

D. D. DAVIS.
SEAL.
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1,025,081.

Patented Apr. 30, 1912.

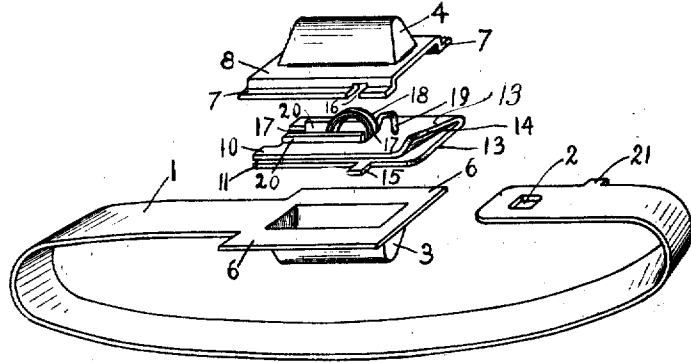


Fig. 1

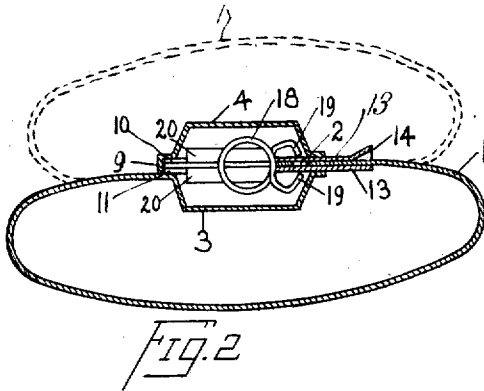


Fig. 2

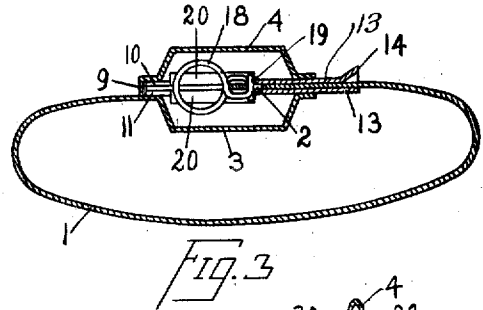


Fig. 3

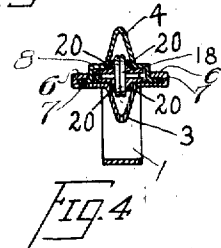
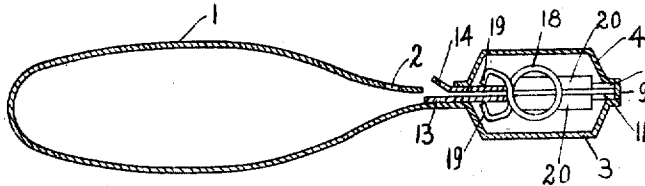


Fig. 5

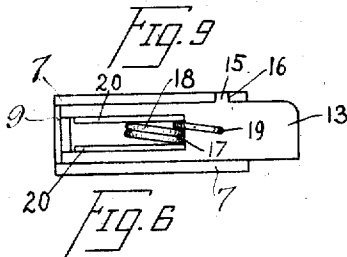


Fig. 6

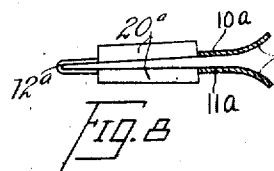


Fig. 7

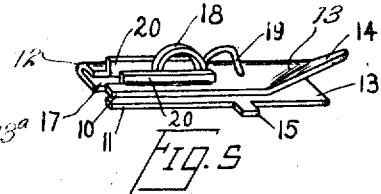


Fig. 8

WITNESSES:

allgardes
co. A. Freitz

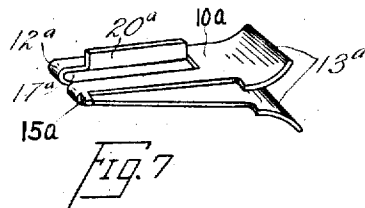


Fig. 9

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SEAL.

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To all whom it may concern:

Be it known that I, DON D. DAVIS, a citizen of the United States, residing at Saginaw, Saginaw county, Michigan, have invented new and useful Improvements in Seals, of which the following is a specification.

This invention relates to seals, and more particularly to that class of seals applied to freight car doors to indicate, by their mutilation, whether the cars have been opened while *en route*, though its employment is by no means confined to this use.

One object is to provide an improved locking mechanism for seals of this general character, which will not readily get out of order or become inoperative by rough handling.

A further object is to provide a seal, the strap of which cannot be cut and the severed end readily reinserted in the lock.

Still another object is to render it difficult, if not impossible, to unfasten the seal after it has been locked, without severing the strap.

A still further object is the provision of an efficient seal which is more readily applied and locked.

Other objects and advantages will be more fully set forth hereinafter and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view, showing one embodiment of the invention, the locking mechanism being disassembled. Fig. 2 is a section showing the latch, about to be tripped by the free end of the strap. Fig. 3 shows the latch tripped, the seal being locked. Fig. 4 is a sectional view taken at right angles to Fig. 3. Fig. 5 is a detail perspective of the mount or carrier, with the latch in readiness to operate. Fig. 6 is a detail showing one means for holding the mount in place in the casing. Fig. 7 is a perspective of a mount of a slightly modified form. Fig. 8 is a cross-section therethrough, and Fig. 9 is a sectional view, similar to Fig. 2 showing the strap arranged to enter the casing at the opposite end from that shown in Fig. 2. The seal illustrated comprises a strap 1 having a locking aperture 2 at or near one end, which end is entered and locked in a housing or casing at the opposite end of the strap. Said housing, in the present instance, comprises a pair of pockets 3 and 4, the open ends of which are registered to

form a chamber within which to conceal the locking mechanism said mechanism being thus protected against injury. The pocket 3 may be formed at one end of the strap, said pocket being laterally flanged, as at 6, to form seats on which the edges 7 projecting from the base 8 of pocket 4, rest. The outer edges of the flanges 6 may be bent, crimped or folded over said edges 7 to secure the pockets together and prevent the introduction of seal-picking tools. A flange 9 closes the space between the pockets at one end, to prevent access to the locking chamber, the opposite end of the chamber being left open to admit the free end of the strap 1. Within said chamber is a mount or carrier held stationary in a seat formed between the base 8 and the flanges 6 of the respective pockets, said mount comprising a pair of guides 10 and 11 folded together, preferably, along one side as at 12, to form a throat. The outer ends of the guides project through the open end of the casing or chamber to form guide lips 13, at least one of which may diverge from the other, as at 14, to facilitate the insertion of the free end of the strap there between. A lug 15 on said mount lies in a recess 16 formed, preferably, in one of the edges 7 of the pocket 4 to secure the mount against shifting in the casing, and prevent its withdrawal therefrom. To these ends both the lug and its recess lie transversely to the path of travel of the free end of the strap, when the latter is inserted in the housing.

A spring latch 18 is loosely held between the walls of a guide slot 17 extending longitudinally of the mount. In the present instance, said latch comprises a resilient coil lying in the registering slots, the ends of which pass across each other and project away from the coil said ends lying opposite each other and being substantially U-shaped, the concave portions of which open toward each other, and terminating in catch fingers 19 normally pressing toward each other against the outer faces of the respective guides 10 and 11. The free end of the strap, when inserted between the guides, passes between the V-shaped ends of the latch and strikes the coil to force the entire latch backwardly along the guide slot until finally the catch fingers slip off the guides into the slot, at which time the locking aperture 2 has been brought into registry with the forward end of the slot, whereupon the fingers snap

through the aperture from opposite directions and overlap, to lock the free end of the strap against withdrawal from the housing. The latch approximates a figure 8 in shape. Attempted withdrawal will operate to bring the fingers against the end walls of the registering slots 17 in the guides to prevent the release of the strap. The latch is held in readiness to operate and prevented from lateral displacement (other than by the insertion of an article into the housing) by confining walls 20 extending longitudinally along one or both sides of the slots in the guides, which walls restrain the latch to a path longitudinally of the slot. Said walls extend in opposite directions into the respective pockets. By this construction, the latch, when once adjusted for operation, remains in position until displaced by the insertion of the strap into the housing, even though the seals may be roughly handled, and said walls also prevent access of a pick or other tool to the latch. By mounting the cylindrical coils or body of the latch in the slots 17, two separate points of contact are provided which tend to prevent latch displacement of the latch. To prevent the strap from being cut and the severed end inserted in the casing, the free end of said strap has a lug, tooth or stop 21 thereon, which would have to be removed. The pocket 4 may be applied to pocket 3 in such a manner that the entrance to the casing is at the extreme end of the seal, or at the strap end of the housing (see Fig. 9). In the former case, the strap may be entered in the housing from either side (in the drawing in dotted lines in Fig. 2), nor is it necessary to rotate or turn the seal to bring the strap and opening into line. With the opening at the strap end of the housing, the free end of the strap can only be inserted when bent in one direction.

In Figs. 7 and 8, a slight modification of the carrier or mount is shown, the fold connecting the two guides 10^a, 11^a, being at the rear or inner end instead of along one side, as in Fig. 4. In this form, the fastening lug 15^a, is at the rear end of the guide member, instead of at the side.

What I claim as new, is:—

1. In a car seal, the combination with a flexible strap having an aperture near one end, and a housing or casing secured to the opposite end, and into which the apertured end of the strap is inserted, of a mount stationary within the casing, comprising a substantially U-shaped or folded member formed with a longitudinally-extending

slot in the upper and lower leaves thereof, a latch having catch fingers supported on the mount, the body-portion of the latch lying at the forward end of the slot in the path of the inserted end of the flexible strap to be contacted thereby, and shifted along the slot until the catch fingers pass off of the mount and snap into the locking aperture, and confining walls on the mount projecting above the plane of the slot and of the mount, to prevent accidental dislocation of the latch by guiding the body-portion thereof and preventing lateral movement.

2. In a seal, the combination with a flexible strap having a locking opening near its free end, of a flanged housing at its opposite end provided with a single entrance, a carrier stationary within the housing and formed independently of the strap, a latch on the carrier in position to be struck and tripped by the free end of the strap when inserted in the housing to lock the strap in the housing, and a transversely projecting lug on said carrier seated in a recess formed in the housing and extending at an angle to the path of travel of the strap when inserted in the housing, to hold said carrier stationary.

3. A car seal comprising a flexible strap having a locking opening near one end and a housing at its opposite end, a mount within the housing, and a latch on the mount, said latch comprising a substantially annular resilient coil, the ends of the coil crossing and projecting away from the coil and from each other, and finally curving toward each other to form opposing catch fingers which tend to enter the locking opening and overlap to hold the free end of the strap, the latch approximating a figure 8 in shape.

4. In a seal, the combination with a strap having a housing at one end, and a locking opening near its opposite end, said last-named end adapted for insertion within the housing, of a stationary mount or carrier within the housing and having a slot, a latch supported by the mount and lying in the slot in position to be tripped by the free end of the strap to lock the strap in the housing, and guides on the mount other than the edges of the slot, to hold the latch against accidental displacement.

In testimony whereof, I have signed my name hereto, in the presence of witnesses.

DON D. DAVIS.

Witnesses:

FREDERICK J. KELLEY,
JOSEPH TROY.