

MATTHEWS *V.* SHONEBERGER AND ANOTHER.

Circuit Court, S. D. New York. —, 1880.

1. RE-ISSUE No. 2,386, granted October 30, 1866, for an improvement in bottle stoppers, *held, not infringed*.
2. PATENT No. 44,684, granted October 11, 1864, for an improved method of stopping bottles, *held, not infringed*.
3. CLAIM—CONSTRUCTION.—Every claim of a patent is to be construed as though it in terms in referred to the descriptive part of the specification.
4. SAME—SAME.—A claim for inserting a stopper through the mouth of a bottle, and then passing it upwards till it is closed tight against a seat inside, must be limited to the mechanism described, having the mode of operation described.
5. SAME—SAME.—A claim to a function of mechanism, aside from the structure of such mechanism, is not valid.

A. V. Briesen, for plaintiff.

G. V. N. Baldwin, for defendants.

BLATCHFORD, C. J. This suit is brought on two patents. One of them is a re-issue, No. 2,386, granted to the plaintiff, October 30, 1866, for an improvement in bottle stoppers, the original patent having been granted to Albert Albertson, as 636 inventor, August 26, 1862. This patent has expired. The specification says: "This invention consists in a stopper which always remains in the bottle, and which readily permits the introduction of any fluid into the bottle, and at the same time effectually prevents any discharge of it except when desired, and which is particularly adapted to bottles containing soda-water, wines, and all fluids having a generating fixed air, as the greater the pressure from such cause the closer and tighter is the stopper. An important feature of the invention, which distinguishes it from all previously-applied stoppers which remain in the bottle, is that it is inserted into the bottle through the neck without requiring the use of a separate or larger opening, or

detachable cap, to permit its introduction. * * * The stopper represented * * * consists of a small metallic or other stem, A, upon the lower end of which is fixed a rigid button or disk, B, which is made of such a size as just to pass through the smallest part of the mouth or neck of the bottle. Close above the button or disk is secured to the stem, A, a smaller rigid ring or disk, C. Between these two disks is placed and held fast a disk or diaphragm of India rubber, felt, leather, or cloth, D, or any yielding substance, which should be somewhat larger in its external diameter than the disk, B,—say generally of a diameter about as large again, and larger than the lower part of the interior of the neck of the bottle. To a stop or shoulder on the upper part of the stem, A, which is long enough to project above the mouth of the bottle or vessel when the valve is in contact with its seat, there is attached or applied a helical wire spring, E, which covers the stem, A, for some little distance, and which need only be stiff enough to hold up firmly the stem, A, and cause the rubber or other diaphragm, D, to fit closely against the inside neck of the bottle.”

The specification then describes two ways of supporting the spring at its bottom. One is to enlarge the mouth or neck of the bottle from the bottom of the spring upward so as to form an edge or shoulder sufficient to support the spring. The other is not to enlarge the neck, but to clasp over the top 637 of the neck two or three metallic strips, which extend down within the neck as far as the spring is to reach, and have their bottoms turned over the lower coil of the spring and thus give it a sufficient support. The specification proceeds: “The stopper is placed in the bottle by simply inserting it in the neck and pressing the spring, E, until the rubber or flexible disk or diaphragm, D, has passed below the narrowest part or place, *a*, of the neck. As the ring or disk C is considerably smaller than the disk B, the flexible disk

or diaphragm D will fold up and around C as the stem, A, is passed down through the neck, and the stopper will thus easily pass into the bottle. But, when once the stopper has been so placed in the bottle, as the disk B is of nearly the size of the opening in the neck, any effort of the spring, E, or of any kind, to draw or push up the standard, A, presses the flexible disk D between the bottle and the bottom, B, and effectually prevents its coming out; and the greater the pressure from within against the bottom of the stopper, the closer will the contact be of the parts B and D against the sides of the bottle. When it is desired to open the bottle to discharge its contents, a bent instrument, such as is shown in Fig. 2, or any one fitted to accomplish the same purpose, pressing down the stopper, may be made use of."

The first two claims of the patent are as follows: "*First*, a stopper which is inserted through the mouth of the bottle, or other vessel, and which, when inserted, is closed perfectly tight against a seat found within the bottle itself by pressure in an upward direction; *second*, a prolongation of such stopper by means of a central stem, rod, or other extension of the stopper in an outward direction, beyond the seat of the valve, for the purpose of affording facility for opening the stopper, or that of receiving the upward pressure of a spring, or other means of drawing the valve to its seat, substantially as herein specified."

The stopper and bottle used by the defendants is that shown in "Codd No. 2." It is not proved that they used any other. In the defendants' arrangement, the stopper is a sphere of glass in a receptacle at the base of the neck of the bottle, 638 which receptacle communicates with the body of the bottle below, by an orifice which is too small to allow the sphere to pass down. The mouth of the bottle above the sphere is too small to allow the sphere to pass out above. The sphere is loose, and there is no spring. In the inside

of the mouth is an annular groove, in which a ring of India rubber is inserted, with which the sphere, when it is to act as a stopper, comes in contact, and against which, as a seat, it is pressed to make a tight joint by the upward action of the gas in the liquid below. The receptacle referred to is of greater diameter than the neck above it, and of less diameter than the bottle below it. The bottle is opened by inserting the finger or some pushing instrument in the mouth, and pressing the sphere downward, causing it to leave its seat, and allowing the liquid to be poured out. The sphere, when the bottle is emptied, rests on the bottom of the receptacle referred to, over the orifice which leads into the body of the bottle.

It is alleged that the first and second claims of this patent are infringed by Codd No. 2. As the sphere in the bottle cannot pass out through the mouth, and as it is not inserted through the mouth of the finished bottle, it is put in before the bottle is finished. The bottle is made with the receptacle and the neck, and then the sphere is put in through the neck, and then a ring of melted glass is put on the outer end of the neck to form the finished mouth. The first claim of the re-issue does not contain the words "substantially as specified," but it must be construed as if those words were in it. Every claim of a patent has reference to the descriptive part of the specification. In the plaintiff's bottle, the stopper can pass in through the smallest part of the mouth of the finished bottle. This is dwelt on in the specification as "an important feature of the invention," and is made an integral part of the first claim. This feature does not exist in Codd No. 2. The stopper in that cannot pass in through the mouth of the finished bottle. The first claim is not a claim to any mechanism; but, if not a claim to a function, is a claim to a mode of operation. It amounts to a claim to inserting a stopper through the mouth of a bottle, and then pressing it upwards 639 till it is closed tight

against a seat inside. It seems to be intended to cover every form of stopper and any form of mouth, and any means of pressure, and any arrangement of seat. As a claim thus broad it cannot be sustained. It must be limited to the mechanism described, having the mode of operation described. The stopper, to infringe, must be inserted through the mouth of the finished bottle substantially as the plaintiff's is, and the pressure upward must be made by mechanism and not by the gas in the liquid. The first claim is not infringed by Codd No. 2.

As to the second claim the specification says: "I am aware that an internal flap, valve, or door, acted upon by a spring float or counterweight, has been used to close the orifice of vessels, as an ink-holder or oil vessel, to keep out dust, etc., but intended to give way on a very slight pressure. Such arrangement, however, could not make a stopper which would "be air-tight." This statement shows that it was not new to press from without an internal valve closing the orifice of a vessel, such closing taking place by the action of a spring, and such pressure being made against the outer face of the valve to open the orifice. This being so, the second claim of the re-issue must be limited to substantially such a form of stopper as the specification shows, with substantially such a prolongation or extension in an outward direction, if, indeed, the claim can be made at all, in respect to the facility afforded for opening the stopper, in view of the admitted prior arrangement. Under this construction of the second claim it is not infringed by Codd No. 2.

The second patent sued on is No. 44,684, granted October 11, 1864, to J. N. McIntire, on the invention of Albert Albertson, for an improved method of stopping bottles. The specification says:

"Previous to my invention several methods of stopping bottles have been suggested and patented, all having for a main object to dispense with the

employment of ordinary corks, (which have to be renewed at each filling of the bottles and are expensive,) and avoid the labor involved in the use of them, especially in bottling gaseous liquids, where the cork 640 has to be tied or otherwise secured in the mouth of the bottle. Among the inventions suggested heretofore, having for their object the great *desideratum* of dispensing with the expensive and laborious system of corks and fastenings, the best method to my knowledge is that shown and described in letters patent granted to me on the twenty-sixth day of August, 1862. But experience and thorough practical tests have shown that in the method patented to me there are serious objections when put into general use; as, for instance, the liability of the mechanism to clog up, the necessity of an instrument for the purpose of readily opening the mouth of the bottle to empty it of its contents, and the liability of the necks of the bottles, from their necessarily weak form, to break during transportation or handling. These objections, and others, I propose to effectually overcome by my present invention, which has for a further object to produce a more economical, durable, and desirable method of stopping bottles than any heretofore known; and to these ends my invention consists in the employment of a stopper which may be inserted through the neck of the bottle, and so constructed that it can be brought into close contact with a suitable bearing surface or seat on the interior or neck of the bottle to close it, and be depressed or pushed down into the bottle to open it, as will be hereinafter more fully explained. And my invention consists further in so constructing the stopper and forming the seat or bearing surface in the neck of the bottle, that, while the stopper may be readily forced into the bottle, any tendency to force it out will only tighten the joint between the stopper and the seat in the bottle neck, as will be presently more

fully explained. And my invention further consists in making the entire stopper of a length exceeding the diameter of the bottle in which it is to be used, so that the stopper, while resting in the body of the bottle, cannot turn round, but must always present itself right and foremost to the mouth of the bottle, as will be more fully described hereinafter. * * *

“Figure 1 is a vertical or longitudinal section of a bottle, with the stopper represented in the position in which it closes or stops the mouth of the bottle. Figure 2 is an elevation 641 of the same, (with the lower portion of the bottle broken out,) showing the position of the stopper after opening or unstopping the bottle to empty it. * * A is the bottle, (of any shape or design,) on the interior of the neck of which I propose to form a shoulder, as seen at *x*. The stopper is formed of a stem or rod, *b*, having a suitable knob portion, B, and having secured (or formed) on it a gutta percha or other elastic or yielding valve or cork, *c*. I have represented the stem, *b*, as made of metal, and with a thimble or cover, *e*, of soft material, such as gutta percha, at its lower end, the object of which is to avoid any possibility of injuring the bottle by the sudden contact with the glass of the hard stem, when the latter is forced or drops down into the bottle in ‘opening.’ The valve portion, *c*, I have shown secured to the stem, *b*, by means of a band or collar, *d*, and an annular depression in the stem, *b*, into which the yielding stock of *c* is forced and held by the encircling collar, *d*, but, in lieu of this mode of construction, the entire stopper may be formed, if found practicable and expedient, of rubber; the stem portion ‘hard,’ with its lower end ‘soft,’ and the conical valve portion, *c*, of the proper flexibility. The position of the valve portion, *c*, on the stem, *b*, is such as to allow the knob or upper end of the stopper to protrude a short distance beyond the mouth of the bottle when the valve, *c*, is in its seat—that is, when the bottle is closed—in order

that the stopper may be readily forced down into the bottle by pressure or a blow with the hand, to open the bottle. The entire length of the stopper (its stem) is such that, when resting in the empty bottle, as shown at figure 2, it cannot turn over and get wrong end towards the mouth of the bottle. At figure 2 I have shown in dotted lines the position of the projecting end of the stopper before the bottle is unclosed. I prefer to make the valve, *c*, as shown, conical, with upper end hollow, and provide the interior of the neck with a shoulder, *x*; for in this form of valve and seat the stopper is readily forced down through the neck, but, in being forced up against its seat or shoulder, the valve, *c*, will be bulged or upset, and cannot be forced out, which is a *desideratum* where the contents of the 642 bottle embrace gas or fixed air,—as, for instance, when soda water is contained,—but other forms of valve may be used without destroying the advantages of my invention. The valve, *c*, and neck of the bottle should, however, be so shaped, even when the shoulder, *x*, is employed, that the former will be compressed in the taper portion of the neck before it comes against the shoulder, in order to create friction sufficient to prevent the falling of the stopper when still liquors are contained in the bottle; as, for instance, a valve slightly conical on the upper end, and fitting into the neck of the bottle, shaped correspondingly, and without any shoulder. The operation of my new stopper for bottles, etc., may be thus explained:

“I may remark first, however, that the manipulation, in closing a bottle with my invention, is different somewhat when different liquors are to be bottled; that is, those which are bottled under pressure, such as soda-water, and those which are still liquors, or without gas or pressure. In all instances, however, the stopper is formed as shown, and is forced into the bottle as seen at figure 2. To bottle soda-water and other gaseous liquids, under pressure, I take the

bottle, thus provided with its stopper, and place it in the filling machine, in which the given quantity of water and gas is supplied to the bottle, the stopper remaining, as seen at figure 2. I then invert the bottle while it is yet attached to the supply tube, which must for this purpose be flexible and have its cock arranged so as to admit of the bottle, while attached to the tube, being thus turned over, when the stopper falls into the neck of the bottle, the valve, *c*, resting in its seat, and in this position I disconnect the bottle from the filling machine, when the pressure within the bottle retains the valve, *c*, against its seat and keeps the bottle effectually closed. When it is desired to empty the bottle a slight blow or pressure on top of the knob, *b*, will cause the stopper to descend to the bottom of the bottle, as seen at figure 2, and the liquid is poured out. The stopper being of a much greater specific gravity than the liquid, and being so long, will not impede the flow of the liquid from the bottle if it is gradually poured 643 out. In bottling still liquids, such as cider, porter, etc., which make more or less gas after being closed up, I take the bottle provided with its stopper, as before mentioned, and pour in the liquor in the usual manner; then, quickly inverting the bottle, cause the valve, *c*, to drop into its seat partially, and, taking hold of the protruding end or knob, *b*, I pull the valve, *c*, tight into its seat, when the mouth of the bottle will be effectually closed, and the compression of the valve, *c*, of elastic material, in the tapering portion of the neck, will insure the retention of the stopper; then the bottle is turned up again. The mode of unclosing is the same in all cases. * * *

“Wishing to be understood as not limiting my claims of invention to any particular materials or precise forms of the parts so long as they embody the characteristic features of form, and the mode of operation involved in my invention, what I claim as new and desire to secure by letters patent is—*Firstly*,

the employment in combination with a bottle, having the interior of its neck suitably formed to receive it, of a stopper constructed to operate in closing and unclosing the bottle, substantially as described; *secondly*, I claim so constructing the valve, *c*, and the mouth of the bottle, that the former may be readily forced through the latter in one direction, and incapable of easy passage through it in the opposite direction, as herein before described, for the purpose set forth; *thirdly*, I claim making the entire stopper of such a length that it cannot turn over in the body of the bottle, as and for the purpose set forth.”

It is important to see what is the proper construction of the first claim of this patent. The specification describes the stopper as having a valve on it which is to be elastic or yielding. It is indispensable that this valve shall be compressible. The stopper with the valve on it is described as a distinct thing from the bearing surface or seat on the interior of the neck of the bottle with which the valve comes in contact to close the bottle.

By the terms of the first claim the stopper is to be “constructed to operate in closing and unclosing the bottle substantially as 644 described.” The claim is to mechanism, to a physical structure, to the combination of a bottle which has a neck, and has the interior of its neck suitably formed to receive the stopper, with a stopper constructed as stated in the claim. This means a stopper constructed as described, and which, by reason of its construction, operates as described, in connection with the neck of the bottle, in closing and unclosing the bottle. The claim is not to the employment in a bottle of a given mode of operation, resulting from any structure of stopper. Such a claim would not be a claim to a process; it would be a claim to a function of mechanism a side from the structure of such mechanism. It would not be a valid claim. The proper construction of the claim is that it is a claim to

the employment, in combination with a bottle having the interior of its neck suitably formed to receive such stopper, of a stopper constructed substantially as described. Of course, a stopper constructed as described will, in combination with a bottle so arranged, operate in a definite way,—in the way described in closing and unclosing the bottle. The claim, then, is, in effect, one to the structure of the stopper, so far as its parts are brought into use in the closing and unclosing of the bottle.

In Codd No. 2 the stopper is a stopper of a different structure from the plaintiff's stopper, and it does not have the features of construction or operation which the specification of No. 44,684 states to be, or which are, the characteristic features of the plaintiff's stopper, so far as those features are not also characteristic of the stopper shown in the Albertson patent of August 26, 1862. In Codd No. 2 the stopper cannot be inserted through the neck of the bottle, and is not of a length exceeding the diameter of the bottle, or receptacle in which it is placed; although it can be brought in close contact with a suitable bearing surface or seat on the interior of the neck of the bottle to close it, and be depressed or pushed down into the bottle to open it, and although any tendency to force it out only tightens the joint between the stopper and the seat. These features all of them existed in the patent of August 26, 1862, in reference to the stopper there 645 shown. The stopper in Codd No. 2 has no stem or rod, no knob projecting beyond the mouth of the bottle when the sphere is at its closing place, no elastic yielding or compressible valve on the stopper. It is true that the stopper in Codd No. 2 is of a greater specific gravity than the liquid, so that it will fall into the seat by gravity when the bottle is inverted, and then be held there by the pressure of gas in the liquid. But this is not enough to make an infringement of the first claim. The construction of the stopper in Codd No.

2 is so essentially different in the particulars above pointed out from that of the plaintiff's stopper, so far as such construction is involved in the first claim, that it cannot be held to infringe that claim. The second claim is not infringed because in Codd No. 2 there is no valve, C, on the stem, and no valve capable of being forced through the mouth of the bottle from without it. The third claim is not in question.

The bill is dismissed. with costs.

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