J. B. Alexander,

Bottle Stopper,

No. 79,536. Patented July 7, 1868.

Fig: 1

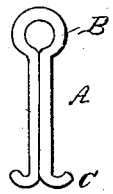


Fig: 2.



Fig: 3.

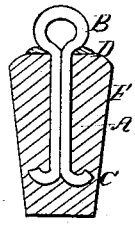


Fig: 4.

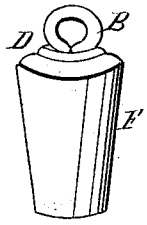


Fig: 5

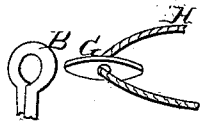


Fig: 6

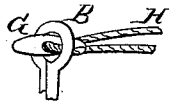


Fig: 7

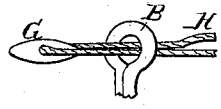
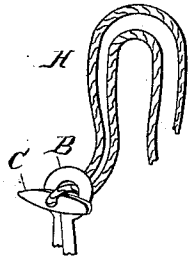


Fig: 8



Witnesses;

Edward Seymour

A. James Sully

Inventor;

J. B. Alexander

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

JOSEPH BELL ALEXANDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 79,536, *dated July* 7, 1868.

IMPROVED BOTTLE-STOPPER.

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, JOSEPH BELL ALEXANDER, of the city of Washington, in the District of Columbia, have invented a new and improved Method of Making Stoppers for Bottles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 represents, in perspective, a bent wire staff.

Figure 2 represents, in perspective, a metallic disk, through which the staff A is inserted.

Figure 3 represents a vertical section of the stopper, with the staff A and disk D in place.

Figure 4 represents, in perspective, an external view of a complete stopper.

Figure 5 represents, in perspective, the eye B of the staff A, with the button G and section of string H, before passing through the eye B, for the purpose of attaching the stopper to the neck of the bottle.

Figure 6 represents the same as fig. 5, but showing the button G in the act of passing through the eye B.

Figure 7 represents the same as fig. 5, but showing the button G as having passed through the eye B.

Figure 8 represents the same as fig. 5, but showing the button G, which has passed through the eye B, as drawn back by the string H, so as to catch transversely upon the rim of the eye B.

Similar letters of reference denote like parts, where they occur in the several figures.

The nature of my invention consists in an improvement upon a patent granted to me for stoppers for bottles, jugs, &c., dated June 18, 1867, and numbered 65,857, these stoppers being particularly designed for the purpose of bottling soda and other gaseous waters or liquids, by means of machinery, and so constructed and arranged that, when the stopper is discharged from the mouth of the bottle, it will still remain attached to the neck of the bottle, and thus return with the bottle to the bottler, to be used again many times; also, as a means of more perfectly preventing the gases from escaping from the highly-charged liquids contained in the bottles.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I bend a piece of wire, of suitable length, double, so as to form the eye B, as seen in fig. 1 and other figures. I then make a metallic disk, D, with the perforation E, as seen in fig. 2, through which is inserted the double staff A. The disk D is then pushed up until it rests firmly against the eye B. The two ends of the staff A are then turned, like hooks, in opposite directions, as seen at C, fig. 1. This staff, so arranged, is then covered from the disk D to a suitable distance below the hooks C, (see fig. 3,) with a strip of thin sheet India rubber, (in the sticky and unvulcanized state,) by the process of rolling, or any other suitable manner, until a sufficient bulk is given. The article, in this condition, is then placed within proper-shaped moulds, which moulds, thus charged, are placed into the vulcanizing-heater, where, under a proper degree of heat, the rubber becomes vulcanized, and swells in such a manner as to exactly fill the mould or matrix, thus forming the stopper into proper shape, and consolidating the rubber into a firm but highly-elastic body.

By this means the staff A is solidly vulcanized into the body F of the stopper, the disk D firmly fixed at the top, as a bearing for the end of the bottling-plunger, and the hooks C so embedded as to prevent the turning or twisting of the staff A. The stopper, thus prepared, is ready to be passed through the bottling-machine.

To prevent these stoppers from becoming lost, I attach them to the neck of the bottle after the bottle is stopped and leaves the machine, by means of a string of twine or other suitable substance, one end being attached to the neck of the bottle, and the other end holding or strung through a metallic button, G.

To attach the stopper to the bottle, the button G (which I make oval-shaped, with a hole in the centre, through which passes the string H,) is pushed long ways through the eye B, and, when fully through, the string H is jerked back, and the button G, assuming a transverse attitude, cannot escape, unless passed back again longitudinally through the eye B.

Thus is formed a quick and simple mode of attaching and detaching these stoppers, as will be seen in figs. 5, 6, 7, and 8.

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

1. The combination of the staff A and disk D with the rubber body F, when united by the process of vulcanization, substantially as described, and for the purpose set forth.

2. I also claim, in combination with the above, the device composed of the button G and the string H, for attaching the stopper to the neck of the bottle, substantially as described, and for the purpose set forth.

J. B. ALEXANDER.

Witnesses:

EDWARD SEYMOUR,

A. JAMES FALLS.