

tions of the twentieth, twenty-fifth, and twenty-eighth claims, bears some resemblance to Jensen's device for wiping inside of the advancing cans. The latter is certainly a means for doing the same work in a similar manner. But Leavitt claimed this device only in combination with "a means, substantially as described, for advancing the can bodies, * * * means for moving the can body along from the horn over the solderer, substantially as specified," and "can-forwarding mechanism for conveying the cans from the horn through and over the solder bath." The means for advancing the cans and can-forwarding mechanism specified, which are elements of each of these claims, differ from the means and mechanism of Jensen's machine, as we have heretofore shown, by comparison of the latter machine with the Norton soldering machine. These claims must be limited to the upper and lower tracks, supporting arms and shafts, wheels, chains, blocks, brackets, rollers, saddles, and the rest of the complicated mechanism for conveying the can bodies through and over the solder bath, described in the specifications, or known equivalents for said can-forwarding mechanism. The law does not authorize an extension of said claims to cover the subsequently invented and comparatively simple can-body conveyor of the Jensen machine. This one principle of patent law strikes every one of these claims, with the possible exception of the twenty-second; and, in view of the length to which this opinion has already progressed, it becomes unnecessary and inexpedient to further continue comparing this machinery. We have gone down the list, and shown that each claim covers a combination of elements not found in Jensen's machine, and that is enough. The decree is reversed, and the cause will be remanded to the circuit court for the district of Oregon with directions to dismiss the bill, with costs.

S. F. HEATH CYCLE CO. v. HAY et al.

(Circuit Court, D. Indiana. April 22, 1895.)

No. 9,064.

1. PATENTS—VALIDITY OF COMBINATION CLAIMS.

A combination, to be patentable, must produce a single new and useful result, or an old result in a better or cheaper manner; and if it only produces an aggregate of single results, each the complete result of one of the combined elements, it is not patentable. It is not necessary, however, that the mode of action of every element should be changed by each of the others, but, so long as a new and useful result is produced, it is immaterial whether their operation is simultaneous or successive. *Pickering v. McCullough*, 104 U. S. 310, criticised, and *National Cash Register Co. v. American Cash Register Co.*, 3 C. C. A. 559, 53 Fed. 367, followed.

2. SAME—ANTICIPATION—INVENTION.

The fact that, after a combination which accomplishes a new and useful result has once been produced, it would seem but a simple and easy matter to change a pre-existing device so as to produce the same result in the same way, is not sufficient to show anticipation by such device, when it appears that, although the latter was long in common use, no one had pre-

viously discovered its adaptability to accomplish the result achieved by the combination.

3. SAME.

The Johnson patent, No. 507,224, for a machine for inflating pneumatic bicycle tires without regard to the size, shape, or kind of nipple used upon them, held to be a patentable combination disclosing invention, and also held infringed.

This was a bill by the S. F. Heath Cycle Company against Thomas Hay and V. B. Willits, copartners as Hay & Willits, for alleged infringement of a patent for inflating pneumatic tires.

Paul & Hawley, for complainant.

Chester Bradford and Harry Bowser, for defendants.

BAKER, District Judge. This is a suit in equity by the complainant against the defendants for the infringement of letters patent No. 507,224, granted to complainant October 24, 1893, as assignee of Hastings H. Johnson, for improvements in inflating devices for pneumatic tires. The invention relates to means for inflating pneumatic tires for bicycles and other vehicles. Prior to this invention it had been necessary to provide a different sized threaded metallic air-pump hose coupling for each line or make of pneumatic tires, owing to the fact that the inflating tubes or nipples of the several makes of vehicles varied considerably in size, and owing to the manner in which their metal parts were threaded. The object of the invention was to provide a universal air-pump hose and couplings, which could be employed for inflating the tires of any machine. The defenses interposed are that the patent is invalid, and that, in view of the prior state of the art, the claims, if valid, ought to be limited so that the defendants' device would not be held to constitute an infringement. The defense of invalidity is bottomed upon the three following grounds: (1) That neither of the claims discloses a patentable combination of elements, but only what is known in law as "an aggregation"; (2) that the devices display no invention; (3) that the devices, in view of the prior state of the art, are not novel or patentable, but have been anticipated in all their essential features.

The invention described and claimed in the patent is a combination of devices arranged to be used for inflating pneumatic tires in common use upon bicycles. Such tires are generally provided with a rubber-covered metal nipple, having within it a valve that is adapted to open inward, and held to its seat by a suitable spring or other device, and by the pressure of the air within the pneumatic tire, thus preventing the escape of the air through the nipple. The end of the nipple is usually provided with an internal screw thread, and, prior to the invention of the device covered by the patent in suit, it had been customary to inflate such tires by means of an air pump having a hose upon the end of which was an externally screw-threaded coupling, adapted to screw into the internally screw-threaded end of the nipple on the bicycle tire. The inconveniences and disadvantages in the use of this device were many. As there are numerous styles of bicycles upon the market, and as the

threaded nipples on the tires were seldom alike, it resulted that a separate pump must be used for every different style of bicycle, or a separate connection must be had, specially adapted for use with each bicycle tire having differing nipples. This objection and the manner in which it was proposed to be overcome are fully set forth in the specifications of the patent. The device which forms the subject of the invention described and claimed in the patent consists of an air pump provided with a flexible hose or tube having an open end, into which the nipple of any pneumatic tire may be inserted. With the air pump having this particular arrangement of hose, there is combined a device for forming an air-tight joint between the hose and the nipple inserted therein, consisting of a loop arranged to encircle the hose, a follower arranged to slide along the sides of the loop, which thus forms guides to keep the follower from shifting out of place, and a screw connected to the follower, and adapted to be used to force the follower in against the outer surface of the hose, thereby clamping the hose around the nipple by compressing it between the curved inner surface of the lower part of the loop and the curved surface of the under side of the follower. By this means the hose is equally compressed at all points around its surface, and an air-tight joint is formed between the inner surface of the hose and the outer surface of the nipple. There are two claims in the patent:

"(1) The combination, with an air-pump hose, within the end of which the pneumatic tire nipple may be inserted, of means for compressing said hose about said nipple to form an air-tight joint between the tube; said means consisting in a loop, a follower, and a device for forcing in said follower, substantially as and for the purpose specified. (2) The combination, with an air-pump hose, wherein a pneumatic tire nipple may be inserted, of a loop surrounding said hose, a follower or gib adapted to operate within said loop, and a thumbscrew arranged in the end of said loop, pressing on the end of said gib, whereby said hose may be tightened on said nipple, substantially as and for the purpose specified."

It is earnestly contended that the claims of complainant's patent are void because they do not cover patentable combinations. It is urged that the action of the clamping device does not qualify the action of the pump, and that it is necessary, to constitute a patentable combination, that each element should qualify the action of every other element; and numerous authorities are cited which it is claimed support this position. The case of *Pickering v. McCullough*, 104 U. S. 310, a leading case upon this question, is mainly relied on to support this contention. Counsel quote from the opinion in that case, as decisive of the invalidity of the patent in suit, the following:

"In a patentable combination of old elements, all the constituents must so enter into it as that each qualifies every other; to draw an illustration from another branch of the law, they must be joint tenants of the domain of the invention, seised each of every part, per my et per tout, and not mere tenants in common, with separate interests and estates. It must form either a new machine of a distinct character and function, or produce a result due to the joint and co-operating action of all the elements, and which is not the mere adding together of separate contributions. Otherwise, it is only a mechanical juxtaposition, and not a vital union."

It is claimed that this case and others following it establish the doctrine that in a patentable combination of old elements all the constituents must so enter into it that each qualifies the mode of action of every other, and that each element must not merely perform its own part in the combination, but must also, in some way, be directly and immediately concerned in the performance of their respective parts by every other of the elements. No such doctrine as is claimed was essential to the decision of that case, nor is it fairly deducible from the particular language above quoted. All that can be claimed to be settled by that case is that a combination, to be patentable, must produce a single new and useful result, or an old result in a better or cheaper manner, as the product of the combination. If the combination produces an aggregate of several results, each the complete result of one of the combined elements, it does not constitute a patentable combination. There must be some new and useful result produced by the combination, but each element of the combination, so far as essential to the production of the single new and useful result, may act according to the law of its own nature or structure. As has been well said in the case of *National Cash Register Co. v. American Cash Register Co.*, 53 Fed. 367, 3 C. C. A. 559:

"If it were essential to a valid patent for any combination whatever that the mode of action of every element included in the combination should be changed by each of the others, it would have been impossible to sustain several combination patents which have in fact been upheld, as, indeed, it would be difficult to conceive of any mechanical combination which would be both possible and patentable. A screw or a lever can act only in one way, yet a screw and a lever may so act in combination as to produce, in consequence of their combination, a single new and useful result. Moreover, there is no intimation in the opinion in *Pickering v. McCullough* of a purpose to overrule the earlier decisions with which, upon the view taken of it by counsel, it would appear to conflict, nor has it in later cases, which are of course to be followed, prevented the supreme court from declaring the law of this subject in accordance with our understanding of it. *Blake v. Robertson*, 94 U. S. 728; *Parks v. Booth*, 102 U. S. 96; *Loom Co. v. Higgins*, 105 U. S. 580; *Clough v. Barker*, 106 U. S. 166, 1 Sup. Ct. 188; *Lake Shore & M. S. Ry. Co. v. National Car Brake Shoe Co.*, 110 U. S. 229, 4 Sup. Ct. 33; *Manufacturing Co. v. Sargent*, 117 U. S. 536, 6 Sup. Ct. 934."

It seems clear that the claims in the patent in suit come within the rule laid down in these cases, and cover a patentable combination. A single unitary result, that of inflating a bicycle tire, is produced by the co-operation of all the elements of the claims, and it is immaterial whether the operation of the elements is simultaneous or successive.

It is insisted that in view of the prior state of the art the patent in question does not disclose invention. It is claimed that the lathe dogs, scythe snath handles, scythe holders, saw handles, hose couplings for fire engines, and other like exhibits introduced in evidence have parts more or less analogous to some part of the clamping device constituting a part of complainant's combination, and that, in consequence thereof, the combination covered by the claims in suit does not involve invention. I perceive nothing in any of these devices which ought to be held to anticipate the com-

plainant's combination. None of them would suggest to a mechanic the combination in suit. The English patent, No. 18,147, and the choker model used upon the hearing, each show a device constructed and adapted to take the place of a valve in a flexible tube. They operate on the same principle as the Dart patent, No. 318,091, which is a cut-off device for the flexible tubes of fountain syringes. The choker devices are constructed and intended for use with the nipples of bicycle tires, and are used for the purpose of choking the nipple after the tire has been inflated, and thus preventing the escape of air therefrom. They take the place and perform the office of valves. It was suggested on the hearing that by making the choker of larger size and by changing the form of the follower this device could be used in the combination set forth in complainant's patent. This is doubtless true, but, if such a change would not involve invention, it is to be borne in mind that the complainant is not claiming the clamping device alone, but is claiming it in combination with other elements, the entire combination producing a single unitary result, namely, the inflation of any bicycle tire. The claims are for a combination which can be readily and economically used for the inflation of any bicycle tire, without regard to size, shape, or kind of nipple used upon it. The complainant was the first to discover a combination capable of producing this new and useful result by means of a simple and inexpensive device. In my opinion, it involved invention to change the form of the choker device, and provide it with a concave instead of a convex follower, and combine it with an air pump having a hose with an open end adapted to slip over any bicycle nipple, and by this means form an air-tight joint between the inner side of the hose and the outside of the nipple. The English device was patented in 1890, and that and the choker model have never been used for any other purpose than that for which they were designed. Indeed, they are incapable, without material change, of being used to accomplish the purpose to which the clamping device of complainant is applied. It is, of course, simple, after the thing has been done, and after complainant's patent has shown how it can be done, to make the necessary changes in the English patent and in the choker model, and to combine the same with the other elements of complainant's combination so as to produce the same result in the same way as complainant does. It is a fact, however, that these choker devices are many years older than the complainant's invention, and, though they were in common use to take the place of valves in the nipples of the pneumatic tires of bicycles, yet the users of them went on employing a different device for the inflation of such tires, and it remained for complainant's assignor to show that by his combination a device had been discovered which would provide a simple and economical means for the inflation of any pneumatic tire, regardless of size, shape, or style of nipple, or the kind of valve used therein. To one who has accomplished this result the quality of inventor should not be denied. *Topliff v. Topliff*, 145 U. S. 156, 12 Sup. Ct. 825; *The Barbed Wire Patent*, 143 U. S. 275, 12 Sup. Ct. 443, 450; *Consolidated Safety Valve Co.*

v. Crosby Steam Gauge & Valve Co., 113 U. S. 157, 5 Sup. Ct. 513; Manufacturing Co. v. Adams, 151 U. S. 139, 14 Sup. Ct. 295; Electric Co. v. La Rue, 139 U. S. 601, 11 Sup. Ct. 670; Stohlmann v. Parker, 53 Fed. 925, 4 C. C. A. 109; Machine Co. v. Dizer, 61 Fed. 102, 9 C. C. A. 382.

The foregoing are some of the cases in which the deviations from former devices were trifling, but the changes produced better results, and were held to constitute patentable inventions.

In the case of *Topliff v. Topliff*, supra, the court, speaking of the change in the patented device from former ones, observed:

"Trifling as this deviation seems to be, it renders it possible to adapt the Augur device to any side-spring wagon of ordinary construction."

And on this ground the patent was upheld. In the *Barbed Wire Patent Case*, supra, the court said:

"From this view of the state of the art at the time the patent in suit was issued, it is evident that Glidden can neither claim broadly the use of the plain or the twisted wire, nor the sharp thorns of barbs, nor, indeed, the combination of the two as they appear in the Kelly patent. * * * The vital difference in the two patents is in the shape of the barb itself."

And upon this difference the patent was sustained. In *Consolidated Safety Valve Co. v. Crosby Steam Gauge & Valve Co.*, supra, the principal thing that had been done by the inventor of the patent there involved was to make a change in the size and shape of the area of the valve outside of the beveled seat. In *Manufacturing Co. v. Adams*, supra, although the court found it difficult to differentiate between the patent in suit and previous devices, yet it was held that, as a better machine was produced, the patent therefor was sustainable.

Applying these principles to the patent in suit, I am of opinion that the device covered by it constitutes a patentable invention, and that it had not been anticipated by any prior patented device. It is not seriously contended but that, if the complainant's patent is valid, the defendants' device is an infringement of it. In my judgment, it is so palpable an infringement that it is needless to point out the coincidence of structure and operation of the two devices. It is apparent upon the most casual inspection. There will be a decree for the complainant.

THE BATTLER.

NEALL v. WESTERN ASSUR. CO. et al.

(District Court, E. D. Pennsylvania. March 8, 1895.)

No. 115.

1. MARITIME LIENS—DISTRIBUTION OF FUND—LIMITATION OF LIABILITY.

Holders of maritime liens of the same class are entitled, especially in proceedings for limitation of liability, to pro rata distribution, without regard to the dates of issuing process or obtaining decrees, unless their rights have been forfeited.