

No. 650,944.

Patented June 5, 1900.

W. L. MARBLE.

MATCH BOX.

(Application filed Oct. 4, 1899.)

(No Model.)

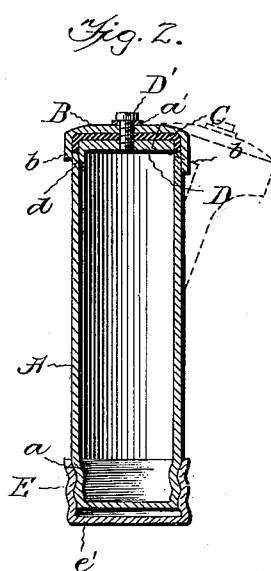
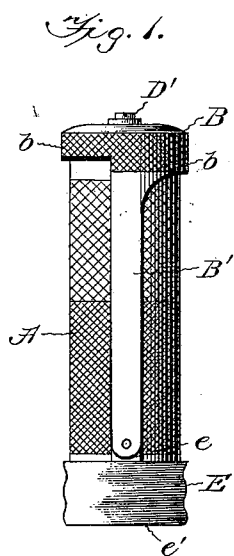


Fig. 3.

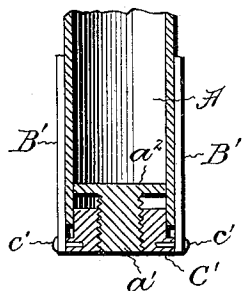
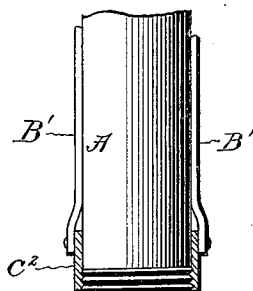


Fig. 4.



Witnesses

T. L. Kocstane
C. B. Sturtevant

Inventor

Webster L. Marble,

By Geo. P. Whitely
Attorney

UNITED STATES PATENT OFFICE.

WEBSTER L. MARBLE, OF GLADSTONE, MICHIGAN, ASSIGNOR OF ONE-HALF
TO FRANK H. VAN CLEVE, OF ESCANABA, MICHIGAN.

MATCH-BOX.

SPECIFICATION forming part of Letters Patent No. 650,944, dated June 5, 1900.

Application filed October 4, 1899. Serial No. 732,558. (No model.)

To all whom it may concern:

Be it known that I, WEBSTER L. MARBLE, a citizen of the United States, residing at Gladstone, in the county of Delta and State of Michigan, have invented certain new and useful Improvements in Match-Boxes; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to match-boxes; and its object is to provide a box that shall be entirely waterproof.

Lumbermen, hunters, sportsmen, and all who have occasion to live an outdoor life are frequently subjected to great inconvenience and even hardship by having their matches get wet. The ordinary pocket match safe is not water-tight and will not long prevent the entrance of moisture, especially if the wearer accidentally falls into a stream or lake. The need of an absolutely-imperious match-box has long been appreciated, and my invention aims to meet this want.

It consists, in brief, of a box provided with means for clamping the cover or lid tightly upon the body, so as to make a water-tight joint.

In the drawings, Figure 1 is a side elevation of my improved waterproof match-box. Fig. 2 is a longitudinal section showing the cover open in dotted lines. Fig. 3 is a modification of the screw clamping device. Fig. 4 is a further modification of the same.

The body A of the box is tubular, being preferably cylindrical. It is best made by drawing it from a suitable blank, preferably of steel, though brass or any other suitable metal may be used. The open end of the body is provided with a cover or lid B, which is flanged or cupped to fit down over the sides of the body. A packing-disk C, of rubber or the like, is held up against the under side of the cover by a follower D, of metal, which is smaller than the inside of the cover, so as to leave an annular space into which the upper end of the body is received when the cover is

closed. The follower keeps the packing in place and prevents it from wrinkling or being forced away when the cover is clamped down upon the body. The screw D', which fastens the follower to the cover, has a washer *d'* under it to make a water-tight joint.

Various means may be employed for producing the clamping action above referred to; but I prefer to use a screw of some kind as giving a positive and simple movement and one which allows considerable latitude, so as to provide for different thicknesses of packing or wear in the threads, while yet serving to effect a perfectly-tight closure.

The best mode of applying the screw clamping device is to arrange a screw-threaded collar at or near the lower end of the body engaging with screw-threads on or attached to the body and connected with the cover by long arms or links.

In Figs. 1 and 2 the screw-threads *a* are shown as formed in the material of the body A by helically corrugating the body in any suitable manner, as by means of a pair of properly-corrugated rolls. The collar E is similarly screw-threaded and is provided with ears *e*, to which are pivoted the lower ends of arms B', depending from the cover and preferably integral therewith. In order to strengthen the collar, it is preferably made cupped, as shown, with a closed lower end *e'*.

It will be seen that on giving the body a rotary movement on its longitudinal axis the screw-threads will cause it to advance or recede from the cover, so that it can be either tightly forced against the packing C or withdrawn below the edge of the flange *b*. In this latter position the cover can be swung to one side, turning on the pivots in the ears *e*, as shown in Fig. 2. To prevent it from going too far, the lip *d* is made on the follower D, projecting down into the body A, so that when the cover is swung over the lip will catch on the edge of the body and stop the further movement of the cover. When the cover is swung forward again to close the box, it is stopped in line with the body by the flange *b*, which on the side opposite the lip *d* is made deeper than on the other side, so as to overlap the body even when it has been screwed down to its opening position.

The body of the box may be ornamented in any suitable manner; but I prefer to knurl it, as shown in Fig. 1, in order to give a firm grasp for the fingers in rotating it to open and close the box and also to afford a convenient surface for striking the matches.

By pivoting the arms B' at or near the lower end of the body the arc of movement of the cover is flatter and the longitudinal movement of the body necessary to release the cover is less than if the arms were shorter.

In Figs. 3 and 4 I have shown two other modes of arranging the screw-threads.

Fig. 3 shows the screw-threads formed on a stud a' , projecting downwardly from a bottom a^2 , set up inside the body A. The collar C' is rather thick and has internal screw-threads engaging with those on the stud. The collar depends below the lower end of the body to permit the arms B' to be pivoted to it at c' .

In Fig. 4 the screw-threads are cut on the outside of the body, and the collar C² has internal screw-threads cut in it to correspond. Other modifications might be illustrated, but I do not deem it necessary.

It will be seen that when the body is tightly screwed up against the packing in the cover the box is closed absolutely water-tight, so that even a prolonged soaking will not injure the contents. Moreover, the screw-threaded parts by means of which the cover is clamped upon the body are always in mesh with each other, so that no time need be lost in getting them into engagement, as is the case with an ordinary screw-cap.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A match-box provided with a cover, a collar having screw-threads meshing with a screw-threaded portion of the body, and connections between said collar and the cover.

2. A match-box provided with screw-threads at its lower end, a collar having threads meshing with those of the body, and a cover having arms connected with the collar.

3. A match-box provided with screw-threads at its lower end, a collar having threads engaging with those of the body, and a cover having arms pivoted to the collar.

4. A match-box having a helical corrugation formed in its body at or near one end, a

collar similarly formed to screw on over the body, a cover fitting the opposite end of the body, and arms on said cover pivoted to said collar.

5. A match-box having a tubular body provided with screw-threads at one end, a flanged cover fitting its opposite end, a collar having threads fitting those of the body, and arms on the cover pivoted to the collar.

6. A match-box having a tubular body provided with screw-threads at one end, a flanged cover on its opposite end, packing in said cover, a follower holding the packing in place, a collar provided with screw-threads engaging with those on the body, and arms connecting the cover and the collar.

7. A match-box having a tubular body, a cover fitting one end thereof, a collar movable lengthwise on the body, arms on the cover pivoted to said collar, and stops on the cover to limit its opening and closing movements.

8. A match-box having a tubular body, a cover fitting one end thereof, pivoted arms on which the cover swings to open and close the same, a flange to limit the closing movement of the cover, and a lip secured to the inside of the cover to limit its opening movement.

9. A match-box having a tubular body, a cover fitted to close one end thereof, a clamping device adapted to give the cover a lengthwise movement on the body, a flange on the cover deeper on one side than on the other, and arms on the cover enabling it to swing sidewise in opening and closing.

10. A match-box having a tubular body, a cover to close one end thereof, a packing-disk in the cover, a follower for holding the packing in place, said follower being smaller in diameter than the inside of the cover and provided with a downwardly-projecting lip, a flange on the cover deeper on one side than the other, pivoted arms on the cover enabling it to swing sidewise in opening and closing, and a clamping device adapted to give the body and cover a relatively-lengthwise movement.

In testimony whereof I affix my signature in presence of two witnesses.

WEBSTER L. MARBLE.

Witnesses:

FRANK D. BLACKSTONE,
GEO. P. WHITTLESEY.