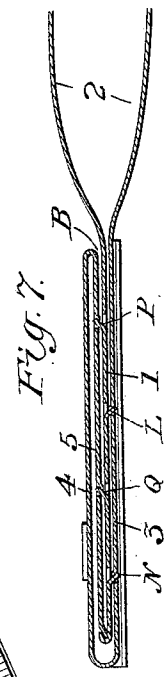


Fig. 7.

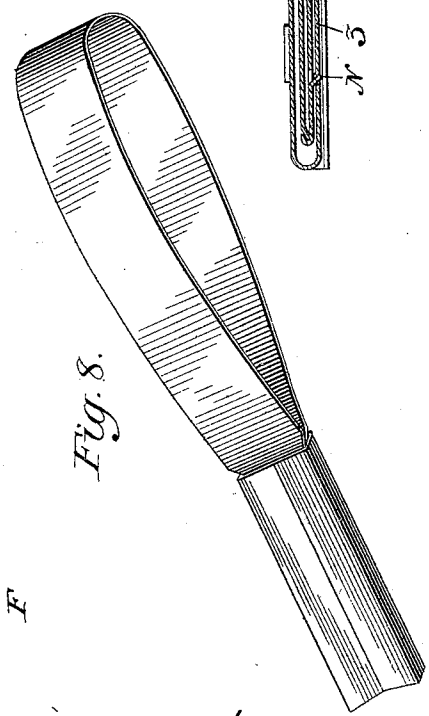


Fig. 8.

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UNITED STATES PATENT OFFICE.

ROCKWELL M. MACCORMAC, OF KANSAS CITY, MISSOURI.

CAR-SEAL.

SPECIFICATION forming part of Letters Patent No. 641,785, dated January 23, 1900.

Application filed April 17, 1899. Serial No. 713,352. (No model.)

To all whom it may concern:

Be it known that I, ROCKWELL M. MACCORMAC, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Automatic Car-Seals, of which the following is a specification.

The object of my invention is the production of a car-seal which shall be cheap in first cost, simple in construction, durable, automatic in operation, adapted to be easily and quickly manipulated, not liable to become deranged, which will prevent the possibility of imperfect sealing, which will obviate the necessity of using a sealing-iron or other tool to effect its practical application, and which withal shall possess many other desirable features and characteristics constituting it a superior seal.

With the above end or object in view my invention consists mainly in cutting to shape a piece of tin or other suitable sheet metal or material, fashioning it to form a tongue, a body portion, a neck, a base, and a tail, providing the several parts with interlocking means, bending the tail upon the base and the base and tail upon the neck, and finally securing the tail, base, and neck together.

It further consists in certain novelties of construction and combination of parts hereinafter described, and set forth in the claims.

The accompanying drawings illustrate two examples of the physical embodiment of my invention fashioned and constructed according to the best modes I have so far devised for the application of the principle.

Figure 1 is a plan view of the first example or preferred form as it appears before being bent and with a part of the body portion removed. Fig. 2 is a longitudinal section of Fig. 1, taken on a central line. Fig. 3 is a longitudinal section of Fig. 4 much enlarged for the purpose of showing more plainly the relative locations of the parts as they appear when the seal is in use. Fig. 4 is a view of the seal in perspective as it appears when completed and with the tongue in a locked position. Fig. 5 is a plan view of the second example as it appears before being bent and with a part of the body portion removed. Fig. 6 is a longitudinal section of Fig. 5, taken on a central line. Fig. 7 is a longitudinal section of Fig. 8 enlarged for the purpose of showing more plainly the relative positions of the parts as they appear when the seal is in use. Fig. 8 is a view of the seal in perspective as it appears when completed and with the tongue in a locked position, said view also illustrating the opposite or reverse side of the example shown in Fig. 4.

Referring to the drawings and to both examples, the numeral 1 designates the tongue, 2 the body, 3 the neck, 4 the base, and 5 the tail, of the seal. In the first example these several parts are of the following approximate form, construction, and dimensions:

The tongue embraces that part of the seal between the end and the line G Y. The distance from the end to the said line G Y is about one and seven-eighths inches. The width is slightly less than one-half inch. At the extreme end the tongue is bent over to the right, so as to form a hook A, and in the hook is a slot *a*, which has one edge slightly turned out in the direction of plane of the tongue. Within the body of the tongue are cut slots C E and D F about one-half inch apart and located to the right and left alternately, as shown. The right edges of the slots C E are turned upwardly and edges D F downwardly one thirty-second of an inch, more or less.

The body portion 2 is one-half inch in width and of any convenient length, ten inches being a suitable dimension for ordinary use. Adjacent the line G Y the metal is widened to form angular projections, and to the right thereof and in the tongue are cut two circular holes H′ H′, each about one-eighth of an inch in diameter.

The neck 3 extends from line H X to line I W. It is of the same width as the body portion and two inches long. Within the body of the metal are cut angular slots in such a way that the metal adjacent each slot can be bent upwardly to form projecting lips L N, the curve of which is shown in Fig. 2. At the base of the lips and in the sides are cut notches *b b* for a purpose hereinafter described. The lips N and L are one inch apart and the lip N about one-fourth of an inch from the line I W.

The base 4 extends between the line I W and the line O U and is two inches long by one and one-fourth inches wide. The edges

adjacent I W and O U are beveled, as shown. Through the body of the metal, about three-eighths of an inch from the edges of the wings J V and one-half of an inch apart, are cut two longitudinal slots K M, slightly wider than the thickness of the tin, the edges being turned upwardly to a slight degree.

The tail 5 embraces that part between the line O U and the extreme left-hand end. It is one and three-fourths inches long and of the same width as the neck and body portions. Two lips P Q are formed from the metal in the same way as the lips N L were fashioned, except that the notches *c c* are on the opposite sides of the lips, and the latter project downwardly in an opposite direction. Near the end of the tail and integral therewith are two small wings R T and adapted to be bent upwardly in planes at right angles to the plane of the main portion of the tail. The extreme end S is inclined or sprung down, as illustrated in Fig. 2, so as to be at an angle to the plane of the seal. The inclined part is provided with a lip *d*, as shown.

The bending of the parts to constitute the finished or completed seal is effected as follows: First, the tail is bent over to the right on the line O U till it is substantially parallel with the base, the end S being one-fourth of an inch or more from the line I W and the wings R T, which have been bent up, engaging and passed through the slots K M, and to firmly and securely anchor the tail to the base the projecting portions of the wings R T are turned over, one to the right and the other to the left, against the outer surface of the base; secondly, the base and tail are bent over on the line I W and through an arc of one hundred and eighty degrees to a position parallel with the neck, and, finally, the wings J V are bent so as to lap over the side edges of the tail and neck and across the outer surface of the neck, in which positions the edges meet, lapping slightly, (see Fig. 8,) and are soldered together throughout their length. By this method of bending the several parts a casing is formed which has a single opening B, as shown in Figs. 3 and 4.

It will be observed that as a result of the particular process of bending the adjacent surfaces of the tail, base, and neck are not left in frictional contact, but are some distance apart; also, that the wings J V and the base protect and conceal the tail and neck and likewise the lips L N P Q therein.

The *modus operandi* in locking the seal is obvious. The tongue and body are bent over toward the left and the tongue slipped into the opening B, as shown in Fig. 3, between the neck and tail. As the tongue is advanced the end A and the projecting parts of the slots C D E F slide over and beyond the lips L N P Q in the neck and tail till the end A reaches a position beyond the end S of the tail. A slight retraction of the tongue causes the end of the hook A to slide over the end S of the tail and allows the lip *d* to spring into the slot *a*, as shown in Fig. 3. The same movement advances the lips L N P Q far enough into the slots C D E F to occasion the interlocking of the end of the slots with the notches *b b c c* of the lips. By reason of the slots being located alternately to the right and left they engage the notches in such a way that the tongue cannot be moved either inwardly or outwardly. A like function is performed by the lips *d* and slot *a*, which still more securely hold the tongue in position. When the parts have thus become interlocked, the unsealing cannot be effected without destroying or mutilating the seal. However, to insure the breaking of the seal when tampered with by any unauthorized person I have weakened the tongue by cutting the two holes H′ H′ adjacent the projections G Y. When the seal is locked, these holes occupy the approximate positions relative to the opening B shown in Fig. 4.

In the second example, and where parts analogous to the first example are designated by like numerals and letters, (illustrated in Figs. 5 to 8, inclusive, (I have introduced several changes in the construction and in the location of the interlocking parts, the principle, however, remaining the same. The body portion is made wider; but the dimensions of the other portions are substantially the same as in the first example. The most noteworthy changes relate to the holes H′ H′, which are here located in the body, the construction of the hook A and tail S, in which the slot and lip are omitted, and the interchange in the location of the slots C D E F and lips L N P Q, the former being in the neck and tail and the latter in the tongue. The notches *b b c c* are also omitted from the lips, and consequently the slots are placed in line.

The mode of operation of the second example is the same as in the first except that the tongue can be moved backwardly a short distance when it is in a locked position. However, such movement will not cause the parts to become disengaged should the tongue be moved outwardly, as the lips and slots will again engage each other and the hook A catch over the tail S.

The particular disposition of the lips and slots in the two examples I do not deem the essence of my invention, inasmuch as they may be interchanged, as hereinbefore set forth. I prefer, however, to locate the lips in the neck and tail, where they will be protected and not liable to become bent when the seal is subjected to rough handling.

From the foregoing description, taken in connection with the illustrations, it will be apparent that I have produced an automatically-locking car-seal which fulfils all the conditions set forth as the end or purpose of my improvements.

While I have shown only two examples of the physical embodiment of the invention, I do not thereby intend to limit the scope thereof to such specific embodiments, as obvious

changes may be introduced at the discretion of the manufacturer. For instance, the proportions and dimensions of the several parts of the seal may be altered, the method of bending varied, and other colorable alterations made, as well as equivalents substituted, without constituting a substantial departure.

Having thus fully described my invention, what I claim is—

1. A car-seal made of flexible metal and having a tongue, a body portion, a neck, a base having wings, and a tail; the tail bent on the base and secured thereto, the base and tail bent on the neck, and the sides closed and the parts permanently united by the wings; the said tongue being provided with a hook for automatically engaging over the end of the tail and interlocking therewith; in substance as set forth.

2. A car-seal made of flexible metal and having a tongue, a body portion, a neck, a base having wings, and a tail; the tail bent on the base, the base and tail bent on the neck, and the several parts properly secured together and the sides closed by the wings; the said tongue being provided with a hook having a slot *a*, and the said tail being provided with a lip *d* struck up from the metal, which latter engages the slot *a* when the hook engages the end of the tail; in substance as set forth.

3. A car-seal made of flexible metal and having a tongue, a body portion, a neck, a base having wings, and a tail; the tail bent on the base, the base and tail bent on the neck, and the several parts properly secured together by the wings; the said tongue and tail being provided with lips and slots, made in the body of the metal, which interlock; in substance as set forth.

4. A car-seal made of flexible metal and having a tongue, a body portion, a neck, a base having wings, and a tail; the tail bent on the base, the base and tail bent on the neck, and the several parts properly secured together by wings; the said tongue and neck being provided with lips and slots, made in the body of the metal, which interlock; in substance as set forth.

5. A car-seal made of flexible metal, having one end bent upon itself to form a casing, and the other end fashioned to form a tongue; the said casing and tongue provided with lips and slots which automatically interlock, and the lips having notches, as *c c*, *b b*, for engaging the ends of the slots; in substance as set forth.

6. A car-seal having a tongue, a body portion, a neck, a base, and a tail; the said tail bent on the base and secured thereto by the wings R T and slots K M; and the base and tail bent on the neck and secured thereto by the wings J V; the said portions bent as described constituting a casing having an opening; and the said casing and tongue provided with means which automatically interlock; in substance as set forth.

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

ROCKWELL M. MACCORMAC.

Witnesses:
WARREN A. PIERCE,
H. T. HOWELL.