

(No Model.)

K. KIEFER.
BOTTLE STOPPER.

No. 545,897.

Patented Sept. 10, 1895.

Fig. 1.

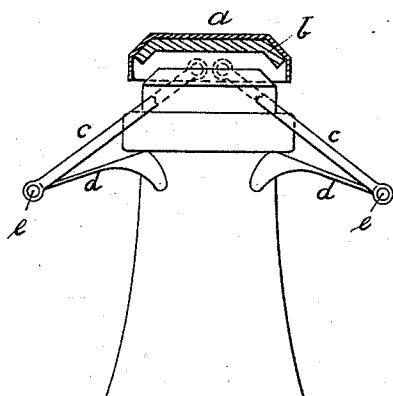


Fig. 2.

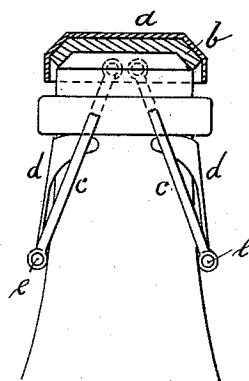


Fig. 3.

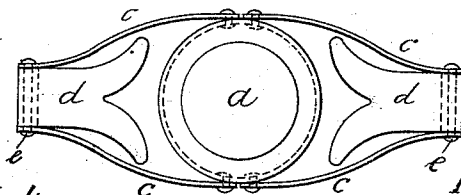


Fig. 4.

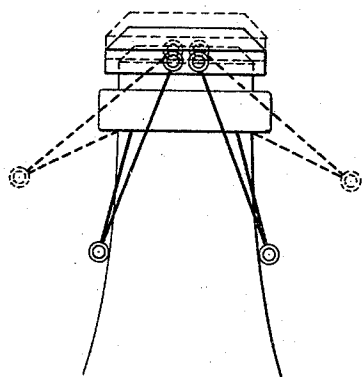
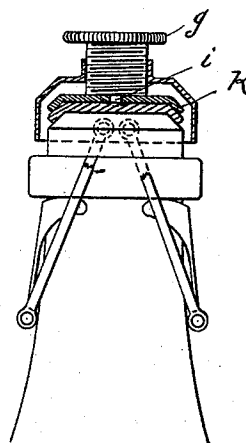


Fig. 5.



Witnesses.
Thomas H. Smith
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KARL KIEFER, OF CINCINNATI, OHIO.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 545,897, dated September 10, 1895.

Application filed December 4, 1894. Serial No. 530,836. (No model.)

To all whom it may concern:

Be it known that I, KARL KIEFER, a citizen of Germany, residing at Cincinnati, in the county of Hamilton, in the State of Ohio, have
5 invented a new and useful Bottle-Stopper, of which the following is a specification.

My invention relates to the class of bottle-stoppers which have their fastenings on the rim of the bottle-neck. There is no special
10 neck necessary for this device. It is also unnecessary to have it permanently fastened to the bottle; but it can be detached like any other stopper. The stopper can be used for
15 any ordinary liquid, filled without pressure, but is especially adapted to glass bottles with higher than atmospherical pressure, where the common cork is apt to leak.

In the drawings the device is shown in different positions. There is also one construction shown to overcome the difference in the
20 size of the bottle-necks.

Figures 1, 2, 3, and 4 show the bottle-stopper, for which it is supposed that all bottle-necks are blown alike. Fig. 5 shows an adjustable bottle-stopper, which can be fitted to
25 most all bottles with rims. Fig. 1 shows the stopper put on a bottle and ready to be closed. Fig. 2 shows the stopper in closed condition. Fig. 3 is a view from the top of the opened
30 stopper. Fig. 4 shows the diagram of the opened and closed stopper.

Similar letters refer to similar parts throughout the several views.

The stopper consists of the following parts,
35 Fig. 3: The cap *a*, which incloses a gasket *b*, the four bars *c*, and the swallow-tailed sides *d*. The one end of the bars *c* is riveted to the cylindrical part of cap *a*, and the other ends are connected with side parts *d* by the long
40 rivets *e*, forming hinges. Each pair of bars *c*, fastened to one side part *d* and connected in the described way to cap *a*, act as levers on the diametrically-opposed sides of the bottle-neck.

45 The stopper is put on in the following manner: The cap *a* is brought in the right position and the two sides are put below the rim, as shown in Fig. 1 in view and Fig. 4 in the dia-

gram. A pressure on hinges *e* and *e* is now exerted synchronically. The knee-levers, composed out of bars *c* and side bars *d*, will soon
50 cover each other, at which moment the greatest pressure is exercised. In order to secure a permanent remaining in this condition it is necessary to let the levers go over this point
55 until the hinges *e* come in contact with the bottle-neck. In this position they will remain by themselves.

The gasket *b* can be manufactured either out of cork-wood or rubber, or both combined,
60 according to the pressure in the bottle. The swallow-tailed parts of the side parts *d* are bent according to the bottle-neck, as shown in Figs. 1 and 2.

In Fig. 5 the cap has an aperture on its top
65 and a set-screw *g*. On the projection *i* of this screw a plate *k* is loosely riveted. The gasket *b* is now put against this plate *k*, which can be lowered and raised by means of this set-screw *g* to suit the height of the bottle-neck.
70

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

1. The combination of a cap, a gasket, and two or more symmetrical sets of self-locking
75 levers, and consisting of the bars *c* and the side *d*, and pivotally connected to the cap, which exert on opposite sides of the bottle-neck a pressure upon the cap, under an angle to the axis of the bottle, sufficiently large to prevent their slipping from a ring-shaped pro-
80 jection of the bottle.

2. The combination of a cap, a gasket and two or more symmetrical sets of self-locking
85 levers, and consisting of the bars *c* and the side *d*, and pivotally connected to the cap, which exert on opposite sides of the bottle-neck a pressure upon the cap, under an angle to the axis of the bottle, sufficiently large to prevent their slipping from a ring-shaped pro-
90 jection of the bottle with means allowing the further tightening of the gasket, after the same has been locked to the bottle mouth.

KARL KIEFER.

Witnesses:

THOMAS H. TOWERS,
ALFRED MACK.