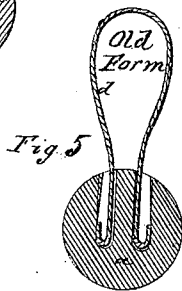
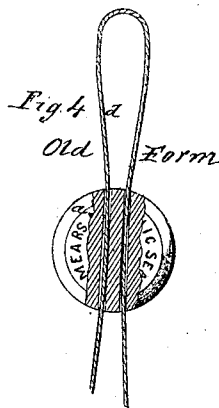
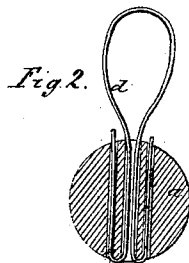
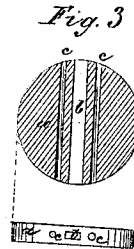
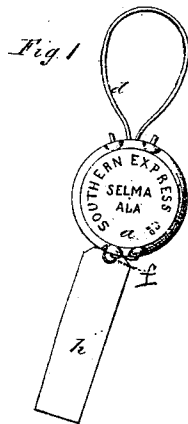


A. B. SMALL.
METALLIC SEAL.

No. 106,734.

Patented Aug. 23. 1870.



Witnesses.

H. J. Smith
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ALEXANDER B. SMALL, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 106,734, dated August 23, 1870.

IMPROVEMENT IN METALLIC SEALS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, ALEXANDER B. SMALL, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and improved Metallic Seal; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of the seal, with the wire passed through it according to my improved plan;

Figure 2 is a sectional elevation of the same;

Figure 3 includes a sectional elevation and an edge view of the seal by itself; and

Figures 4 and 5 are sectional elevations of two varieties of the seal on which mine is an improvement.

This invention is an improvement on Mears & Houlton's "seal for railroad freight-cars, &c," patented July 14, 1857, shown in figs. 4 and 5 of my drawing, and consisting of a soft-metal disk, and a wire that is first passed through staples attached to the door and door-frame of the car, after which either the ends of the wire are bent, as shown in fig. 5, and then inserted in holes extending partly through the soft metal disk, or the branches of the wire are passed entirely through the disk, as shown in fig. 4, after which, in either case, the disk is struck with a proper die and compressed upon the wires with force enough to hold them firmly.

This form of seal has passed into extensive use, and been found to be a very good one for the purpose. Nevertheless, it is objectionable in at least three particulars, viz:

First, it is not entirely secure, as, by applying sufficient force, the disk may be drawn off from the wire, and subsequently replaced and compressed upon the wire again, by pounding upon a board, or other substance softer than the metal laid above the same, without leaving upon the seal any appearance of having been tampered with.

Second, after removing the seal and throwing it aside with others, there is nothing to show to which car it had been attached, so that, on opening a car, if it be found that it has been improperly entered, it is impossible to find the seal that was on it, although it would be desirable to do so in order to ascertain whether it had been tampered with.

Third, it is necessary to employ twisted wire in order that the metal may fill the spiral grooves in the surface of the same, and thus more securely hold it. This is not only more expensive than plain wire, but may also be cut by a skillful operator; one strand at one place and the other strand at another place, say from half an inch to an inch distant from the first, after which the strands may be untwisted, the seal

and wire removed from the car, and, after the latter is rifled, be replaced, the strands twisted together again, and the wire joined in such a manner as exhibit no trace of what has been done except after close examination by an experienced eye.

My invention is designed to remedy these defects of the Mears & Houlton seal, and it relates to a disk in which are made three parallel holes, through the central one of which both branches of the wire are passed after being inserted in the staples of the door and door-frame, which branches are then bent backward and passed one through each of the side holes, and both drawn tightly against the bottom of the disk, or one of the branches may be run through an eye in a common paper tag prior to being bent backward, and passed through the side hole, as described, on which tag the number of the car to which the seal is attached may be written, after which the seal is struck in a die in the same manner as that of Mears & Houlton.

In the drawing—

a are the soft metal disks.

b, the central hole made through the same.

c c, the side parallel holes.

d, the wire passed through the central hole, and bent backward through the side holes.

f is the eye in one of the branches.

h is the paper tag which identifies the seal with reference to the car.

It is obvious that, after the soft metal has been suitably compressed around the reflexed branches of the wire, it will be impossible to pull them out. Hence plain wire, which is cheaper, answers for this purpose as well as twisted wire, and moreover, cannot be cut without showing it to the most casual observer.

In the bottom of the disk is a groove, into which the wires are to be drawn so as to be inclosed by the metal when the latter is pressed together in the disk, thus rendering it impossible to remove the seal without destroying the metal or cutting the wire, by which arrangement security is attained, and detection rendered certain.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The disk *a*, provided with the holes *b c c*, in combination with the wire *d*, when both branches of the same are passed through the central hole *b* and then bent backward and passed one through each of the parallel side holes *c*, whether the eye *f* be formed in one of the branches or not, substantially as described.

A. B. SMALL.

Witnesses:

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