

No. 693,436.

Patented Feb. 18, 1902.

W. H. PERKINS.
WATER BOTTLE STOPPER.

(Application filed Oct. 10, 1901.)

(No Model.)

Fig. 1

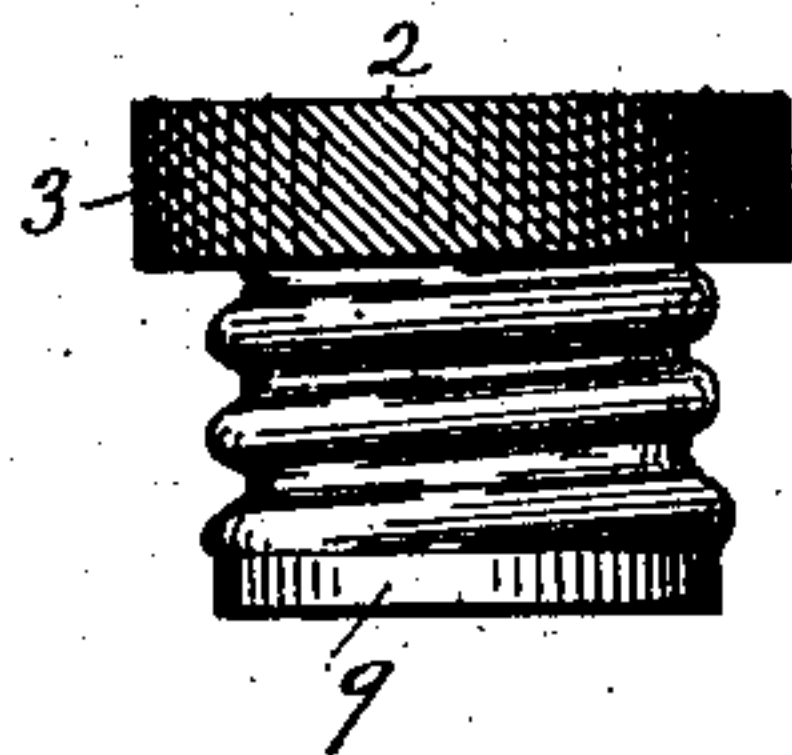


Fig. 2

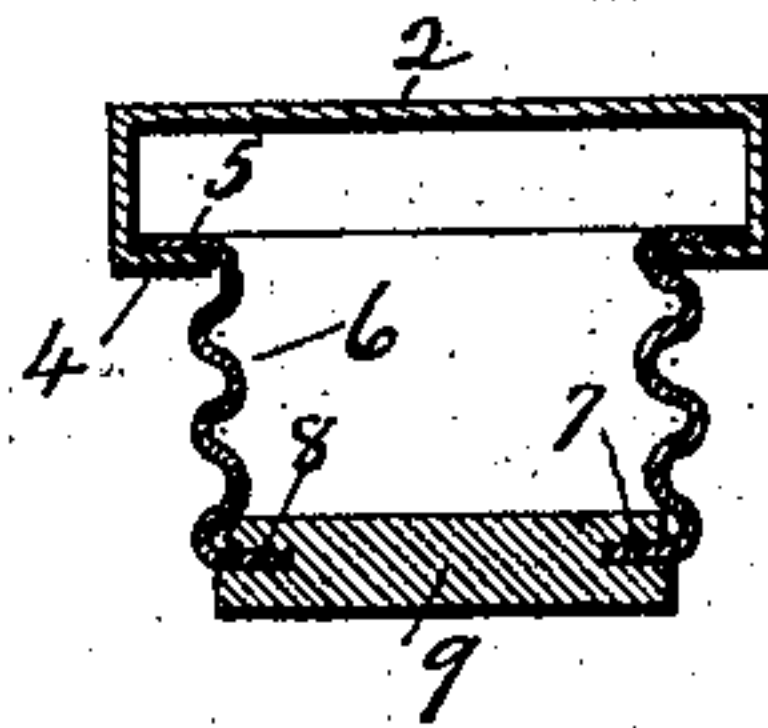


Fig. 3



Fig. 4



Fig. 5



Fig. 6



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UNITED STATES PATENT OFFICE.

WALTER H. PERKINS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE
WATERBURY MFG. CO., OF WATERBURY, CONNECTICUT, A CORPORATION.

WATER-BOTTLE STOPPER.

SPECIFICATION forming part of Letters Patent No. 693,436, dated February 18, 1902.

Application filed October 10, 1901. Serial No. 78,220. (No model.)

To all whom it may concern:

Be it known that I, WALTER H. PERKINS, (assignor to the WATERBURY MANUFACTURING COMPANY,) of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Water-Bottle Stoppers; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in side elevation of a water-bottle stopper constructed in accordance with my invention; Fig. 2, a view thereof in vertical section; Fig. 3, a detached view, in side elevation, of one form which the disk may assume; Figs. 4, 5, and 6, corresponding views of modified forms which the disk may assume.

My invention relates to an improvement in water-bottle stoppers, the object being to produce at a low cost for manufacture a simple, compact, convenient, and effective device constructed with particular reference to ease of manipulation, for which purpose it is provided with a knurled head instead of a skeleton thumb-piece, and to effectiveness in use, for which purpose its rubber disk is secured in place in an improved manner.

With these ends in view my invention consists in a water-bottle stopper having certain details of construction and combinations of parts, as will be herein described, and pointed out in the claims.

In carrying out my invention as herein shown I employ a struck-up sheet-metal cap having a flat top 2, a knurled edge 3, and an inwardly-turned flange 4, which is secured to an outwardly-turned flange 5, formed at the upper end of the cylindrical sheet-metal body 6 of the stopper, the said body having threads rolled into it. The flanges 4 and 5 are secured together by soldering or otherwise, or the cap and body may be formed of a single piece of sheet metal. The lower end of the body 6 is turned inwardly to form an annular flange 7, which is entered into an annular groove 8, formed in the edge of the rubber disk 9, which practically corresponds in diameter to the di-

ameter of the said body. When the rubber disk 9 has its annular groove 8 entered by the annular flange 7, the disk may be said to be partly within and partly without the body 6. It is very firmly secured in place and has a wide bearing against the outer face of the flange to resist pressure tending to force it into the body of the stopper.

Figs. 4, 5, and 6 of the drawings show modified forms of the disk; but all of them are alike in having an annular groove to receive an annular flange formed at the lower end of the body, though the portions of the disk separated by the groove are widely differentiated in size, whereas the portions of the disk 9 separated by the groove 8 practically correspond to each other in diameter.

In view of the modifications suggested and of others that may obviously be made I would have it understood that I do not limit myself to the exact construction described, but hold myself at liberty to make such alterations as fall within the scope and spirit of my invention.

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

1. In a water-bottle stopper, the combination with a threaded sheet-metal body formed at its upper end with an outwardly-turned annular flange, and at its lower end with an inwardly-turned annular flange, of a hollow sheet-metal cap larger in diameter than the diameter of the said body, formed with a knurled edge and formed at its lower end with an inwardly-turned annular flange which is secured to the said outwardly-turned annular flange at the upper end of the said body which enters the said hollow cap for the fastening of the two said flanges together, and a disk adapted to partially enter into the lower end of the said body and formed in its edge with an annular groove for the reception of the edge of the inwardly-turned annular flange located at the lower end of the said body.

2. In a water-bottle stopper, the combination with a threaded sheet-metal body formed at its lower end with an inwardly-turned annular flange, of a disk adapted to be partially

entered into the lower end of the said body
and formed in its edge with an annular groove
for the reception of the said flange by which
it is retained in place, and a cap applied to
5 the upper end of the said body and closing
the same and adapted to be seized for oper-
ating the same.

In testimony whereof I have signed this
specification in the presence of two subscrib-
ing witnesses.

WALTER H. PERKINS.

Witnesses:

JNO. S. NEAGLE,
ADOLPH C. RECKER.