

(No Model.)

C. L. WHEELER.
CAR SEAL.

No. 446,653.

Patented Feb. 17, 1891.

Fig. 1

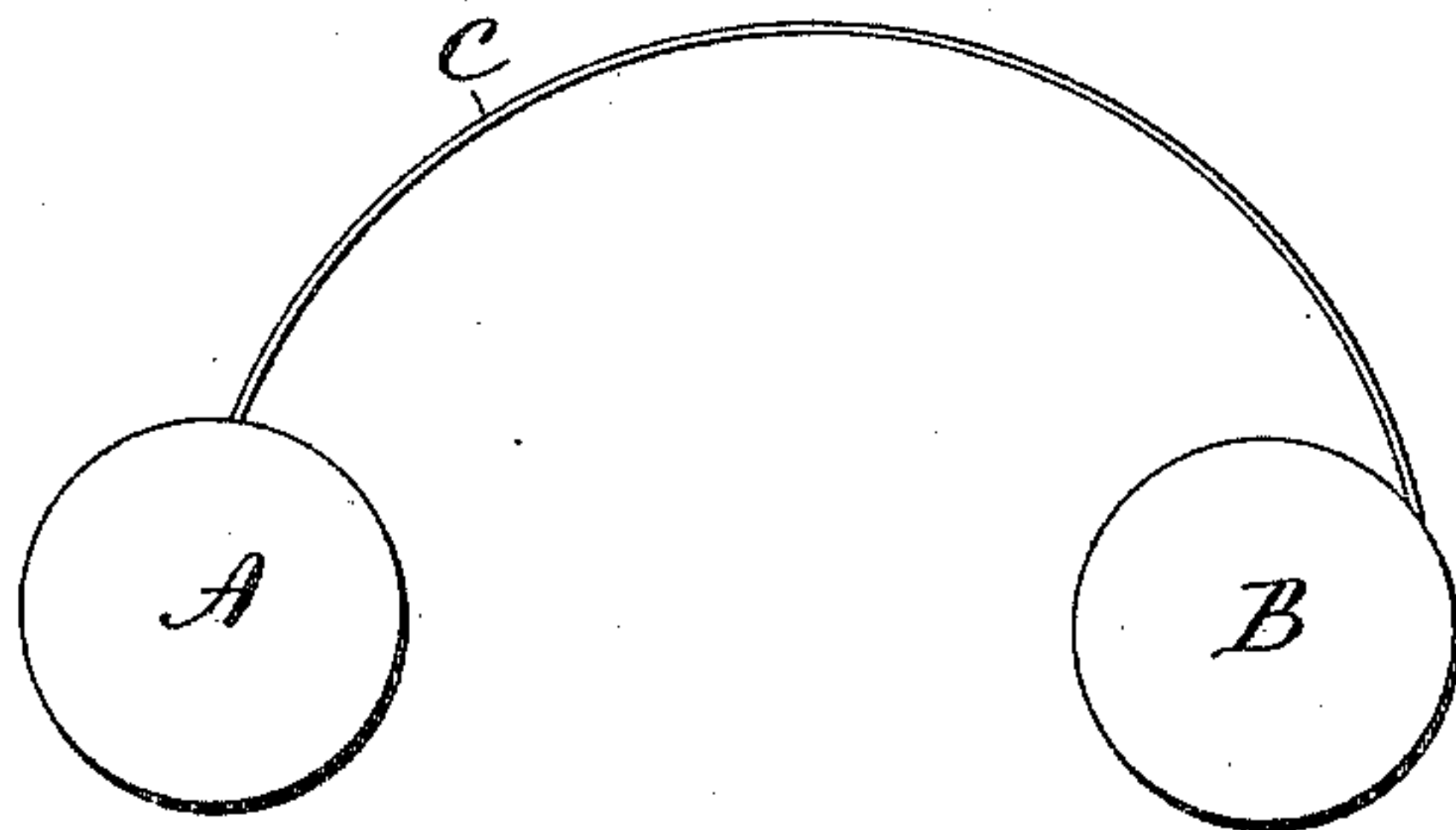


Fig. 2

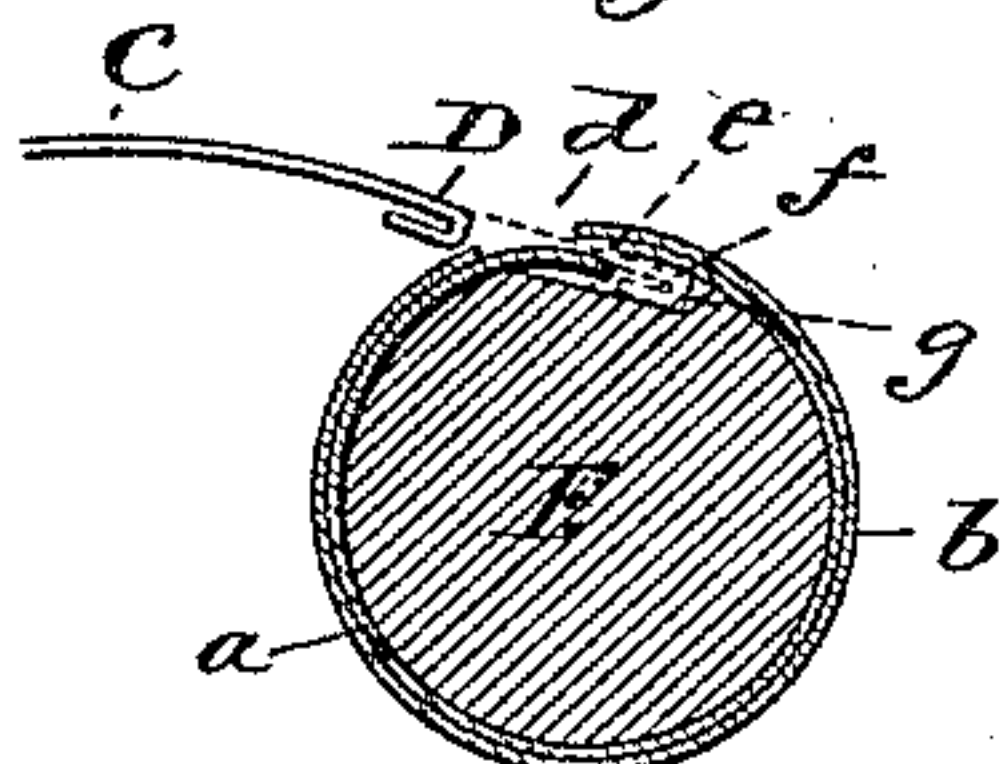


Fig. 3

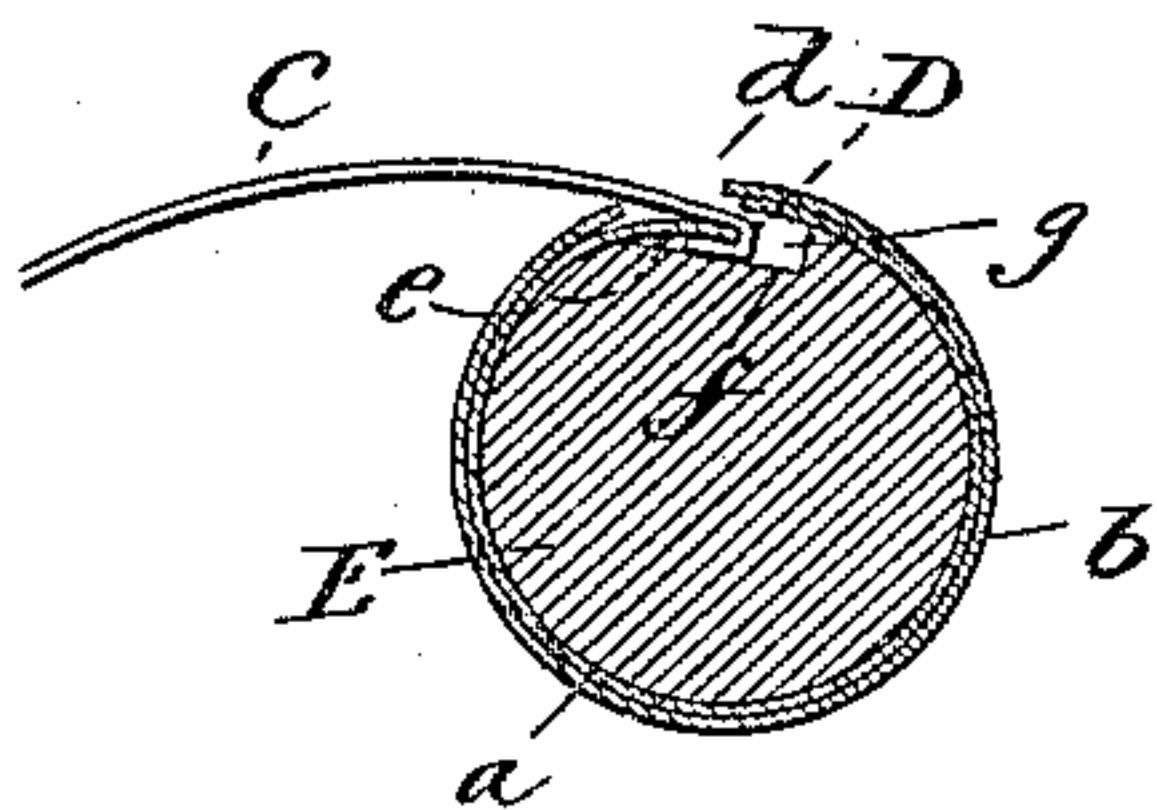


Fig. 4

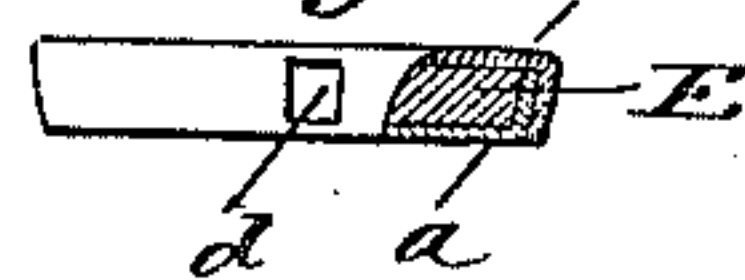
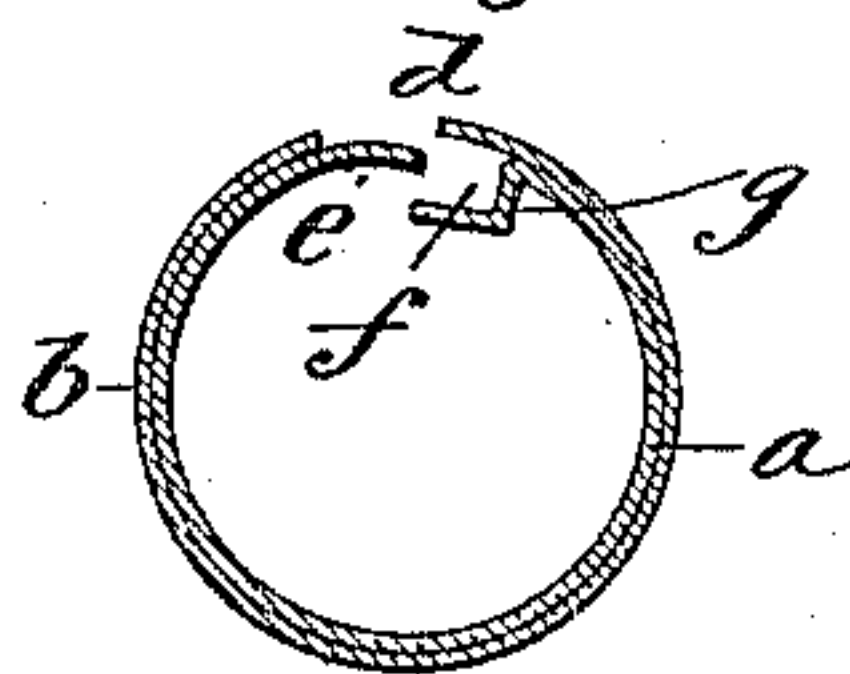


Fig. 5



Witnesses.

J. P. Shumway
Lillian D. Keby

Clarence L. Wheeler
Inventor
By *atys*
Earle Seymour

UNITED STATES PATENT OFFICE.

CLARENCE L. WHEELER, OF MARION, INDIANA, ASSIGNOR OF ONE-HALF TO
JAY WILLARD CLARK, OF SAME PLACE.

CAR-SEAL.

SPECIFICATION forming part of Letters Patent No. 446,653, dated February 17, 1891.

Application filed June 2, 1890. Serial No. 353,976. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE L. WHEELER, of Marion, in the county of Grant and State of Indiana, have invented a new Improvement in Car-Seals; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference made thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a car-seal embodying my invention; Fig. 2, a sectional view showing the hooked end of the strap, the outer and inner cups and the filling, and as the strap is about to be inserted; Fig. 3, a similar view showing the hook engaged with the tongue of the said inner cup; Fig. 4, a sectional view of the seal, showing how its two cups are secured together; Fig. 5, a modification.

My invention relates to an improvement in car-seals, the object being to provide a simple and inexpensive device adapted to be applied manually and sealed without the use of tools or stamps, and containing an automatic lock, whereby it cannot be unsealed or broken, except as it is destroyed or disturbed in such a manner as to plainly indicate that it has been tampered with.

With these ends in view my invention consists in the combination, with a strap provided at one end with a spring-hook, of two metallic cups adapted to fit one within the other, the flange of the inner cup being cut and bent inward to form a tongue, and the flange of the outer cup being provided with an opening to admit the hook end of the strap to the said tongue, and the said parts constructed and proportioned so that when the hook end of the strap is inserted through the opening in the flange of the outer cup and slid over the tongue the hook will contract, and then as it escapes from the end of the tongue it will expand and embrace the tongue, from which it is then impossible to disengage it.

My invention further consists in certain details of construction and combinations of parts, as will be more fully hereinafter described, and pointed out in the claims.

As herein shown, the device consists of two

disks A and B and a narrow flexible strap C, at the opposite ends of which the said disks are located. One of these disks, as A, may be a dummy, and of any suitable shape to prevent its passage through the staple, one only requiring to be separate from the strap at the time of applying the seal. The particular construction of the "dummy-disk" A, as I shall call the disk which is not used, need not therefore receive attention; but it will be desirable that to outward appearance they shall look alike. One end of the strap C is provided with a hook D, which is preferably formed by turning the end of the strap upon itself, and the metal from which the strap is made should be sufficiently elastic, so that this hook may be in itself elastic, that being required to secure a locking action of the device.

The detached disk B is composed of two cup-shaped disks *a b*, the external diameter of the one *a* corresponding substantially to the internal diameter of the other *b*, and so that the two may be set together, their open sides toward each other, as seen in Fig. 4, the outer being adapted to be closed over the outside of the other, so as to secure the two parts together. The width of the hook D of the strap should be somewhat less or no greater than the width of the space between the two cups. The flange of the outer cup is constructed with an opening *d*, (see Fig. 4,) through which the hook may be introduced, and the flange of the inner cup at a point corresponding to the opening *d* is cut to form a tongue *e*, the said tongue being turned inward from the periphery of the flange, of which it forms a part, and so as to leave a space between the outside of the end of the tongue and the inner surface of the flange, as seen in Fig. 2. The width of the open side of the spring-hook is greater than the space between the spring-tongue *e* and the said flange, and so that from the position seen in Fig. 2 the hook may be passed through the opening *d* in the outer flange onto the tongue *e* and thence pressed forward into the position indicated in broken lines in said Fig. 2. The hook will contract by being pressed between the tongue and flange until the end of the hook escapes from the tongue *e*, as in

broken lines, Fig. 2. Then the hook drawn outward will bring it into engagement with the tongue *e*, as seen in Fig. 3, and as it is impossible to introduce an instrument to again contract the hook it is impossible to draw the hook from the seal, and the engagement is secure against being tampered with without detection.

In applying the seal the strap is passed through the staple and then the sealing-disk applied, as described, both disks being of a size so great that they cannot be forced through the staple.

In order to prevent the hook from being forced too far into the seal, or beyond the point where the engagement of the hook and tongue may be made, a filling *E* is introduced into the cups before they are closed together, and this filling is constructed with a recess *f* in its periphery, forming a shoulder *g* so far beyond the end of the tongue that the hook may enter so far as to permit the open end of the hook to pass below the tongue; but when that point is reached then the hook will strike the said shoulder. This shoulder or strap *g* makes it practically impossible to introduce an instrument to engage the hook after it has once passed beyond the end of the tongue without leaving evidences of the seal having been tampered with. The filling may be of metal or non-metallic material.

In the manufacture of the seals they may be embossed or stamped with any suitable device to indicate the car or the location where the seal was applied.

The seals are manufactured complete, preferably with one disk attached at one end of the strap, the other disk being detached, but in condition for ready attachment to the hooked end of the strap. After the seal has been once attached, if the strap is pulled outward the hook only engages more firmly with the tongue, while, on the other hand, inward movement of the strap into the seal is so far prevented by the hook in its expanded condition that its end can never be cleared from the free end of the tongue, and in this the hook is arrested by the shoulder in the filling, which also prevents the hook from being crowded toward the center of the seal and thus by any means disengaged from the tongue. It will also be seen that, the slot in the outer disk being very narrow and the hook being caught under the flange of the inner disk, no tool can possibly be inserted into the seal which will unlock it without revealing the fact that it has been tampered with.

While I prefer to make the seal in the form of two cups and form a stop or shoulder *g* by the introduction of a filling into the inner cup, that stop may be made by cutting a tongue in the flange of the inner cup and turning it inward, as seen in Fig. 5, to form the shoulder *g*, and then toward and below the tongue to complete the recess, as seen in Fig. 5.

Instead of using the permanent disk *A*,

that may be omitted, that end of the strap being secured to the car at some inaccessible point, and so that the strap may pass through the staple for the application of the seal.

I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as may be considered to fairly fall within the spirit and scope of my invention.

I claim—

1. In a car-seal, the combination, with a strap provided at one end with an elastic hook, of a disk composed of an outer cup and an inner cup, the two cups set together, their open sides toward each other and so as to form a space between the two, the flange of the outer cup having a transverse slot formed therein and the flange of the inner cup cut to form an inwardly-projecting tongue in line with said slot of the outer cup, the said tongue being adapted to engage the spring-hook of the strap as it is forced through said slot and beyond the end of the tongue, substantially as described.

2. In a car-seal, the combination, with a strap provided at one end with an elastic hook, of a disk composed of an outer cup and an inner cup, the two cups set together, the open sides toward each other, the flange of the outer cup closed around the flange of the inner, the flange of the outer cup having a transverse slot formed therein and the flange of the inner cup cut to form an inwardly-projecting tongue in line with said slot through the flange of the outer cup, and a stop within the inner cup distant from the point of said tongue corresponding to the length of the hook, and whereby when the hook is introduced through the said slot onto said tongue the said hook will expand after it escapes from the tongue and so as to engage therewith, substantially as described.

3. In a car-seal, the combination, with a strap provided at one end with an elastic hook, of a disk composed of an outer cup, an inner cup, and a filling located within the inner cup, the flange of the said outer cup having a transverse slot formed in it and that of the inner cup being cut to form an inwardly-projecting tongue, and the filling being notched to provide a clearing-space for the tongue and stop for the hook when introduced into the inner cup, the said cups and filling being arranged so as to bring the said slot, tongue, and notch into practical alignment, whereby when the hook is introduced through the slot into the inner cup it expands and engages with the tongue, from which it cannot thereafter be disengaged, except by destroying the seal, substantially as described.

CLARENCE L. WHEELER.

Witnesses:

M. BLUMENTHAL,
JOHN WHISTLER, Jr.