

(No Model.)

H. CRIMMEL.
BOTTLE AND STOPPER.

No. 482,230.

Patented Sept. 6, 1892.

Fig. 1.

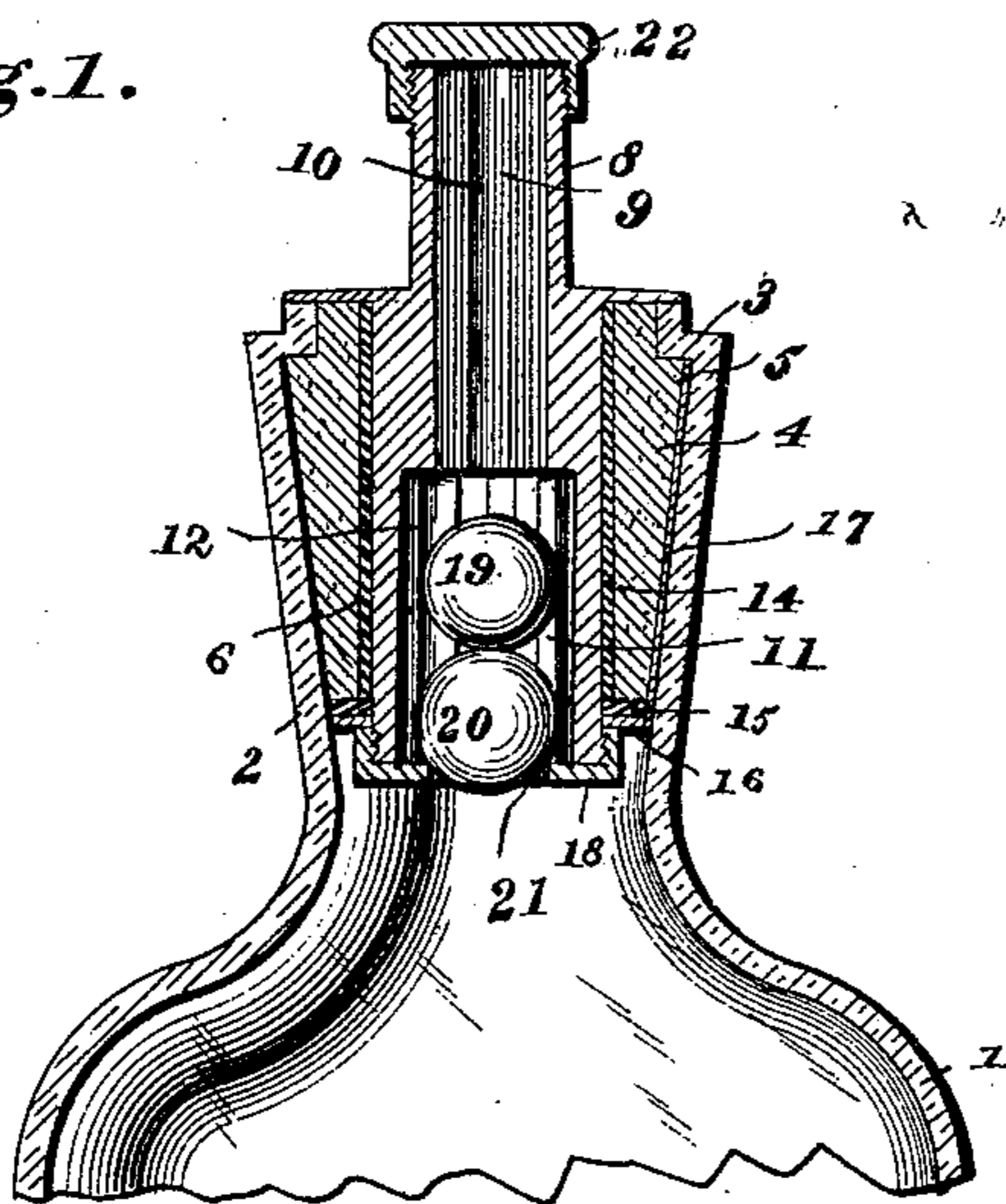


Fig. 2.

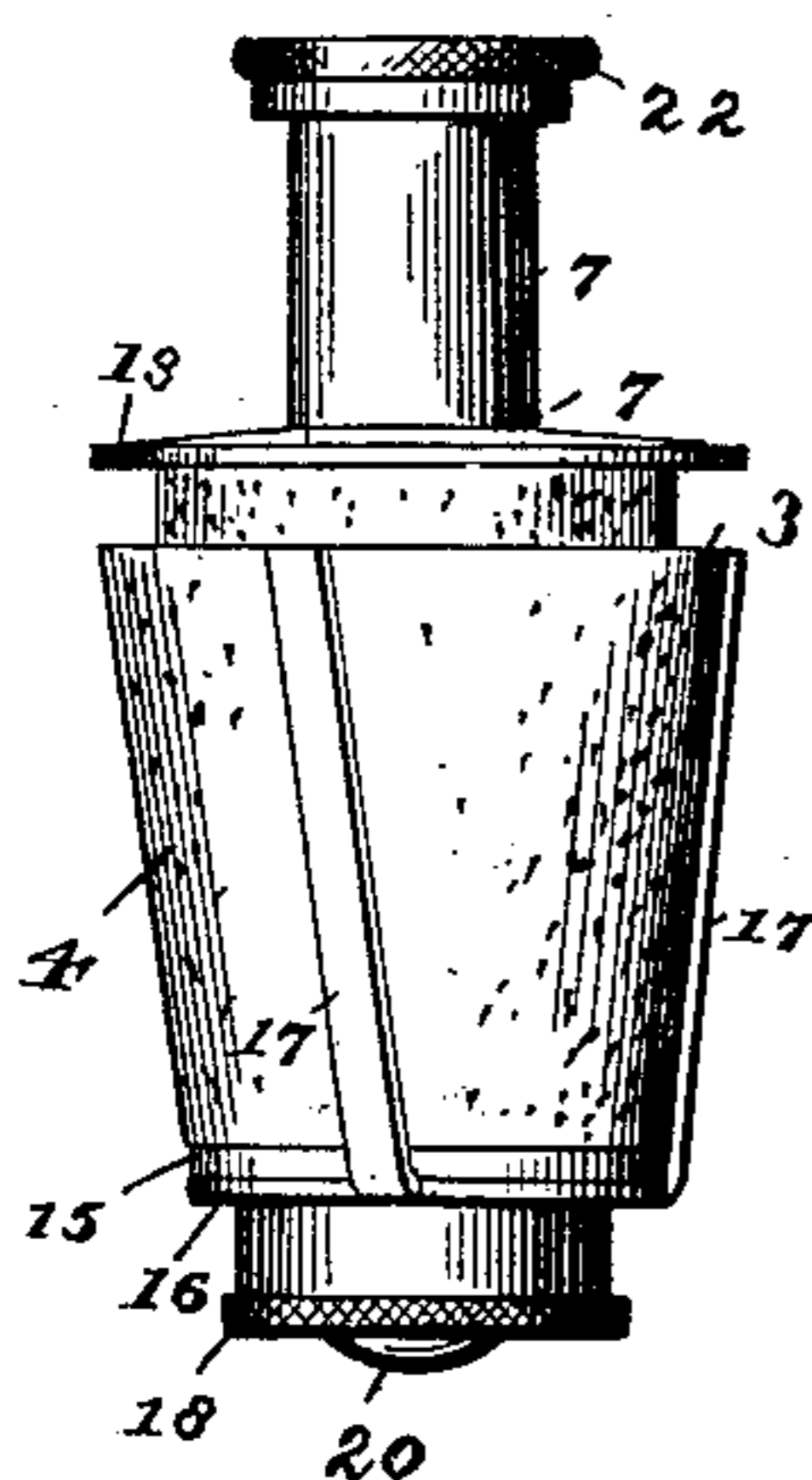


Fig. 4.

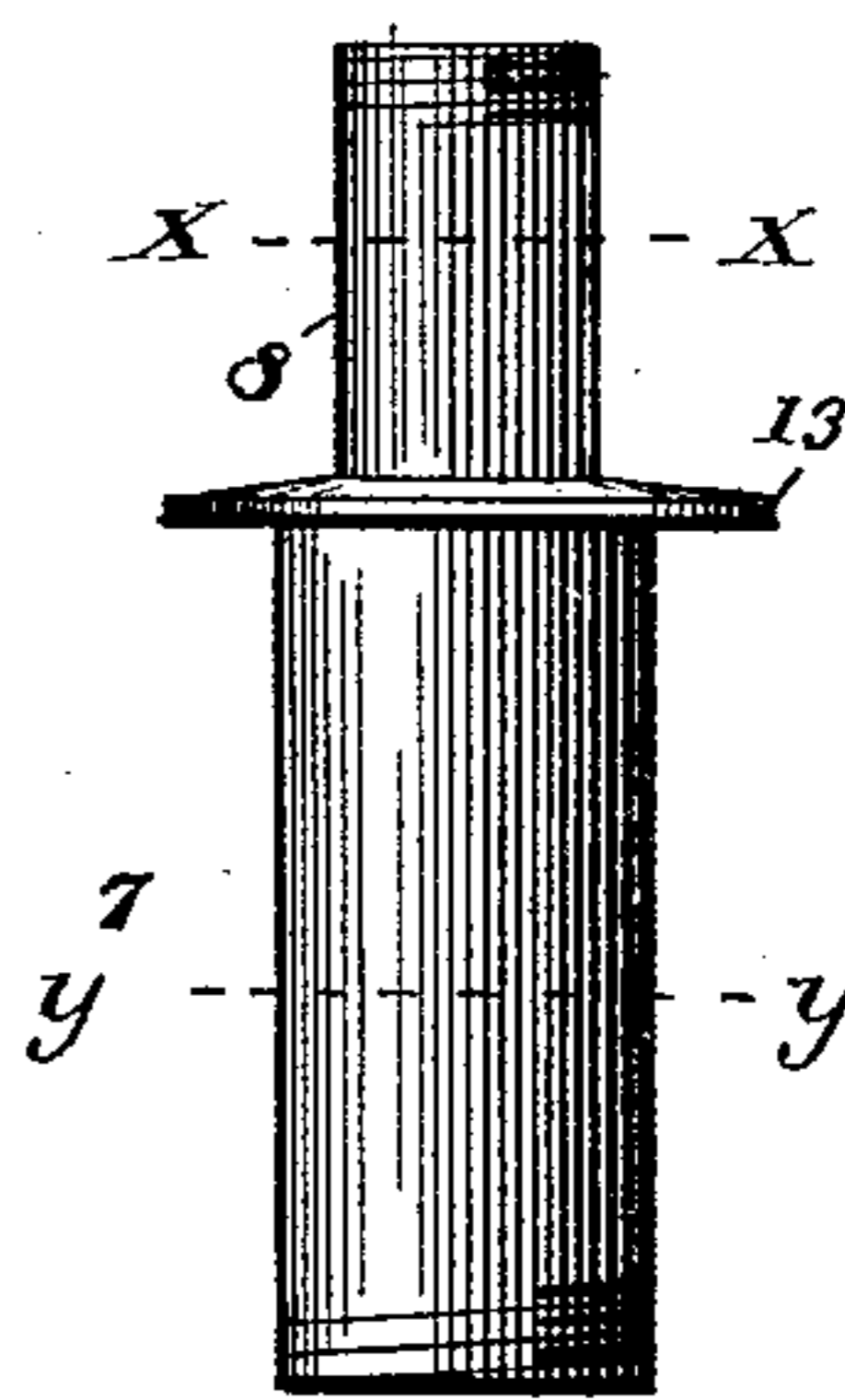


Fig. 3.

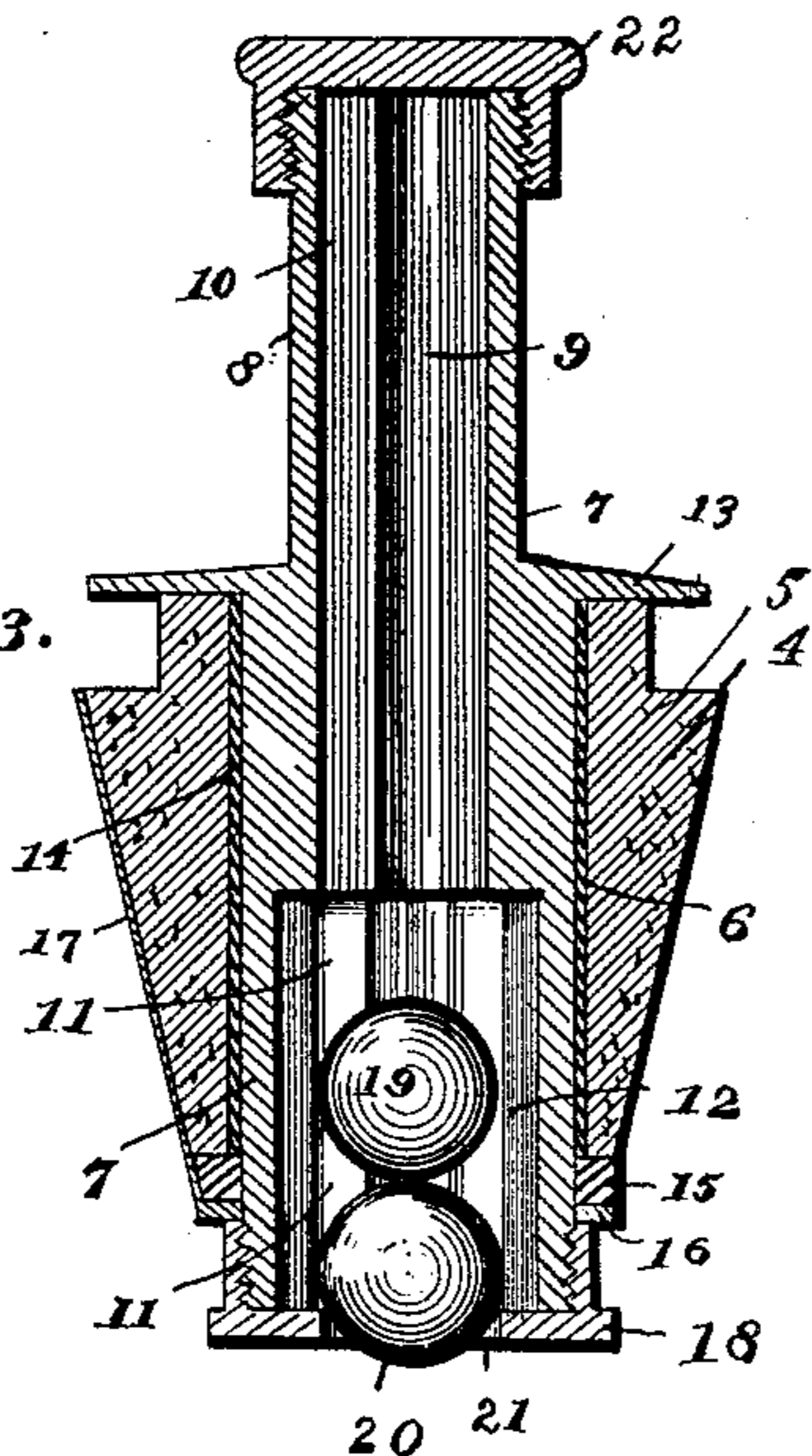
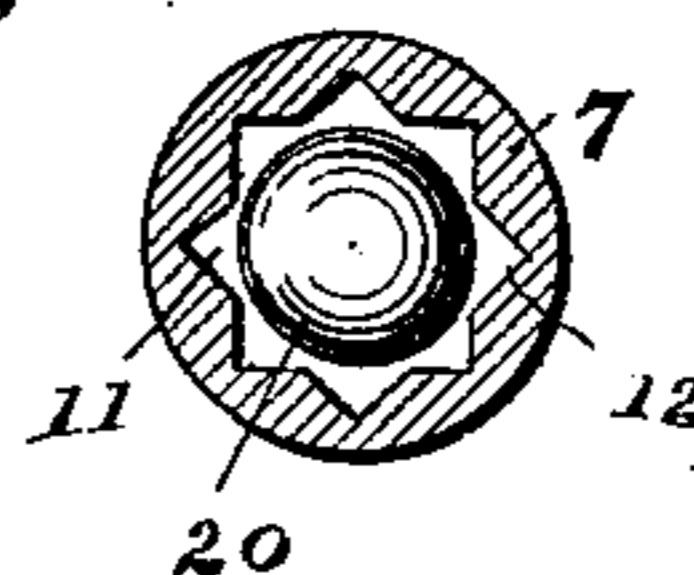


Fig. 5.



Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY CRIMMEL, OF FOSTORIA, OHIO.

BOTTLE AND STOPPER.

SPECIFICATION forming part of Letters Patent No. 482,230, dated September 6, 1892.

Application filed April 23, 1892. Serial No. 430,359. (No model.)

To all whom it may concern:

Be it known that I, HENRY CRIMMEL, a citizen of the United States, residing at Fostoria, in the county of Seneca and State of Ohio, have invented a new and useful Bottle and Stopper for the Same, of which the following is a specification.

This invention relates to improvements in vessels for containing liquids of various kinds, and more particularly to those vessels—such as bottles, jugs, and carboys—employed for storing fine liquors, brandies, cordials, colognes, extracts, &c.

The objects of my invention are to produce a receptacle for this purpose and a cork or stopper for the same, the latter being so constructed as to be adapted to be secured to the vessel in such manner as to prevent removal thereof without either destroying the vessel or the stopper, and thus to obviate the refilling of such vessel, which previously contained some special make or production of liquor, by an inferior liquor.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a vertical longitudinal section of (in this instance) a bottle constructed in accordance with my invention, a stopper so constructed being mounted therein. Fig. 2 is an elevation in detail of the stopper. Fig. 3 is an enlarged vertical section thereof. Fig. 4 is a detail in elevation of the metal tube composing a part of the stopper. Fig. 5 is a detail in cross-section on line *x x*, Fig. 4. Fig. 6 is a similar view on line *y y*.

Like numerals of reference indicate like parts in all the figures of the drawings.

The bottle 1, or it may be any other suitable vessel, is provided with the neck 2, the same having its mouth provided with an internal annular shoulder 3. The cork 4 is tapered, as is usual, and is provided at its upper end with an L-shaped groove, or, in other words, is reduced to form immediately below its upper end a shoulder 5. The cork is furthermore provided with a vertical bore 6. A tube 7 fits snugly in the bore of the cork and below the same is externally threaded. This tube above the cork is reduced to form a spout 8. The spout 8 is

provided with a longitudinal bore 9, which has a series of longitudinal grooves 10, and the tube 7 below the spout is also bored at 11, and the wall of the bore is provided with angular grooves 12, extending throughout the length of the same. The bore 11 is larger than the bore 9, and its grooves are greater in number, but shallower. At its reduced point the tube 7 is provided with an external annular collar or boss 13, which when the tube is in position rests flatly upon the upper end of the cork and extends slightly beyond the upper reduced portion of the same.

As indicated at 14, the tube 7 may be provided with an external coating of soft rubber or other analogous substance. A washer 15 encircles the lower threaded end of the tube, said washer being formed of rubber or other material and constituting a tight joint between the lower end of the cork and the tube. I also provide the lower end of the tube with a metal ring 16, which is located immediately below the washer, and from the ring, extending along the sides of the cork, is a series of prongs 17, which extend to the shoulder 5 of the cork. Upon the lower end of the tube below the ring a milled binding-cap 18 is threaded. Within the tube 7 there is located, in this instance, a pair of balls 19 and 20, the latter when the stopper is in a vertical position automatically seating itself in a circular opening or valve-seat 21, formed in the cap, and the former resting thereon. When the stopper is inverted, however, as in the act of pouring liquids, the balls fall to the end of the bore 9 of the spout, the ball 19 resting against the bore 9 and covering the same, with the exception of the grooves 10, which afford exits for the liquid. This completes the construction, with the exception of a removable cap 22, which fits over the upper end of the spout 9 during transportation. After the bottle or vessel has been filled the cork as thus constructed is forced into the neck of the bottle, said cork being of greater diameter than the mouth of the bottle and adapted to fit snugly the neck thereof, so that by exerting force the cork is sprung into the tapered neck and the shoulder 5 of the cork takes under and interlocks with the shoulder 3 of the neck. By reason of the shoulder 3 the cork cannot be pulled out, and by the taper of the neck 2

it cannot be pushed farther in, so that the consequence is the stopper is immovable. It will be seen that by inverting the vessel the contents will readily pass through the stopper, 5 as heretofore described; but that it will be impossible after the vessel has been once emptied to refill the same without breaking the vessel or destroying the stopper. The metal prongs 17, which rise from the ring 16, 10 are resilient or formed of spring metal preferably, and also engage with the shoulder 3 of the neck of the vessel.

Having described my invention, what I claim is—

15 1. The herein-described stopper adapted to interlock with the neck of a bottle, the same consisting of a truncated cork having a central bore, a tube mounted therein and provided near its outer end with a smaller or re- 20 duced bore and at its lower end with an expanded bore, each of its bores being provided with grooves respectively differential in depth, said tube terminating at its lower end in a reduced opening, and a ball mounted in 25 the lower end of the bore and adapted to close the opening, substantially as specified.

2. The herein-described stopper adapted to interlock with the neck of a bottle, the same consisting of a truncated cork having a 30 central bore, a metal tube located in the bore and provided at its upper end with an expanded bore having a reduced bore and at its lower end with a reduced valve-seat, and a valve adapted to cover the seat when the 35 stopper is in a vertical position, substantially as specified.

3. The combination, with the vessel having a tapered neck, the mouth of which is provided with an annular shoulder, of a stopper 40 consisting of a cork having an upper annular shoulder forced into the neck and engaging the shoulder, said cork being provided with a bore, a metal tube snugly fitting the bore, said tube terminating at its upper end in a 45 reduced opening and at its lower end in a reduced valve seat or opening, and a valve mounted over the lower reduced opening, substantially as specified.

4. The combination, with a vessel having 50 a tapered neck terminating in a reduced annular shoulder, of a cork tapered to fit the

neck and having an upper reduced end forming a shoulder for engaging that of the neck, a metal tube mounted in the cork and extending 55 below the end of the same, said tube being provided with an upwardly-opening valve, and a ring mounted on the lower end of the tube and having prongs embracing the exterior of the cork and terminating at the shoulder 60 thereof, substantially as specified.

5. The combination, with the vessel having the tapered neck and annular shoulder at the upper end of the same, of the tapered cork fitting the neck and having an annular shoulder 65 engaging that of the neck, a tube mounted in the cork and comprising a lower bore and an upper reduced bore, said bores having their walls corrugated, a cap having a central opening threaded on the lower end of 70 the tube, and a ball mounted in the large bore of the tube and adapted to close the opening in the tube, substantially as specified.

6. The combination, with the vessel having the tapered neck provided with the annular shoulder, of the tapered cork fitting the neck 75 and provided with an external shoulder engaging that of the neck, a metal tube mounted in the cork, extending below the same, exteriorly threaded at its lower end, and having 80 an upper and a lower bore, each of which is grooved longitudinally, the upper bore being smaller than the lower bore, a metal ring mounted on the lower end of the tube and provided with a series of upwardly-disposed 85 cork-embracing prongs terminating at the shoulder of the cork, a perforated cap threaded on the lower end of the tube, a pair of balls mounted in the large bore of the tube and loosely fitting the same, a washer inter- 90 posed between the lower end of the cork and ring, and an annular boss located upon the upper end of the tube and extending over the upper end of the cork, substantially as specified.

In testimony that I claim the foregoing as 95 my own I have hereto affixed my signature in the presence of two witnesses.

HENRY CRIMMEL.

Witnesses:

T. P. JOHNSTON,

I. W. MONNEMAN.