

W. H. KING.
Can.

No. 216,963.

Patented July 1, 1879.

Fig. 1

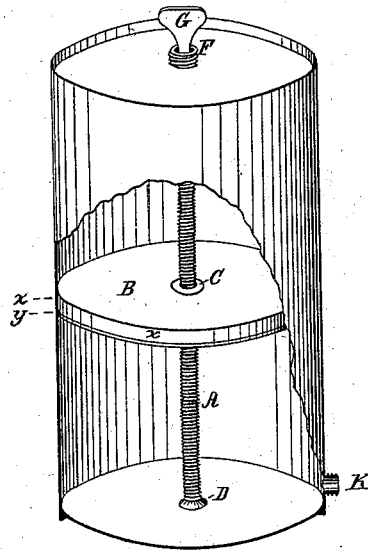
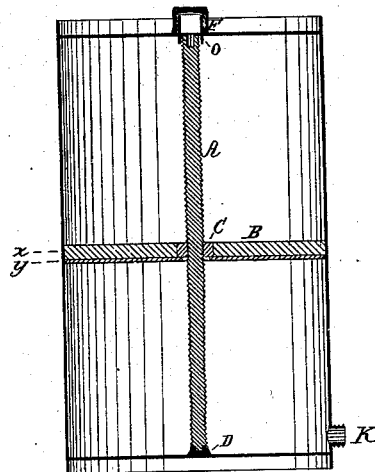


Fig. 2



Witnesses:

J. A. Spooner
J. A. Bastedo

Inventor:

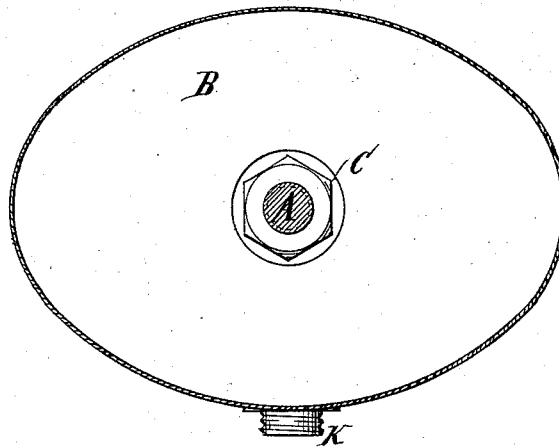
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Fig. 3.



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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM H. KING, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN CANS.

Specification forming part of Letters Patent No. **216,963**, dated July 1, 1879; application filed March 22, 1879.

To all whom it may concern:

Be it known that I, WILLIAM H. KING, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Cans, of which the following is a specification.

This invention relates to that class of cans provided with pistons to expel their contents.

It consists in certain peculiarities of construction by which such cans are more easily constructed and less wasteful of the contents than those heretofore employed.

Previous to my invention a can had been made having a piston forced down by a screw working through a nut screwed into the head of the can. The body of this can has corners or ribs of such shape as would prevent the turning of the piston, and I do not therefore claim the idea of preventing the turning of the piston by the shape of the can. These corners, however, are objectionable, as solder is apt to accumulate on the ribs, and thus prevent the ready movement of the piston. The corners are also objectionable, because they are easily dented during the rough usage such cans experience, as are also the flat sides. These dents form obstacles to the passage of the piston and it becomes jammed to one side, and thus the can becomes useless.

The method of operating the can is also objectionable, because when it is full, or nearly full, the screw projects out the whole length of the can, thus taking up much more room, and if laid away for any length of time dirt accumulates on the screw and makes it hard to turn.

To overcome these difficulties I make the body of my can of oval shape, which prevents the piston from turning in the can, and yet it (the can) has neither corners nor flat sides, and I inclose my screw entirely inside the can and provide it with a socket to receive a detachable key to turn it when the paint is to be forced out, which allows of the paint being inclosed air-tight at any time by simply removing the key and screwing on the cap, when the can may be stored away until again wanted.

The use of an oval can is also best in an economic point of view, as the oval can-bodies are easier made than those having internal ribs or corners, and the same may be said of

the pistons, especially when made of wood, which is the preferable material, as they can be readily turned in an oval lathe all ready for use without any subsequent notching to fit the ribs, &c., which other forms of cans require.

The use of the ribs as a means of preventing the turning of the piston is wasteful of the original material of which the can is composed when compared with an oval can, and it also wastes the material inclosed in the can, inasmuch as there is more surface to be covered by it; and in actual practice it is not easy to make pistons fit such ribs without leaving considerable space between the grooves and ribs, which allows of much of the paint in the can oozing through the grooves to the upper side of the piston, where it is wasted.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective of the can with a portion of the side cut away. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a cross-section of the same.

A is the screw-shaft running through the center of the can or vessel, and held in position at O and D by means of a socket, collar, pivot, or other simple device, and yet not so rigidly as not to allow of its being revolved.

B is the diaphragm or disk, and C is the nut in the center of the same, through which the shaft A works, thus carrying the disk B downward or upward.

K is the orifice through which the contents of the can are removed, and over which a cap can be screwed, or the orifice otherwise closed, when the can is not being used.

At F there is an opening in the head of the can or vessel, into which fits the top of the shaft A, and through which a key or crank or other device may be applied to turn the shaft A. This opening may be closed by means of a cap or otherwise when the can is not in use.

G is the key or crank with which to revolve the shaft A.

When the can is full the disk B is close up under the head of the can and between it and the contents of the can.

The operation of the device is as follows: The orifice K being opened the key or crank G is applied to the screw-shaft at F, and the

latter is revolved. The shaft A, working through the nut C, carries downward the disk B, which in turn is forced down upon the contents of the can, and the latter are expelled through the orifice K.

In order to prevent the disk B from revolving around with the shaft A, the vessel may be made of a shape other than cylindrical—such as square or oval.

My invention may be used in cans or vessels made of any material, as tin, glass, earthenware, &c.

Another advantage in my invention is that, as the disk B may be lowered or raised at will, when the can has once been emptied it may be used over again by raising the disk to the head of the can, and then refilling the same.

I find that it is better to make the disk B of two parts—the upper portion, *x*, made of wood or other material which will give strength to the disk and prevent it from being turned up at the edges by the resistance of the contents of the can, and the lower part, *y*, of a light flexible material, and slightly larger than the upper portion, so that when the disk is forced downward this lighter portion will completely fill whatever small space (arising from inequalities in the can or otherwise) there may happen to be between the periphery of the disk and the sides of the can, and thus prevent any of the contents of the can sticking to its sides. This lower portion must, of course, be made of such material as will not be injurious to the contents of the can, since it comes in immediate contact with the same. Thus, for paint, it may be oiled or shellaced paper or light pasteboard. This remark will also apply to the shaft A.

I am aware that lubricating devices have been provided with pistons operated by a screw-shaft; but there are essential differences in con-

struction between the lubricators referred to and my can.

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

1. A can having an oval body, in combination with a screw-shaft and oval piston, substantially as and for the purpose set forth.

2. The combination of a detachable key, a revolving screw-shaft permanently set in fixed bearings, and a piston supported and propelled by said screw-shaft with a can provided with an aperture in its head, through which the screw and piston are operated by the detachable key, and a cap to close said aperture, whereby one key can be used for various cans, and the can closed air-tight on the removal of the key, substantially as specified.

3. The combination of a screw-shaft for propelling a piston with a can having its lower head provided with a step or bearing for the lower end of the shaft, and the other head having an aperture registering with said shaft, through which it may be operated, and a cap to cover up said aperture when the key is removed, substantially as specified.

4. A can or vessel provided with a discharge-orifice, K, and containing a screw-shaft, A, entirely inclosed between its heads, which screw-shaft passes through a piston, B, and is operated by means of a key or other device through the opening F, and is adapted to propel the piston from one end of the can to the other, the can being of such a shape as to prevent the piston turning in the same, and the whole rendered air-tight by means of caps screwed over the openings F and K, substantially as and for the purpose set forth.

WM. H. KING.

Witnesses:

J. A. SPOONER,
J. H. BASTEDO.