piston rod, as such, is not in fact material to the operation; and the claim does not appear to so make it a material element of the combination that it must be considered such. So the defendant appears to use this combination, and to infringe this claim.

The first and fourth claims of the other patent make the crank and pitman distinct parts of the working mechanism. The second and third do not, but merely describe the shaft as connected with the piston, without mentioning how. Question is made, in expert opinion and in argument, as to whether the shaft is connected with the piston within the meaning of these claims. The second of them provides for the connection of the shaft to the piston to operate the same; and the third, for connection of it with the piston to operate the same and be operated thereby. This shows that the connection provided for is not an actual attachment, that will prevent any separation, but such a relation of parts as will produce simultaneousness of motion between the shaft and the piston. In the defendant's apparatus the cam produces such simultaneousness of motion between the shaft and piston, and in the sense of these claims connects them. Thus this apparatus appears to infringe them.

The first and fourth claims make the crank and pitman so material, in a combination of improvements so special, that they do not seem to be infringed by anything not having these parts.

The bill alleges that the plaintiff notified and warned the defendant to desist from infringement, account for profits, and pay damages, and that he neglected and refused so to do; but does not allege otherwise that he continued the infringement after notice, nor allege that the plaintiff marked its articles patented by these patents as so patented. The answer is silent upon this subject, but the defendant showed by cross-examination of one of the plaintiff's witnesses that they were marked as patented by the first and by other patents, but not by the later one. As these facts so appear, they are considered, although under such defective allegations. Upon them the plaintiff appears to be entitled to an account of damages under the first patent, and not under the other. Dunlap v. Schofield, 152 U. S. 244, 14 Sup. Ct. 576; Traver v. Brown, 62 Fed. 933. Decree for plaintiff for an injunction, and an account as to the second claim of 289,380, and for an injunction as to the second and third claims of 458,357.

DE LA VERGNE BOTTLE & SEAL CO. v. VALENTINE BLATZ BREWING CO. et al.

(Circuit Court of Appeals, Seventh Circuit. March 22, 1895.)

No. 161.

1. PATENTS—LIMITATION OF CLAIM—INFRINGEMENT—BOTTLES AND CORKS.
The De La Vergne patent, No. 232,468, for an improvement in bottles and corks, and which describes a cork made in the form of a truncated cone, adapted to be inserted, larger end innermost, into a receptacle of the same shape, must be limited to a cork which is conical in form before in-

sertion, and is therefore not infringed by a cylindrical cork, which by reason of its expansive force necessarily assumes a conical shape after insertion, to conform to the shape of the receptacle.

2. SAME—ENLARGEMENT OF CLAIM WITHOUT NEW OATH.
An enlargement beyond the scope of the original application, which alone is supported by the required oath, would seem to render the patent invalid. Eagleton Manuf'g Co. v. West, Bradley & Carey Manuf'g Co., 4 Sup. Ct. 593, 111 U. S. 490, and Machine Co. v. Featherstone, 13 Sup. Ct. 283, 147 U. S. 209, followed.

3. SAME—INVENTION—INDIA RUBBER.
The characteristics of India rubber, its powers of compression, expansion, and elasticity, having been long well known and understood, there is little room for invention merely in devising and adapting new forms to old uses. Temple Pump Co. v. Goss Pump & Rubber Bucket Manuf'g Co., 7 C. C. A. 174, 58 Fed. 196, followed.

4. SAME—ANTICIPATION—PRIOR ART.
In considering the force of the prior art, the question is more of the identity than of the differences between the old and the new; and it is needless to point out details of difference which are accidental, or which can be made to disappear by substituting one form for another, without disturbing the relation and operation of essential parts.

5. SAME—INVENTION.
It requires no invention to revert to old and well-known forms and processes from which an alleged anticipating patent departed for the sake of economy.

Appeal from the Circuit Court of the United States for the Eastern District of Wisconsin.

This suit was brought by the De La Vergne Bottle & Seal Company, a corporation of New Jersey, against the Valentine Blatz Brewing Company and Valentine Blatz, individually and as president of the latter company, both of Wisconsin, to enjoin infringement of letters patent No. 232,468, issued September 21, 1880, to John C. De La Vergne, and assigned by him to the complainant, and to obtain an accounting and damages. The defendants answered, denying invention and infringement, and alleging that the supposed invention of De La Vergne had been anticipated in letters patent of the United States: No. 20,778, dated July 6, 1858, to M. C. Cronk; No. 39,208, dated July 14, 1863, to C. F. Baxter; No. 1,576 (reissue), dated November 24, 1863, to W. A. Shaw; No. 41,532, dated February 9, 1864, to S. J. Parker; No. 49,916, dated September 12, 1865, to Perry and Lazell; No. 54,015, dated April 17, 1866, to G. M. Ramsey; No. 77,559, dated May 5, 1868, to Worcester and Brown; No. 205,011, dated June 18, 1878, to A. Templeton; No. 208,043, dated September 17, 1878, to F. J. Seybold; No. 217,072, dated July 1, 1879, to A. Cunningham,—and in letters patent of Great Britain: No. 2,361, dated June 16, 1877, to Warner and Tully, and No. 2,399, of 1866, to Alexander S. Stocker. Prior use of the invention by persons named is also alleged. Replication in denial.

The specification, claim, and drawings of the patent in suit are as follows: "Be it known that I, John C. De La Vergne, of the city, county, and state of New York, have invented certain new and useful improvements in bottles and stoppers, which are fully set forth in the following specification and accompanying drawings. The said invention is applicable for the bottling of all kinds of liquids, but especially so for malt, fermented, and such other liquids as have latterly been bottled under pressure and subjected to extreme heats and outward pressures for the purpose of destroying the germs of life or coagulating the albuminous constituents of the ferments contained within the bottle. The cork must be free from complex combinations, must be readily inserted, and not likely to be injured by the extreme heat or pressure to which it will be subjected. It is also very desirable to have one in such form as to obviate the necessity of any outside appliances to hold it in position, as they would materially retard the operation of corking; and, again, it is a well-known fact that even corks made of rubber, if compressed, in time

lose their power of expansion, which would permit the inclosed gas to escape and the ingress of atmospheric air, together with a fresh supply of germs, which would soon decompose the inclosed material. This invention consists in a bottle or jar having a receptacle for the cork or stopper made in the form of a truncated cone, with its base or large diameter innermost, and having an annular ring or shoulder at the bottom of said receptacle, to prevent the cork from being driven into the bottle by outside pressure, and in combination therewith a solid cork or stopper, of rubber or other elastic material, made to fit tightly in said receptacle, and press with force against its converging sides. The said cork or stopper is made larger than the receptacle which holds it, and is compressed and inserted to its seat, where it expands with the elastic force due to compression in an oblique and upward direction, all of which will be apparent, reference being made to the drawings, wherein * * * Figure 1 is a perspective of a bottle, showing the form of the receptacle for the cork by the dotted lines a, b, c, d, and d a. Fig. 2 is a cross section, showing the outline of the cork receptacle with a cork placed therein, as at a, b, c, d, and at the base of said receptacle an annular ring or shoulder e f. Fig. 3 is a top view of the bottle neck, wherein is plainly shown the annular ring or shoulder, e f, which prevents the cork from being driven into the bottle. Fig. 4 is a cross section of the cork. Fig. 5 is a view of the bottom of the cork which presses against the shoulder e f, showing by the dotted line h that part of the cork against which a pressure of the compressed air or gas is exerted. Fig. 6 is a cross section of a jar, showing a solid cork inserted in a receptacle of the form described, and above it a plate which may be used to aid in holding a cork in place should it be thought desirable to make the cork in two parts as a matter of economy. Fig. 7 is a top or plan view of said plate. By reference to Figs. 1, 4, and 6 it will be observed that, when the cork is inserted in a bottle or jar, the base or greater diameter of the cone-shaped cork is innermost, and forms a wedge or dovetail, and, having been compressed, the converging sides g g press with force against the sides of the cork receptacle. Heat being applied to the bottles after the cork is inserted, the rubber of the cork firmly adheres in spots to the surface of the bottle, and with such tenacity as to require a considerable force to separate it therefrom. By this means, in addition to the resistance of the compressed cork against the converging sides of the bottle neck, the tendency of the compressed air or gas within the bottle to eject the cork therefrom is entirely overcome, thus obviating the necessity of using outside fastenings, which would render it difficult to obtain an equable gaseous pressure within the bottle. It will also be observed that in case the rubber should lose its power of expansion, as it often does after a lapse of time, and cease to press with force against the sides of the cork receptacle, the inclosed gas could escape between that part of the cork not attached to the glass of the bottle and the side of the bottle neck. In this invention this difficulty is overcome by the cork being pushed forward by the pressure of the compressed air or gas, and tightly wedged, that part of the rubber cork which is attached to the glass stretching. In this manner bottled liquids may be retained hermetically sealed for any reasonable length of time. That part of the corking apparatus which appertains exclusively to the insertion of the cork consists of a stationary tapering metal tube, beneath which the bottle or jar is placed, and which will admit of the introduction of the wet cork or stopper by hand, and which is compressed by being forced through the smaller end of said tapering tube by a plunger into the aperture or cork receptacle of the bottle by the application of force. At Figure 6 is shown a jar, B, having a cork, A, and a cork receptacle of the form described, as at a b, b c, c d, and d a. e f is the annular ring or shoulder, which prevents the cork or stopper from being driven into the bottle. In this case a solid cork is used; but it is evident that some cheaper material, such as pottery, clay, or cheap metal, might be inserted in the central part of said cork to lessen its cost. In such a case, a plate, D, might be used to hold the cork in place. The said plate is a circular disk of cheap metal, a little smaller than the neck of the jar, having a segment of a circle cut out, as at O, Figure 7, to a depth of two-thirds of its thickness, as shown in Figure 6, to permit the movable arm K, which is secured to the plate D

Fig. 1.

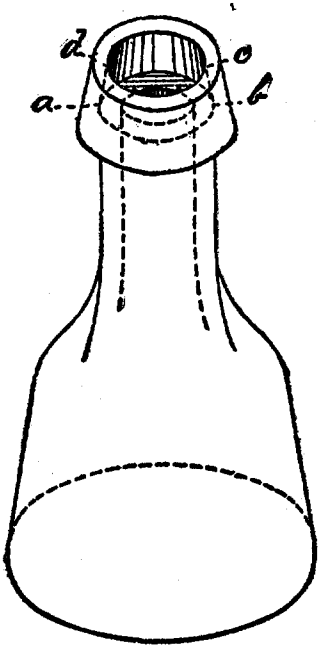


Fig. 2.

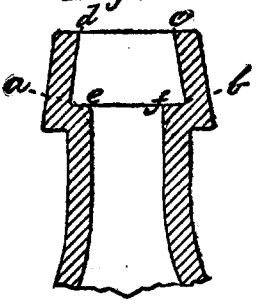


Fig. 4.

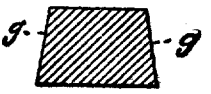


Fig. 3.

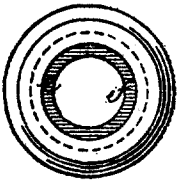


Fig. 5.

Fig. 6.

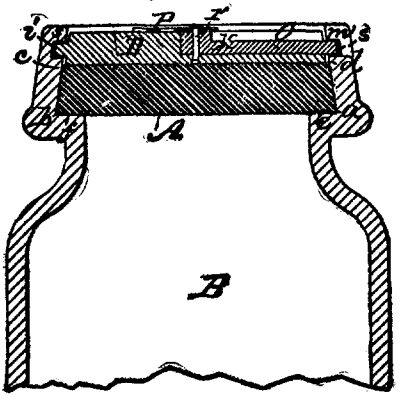
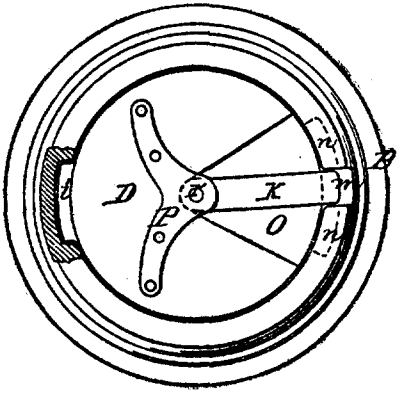


Fig. 7.



by means of the plate P, and rivet r, to move in a horizontal direction. The movable arm K extends beyond the periphery of the plate D, for the purpose of extending into an inclined recess, n, of the jar B, and which serves as a locking bar when the plate D is inserted in its place, with the extension i on one side of said plate also inserted in the recess n, Figure 7. Before inserting said plate D in position, a thin strip of tin or other metal, S, Figure 6, corresponding in form to the groove n, is placed in said groove n, to prevent the arm K from chipping out the edges of the glass. The plate D is then introduced by holding it in an angular position, inserting the extension i into the groove n (shown at Figure 7), when the plate D can be forced down to its seat by allowing the end of the locking bar K to pass through the notch m in the jar B, Figure 7, and be firmly secured to the jar by forcing the arm K to either side of the notch m in the inclined recessed groove n. Having described my invention, which I claim as new, and desire to secure by letters patent of the United States, is—A bottle or jar having a receptacle for a cork made in the form of a truncated cone, with its base or larger diameter innermost, and formed with an annular ring or shoulder at its bottom, in combination with a solid cork of rubber or other elastic and compressible material, made to fit tightly therein, and press with force against the converging sides of said receptacle, substantially as and for the purposes set forth."

It appears from the file wrapper and contents that in the first instance De La Vergne assumed to have invented only an improvement in bottles, the claims being in substance for a bottle with a receptacle for the cork in the form shown in the patent, but nothing was claimed for the cork in combination with the bottle or otherwise. The specification was criticised and the claims rejected on references to the patents of Ramsey, Cronk, Baxter, and Shaw, and attention was called to Fig. 11, English patent No. 2,361, A. D. 1877, of Warner and Tully, and to patent No. 208,043, of Seybold. Thereupon a second application was made, in which the claim was for a "bottle or jar having a receptacle for the cork made in the form of a truncated cone, in combination with a shoulder at the base of said cone, and a cork of rubber or other elastic and compressible material, also made and used in combination therewith as described." This claim was rejected June 23, 1880, "for indistinctness in that the last two lines compel reference to the specification to make it intelligible," and also "on references previously cited, especially Baxter and Shaw." The specification was again criticised, and the suggestion made that "the description should be amended to disclose the manner of compressing and inserting the stopper into the neck of the bottle." "This," the applicant responded by letter of June 28, 1880, "could be readily effected by any of the devices generally in use for corking bottles; but, for special reasons given in the amended or substituted specification, we prefer to use a device which has been the subject of an application for letters patent, filed May 11, 1880;" and with that letter he sent another specification which he suggested might be substituted for the one on file. The office responded July 3d, refusing to enter the amendment without specific direction, and, besides noting further corrections which would be necessary in the specification proposed, suggested an amendment of the claim for the purpose of removing uncertainty whether it covered an article or combination; the wording proposed being that of the claim as allowed, lacking the word "solid" before "cork." Accordingly, on July 29th, the applicant gave specific direction for the substitution of the specification last proposed, together with a new description of Fig. 6, and for the amendment of the claim as stated. The office admitted that this claim escaped the references before cited, but declared it anticipated by the patent of Parker (No. 41,532), which had been found. On August 13th the applicant proposed an amended drawing of Fig. 6, an additional drawing, Fig. 7, the insertion of the word "solid" in the claim, and later, in conformity with requirements of the office, made further alterations in the specification, but not of a character which need be noted. Thereupon the patent was granted. Except as stated, no change was made in the drawings which accompanied the first application, and the change made in Fig. 6 affects no question involved in this appeal. The bottles made, used, or sold by the appellees, it is asserted, were made under and in conformity

with letters patent No. 327,099, granted September 29, 1885, to William Painter. The cause was heard upon the pleadings and proofs, and a final decree entered that the bill be dismissed for want of infringement by the defendants of complainant's patent.

The substance of the very elaborate arguments made in support of the appeal is contained or suggested in the following extracts from the brief of Mr. Carter: "The great desideratum was some contrivance in the shape of an external stopper which would not require outside fastenings of any kind. De La Vergne solved this problem. He first hit upon the idea that the article of India rubber, and other materials of similar qualities, would, by their own elastic and expansive force, when powerfully compressed by a machine and inserted in a recess below the mouth of a bottle, expand and fill the recess so as to make a perfectly tight joint. He had two difficulties to contend with. The first was to so overcome the internal pressure that after the bottle was withdrawn from the machine, and especially after the pressure had increased by fermentation or otherwise, the stopper would not be blown out. The other was that India rubber deteriorated in quality and lost its elastic property by age, and the joint was thus likely to become broken and allow the gas to escape. He overcame both these difficulties by making the form of his recess conical, and with an annular ring or flange at its base so constructed that the stopper, by virtue of its elastic property, would, when first inserted, make a joint against that, and thus confine the pressure from within to a part only of the inner surface of the stopper; and when it had lost its elastic power, and had become contracted, so as to break the joint at its side, the expansive power of the contents of the bottle would force it up the cone, and by a wedging action preserve the joint. This latter result could not, perhaps, be gained unless the rubber, in losing its expansive power, became at the same time more rigid, a quality which De La Vergne was the first to avail himself of. All the elements of the combination which produced this result had been previously employed in this very art of stoppering bottles. The conical recess in the bottle neck was not new; the elastic cork or stopper was not new; the flange at the bottom was not new; the use of the internal pressure to make a tight joint was not new; but nobody had before combined them for the purpose and with the result of making an effective stopper against liquors under pressure without the aid of outside fastenings, or for any other purpose. In this contrivance, De La Vergne displayed several distinct forms of novelty: First. He was the first to grasp the idea that one might rely for making a tight joint, in the first instance, wholly on the expansive power of the rubber stopper, provided the whole of that power were employed, in the first instance, in lateral expansion; that this would first force the sides of the stopper tightly against the sides of the recess, and then (its expansive power not yet being exhausted) would force it against the flange, and make a joint there. Second. He was the first to grasp the idea that, to accomplish the end he had in view, the stopper must be, at first, wholly seated within the neck of the bottle, because if, when inserted, any part remained above the neck, that part would tend to pull the rest out of the bottle. He perceived that the end he had in view—namely, to dispense with outside fastenings—was one of the requirements for its own accomplishment, for outside fastenings would or might require a large part of the cork to be outside the bottle neck. In short, he perceived, and fully employed what had never before been fully employed, the peculiar qualities of the material which he used; namely, that, while rubber is by no means as elastic as many other substances, its elasticity has very wide limits, so that its original form may be prodigiously distorted, and its available expansive force correspondingly increased. His device was to shorten the lateral and increase the vertical diameter of his stopper, and thus secure its entire elastic power for lateral expansion. And inasmuch as rubber has very little compressibility, in the scientific sense of that word, the whole of the force employed with the machine in shortening the lateral and lengthening the vertical diameter of the stopper is, when it is forced to its recess, exerted in its effort to regain its original form; that is, in lateral expansion. The cork thus springs to its recess at a jump. It has no direct tendency to go out, but, on the contrary, to remain there. Its tendency to expand vertically, and thus to go

out of the bottle, is secondary only, and because of the resistance to further lateral expansion furnished by the sides of the bottle neck. Most corks wish to go out rather than in. This prefers to stay in. Third. He was the first to use a conical recess in a bottle neck in combination with a cork to which a prodigious power of lateral expansion had been given by machine insertion, as a machine, operated by the increased pressure from beneath, to preserve the joint by a wedge action, and thus enable the stopper to continue to perform its function after it had lost its elasticity. It will be observed that De La Vergne's specification requires the cork to be made larger than the receptacle which holds it. This means, of course, larger laterally, but not very much larger in cubical contents, as he evidently by his drawing assumes that the cork is to be substantially seated in its recess; and as already pointed out, if it were made greatly larger, like ordinary corks, inasmuch as rubber has little compressibility, there would necessarily be a large part outside of the recess, which would not only not aid the object in view, but would hinder it. With this knowledge of the characteristics of De La Vergne's invention, all the suggested anticipations in the record are easily avoided. * * * Inasmuch as De La Vergne did not pretend to patent a conical bottle neck, the use of such a bottle neck, with an ordinary cork, of the kind, and in a manner, and for a purpose, having none of the characteristics of De La Vergne's contrivance, would not be an anticipation. Certainly, such a use, if later in date, would not be an infringement of his patent, and therefore, if earlier, could not be an anticipation. Any use of a conical recess in a bottle, in order, if earlier in date, to be an anticipation of De La Vergne's invention, or, if later in date, an infringement, must be in combination with a cork possessing the characteristics of De La Vergne's stopper. It must be (a) made of rubber or other similar elastic material, larger than the bottle, and yet not so much larger as when inserted to leave any considerable part outside the bottle, so as to create a tendency to work itself out; (b) it must be insertable by machine only. The powerful compression necessary in order to convert the requisite amount of lateral into vertical diameter is an essential characteristic of the cork in De La Vergne's combination. * * * The contrivance thus discovered by De La Vergne is well described and embraced in the specification of his patent. It was by a denial of this proposition that the learned judge in the court below reached the conclusion that the defendants were not guilty of an infringement."

Thomas A. Banning and Ephraim Banning (James C. Carter and Hubert A. Banning, of counsel), for appellant.

Edmund Wetmore (Robert H. Parkinson, of counsel), for appellees.

Before WOODS, Circuit Judge, and BAKER and GROSSCUP, District Judges.

WOODS, Circuit Judge, after stating the case, delivered the opinion of the court.

We are of opinion that the circuit judge did not err in holding the patent to be limited to a conical or cone-shaped cork. That the inventor so understood when he first claimed the combination of bottle and cork is conceded, and is demonstrated by the explicit language both of the claim and the specification. It is true that the language of the specification and of the claim of the patent is different in this respect from that first used in the application, but the correspondence contained in the file wrapper discloses no purpose to change the character or scope of the invention in this particular. To say that the change is immaterial because when in place the stopper necessarily conforms to its seat, and has the same effect as if it had been conical before insertion, is evasive of the

question. The mechanical and practical effect of the stopper may not in any degree depend upon its original form, but a patent limited to a particular form of cork is necessarily more narrow than a patent which covers any form that may be compressed into and made to fill the seat designed for it. The difference is so essential as to be determinative of the question of infringement. If the claim of the patent is not limited to a cork made in the form of a truncated cone, it is an enlargement beyond the scope of the original application, which alone was supported by the required oath, and for that reason the patent would seem to be invalid. Eagleton Manuf'g Co. v. West, Bradley & Carey Manuf'g Co., 111 U. S. 490, 4 Sup. Ct. 593; Machine Co. v. Featherstone, 147 U. S. 209, 229, 13 Sup. Ct. 283. We are of opinion, however, that, when the patent is construed with reference to the specification and drawings in their final shape, there can be no reasonable doubt that the claim is limited to a conical cork. It is only a cork made in that shape which, when inserted in the receptacle, will most completely fill the space, "fit tightly therein, and press with force against the converging side," equally from bottom to top, and give the best effect to that power of lateral expansion, on which, it is asserted, De La Vergne "was the first to grasp the idea" of relying "for making the tight joint, in the first instance." Fig. 4 represents the cork in the form of a truncated cone. There is no suggestion in the specification that it may be of a different form. On the contrary, the following expressions, considered together, are unmistakable: "This invention consists in a bottle or jar having a receptacle for the cork or stopper made in the form of a truncated cone, with its base or larger diameter innermost." "The said cork or stopper is made larger than the receptacle which holds it, and is compressed and inserted to its seat, where it expands with the elastic force due to compression in an oblique and upward direction, all of which will be apparent, reference being made to the drawings, wherein * * * Fig. 4 is a cross section of the cork." "By reference to Figs. 1, 4, and 6 it will be observed that, when the cork is inserted in a bottle or jar, the base or greater diameter of the cone-shaped cork is innermost, and forms a wedge or dovetail, and having been compressed, the converging sides g g press with force against the sides of the cork receptacle." These expressions cannot without distortion be made to mean that the cork, when forced into the receptacle, becomes cone-shaped. The clear purpose was to say that, by reason of being cone-shaped and larger than the receptacle, when inserted it will fit tightly, and press with force against the sides.

This conclusion does not rest upon an implication, but upon the fair and reasonable construction of the patent. To say that it deprives the patentee of a part of his invention is to beg the question; and it is scarcely better to say that it deprives him of his whole invention because "every one can see, and it is not disputed, that a cylindrical cork will operate as well as a conical one, and is much more easily and cheaply made." That argument might be pertinent to the question whether or not upon any construction

the patent shows invention, but, as against the specification and drawings, it is of little weight in determining what the construction should be. Indeed, unless the patent be limited to a cork of the particular form described, and when so limited can be upheld, we think it clear, in view of the prior art, that it contains no invention. Bottles and jars with receptacles for their stoppers in the form described, it is conceded, are not new. They are shown, in this record, in the patents of Stocker, Cronk, Baxter, Shaw, Parker, and Seybold. Corks in conical form, and made of rubber, are likewise old, and, of the patents mentioned, are shown in those of Parker, Shaw, Baxter, Seybold, and Stocker; and in some of them the elastic and compressible, or, as it would perhaps be more nearly accurate to say, pliable or flexible, qualities of rubber, perform, and were designed to perform, the same offices as in the combination of De La Vergne. In the case of Temple Pump Co. v. Goss Pump & Rubber Bucket Manuf'g Co., 7 C. C. A. 174, 18 U. S. App. 229, and 58 Fed. 196, where the patent was "for improvements in expansion rubber buckets for chain pumps," the question of infringement turned upon the peculiar qualities of India rubber, and the opinion delivered in that case is in some respects applicable to the present discussion. Without quoting literally, we may say here, even with more emphasis than we said there, that it cannot be pretended that the characteristics of rubber which are brought into play—its powers of compression, expansion, and elasticity—were not already well understood, and that, besides its use in the earlier patents in the particular art in question, its employment in various arts and manufactures had made its qualities so well known as to leave but little room for invention merely in devising new forms for old uses. Witnesses and counsel have not omitted to point out with elaborate precision the particulars in which the bottles and stoppers of the earlier patents differ from each other and from those of the patent in suit,—differences which are accidental, and in most instances might be made to disappear by substituting one form for another, without disturbing the relation and operation of essential parts, and without the display of invention. In considering the force of the prior art in any case, the question is more of the identity than of the differences between the old and the new. If the novelty claimed for the new is found in the old, in substantially the same form and performing in a useful degree the same function, the anticipation must be recognized, and it becomes a waste of effort to look after details of difference which are irrelevant and cannot affect the conclusion. For example, the patent of Stocker shows a bottle with a receptacle and a cork of similar form and in the same relation to each other as in the patent of the appellant, and performing in a degree and in the same manner the same functions. The cork is described as elastic, and, filling the receptacle, it rests upon a shoulder or annular ring below, the necessary and manifest effect of which would be to prevent the cork being thrust below its proper position, and to diminish the amount of internal pressure exerted on the under surface. It is also declared in the specification that the inner por-

tion of the neck of the bottle should "be expanded or rather wider than the lip of the neck, whereby the cork, by expanding and assuming that form, will be prevented from becoming accidentally * * * withdrawn from the bottle neck, and will be held more firmly therein." To meet this explicit description and anticipation of every characteristic feature and advantage of De La Vergne's combination what suggestions are made?

1. It is urged that the cork of the patent in suit must be inserted in its place under powerful compression by a machine, "so that its original form may be prodigiously distorted, and its available expansive force correspondingly increased"; or, as it is also expressed, there must be "a bottle neck in combination with a cork to which a prodigious amount of lateral expansion has been given by machine insertion." That is to say, the cork is to be inserted by machine with such force as to make it tight enough to stay, and, excepting the use of a machine, that is the meaning of Stocker's specification. But the use of machines for inserting stoppers in bottles was already so well understood that there could be no novelty in that mode of insertion, and whatever advantage results from it is of degree merely. Besides, we are not able to agree that the claim of the appellant's patent is limited to a cork inserted by a machine. In response to a demand from the patent office, made presumably for the purpose of eliciting evidence of the practical utility of an invention which required the insertion of a cone-shaped cork larger end foremost, he added to the specification the clause concerning "the corking apparatus"; but we do not suppose that it was intended, or rightfully could have been required, that he thereby should limit his claim to a combination of bottle and cork effected by machinery, and we do not think that his compliance with the suggestion or demand of the office had that effect.

2. It is said that the receptacle in the neck of Stocker's bottle was made in the process of blowing, and for that reason is necessarily defective. If the defect be real and more than a matter of degree not affecting the question of patentability, it involved no invention to revert to bottle necks put on by the process of welding, from which Stocker departed for the sake of economy. If, too, instead of a bottle for sauces, he had been planning for liquids which are bottled under pressure, he would have been under no necessity to invent, but simply to adhere to the use of bottle necks put on in the old way, and to insert his corks by means of machines already in use. Indeed, his specification says that, "in order to facilitate the introduction of the cork ring or improved stopper," he preferred "to expand the lip or upper edge of the part, so as to cause it to assume a slightly bell-mouth form"; and, if unknown before, that would have been a fair suggestion of the use of converging tubes as means for compressing and forcing the corks or stoppers into place.

3. Stocker's cork, it is said, differs from that of the appellant in that its central portion is made of glass, provided with screw threads and with a roughened or milled glass head; its outer portion is made of a ring of corkwood, etc., and it is not capable of

insertion by compression through a tapering tube. But Fig. 3 of the drawings of Stocker shows a solid block of cork, from which a piece, it is explained, is to be removed for the admission of the glass portion, and it manifestly required no invention to reject the glass head, and by forcing the solid piece of cork into place, either by hand or by machine, to produce the exact combination of the appellant's claim. Instead of devising or using new corks with screw-threaded glass heads, it was only necessary to employ the old and familiar forms, and to put them in place by means which were not less well known.

4. It is said that the stopper of Stocker's patent is not a solid or one-part stopper, such as is required by the claim of the patent in suit. Whatever significance there is in that objection is answered by what has just been said. It required no invention to revert to old and simple forms. We do not perceive, however, that the word "solid" in the claim of appellant's patent requires that the cork shall be of "one part" or one material, "homogeneous throughout." That is not among the definitions of the word, and, if it were, its application to this patent is forbidden by the specification which recognizes it as "evident that some cheaper material, such as pottery, clay, or cheap metal, might be inserted in the central part of the cork to lessen its cost." If it were conceded that the solid cork means one made of a single homogeneous material, the appellees have not infringed, because their cork, though solid, contains different substances. If there were nothing else, the presence of the metal ring or staple would be enough, under the definition, to distinguish the stopper of the appellees from that of the appellant. Though the ring is designed mainly to be used in extracting the cork, yet the end imbedded in the body of cork, it is evident, constitutes a different and nonhomogeneous substance; and, if considerably enlarged, it might, by reason of the cheapness of the metal as compared with caoutchouc, serve materially to lessen the cost. At the same time, it is manifest that a cheaper substance within the body of the cork, if the exterior parts be sufficiently thick, will not affect the fitness of the cork for insertion and use in appellant's combination; and, this being so, it is evident that, unless limited to a conical cork, the combination is fully anticipated by the patent of Parker. It is not material that Parker's invention may have been intended mainly for putting up and preserving fruit. The appellant's jar is adapted and was designed in part for the same purpose, and the patent, whether considered as related to bottles or jars, contains no feature of construction, unless it be in the cone-shaped cork, nor principle or mode of action, which is not illustrated in the specification and drawings of Parker.

So, too, in the patents of Shaw and Baxter, there needs only to be a return to the solid cork, from which they sought to escape, and in each there is a perfect anticipation of De La Vergne's patent. It is true that the corks of Shaw and Baxter extend above the lips of the bottle, but, if the complainant's invention be worthy of the name, it cannot be evaded by making a part of the cork to

protrude from the mouth of the bottle. It is an unessential incident, easily removed, which would not affect the operation and efficiency of a cork the main body of which had been compressed into the converging receptacle. The specification and claim of De La Vergne do not in terms require that the cork be "wholly seated within the neck of the bottle," and we do not perceive it to be true, as contended, that "if, when inserted, any part remained above the neck, that part would tend to pull the rest out of the bottle." Unless that part were the larger, its tendency would be rather to follow the greater mass into the receptacle,—the disposition of elastic bodies when compressed or distorted being always to return to the original or normal form. It is evident that if the Shaw stopper were solid, and had been thrust into place by means of "prodigious compression," shortening the lateral and increasing the vertical diameter, and thereby creating a "prodigious power of lateral expansion," the portion outside the lip would have no effective power to pull out the parts within the neck. On the contrary, the vertical diameter both inside and outside being abnormally extended, upon withdrawal of the compressing force of the machine the force of lateral expansion alone, both within and without the receptacle, would come into action, and the portion of the cork outside the receptacle would gather or at least tend to gather into a cap or bulb over the mouth of the bottle, with shortened vertical and extended lateral diameter. To say the least, the tendency to pull out would not equal the tendency to be drawn in, because of the greater mass being within the receptacle.

But, without further consideration of the prior art, we deem it sufficient to add that if the De La Vergne claim is not limited to a cork in the form described it necessarily follows that the patent covers any and all kinds of stoppers made of rubber, common cork, or other elastic and pliable material, when inserted in a cone-shaped bottle neck, under such compression as to cause it to fit tightly and press with force against the converging sides of the receptacle, no matter what the form before insertion. The art of stoppering bottles had long been too well advanced to admit of a claim so broad; the patentee did not conceive it; and no ingenuity of argumentation or charm of eloquence can justify his efforts to appropriate it. The decree below is affirmed.

BRAUER et al. v. CAMPANIA NAVIGACION LA FLECHA.

(Circuit Court of Appeals, Second Circuit. March 5, 1895.)

1. SHIPPING—LIBEL FOR LOSS OF CATTLE—PRACTICE.
   Where cattle injured by perils of the sea are thrown overboard together with others not injured, the failure of respondent to prove a definite number as injured does not make him liable for all that were lost, but the court will endeavor to ascertain the number injured with as near an approach to accuracy as the testimony will permit.
2. SAME—CONSTRUCTION OF BILL OF LADING—EXCEPTED PERILS.
   The sending overboard, during a severe storm, of sound cattle along with the maimed, without any attempt to separate and save the former,