

consequences of self-imposed limitations. *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274, 278; *Fay v. Cordesman*, 109 U. S. 408, 3 Sup. Ct. 236; *Rowell v. Lindsay*, 113 U. S. 97, 5 Sup. Ct. 507; *McClain v. Ortmyer*, 141 U. S. 419, 12 Sup. Ct. 76.

Upon any fair interpretation of the terms of the fourth claim, can it be truly said that the defendant employs the plaintiff's invention thereby secured to him? We are constrained to give a negative response. Not only is the defendant's turn-over mounted on vertically moving tables instead of "laterally adjustable" ones, but it altogether lacks the "tilting support" of the patent. The billet or unfinished rail is sustained, not by the defendant's pivoted finger, but entirely by the table rolls, the grooves of which act as a stop to prevent any lateral movement of the piece of metal under treatment. In mode of operation, also, the two devices are substantially different. In the defendant's apparatus there is no "bulge or projection" to turn the rail by contact with a stationary abutment, but the defendant's turn-over finger is positively controlled and actuated at all times through the intermediary sway bar. Moreover, the defendant's finger not only turns the billet or rail, but by a continuous movement pushes the piece of metal sideways on the table until it registers with the next pass. In our judgment, the two structures cannot be deemed mechanical equivalents.

Our conclusion is that no infringement is shown, and the decree of the circuit court dismissing the bill is therefore affirmed.

STEINER FIRE EXTINGUISHER CO. v. CITY OF ADRIAN.

(Circuit Court of Appeals, Sixth Circuit. November 13, 1893.)

No. 101.

1. PATENTS—ANTICIPATION—CHEMICAL FIRE EXTINGUISHER.

A claim for the connection of a hollow journaled reel with the generator of a chemical fire engine, so that the contents of the generator may be discharged through a hose wholly or partially wound on the reel, is anticipated by well-known prior devices for forcing water and other liquids through a hose, while wound upon a reel, by the use of a hollow journal. 52 Fed. 731, affirmed.

2. SAME—NOVELTY.

As a hollow journaled reel is not wholly impracticable in machines for throwing water, where pressure is applied in the usual way, its mere application to the generator of a chemical fire engine does not involve invention, for the result attained in either case is merely one of degree. 52 Fed. 731, affirmed.

3. SAME—VALIDITY.

Patent No. 147,442, for a chemical fire extinguisher, is void for anticipation and want of invention. 52 Fed. 731, affirmed.

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

In Equity. Bill by the Steiner Fire Extinguisher Company against the city of Adrian for infringement of a patent. Bill dismissed. 52 Fed. 731. Complainant appeals. Affirmed.

Parker & Burton and Geo. Lothrop, for appellant.
John G. Elliott, for appellee.

Before BROWN, Circuit Justice, TAFT, Circuit Judge, and SEVERENS, District Judge.

TAFT, Circuit Judge. This is an appeal from a decree of the circuit court for the eastern district of Michigan dismissing the bill of the Steiner Fire Extinguisher Company, which seeks to enjoin the city of Adrian from using a chemical fire engine averred to be an infringement of the letters patent No. 147,442, granted to John H. Steiner February 10, 1874, on his application of January 5, 1874, and assigned by Steiner to the complainant below.

The defense is anticipation and want of novelty. The patent is for an improvement in chemical fire extinguishers. The only improvement in the Steiner machine which is material here is the use of a hollow journaled reel, upon which the hose is wound. The hollow journal is, at one end, permanently connected by a standpipe with the hose, while at the other end it is connected with the generator so that the contents of the generator may be discharged through the hose while the same is wholly or partially wound on the reel. The patentee says in his specifications:

"As the hose used with this class of engine is of such stiffness that it does not flatten or collapse, it may be filled while wound on the reel, or while being unwound therefrom. In bringing the engine into use, it is only necessary to draw off so much of the hose as is required. No connections require to be made, and no time is spent in making adjustments. The charge always passes through the entire length of the hose, whether it be partially wound on the reel or not. * * * I am aware that the hollow journaled reel, such as used by me in this engine, is not new; and therefore I lay no claim thereto, except in connection with the generator and the connecting pipe, as shown."

The fourth claim of the patent, which is the only one herein involved, is as follows:

"A chemical fire engine, consisting of a wheeled frame provided with a generator or extinguisher, and with a hollow journaled reel, N, the latter having its journal connected permanently to the generator by a pipe, M, and provided with a hose, O, coupled to it, as shown and described."

The generator of Steiner is filled with bicarbonate of soda, sulphuric acid, and water. The soda and sulphuric acid unite to form carbonic acid gas, the expansive force of which creates such a pressure as to expel the water mingled with the gas from the generator through the hose. This use of carbonic acid gas and water to extinguish fires was the invention of W. A. Graham, to whom was issued, under a special act of congress, a patent of July 9, 1878. All chemical fire engines since invented have used Graham's process. There have been small hand extinguishers adapted to be carried upon the back, and larger ones to be carried upon a wheeled frame drawn by horses from the engine house to the fire. The frame has generally been supplied with a reel, upon which the hose to be used is wound, or with a basket, in which it is coiled. The advantage of the Steiner patent is in the rapidity with which it can be brought into action, due—first, to the fact that the connection between the hose and the generator

is permanent, rendering unnecessary any delay in coupling; and, second, to the fact that the water and carbonic acid gas can be discharged through the hose without unwinding it. The claim relied on is admitted to be a combination of old parts, but the result, and the means of obtaining it, are said to be new.

The permanent connection of the hose to the generator on chemical fire engines was not new. That was shown in the patent of Latta, which was earlier by six months than the patent in suit. In this patent there was but one generator, cylindrical in form, which was journaled in a suitable supporting frame or carriage in such a way as to make it available as a drum or spool upon which the hose might be reeled or wound. The hose was permanently attached to the generator, and then was wound around it. By pulling the unreeling end of the hose, the entire generator was revolved, and its chemical contents were so agitated as to promote the generation of the necessary carbonic acid gas. No after coupling of the hose to the generator was necessary, for its connection with the generator was permanent. The generator had flanges upon it to keep the hose in position when wound. The discharge of the gas and water while the hose was unwound does not certainly appear to have ever occurred in chemical engines before the complainant's device. There is no reason why it might not have taken place in the Latta machine. Latta's specifications, in describing the operation of his machine, say that the leading hose is reeled off in the usual manner, and "then the gate, j, is opened so as to discharge the confined gas through the pipe, J, the leading hose, I, and the nozzle, Y." This leaves in some doubt whether, in the mind of the inventor, it was necessary, in his machine, to reel the entire hose off.

However this may be, it is very clear that several devices were well known before complainant's patent for forcing water and other liquids through a hose while wound upon a reel by the use of a hollow journal.

On an application filed May 10, 1873, there was issued to Orin B. Mason a patent for a device for thawing ice in water or gas pipes. This device consisted of a flexible pipe of lead, or other suitable material, wound about a revolving reel or drum, one end of the pipe being connected with the hollow portion of the axial shaft of the reel. The axial shaft was connected to a force pump, and the operation was as follows: The force pump, having been placed in a pail or other vessel containing hot water, forced a stream of the hot liquid through the coiled pipe, the open end of which was thrust into the frozen water or gas pipe. As the thawing out progressed, the stream of hot water was made to follow up the yielding obstruction closely by unwinding the pipe from the drum, so that the heat could be applied just where the work was done. In his specifications the patentee stated that it was evident that a reservoir of steam might be connected with the coil, and carried into the water or gas pipe, in the same manner.

Another device antedating complainant's invention, in which the same use of the hollow journal for the purpose of forcing liquid through reeled pipe is shown, is an English patent, of 1865, issued

to one Russ, for spreading liquid manure on land. The hose is wound on a reel supported on a wheeled frame. One end of the hose is connected to the fixed reservoir from which the manure is drawn, and the other is connected with the hollow journal, at the end of which is a receptacle with holes in it, like a water sprinkler, from which the manure is spread upon the ground. The reel is moved forward, from and back to the reservoir on the land to be treated, while the hose is reeled off and on with the movement of the reel. In this device the liquid enters at what is usually the nozzle end of the hose, and is discharged from the hollow journal, taking an opposition direction from that which it takes in complainant's device; but this does not, of course, change the principle of its working. The same thing is true of another English patent, of 1868, issued to one Headley, for a water sprinkler, which consisted of a wheeled frame carrying a windlass or drum, the axis of which was made hollow, and upon which a hose was wound. One end of the hose was connected to the hollow axis, while the free end was fitted with suitable connections for attaching it to hydrants or standards supplying water under pressure. At the end of the hollow axis were affixed suitable distributing media. The inventor stated the device could be used for extinguishing fires by attaching the free end of the hose to a fire engine.

It will thus be seen that in the use of a hose and reel in fire engines, and other machines for throwing water and other liquid, it was old, by means of a hollow journal, to secure one end of the hose permanently to the source of supply, and to force the water or other liquid through the hose while the hose was wound upon the reel.

To escape the manifest conclusion that application of such a device to a chemical fire engine did not involve any invention, the contention of counsel is that the use of such a device was poorly adapted to ordinary fire engines, where the propulsion of the water through the hose and out of the nozzle is caused by a pressure exerted at one end of the column of water, because the resistance caused by the curved sides of the hose, when wound, would so reduce the propulsive force at the nozzle as to make it impossible to throw the water a practicable distance; but that in the chemical fire engines this difficulty of resistance is entirely absent, because the force by which the mingled water and carbonic acid gas are thrown from the nozzle of the pipe is not applied only in the generator, but is generated in the hose as well. It is said that the mixture of carbonic acid and water is self-propelling, and, in addition, that the union of all of the bicarbonate of soda and sulphuric acid is not completed in the generator, but that particles of each, un-united, are carried along the escape pipe, to settle together at every turn and elbow in the pipe, there to unite, and to generate additional carbonic acid gas, and new pressure. On the ground that an ordinary knowledge of mechanics would lead one not to use the hollow journal reel as an improvement of the ordinary fire engine, it is claimed that the use of this device in a chemical fire engine did involve invention, for its use could only be suggested by the discovery,

that the device when used in chemical engines did not encounter the difficulty which made it impracticable in ordinary fire engines.

If it were true that the hollow journal reel was wholly impracticable in machines for throwing water through a wound hose where the pressure is applied in the usual way, and that this fact was well known and plainly manifest to every one, we might be compelled to acknowledge the force of the argument, but this is not true. This is shown by the fact that devices have been made, and patents have been granted, for hollow journaled reels to be used for fire engines and kindred purposes, in which water is expelled by force applied in the ordinary manner. There is the Dillon reel, patented at an earlier date than complainant's. It was for extinguishing fires in a house. It consists of a reel journaled in a bracket to be hung against the wall. The axis of the reel is hollow, and is permanently connected at one end with some source of supplying water under pressure, and at the other with the hose. The hose is wire lined, so as to enable the water to pass through it freely, even when wound on the reel. It is said that Steiner conceived his invention before the date of the Dillon application, and the court below seems to have conceded this. Whether Dillon's conception of his device antedated that of Steiner, is not material here. We only refer to Dillon's patent to show, what also appears from Headley's, that the impracticable character of the hollow journal reel in fire extinguishing machines, where water is thrown by force applied in the usual way, is not known or recognized by the ordinary mechanic, and does not seem to be well understood in the patent offices of England and America. In other words, the hollow reel is not so plainly inapplicable to ordinary fire engines that a patent for such a device like the Headley patent would not naturally suggest its use in a chemical engine. The new use is not an analogous use. It is the same use. It seems clear to us, therefore, that it did not involve invention to take the hollow reel from the ordinary fire engine or water sprinkler, and put it on a chemical engine. The introduction of the hollow journaled reel in the chemical fire engine was nothing but the application of an old device to a similar subject, with little or no change in the manner of application, and with no result substantially distinct in its nature. The hollow journaled reel may have been better adapted to the use in the chemical engine than in the ordinary steam pressure pump engine; but this, it seems to us, is a mere difference in degree of the result, and did not involve, in bringing it about, anything but what would naturally occur to one skilled in the art. Similar cases may be found in *Roller-Mill Co. v. Walker*, 138 U. S. 124, 11 Sup. Ct. 292; *Electric Co. v. La Rue*, 139 U. S. 606, 11 Sup. Ct. 670; *Blake v. City and County of San Francisco*, 113 U. S. 679, 5 Sup. Ct. 692; *Pennsylvania R. Co. v. Locomotive Engine Safety Truck Co.*, 110 U. S. 490, 4 Sup. Ct. 220; *Preston v. Manard*, 116 U. S. 661, 6 Sup. Ct. 695.

For the reasons given, the decree of the court below is affirmed, with costs.

NORTON et al. v. EAGLE AUTOMATIC CAN CO.

(Circuit Court, N. D. California. November 27, 1893.)

1. PATENTS—INJUNCTION—VIOLATION—CONTEMPT.

Violation of an injunction is not excused by the fact that the infringing machine is made according to a junior patent, for, on a question of infringement, such patent cannot be introduced, even as prima facie evidence of a substantial difference. *Blanchard v. Putnam*, 8 Wall. 420, applied. *Truax v. Detweiler*, 46 Fed. 118, and *Harrow Co. v. Hanby*, 54 Fed. 493, disapproved.

2. SAME—INFRINGEMENT.

The Norton patent for a can-heading machine (No. 267,014) is infringed by a machine made according to the Merriam patent of June 3, 1884.

In Equity. Proceeding to punish defendant for contempt in violating an injunction issued in the suit of Edward Norton and Oliver W. Norton against the Eagle Automatic Can Company for infringement of letters patent No. 267,014, issued November 7, 1882, to Edwin Norton, for a can-heading machine. Defendant adjudged guilty.

For report of decision on motion for preliminary injunction, see 57 Fed. 929.

Munday, Evarts & Adcock and Estee & Miller, for complainants.
John L. Doone, Pillsbury & Hayne, and S. C. Denson, for respondent.

MCKENNA, Circuit Judge, (orally.) The plaintiffs' patent is for applying, automatically and exteriorly, can heads to can bodies. It was construed in *Norton v. Jensen*, 1 C. C. A. 452, 49 Fed. 859, very broadly, and held of a primary character; "standing," to quote the court, "at the head of the art, as the first machine ever invented for applying tight exterior fitting can heads to can bodies automatically, and appellees are entitled to a broad and liberal construction of the claims of their patent."

The order of injunction was for the defendant, its agents and servants, to "absolutely desist and refrain from making, using, or selling any machine for putting on the ends of fruit or other cans which is an infringement of the claims of letters patent of the United States No. 267,014, granted to Edwin Norton on November 7, A. D. 1882; also, from making or selling any machine for applying to can bodies heads fitting outside of the same, containing the combination of a device for sizing the exterior diameter of a can body to conform to the exterior diameter of the can head, and holding the same so sized while the head is applied; said sizing and holding device having its end enlarged to fit the exterior diameter of the can head so as to leave an annular space between it and the can body for the reception of the flange of the can head, with a device for forcing the can head into the said annular space, and thereby applying the head outside of the can body,—or any colorable imitation or evasion or equivalent thereof." There was also a prohibition against using the above device in combination with other devices