

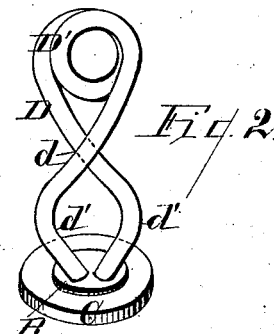
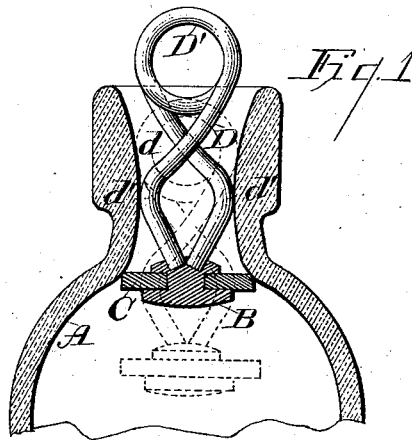
(No Model.)

P. MADLENER.

BOTTLE STOPPER.

No. 260,305.

Patented June 27, 1882.



Witnesses:

E. L. Asmus
Carl Pickhardt.

Inventor:

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UNITED STATES PATENT OFFICE.

PHILIPP MADLENER, OF MILWAUKEE, WISCONSIN.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 260,305, dated June 27, 1882.

Application filed January 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, PHILIPP MADLENER, of Milwaukee, in the county of Milwaukee and in the State of Wisconsin, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to bottle-stoppers; and it consists in certain peculiarities of construction, as set forth hereinafter.

In the drawings, Figure 1 is a vertical cross-sectional view, showing in full lines my stopper in the position it occupies when the bottle is just about to be closed, and in dotted lines the position of the said stopper when the bottle is open. When the bottle is fully closed the bail will be slightly higher than here shown, and the rubber stopper will be forced downward at its periphery and clamped between the metal hub or base and the neck of the bottle. Fig. 2 is a perspective view of the stopper alone.

The object of my invention is the production of a strong, simple, and cheap bottle-stopper of a nature adapted to be placed within the necks of bottles, which are made without any inner shoulder or offset, and which stopper has a bail that, when the bottle is closed, will come in contact with the said neck only at one point and yet be capable of being forced downward into the bottle to open it, and prevented from going too far by reason of the recurved top of the bail being of greater diameter than the neck of the bottle at the point of contact described.

A represents a bottle, such as is intended to hold soda, aerated waters, &c. This bottle, as already stated, is formed without any shoulder or offset within its neck, and the inside of the neck may be either slightly curved, as shown in Fig. 1, or perfectly straight, in which latter case a bottle with a somewhat shorter neck would have to be employed.

B represents the base of the stopper, preferably of metal, and C the rubber packing-ring secured therein.

D is the bail of the stopper, formed of a single piece of stout wire, recurved at top to form a broad striking-surface, D', and crossed at *d*, after which the crossed ends *d'* *d'* are bent back toward each other and meet at their

point of union with the base. The wire bail is either united to the base by casting the latter around the ends of the bail or else the base is cast separately, with sockets for the ends of the wire, and then the whole united with a drop of solder.

My wire bail is much stronger and more durable by reason of the wire being crossed, as stated, and, as there is frictional contact between the bail and bottle-neck only at one point, and that slight, and without any spring to the wire, the stoppers will last much longer than if the bail was in contact with the neck of the bottle all along its length; besides which much less pressure is required in forcing the stopper downward in opening the bottle than would be necessary if the wire lay all against the sides of the neck of the bottle. By reason of recurving the wire at top a broad surface is obtained for striking in forcing the stopper downward and a better effect may be obtained with a small wire thus recurved than with a wire of double the size even not recurved, besides effecting a saving in expense. It has been found by actual test that the stopper best withstands the blow and lasts longer when the wire is crossed centrally, as herein shown and described, than without such central crossing, and this I deem a valuable feature of my invention; and I have found that when thus centrally crossed the bail transmits the blow directly downward in a straight line, instead of crookedly or sidewise, as frequently happens when the wire is not thus centrally crossed, and therefore the bottle is opened more quickly under a single blow with my device than with stoppers constructed in the old way with the wire uncrossed. Further, it is of great importance that both ends of the crossed wire forming the bail should be bent in toward each other at the bottom and both united to the metal base, because if one of these ends were loose the stopper would have the effect of a spring instead of being inflexible, and in the former event there would be greater resistance when it was sought to force the stopper downward than is now experienced, besides which, by reason of both these ends being forced inward toward each other and to the center, the direct downward movement in a perfectly vertical line heretofore alluded to is best insured.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent,
is—

As an improvement in bottle-stoppers, the
bail composed of a single wire, recurved at D',
5 crossed at d, and having its ends bent in from
the points d' and both secured in the base B,
as and for the purpose set forth.

In testimony that I claim the foregoing I
have hereunto set my hand this 18th day of
January, 1882.

PHILIPP MADLENER.

Witnesses:

S. S. STOUT,

HAROLD G. UNDERWOOD.