(No Model.)

E. A. F. MOSES.

METHOD OF APPLYING WIRE CORK FASTENINGS TO BOTTLES.

No. 261,246. Patented July 18, 1882.

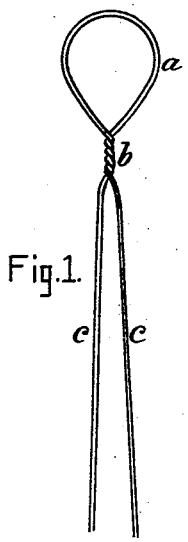

Fig. 1.

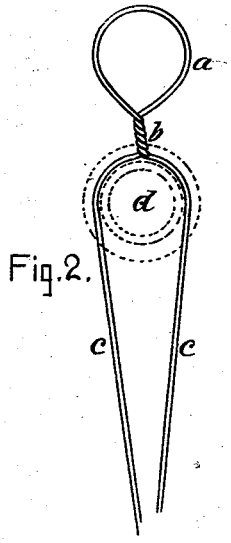

Fig. 2.

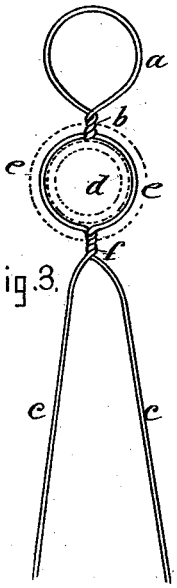

Fig. 3.

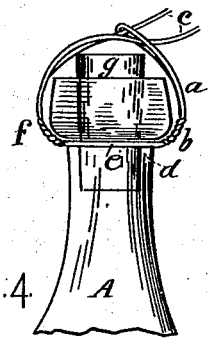

Fig. 4.

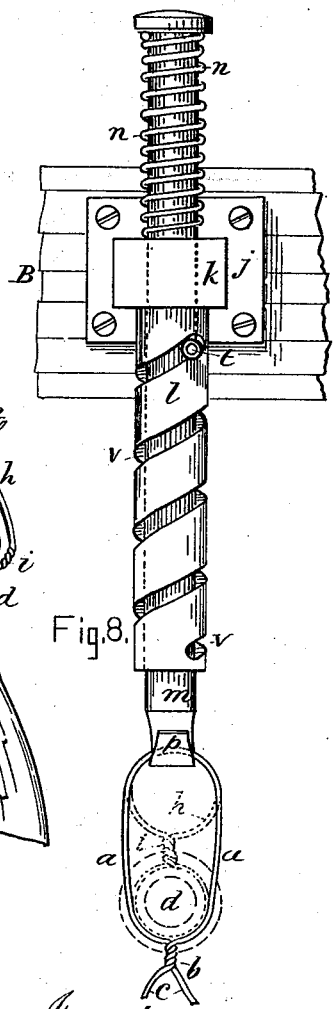

Fig. 8.

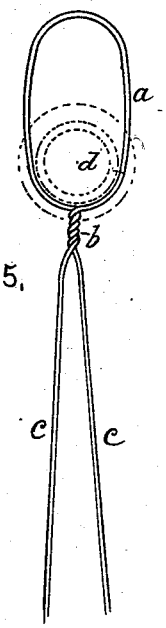

Fig. 5.

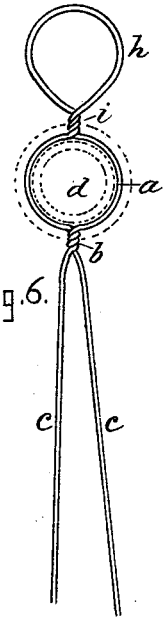

Fig. 6.

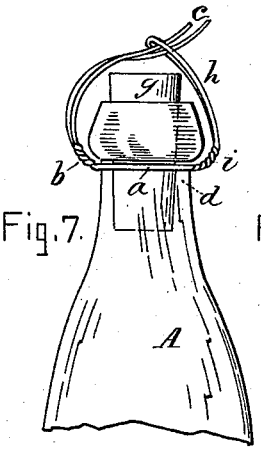

Fig. 7.

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METHOD OF APPLYING WIRE CORK-FASTENINGS TO BOTTLES.

SPECIFICATION forming part of Letters Patent No. 261,246, dated July 18, 1882.

Application filed June 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. F. MOSES, of the city of Boston, State of Massachusetts, have invented an Improved Method of Applying Wire Cork-Fastenings to Bottles, of which the following is a specification.

The object of my invention is to effect a material saving in the time required and in the expense of applying to bottles the wire holders which are employed to secure the corks in the necks thereof when subjected to the expansive force of the gases therein; and my invention will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claim.

Figure 1 is a plan view of a wire cork-fastening of usual form. Fig. 2 shows the same fastening in plan with the bottle, shown by dotted lines, in position for the wire to be twisted thereon. Fig. 3 shows the same parts as Fig. 2, but with the wire twisted upon the neck of the bottle. Fig. 4 is a perspective view of the top part of a bottle, and with the ends of the fastening interlocked in the loop, preparatory to binding the cork in place in the bottle-neck. Fig. 5 represents the fastening formed with an enlarged loop, and showing the bottle-neck inserted therein, preparatory to twisting the loop. Fig. 6 shows the loop of Fig. 5 twisted to the bottle, and leaving a smaller or residuary loop, *h*. Fig. 7 is a view similar to Fig. 4, showing the holder of Figs. 5 and 6 as interlocked, preparatory to being drawn down upon the cork to secure the same. Fig. 8 is a plan view of a machine adapted to automatically twist the fastening upon the bottle in my improved method.

In Figs. 1, 2, 3, 4, *a* represents the loop of the wire as prepared and sold in quantities for application to the bottle A in the process of "bottling." *b* is the twist of the two strands *c c* around each other. In Fig. 2 the strands *c* are shown as separated next to twist *b*, and with the neck *d* of bottle A inserted between said strands close to twist *b*. When the bottle is placed as shown in Fig. 2 the strands *c* are again twisted together, as shown at *f*, thereby firmly inclosing the bottle-neck *d* with a portion of strand *c*, (shown at *e* in Figs. 3 and 4.) After the wire is twisted to neck *d*, as described and shown in Fig. 3, the loop *a* and strands *c* are carried up over cork *g* and interlocked, as shown, and are drawn into the cork and securely fastened. As stated in the preliminary description of said first four figures, they show the method hitherto practiced in applying the securing-wire to the bottle, the same being slow and tedious in the matter of forming the twist *f* after the neck *d* and strands *c* are brought together, as shown in Fig. 2.

To facilitate and hasten the application of the holder to the neck *d*, I have invented my improved method, which I will now describe in connection with the four last figures in the drawings.

The loop *a*, as shown in Fig. 5, should be formed of a length equal to that of the loop *a* shown in Figs. 1, 2, 3 and the circumference of neck *d* added together, and twist *b* is formed as shown in all the figures; but I insert the bottle-neck *d* within loop *a* next to twist *b*, instead of between the strands *c*, and as shown in Figs. 5 and 6. After the neck *d* is thus placed in loop *a*, the loop is twisted to produce the twist *i*, (shown in Figs. 6, 7, 8,) leaving of loop *a* a diminished loop, *h*, of about the size of loop *a* shown in Figs. 1, 2, 3. After thus firmly securing a part of loop *a* upon neck *d* with the resulting loop *h*, the strands *c* and said loop *h* are carried over cork *g*, as shown in Fig. 7, and the cork is thereby secured, as already stated in connection with Fig. 4.

The important advantage of the method of inserting neck *g* in loop *a*, instead of between strands *c* on the side of twist *b* opposite the loop, consists in the largely-increased facility for twisting loop *a*, as at *i*, Fig. 6, instead of strands *c*, as at *f*, Fig. 3, as such twisting of loop *a* can readily be done automatically by machinery; and in Fig. 8 I have shown a machine adapted to such purpose, which machine I will now describe.

A standard, *k*, is secured to floor B by its base *j*. Upon the upper part of said standard is formed or secured the arm *l*, in which slides freely the rod *m*, a pin, *t*, in which travels in the spiral slot *v*, formed in the shell of arm *l*. Upon the rear portion of rod *m* is mounted a

helical spring, *n*, which is arranged between the head of said rod and a seat in standard *k*, so that when the rod is drawn to the front said spring is thereby compressed, and by its reacting force returns the rod to the position shown. Upon the front end of rod *m* is formed a broad hook, *p*, upon which is placed loop *a*, when, by placing neck *d* in the loop next to twist *b* and drawing the bottle forward—that is, away from standard *k*—rod *m* will be drawn outward, and will at the same time be rotated by the action of its pin *t* moving in spiral slot *v*, and thus impart to the wire the twist shown at *i* in Figs. 6, 7, and by dotted lines in Fig. 8.

A great variety of devices may be readily constructed by one experienced in similar machinery for twisting loop *a* to produce twist *i* and the residuary loop *h*, my object being to show a practical means of automatically imparting the second or final twist *i* to the wire by my method.

I make no claim to the wire fastener itself, either as when first formed with loop *a* of any size and with twist *b* and strands *c c* or as applied to the bottle, or to the bottle and cork, as said fastener is at all its stages of application like the one shown, except in the stage shown in Figs. 1 and 5, when the loop *a* must be necessarily larger to practice my method than when it is applied in the usual manner. Hence I make no claim to the fastener as such, but to the described method of securing the fastener to the bottle by placing neck *d* thereof inside the loop *a*, and then twisting said loop to closely draw the wire around the neck, instead of placing said neck between strands *c* and then twisting the same. Hence

I claim as my invention—

The described method of securing wire cork-fasteners to bottles, the same consisting in inserting the neck *d* thereof within the loop *a* of suitable size, and then twisting said loop to produce the twist *i*, and residuary loop *h*, substantially as specified.

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