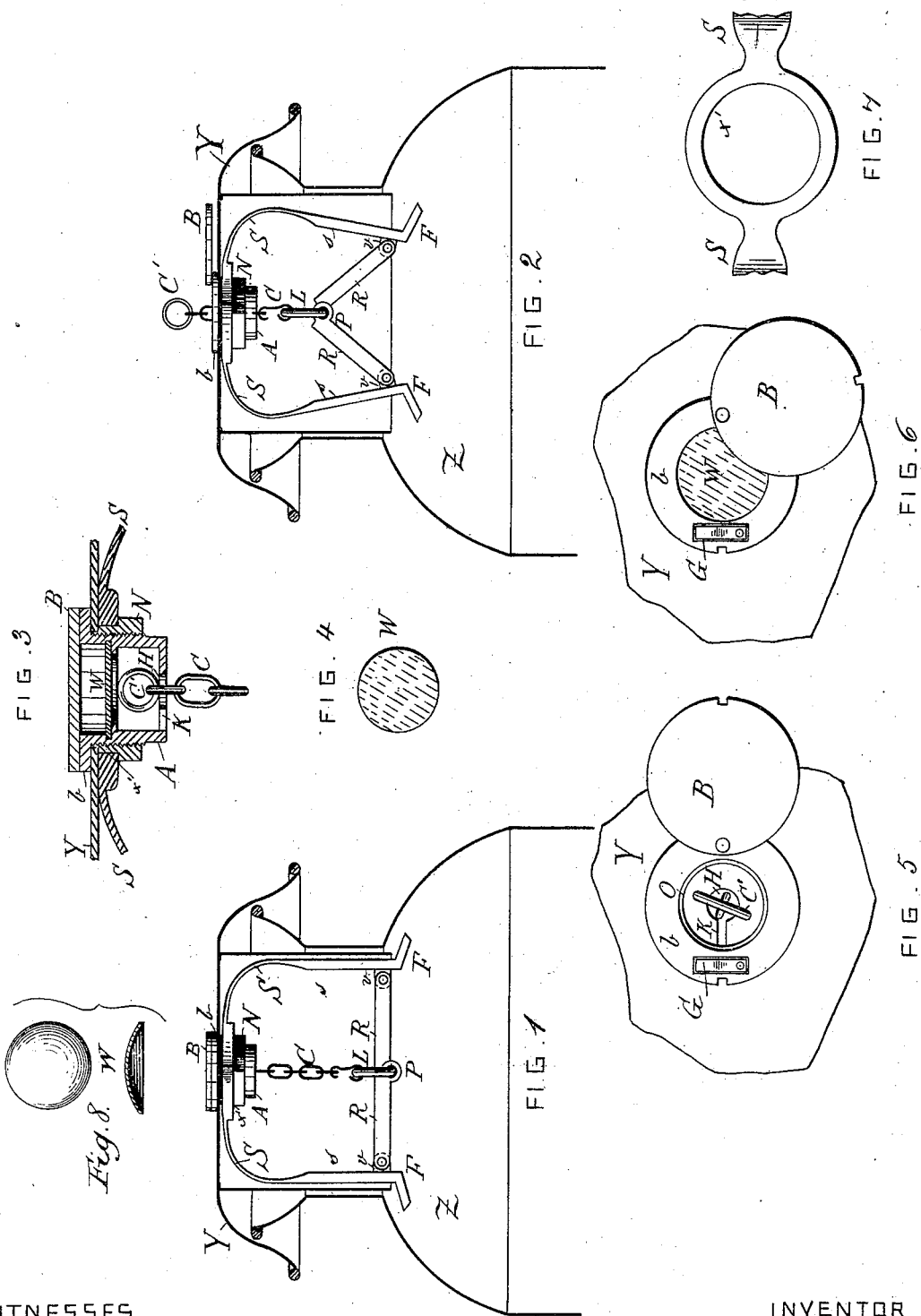


(No Model.)

W. H. STOOPS.
SEAL LOCK FOR MILK CANS.

No. 343,207.

Patented June 8, 1886.



WITNESSES

Wm. A. Lowe
Wm. A. Lowe

INVENTOR

William H. Stoops
by James C. Murray
his Attorney in fact.

UNITED STATES PATENT OFFICE.

WILLIAM H. STOOPS, OF BOONTON, NEW JERSEY.

SEAL-LOCK FOR MILK-CANS.

SPECIFICATION forming part of Letters Patent No. 343,207, dated June 8, 1886.

Application filed December 5, 1885. Serial No. 184,858. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. STOOPS, a citizen of the United States, residing at Boonton, in the county of Morris and State of New Jersey, have invented a new and useful Sealed Automatic Lock for a Milk or other Similar Can, of which the following is a specification, to wit:

My invention relates to that class of locks for milk-cans which are contained wholly within the can itself.

The objects of my invention are, first, to provide a detachable locking device for a milk-can, which can be readily adjusted to the cover of the can, and which can be easily transferred from one cover to another; second, to provide a locking device which can be operated without the use of a key or other external device or mechanism; third, to provide a device which shall operate automatically to lock the cover on the can, and, fourth, to provide a lock which can be sealed, thereby preventing access to the contents of the can without detection. I attain these objects by means of the devices illustrated in the accompanying drawings, in which the same letters refer to like parts.

Figure 1 is a sectional view of the mechanism attached to and locking the cover to the can. Fig. 2 is a sectional view of the mechanism when unlocked and the chain drawn up. Fig. 3 is a sectional view of cup A and sealing device W. Fig. 4 shows the sealing device W. Fig. 5 is a view of the bottom of the cup A, showing slot K. Fig. 6 is a plan view of sealing device W in position in cup A and the spring-catch G. Fig. 7 is a view of upper transverse portion of spring S. Fig. 8 shows seal W when convex.

Z is the can. Y is the cover of the same, in the center of the top of which is an opening into which accurately fits the cup A. The latter is provided with the flange *b*, which rests upon the upper surface of the cover Y, and holds the cup A suspended within the cover of the can. It also has a hole, H, and slot K, running therefrom in the bottom, and may be provided with a cap, B, pivoted or otherwise attached to the flange *b*, and caught, when closed, by a flat spring, G, placed in the flange *b*.

S is a strong curved spring, having in its upper transverse portion an opening large

enough to admit the cup A. The two legs *s s* of the spring S terminate in the feet F F, which project under the shoulder of the can, as shown in Fig. 1, thereby securing the cover to the can, as hereinafter explained.

The spring S and the cup A are secured to the cover Y by means of the nut N, which screws upon the male thread cut upon the outer surface of the cup A, the spring S being placed between the cover and the nut, as shown in Figs. 1 and 2.

I prefer to make the opening in the spring through which the cup A passes a little larger than the outside diameter of the cup, and provide the nut N with a nipple slightly longer than the thickness of the spring S at its upper portion. By this means the spring S will be held firmly in position, but it will not be crowded against the cover Y, and will admit of a rotary motion around the nipple of the nut N, thereby enabling one more easily to clean the several parts. This, however, is not essential to the successful operation of my device, but is simply for convenience, as stated.

R R are two arms, pivoted or hinged at P, and having their outer ends pivoted to the legs *s s* of the spring S at V V, near the feet F F, as shown in Figs. 1 and 2.

C is a chain, one end of which is attached to the hinged arms R R at P, while the other end is secured in the cup A, as shown in Figs. 1 and 2.

The operation of my improved lock is as follows: The tendency of the spring S is strongly outward and to force the feet F F under the shoulder of the can and to keep the arms R R in a horizontal position, as shown in Fig. 1, so that in its normal condition the spring S acts automatically to lock the cover to the can. To unlock the can, the chain C is pulled upward, carrying with it the hinged ends of the arms R R, which in turn pull inward the legs *s s* of the spring S, and the feet F F are withdrawn from under the shoulder of the can, as shown in Fig. 2, and the cover can then be removed. To prevent the chain C from falling into the can when the can is locked a ring, C', or a bar or other suitable device, too large to pass through the opening H in the bottom of the cup, is attached to the end of the chain within the cup A. When the can is unlocked and

the chain C drawn up, in order to hold the chain in position and to prevent the arms R R from resuming their horizontal position, a link of the chain may be caught in the slot K, as shown in Fig. 2, or it may be secured in any other suitable and obvious manner. When it is desired to lock the can, the cover and its attached device being placed in the usual position in the can, the chain C is released, and the elasticity of the spring S immediately extends the legs s s and forces the feet F F under the shoulder of the can, thereby automatically locking the cover upon the can. The cup A not only supports the chain C, but it serves as a receptacle for the surplus chain when the can is unlocked, and also provides a convenient place for sealing the lock after the can has been locked. The seal may be of any suitable form. I have shown one form of seal, Fig. 4, consisting of a disk, w, of tin, wood, or other suitable material, slightly convex, which fits snugly into the cup A, and is forced into the annular groove O around the inside of the cup A, as shown in Figs. 3 and 6, whence it can only be removed by destroying it; but the lock may be sealed in any convenient manner suitable to the particular construction of the locking device herein described. The seal above described answers the double purpose of sealing the lock and concealing it from view, and also of protecting it from the weather. The cup A may also be provided with a cover or cap, B, pivoted or hinged or otherwise attached to the flange b.

While I have shown the spring S provided with only one pair of legs s s, it is obvious that there may be three or four or any practicable number of such legs.

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

1. In a milk or other can, the combination of the cover of said can with the cup A, chain C, arms R R, and the curved spring S, provided with two or more legs, s s, and feet F F, which spring S operates automatically to force the feet F F outward and under the shoulder

of the can, substantially as and for the purposes set forth and described.

2. In a milk or other can, the combination, with the cover of said can, of the cup A, having groove O, the sealing device W, chain C, arms R R, and spring S, provided with legs s s and feet F F, said spring operating automatically to force the feet F F under the shoulder of the can, substantially as and for the purposes set forth and described.

3. In a milk or other can, the combination, with the cover of said can, of the cup A, provided with the slot K, chain C, arms R R, spring S, provided with legs s s and feet F F, substantially as and for the purposes set forth and described.

4. In a milk or other can, the detachable locking device consisting of the cup A, supported in the cover of said can, in combination with the spring S, with its legs s s and feet F F, arms R R, and chain C, substantially as and for the purposes set forth and described.

5. As a new article of manufacture, the detachable automatic seal-lock for milk or other cans, consisting of the cup A, having groove O, and provided with the slot K, supported in the cover of the can, in combination with the spring S and its legs s s and feet F F, arms R R, chain C, and sealing device W, all constructed and arranged substantially as described, and for the purposes herein set forth.

6. In a sealed automatic lock for a milk or other similar can, the combination of the cover of the can with the cup A, having a flange, b, either with or without a cap, B, and spring-catch G, the slot K, inside groove, O, and sealing device W, the curved spring S, having legs s s with feet F F, and nut N, adapted to said cup A, the arms R R, hinged at P, and the chain C and ring C', substantially as described, and for the purpose specified.

WILLIAM H. STOOPS.

Witnesses:

OSCAR P. WHITEHEAD,
JAMES L. VAN DUYN.