

(No Model.)

W. G. DENNEY.
SEAL.

No. 503,110.

Patented Aug. 8, 1893.

Fig. 1.

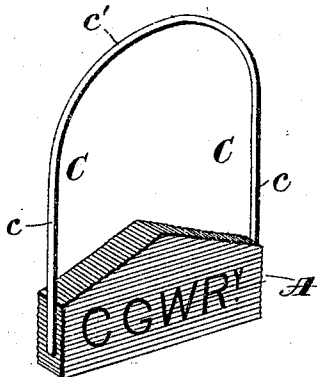


Fig. 2.

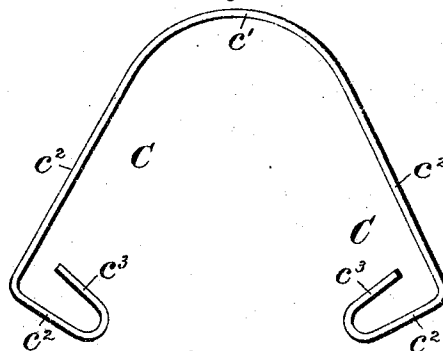


Fig. 3.

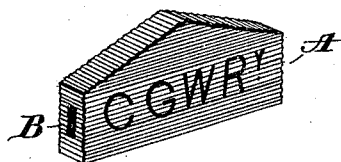


Fig. 4.

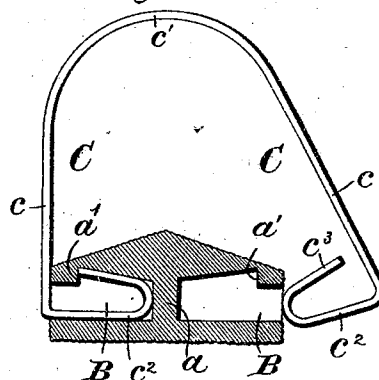


Fig. 5.

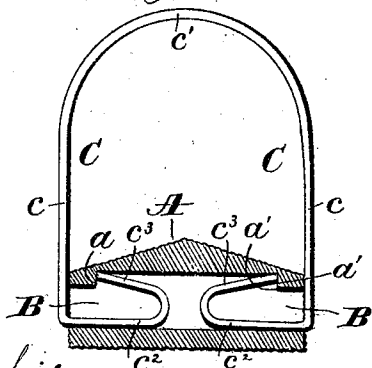
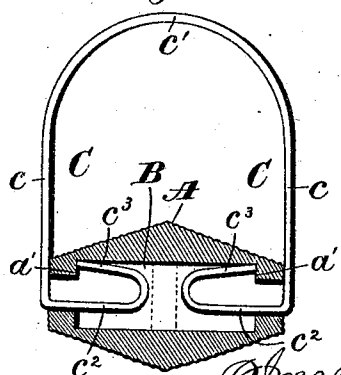


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SEAL.

SPECIFICATION forming part of Letters Patent No. 503,110, dated August 8, 1893.

Application filed September 6, 1892. Serial No. 445,170. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. DENNEY, of South St. Paul, in the county of Dakota, and in the State of Minnesota, have invented certain new and useful Improvements in Seals for Cars, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my seal with the shackle and locket united; Fig. 2 a side view of the shackle detached from the locket; Fig. 3 a perspective view of the locket alone; Fig. 4 a longitudinal section showing a form of locket where separate locking chambers are provided for the shackle ends, one of the latter being shown as locked in a chamber and the other as free; Fig. 5, a similar view showing a form of locket provided with a single chamber passing through the same, both ends of the shackle being shown as locked therein; and Fig. 6 a like view showing the locket as provided with a double set of locking shoulders.

Letters of like name and kind refer to like parts throughout the figures.

The object of my invention, among others to hereinafter appear, is to provide a seal for use on cars, or in other situations where sealing is necessary or desirable, which shall be exceedingly simple in its structure so that its cost of manufacture may be slight, and be capable of use without the employment of presses, stamps, or other instruments or tools whatsoever; and which notwithstanding its simplicity and readiness of application shall be entirely efficient in preventing undetected tampering.

To these ends my invention consists in the seal and in its parts constructed and combined, substantially as and for the purpose hereinafter specified.

My invention belongs to the class of seals which comprise a metal shackle, and a locket of some hard and brittle or frangible material, as baked clay, pottery, &c., the sealing being effected by latching the ends of the shackle to the locket by self-acting catches, while the unsealing is effected either by breaking the locket or cutting the shackle.

In carrying my invention into practice I prefer to make the locket A of clay, although

pottery, cement, or other hard and frangible material may be employed to advantage, giving to it a shape that, in general, is oblong, with its greatest dimension in a horizontal direction, and all of its sides flat.

Upon the locket, as usual, are to be placed the initials or name of the person or concern interested in it, a number, or any other desired identifying marks or devices.

Opening outwardly at the opposite ends of the locket, in the preferred form, are two horizontally extending chambers B and B of the same size and shape, lying in line with each other and separated at their inner ends by a wall or partition α which completely prevents access from one chamber to the other. Each chamber, near its outer, open end, has an abrupt, downwardly projecting shoulder α' adapted to be engaged by and to hold the latch end of the shackle C when it is introduced into the chamber.

The shackle C is made of metal wire or strip and consists of two, straight, side pieces c and c' , a curved or arched piece c'' uniting them, which causes said pieces to spring or tend away from each other, and a latch c^3 at the end of each side piece. Each latch c^3 is exactly like the other, so that either can cooperate with either of the chambers B and B, and consists of an inward, extension of the side piece that stands at a right angle to said piece, and at its innermost point curves upward and outward in the form of a semi-circle, and terminates in a free-ended, straight piece c^3 whose direction is toward, but it does not touch, the side piece c . All of the parts of the latch lie in the same plane as the side piece. The last described portion c^3 , of the latch is designed to have its free end to engage with the locking shoulder α' of one of the chambers B, B, and it has an upward tend or spring to cause it to do this automatically when inserted far enough into the chamber. Each chamber B is just wide enough, horizontally, to admit the passage of a latch, and as the inward extension of the latch rests on the bottom of the chamber, and the side piece c abuts against the end of the locket when the latch is locked therein, it will be seen that said side piece fully covers the opening into the chamber, and constitutes a complete guard against the insertion of an instrument to dis-

engage the latch from the shoulder; or the admission of rain or snow to the chamber, the presence of water in the latter in winter being disastrous in view of the possibility of its freezing and bursting the locket. The likelihood of the entrance of rain or snow, however, is very small, as the chambers, when the seal is in use lie in horizontal planes, and such is the object had in view in constructing the seal that they shall lie thus.

It will be seen that each side piece *c* not only constitutes an efficient guard, but by making it perform this function the simplicity and cheapness of the device are greatly promoted, as the addition or attachment thereto of a distinct and separate part, as has been proposed, is wholly done away with. Of course, it is an important requisite, in this connection, that the side pieces *c, c* be inflexible, or incapable of being bent away from the openings in the locket when the latches are locked to the latter.

The shackle may be made of steel or other wire; or steel, or other metal strips possessing elasticity; and including both the latches and the guards for the locket openings, consists simply of a single piece bent into shape. Preferably, one end of the shackle will be latched to the locket at the factory, leaving the other to be attached at the place of sealing, and it is in this connection that the use of a separate chamber for each latch is of value, as compared with a single chamber continuous from one end to the other of the locket, and provided with locking shoulders at both ends. With the latter construction, should but one end of the shackle be attached to the locket, an instrument could readily be inserted through the open end of the chamber to release it, but with the former construction this is impossible.

The limit of movement of the side pieces *c, c* of the shackle, away from each other is such that the distance between the inner, rounded ends of the two latches is somewhat greater than the length of the locket *A* so that said latches are most conveniently situated for insertion into their respective chambers, *B, B*; and the material of which the shackle is made should have such stiffness as to preserve the general shape of the shackle while admitting of the easy inward spring of the side pieces to place their latch ends in the locking chambers. This structure of the shackle is especially advantageous when one end only is latched to the locket, as the other end will be conveniently held adjacent to its chamber in position to be immediately pushed therein without any necessity for careful manipulation. Of course, if preferred, the locket and one end of the shackle need not be united at the factory but both ends may be latched to the locket at the place of sealing. If the former is done however, all possibility of collusion between the sealer and others is obviated by the use of the separate chamber form of the locket, for, as hereinbe-

fore set forth, when a latch *c*² is in a locking chamber, it is inaccessible from the outside by reason of the chamber being closed by the side piece *c* and it is inaccessible from the opposite chamber because of the partition or wall *a*, between them. The latter, it will be seen, is, therefore, of special utility with the locking chambers disposed in line with each other, when the seal is to be used by uniting the shackle and the locket at the factory. As shown in Fig. 5, however, I propose to use my shackle also with a locket having a single chamber passing horizontally through from end to end.

In Fig. 6 is shown a locket provided with two sets of locking shoulders, the additional set being placed directly opposite the other, and making it absolutely certain that the locket and shackle will be locked together regardless of the relative positions of these parts when the latch is inserted in the locket chamber, thus contributing to the expeditious use of the seal and also preventing the sealer inserting the latch so as not to lock itself in the chamber, either by accident or design.

As it might be attempted to release the seal, when a locket of clay or the like material is employed by filing or cutting through the locket sufficiently to furnish access to one of the latches and enable it to be disengaged from its locking shoulder, and then with a view to removing the evidence of the act, filling the opening thus made with clay, putty, or other material of like color and nature as the locket, I have devised a very simple means to secure the seal against being so treated by making it impossible to restore its original appearance when once changed in the way described. This I do by providing either all of the exposed surfaces of the locket, or only those near to the latches with fine lines, corrugations or ribs, arranged either in straight, parallel lines, or concentric circles, or spirals, or in any other way and made or formed by any suitable means. The surface thus formed after being once removed, or destroyed cannot possibly be restored so as to escape quick detection.

Having thus described my invention, what I claim is—

1. In a seal, in combination with a locket having a locking chamber, a shackle formed of wire or strip having a latch to enter the latter, and covering by the motion of the wire or strip adjacent to the latch the opening into the chamber from the outside of the locket, substantially as and for the purpose specified.

2. In a seal, in combination with a chambered locket having internal locking shoulders, a shackle formed of metal wire or strip comprising two connected side pieces from each of which projects a latch to enter the locket, and each being stiff, and covering the latch entering opening of the locket, substantially as and for the purpose set forth.

3. In a seal, in combination with a locket

having a locking chamber a shackle formed of metal wire or strip having a straight side piece from which projects a latch to enter such chamber, formed by bending the end of the wire or strip so as to have an inward, an upward and an outward extension thereby enabling said side piece to cover the chamber opening when the latch is therein, substantially as and for the purpose shown.

4. In a seal, in combination with a lock having two horizontally disposed chambers separated at their inner ends by a wall or partition, and having each a locking shoulder, a shackle having a latch to enter each chamber and engage its shoulder, substantially as and for the purpose specified.

5. In a seal, in combination with a lock having two horizontally disposed chambers separated at their inner ends by a wall or partition, and having each a locking shoulder, a shackle formed of metal wire or strip having two connected straight side pieces from the end of each of which projects a latch to enter one of said chambers, such latch be-

ing made by bending the wire or strip so as to have an inward, an upward and an outward extension, which lie in the same plane as the side piece, thereby enabling it to cover the open end of the lock chamber when the latch is therein, substantially as and for the purpose set forth.

6. As a new article of manufacture, a seal lock provided with a locking chamber to receive and engage a shackle latch, and made of friable material, and having all of its surface, adjacent to the latch inclosing portion, lined or corrugated, to prevent undetected access to the latch by the removal of portions of the lock, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of August, 1892.

WILLIAM G. DENNEY.

Witnesses:

H. B. CARROLL,
J. R. WAKEMAN.