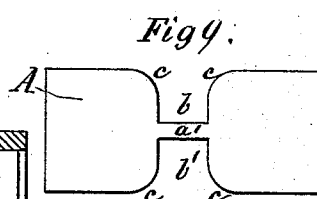
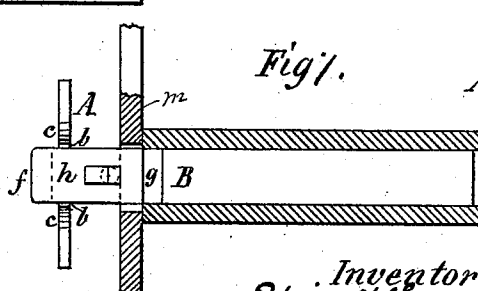
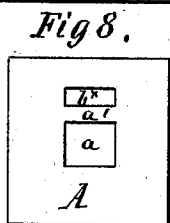
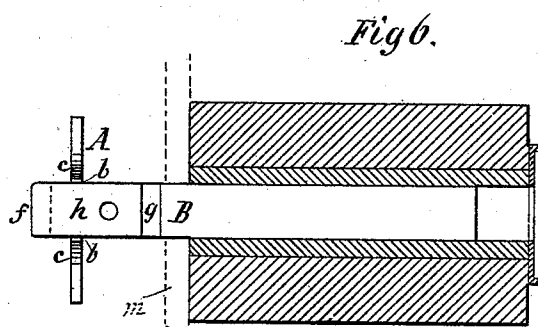
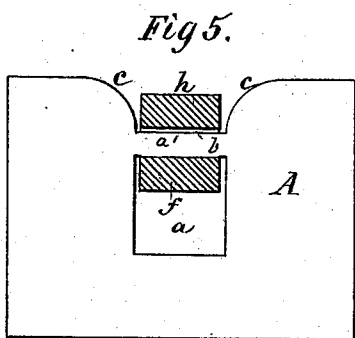
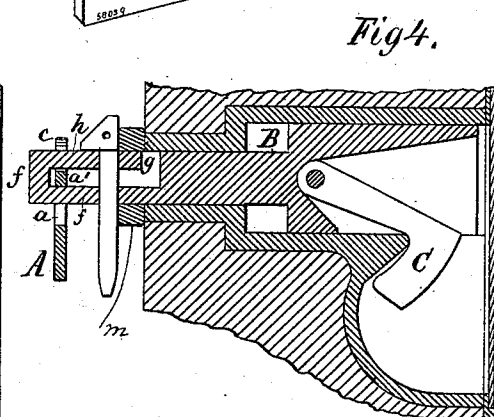
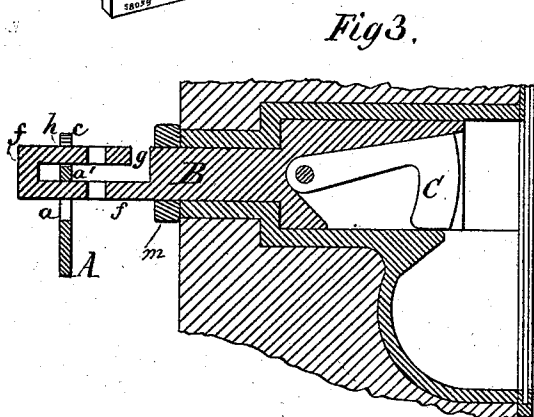
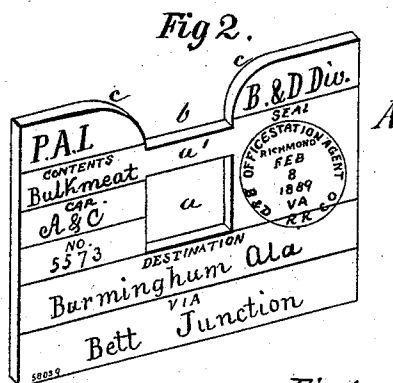
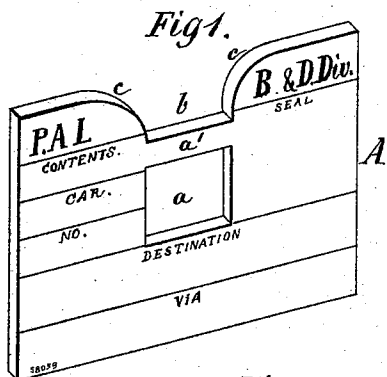


(No Model.)

E. H. LEA & W. B. MARKS.
SEAL FOR SEAL LOCKS.

No. 417,358.

Patented Dec. 17, 1889.



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UNITED STATES PATENT OFFICE.

EDWIN H. LEA AND WALTER B. MARKS, OF RICHMOND, VIRGINIA.

SEAL FOR SEAL-LOCKS.

SPECIFICATION forming part of Letters Patent No. 417,358, dated December 17, 1889.

Application filed March 6, 1889. Serial No. 302,202. (No model.)

To all whom it may concern:

Be it known that we, EDWIN H. LEA and WALTER B. MARKS, both citizens of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Seals for Seal-Locks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to seals for seal-locks for use on freight, postal, and other cars or vehicles, and is especially useful in connection with the seal-lock illustrated in Letters Patent No. 398,411, granted to us February 26, 1889, which lock is provided with a retaining tumbler or pin operative only from the inside of a car or other structure, and combined with a sliding open-loop staple-bolt, a safety retaining-stop for said tumbler or pin, and the hasp or door of a car or other structure on which the lock is applied; but it is not necessarily confined to that special lock, as it may be applied on other analogous seal-locks with advantage; and its novelty and utility consist in its peculiar construction, whereby it is adapted for seal-locks, and answers a better purpose than seals now in use, as will appear from the following specification and claims.

In the drawings, Figure 1 is a detail front perspective view of the seal as manufactured for use. Fig. 2 is a front view of the same after being marked for specific use on a car or other structure. Fig. 3 is a vertical section of a portion of a car, a seal-lock with its bolt moved outward, and our improved seal applied to it ready for the bolt of the lock to be moved back to its locking position. Fig. 4 is a similar section showing the parts in their locked and sealed positions. Fig. 5 is a transverse section of the open-loop staple-bolt with seal on it. Fig. 6 is a horizontal section of the parts shown in Fig. 3, and Fig. 7 is a similar view of the parts as shown in Fig. 4. Figs. 8 and 9 are equivalent modifications of our seal.

The seal-lock seal A is preferably made of wood; but it may be of pasteboard, paper, or other suitable fragile, tearable, or breakable fibrous vegetable substance with less advan-

tage. In form it is preferably a parallelogram—say three by four inches—and in or near its center a square, oblong, or other shaped hole *a* is provided, and directly above and over this hole it is provided with a passage or is notched, as at *b*, to a depth, say, of about three-fourths of an inch, the notch forming vertical side shoulders terminating upwardly and outwardly in rounded corners *cc*, or otherwise suitably, so as to give a flaring or ready entrance to the notch. On the face of the seal suitable division-lines, forming marking and numbering spaces and a space for the station agent's stamp are provided in the manner indicated in the drawings, or in any others suitable manner or order, accordingly as the demands of the transportation business may require. The seals being made entirely of wood or other impressible or indentible fragile, tearable, or breakable material, as pasteboard or paper, can be marked either with a stamp set with printing-type or with a pencil, pen, or paint-brush.

The wooden seal is preferred, because it does not become disintegrated when completely soaked with water; nor will the notations or words and numbers produced by pencilling, writing, printing, or painting on its face become seriously defaced under such circumstances, and thus many serious difficulties from destruction and defacement of the seals will be avoided.

It will be seen from the drawings, Figs. 3 to 7, that by means of the hole *a*, portion *a'*, and the notch *b* the seal can be hung vertically upon our aforesaid seal-lock, or upon any other analogous seal-lock, and that the hasp *m* of the lock being first closed upon the staple-bolt *B* the seal is adjusted to its position on the staple-bolt, the central hole *a* receiving through it the loop *f* of the said staple-bolt; that the seal is then passed along said loop until it reaches the opening *g* in the loop *f*, whereupon that portion *a'* of the seal which is between the hole *a* and the notch *b* is passed down through the opening *g* into the space between the bottom and top of the looped end *f* of the bolt, thereby causing the base of the notch *b* to descend sufficiently below the upper portion *h* of the looped staple-bolt to allow said portion to pass through said notch, and that when the seal is thus ad-

justed the bolt is forced inward far enough to insure its being locked by a pin or gravitating tumbler C of the lock on the inside of the car, in which locked position the opening *g* is concealed and access from the outside of the car is rendered impossible, all as set forth in our aforesaid patented seal-lock. While the looped staple-bolt is being pressed inward the portion *a'* of the seal slides in the loop of the bolt, and the notch *b* permits the upper portion *h* of the looped staple-bolt to pass inward far enough to conceal the opening. This is an important feature of the seal, for without the central hole *a* and notch *b*, or equivalent passage—as, for instance a slot *b^x*—it would be impracticable to hang or place the seal upon our aforesaid seal-lock or any other analogous seal-lock.

The part *a'* of the seal holds the same in a vertical position in the loop of the bolt, and also prevents it from being taken from the bolt after the lock has once been locked, thus preventing fraudulent entrance into the car without detection. It also prevents the hasp being taken off the staple-bolt without first partially or totally destroying the seal, thus rendering certain exposure if any attempt to tamper with the seal-lock is made. This seal is peculiarly adapted for seal-locks constructed after our aforesaid patent, and it will effectually and safely seal the same and at the same time is more easily manipulated, and is more serviceable and durable against exposure to wet weather and the friction caused by the motion of the train than other seals adapted for seal-locks of the character referred to.

In Fig. 8 we have shown the construction of the seal when a slot *b^x* as the equivalent of the notch *b* is substituted for the notch, and in Fig. 9 its construction when a notch *b'* as the equivalent of the hole *a* is provided at its bottom.

Although we have described and shown the tag as adapted by the size of its hole *a* to be slipped horizontally upon the looped end *f* of

the bolt B and allowed to drop through the opening *g*, and then to be slipped under the upper portion *h* of said looped end, it is obvious that the tag can be applied to the bolt by inverting its upper edge, adjusting it vertically and crosswise of the bolt in line with opening *g*, lowering it into the looped end *f* of the bolt until its portion *a'* rests upon the bottom portion of the loop of the bolt and then sliding it under the upper portion *h* of the loop as far as it is allowed to go, and then swinging the tag downward around the front end of the bolt, so as to have its printed face turned outward instead of inward, as when it was inverted. This mode of applying the tag is the best and the one we have always adopted, and it is preferable, because the central hole *a* should be made as small as possible, in order to have a large amount of marking-surface on the tag outside of the margin of said hole.

We make no claim for a tag such as is shown and claimed in Letters Patent No. 150,817, for such construction would defeat the purposes and object of our invention, which is a seal-tag capable of being broken completely in two, or of being torn completely in two.

What we claim is—

The combination, with the open-looped staple-bolt of a seal-lock, of a tag formed of fragile, tearable, or breakable fibrous vegetable material and with a passage for fitting it upon the bolt, and a passage above said bolt-passage for the accommodation of the upper portion of the loop of the bolt after the tag has been fitted upon the bolt and while it is being slid upon the bolt, or the bolt slid upon it, substantially as described.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

EDWIN H. LEA.

WALTER B. MARKS.

Witnesses:

GEO. H. SCOTT,

R. R. FIELD.