

RAPID SERVICE STORE RY. CO. V. TAYLOR *ET AL.*

*Circuit Court, E. D. Michigan.*

August 3, 1887.

1. PATENTS FOR INVENTION—ANTICIPATION.

Letters patent No. 325,425, for a cash and parcel carrier, issued September, 1885, to Robert A. McCarty, consisting of the combination, with a way and a carrier adapted to move thereon, of a spring, arranged to give an initial impetus to the carrier for propelling it on said way, are not anticipated by the English patents for atmospheric railways, issued to Jacob Brett in 1845, and to Thomas Swinburne in 1846, nor by the loom patents.

2. SAME—LIMITATION OF CLAIM.

The first claim of said letters patent for the combination, with a way and carrier “of means for giving an impetus to” said carrier, is limited by the concluding words, “substantially as set forth,” and is but a claim for the way, the carrier, and the springs.

3. SAME—SPECIFICATIONS.

The third and fourth claim of said letters patent are for the combination of a way, a carrier, and a spring, “constructed and arranged” to give the carrier an initial impetus. *Held*, that it was unnecessary for the details of such construction and arrangement to be specified.

4. SAME—INFRINGEMENT.

Said letters patent are infringed by a device in which the carrier is propelled by the elasticity of air compressed between two pistons in cylinders of different sizes.

5. SAME—INVENTION.

Claim No. 17 of letters patent No. 325,618, issued September, 1885, to Robert A. McCarty, for a cash and parcel carrier, consisting of the combination with a carrier of a receptacle, removably locked to such carrier, and a spring cover for the receptacle, held permanently by the carrier, is void for want of invention, being but the combination of two elements which are used separately in lanterns.

In Equity.

This was a bill in equity for the infringement of letters patent No. 325, 425, issued to Robert A. McCarty, September, 1885, for a cash and parcel carrier; and patent No. 325,618, issued to McCarty upon the same date, for a new and useful improvement in store-service apparatus. The principal patent for a cash and parcel carrier contained the following statement of the invention:

“The invention consists, principally, in projecting the carrier containing or supporting the cash or parcel along the way over or upon which it travels, by giving it an initial impetus of sufficient force to impel it to its destination, as distinguished from impelling the carrier by a continuously acting force, as by gravity, in the use of inclined ways down which the carrier travels.

"In carrying out my invention, I prefer to employ springs in which the force is stored up to project the carriers, and these springs I prefer to make stationary, as distinguished from being supported by the carriers, and traveling therewith. I also prefer to use a horizontal way over which a carrier travels back and forth, and to locate a projecting device at each end of the way, forgiving the carrier an initial impetus sufficient to drive it to the other end of the way.

"For the purpose of illustration, I have shown and shall now describe a specific form of apparatus embodying my invention, wishing it to be understood, however, that I do not limit myself specifically thereto, since the principle of the invention is capable of being embodied in various forms of apparatus."

Claims 1, 3, 4, 6, and 7 are charged to have been infringed by defendants, and they are as follows:

"(1) In a cash or parcel carrier, the combination with a way and carrier adapted to move on said way, of means for giving an impetus to said carrier, for the purpose of propelling it upon said way, substantially as set forth."

"(3) In a cash or parcel carrier, the combination, with a way and carrier adapted to move on said way, of a spring constructed and arranged to give an initial impetus to said carrier, for the purpose of propelling it on said way, substantially as set forth.

"(4) The same as the third, except that the spring is described as a 'stationary' spring."

"(6) In a cash or parcel carrier, the combination with a way and carrier adapted to move on said way, of a projecting device located at each end of said way, for giving such carrier an initial impetus sufficient to drive it over the way substantially as set forth.

"(7) The same as number six, except that the words 'stationary spring' are substituted for 'projecting device.'"

Patent No. 325,618 describes a peculiar detachable cup, and it was claimed that defendant infringed the seventeenth claim of this patent.

*Messrs. Parker & Burton and M. B. Phillip*, for plaintiff.

*Geo. H. Lothrop*, for defendants.

BROWN, J. 1. Objection is taken to the first claim of plaintiffs principal, patent, (and the sixth is like unto it,) that it is an attempt to assert a monopoly for every method of giving an impetus to a cash carrier, irrespective of the motive power; in other words, that it is a claim for the principle of propulsion, and not for a mechanical contrivance. We think this claim is either too broad, or too indefinite to be of any service to the plaintiff. If it be construed as a combination of a way, a carrier adapted to move on such way, and of any and every means for giving an impetus to such carrier, then it is too broad, since it would include propulsion by the hand. It is an attempt to patent the principle of propelling a carrier by an impetus given at the end of the wire. It is well settled that this cannot be done. Thus, in *Wyeth v. Stone*, 1 Story, 273, it was held that a claim for cutting ice of

a uniform size, by means of an apparatus worked by other power than human, was the claim of an abstract principle, and therefore void. So in *O'Reilly v. Morse*, 15 How. 62, 112, the eighth claim of the Morse patent, which was the use of the motive power of the electric or galvanic current,

however developed, for marking or printing intelligible characters at any distance, was held to be an attempt to shut the door against the inventions of other persons to bring about the same result, and, therefore, not maintainable. Curt. Pat. §§ 243, 244.

But if this general description is to be construed as limited by the concluding words of the claim, “substantially as set forth,” and this we deem to be the proper construction, (*Stone v. Sprague*, 1 Story, 270; *Gray v. James*, Pet. C. C. 394; *Seymour v. Osborne*, 11 Wall. 516, 547,) a new difficulty is encountered, since his use of springs is only one, and the “preferable,” method of giving the carrier “an initial impetus of sufficient force to impel it to its destination, as distinguished from impelling the carrier by a continuously acting force, as by gravity, in the use of inclined ways.” The “initial impetus” here described is quite as general, and, in fact, a mere restatement, in slightly different language, of “the means for giving an impetus” stated in the claim, and is equally objectionable as embodying a principle.

We are forced then to construe this claim in connection with the springs described in the specifications and illustrated in the drawings; and thus limited, the first and sixth claims are practically the same as the third and fourth, viz., claims for the way, the carrier, and the springs used in producing the impetus.

2. No infringement is claimed of the second and fifth claims. It is also argued that the third and fourth claims are void upon their face, because they do not contain elements enough to make an operative combination. They are for a way, a carrier, and a spring, but no mention is made of the means of putting the spring under tension, viz., the cord by which the rubber spring is elongated, nor of any means of holding the car while the spring is being put under tension, viz., the catch, which holds the car until the spring is stretched, and then releases it and permits the spring to propel it. We had occasion to consider this subject very fully in the case of *Inspirator Co. v. Jenks*, 21 Fed. Rep. 911, and then came to the conclusion that in drawing the claims for a combination patent it was not necessary to include any elements except such as were essential to the peculiar combination, and affected by the invention. Other portions of the machine are usually shown in the drawings to exhibit their relations to the patented combination, but they are wholly unnecessary to the validity of the claims. As said by the supreme court in *Loom Co. v. Higgins*, 105 U. S. 580, 586: In setting forth his claims, the patentee “may begin at the point where his invention begins, and describe what he has made that is new, and what it replaces of the old. That which is common and well known is as if it were written out in the patent, and delineated in the drawings.” It is perfectly manifest to the ordinary observer that a cord passing over a pulley is necessary to stretch the rubber spring, and the catch to hold the car while the tension is being applied. But neither of them were any part of the invention. While the omission of anything absolutely material to the utility of

the invention described is a fatal defect in a description, this rule does not apply where the omission would naturally

be supplied by any person skilled in the art when making the device. In *Carr v. Rice*, 1 Fish. Pat. Cas. 198, 204, it is said that the patentee need not specify the kind of power to be applied, nor the method of applying it in working the machine. Indeed, it is extremely dangerous to the validity of a claim to include unnecessary elements of a combination, since an infringement would be avoided by the omission of any one of the elements. Of course, the omission of an element becomes easier, as the number of elements increases. For example, if the patentee had included the cord and catch, and the infringer had discovered some method by which the spring could be operated without such cord or catch, it would be fatal to plaintiff's case, though the infringing device had included every other element of its claim. The claims themselves speak of a spring "constructed and arranged" to give the carrier an initial impetus, but the details of such construction and arrangement are quite unnecessary to be specified. In this view the cord and catch are really a part of the spring itself.

3. Starting then with the assumption that this is a patent for a spring projector of a carrier over a wire railway, we are next led to consider whether it is anticipated by any of the devices offered in evidence. The English patent to Jacob Brett, issued in 1845, for atmospheric propulsion, and the manufacture of tubes for atmospheric railways, covers an atmospheric railway in which compressed air distributed from a reservoir through pipes is employed to propel a car or train of cars. The general arrangement of the device is as follows: At a central station, at which the air is compressed, is a reservoir or holder for the air. From this reservoir or holder the air is distributed through pipes to devices which project upward through the track, and which are intended to operate in connection with the car when it comes along. The projections upward through the track are placed at or about the distance of 8,000 yards apart, and, from one of these upwardly projecting devices to the other train, is supposed to travel by the impulse it receives while passing over the upwardly projecting device, which is, in fact, a fixed piston co-operating with a slotted tube placed underneath the engine or car. The patent is obviously the result of some of the futile experiments that were made in England, when the science of railway travel was in its infancy, and before the present method of propelling railway trains had become firmly established. The device does undoubtedly contain a way and carrier, and a method of propulsion by means of atmospheric elasticity, and is thus within the literalism of plaintiff's patent. At the same time, we think it very far from being an anticipation of this patent. It is not, in any sense of the term, a cash carrier, or a device adapted for use as such. Indeed, it is intended for a purpose so entirely dissimilar to that of a cash carrier that not only would it require invention to adapt it to that purpose, but we cannot conceive that it would be of any service to McCarty as a suggestion of a cash carrier. It lies so far out of the track of the patentee's invention that if he had seen it while engaged

in his experiments, he would probably never have given it a second thought. We do not mean to say that a

railway car might not be constructed and propelled along a suspended cable in such a way as to suggest an adaptation of the same principle to that of a cash carrier device, but we are very clear that no such hint is contained in the Brett patent. We understand that under the case *Tucker v. Spalding*, 13 Wall. 453, in order to constitute a double use, the structure and action of the prior machine must be such as to suggest to the mind of an ordinarily skillful mechanic another use to which it could be applied without material change. Indeed, considering the recognized manner in which all railway cars are and ever have been propelled along the rail, we may take judicial notice of the fact that the Brett device is an old and abandoned experiment, which was never nor could have been of any practical use, although, as a mechanical device, it might be made to send a locomotive a short distance. The patent of Thomas Swinburne, of 1846, for an atmospheric railway, is open to the same criticism, and contains, if possible, a slighter suggestion of the McCarty device than the Brett patent. It refers to and describes an impossible and useless method of propelling trains over a track, by giving them at intervals, an impulse by the use of compressed air in the direction of their movements. As an anticipation of the McCarty patent, it is hardly worth a serious consideration. The Taylor patent is for a windlass water elevator. It shows an inclined track upon which travels a water-bucket and carrier. The wire, as it leaves the house, is for a short distance nearly horizontal, and then descends rapidly to the spring. It is provided with a car to which is attached a bucket. The car and bucket are let down the wire by an ordinary windlass. After the bucket is filled with water, it is hauled up by the windlass and cord, and when it reaches the horizontal way it catches the end of the spring, and is drawn against the force of the spring to the house, where it is emptied. On the windlass being released or thrown in the other direction, the operation of the spring is to throw the car and bucket along the horizontal portion of the way until it reaches the incline, when it descends by force of gravity. This undoubtedly resembles the McCarty patent somewhat more nearly than the two devices heretofore considered. The initial impetus, however, given by the spring in this case was not designed to propel the car over the way, but as the patentee himself states, merely "to discharge it from the receiver, so that it may pass down the wire by its own gravity, the wire within the receiver being nearly horizontal." The weight of the rope attached to the car, and by which it is hauled up, and the friction caused by the necessity of unwinding the windlass, would effectually destroy the projectile force of the spring, and prevent its operating to give an initial impetus to the carrier for the purpose of propelling it on the way, in the manner described in plaintiffs patent, If the wire in the Taylor patent were horizontal, there would have to be another rope to haul it in the opposite direction from that in which the windlass hauls it, and the pull on this rope would not only be against the car, but also against the other rope, and the windlass for working it. No initial impetus

could be given to the bucket and the carriage, which would be sufficient to suddenly set the windlass

in motion and keep it in motion. The device is a slight modification of another and familiar device, by which cars are drawn over wires by Tories pulling in opposite directions, or by a rope in one direction, and the force of gravity in the other.

The loom patents, in all of which a shuttle is thrown from one end of its path to the other by the blow or push of a picker-staff operated by the force of a spring, the Hotchkiss patent, by which a toy mouse is projected by an interior spring, and the Ireland patent, by which a toy fire-engine is propelled from its house by the recoil of a rubber spring, are all claimed as anticipations of the McCarty patent; but in none of them is there a way or a carrier in any proper sense of the word. They no more contain the principle of McCarty's invention than does the ordinary spring gun to which they are much more closely allied. They all resemble the McCarty patent, in that they contain the principle of propulsion by a spring, which is as old as the use of the bow and arrow, but none of them could be adapted to a cash carrier without the employment of the inventive faculty. But if there were any doubt regarding this, question, we should still consider it our duty to resolve the doubt in favor of the patent in this case, since it is shown that the device has gone into very general use, and has largely supplanted cash carriers propelled by other means. While the single fact that the device has gone into general use, and has displaced other devices which had previously been employed for analogous uses, does not establish in all cases that the later device involves a patentable invention, it may, however, always be considered; and when the other facts in the case leave the question in doubt; it is sufficient to turn the scale. *Smith v. Vulcanite Co.*, 93 U. S. 486, 495.

4. Beyond doubt the most important and serious question in this case is that of infringement. Defendant's apparatus, as described by the plaintiff's expert, Mr. Brevoort, is as follows:

"Defendant's device consists of an upright cylinder with a piston in it, which piston can be by the operator moved up and down within the upright cylinder. Projecting at right angles from the lower part of the cylinder is another cylinder smaller in diameter than the upright cylinder, and having within it a piston attached to one end of a piston-rod, which projects through the forward end of the horizontal cylinder. This piston-rod, at the end, is provided with a spring plunger, the shaft of which is smaller than the piston-rod. This plunger can be pushed into the piston-rod for the distance of about half or three-eighths of an inch. On the end of the horizontal cylinder two jaws are arranged, which are provided with springs, and which jaws are forced apart by the outward movement of the end of the piston-rod. The catches at their outer extremities are provided with hooks or jaws, which catch around the carrier. Thus, the carrier cannot move along the wire until these jaws or catches have separated, and this separation is effected by the advance movement of the piston-rod of the horizontal cylinder."

It will be observed here that the defendants do not employ a metallic or rubber spring to project its carrier, but we apprehend, and we understand it to be admitted in this case, that if the carrier be actually propelled over the way by the elastic expansion of an imprisoned body

of compressed air the McCarty patent is infringed. The theory of the defendants in this connection is that the air contained in the cylinders between the pistons is simply a medium, which transmits the power applied to the main or upright piston to the plunger or horizontal piston. It becomes material, then, to inquire whether the piston in the horizontal cylinder is propelled by the elasticity of the compressed air behind it, or whether, if the two cylinders had been filled with a non-elastic liquid like water, the same effect would be produced. It is very evident that if the two cylinders and pistons could be made perfectly air-tight, as they are in one of the exhibits furnished the court, the descent of the main piston would compress the air; and when this piston had reached a certain point, the elasticity of the air so compressed would be sufficient to drive the horizontal piston, which would start suddenly forward and project the carrier. On the other hand, if the pistons were very loosely fitted to the cylinders, no amount of force and no rapidity of movement would be sufficient to propel the horizontal cylinder, since the air would escape so rapidly as to be of no service. This is manifest in the defendant's device, since, if the lever is pulled down slowly, and the air is thus given time to escape, the horizontal piston is not moved. It is thus essential to the operation of defendant's device—*First*, that the pistons fit so tightly that the air will not escape as fast as it is compressed by the main piston, and yet so loose that it will move easily along the cylinder; *second*, that the lever be pulled rapidly down in order that the air shall not be given time to escape; so that for every inch of travel by the main piston the plunger piston travels five and two-tenths inches, the relative cubic capacity of the two cylinders being as nine to four. The experiments of Mr. Brevoort tend to show that assuming that it takes four-tenths of a second to make the whole stroke of the lever from top to bottom, the lever must pass over more than one-third of its stroke before the horizontal piston moves at all; in other words, the air must be compressed to a certain degree before the plunger will start. We apprehend that if the vertical cylinder and its piston were removed altogether, no amount of atmospheric force applied, as, for example, by a pair of hand bellows, would be sufficient to drive the plunger piston. The only impression we can get from the testimony and experiments is that it is the elasticity of the compressed air that drives the plunger piston forward, and hence that the device is an infringement. Even if the defendant's theory were correct that the air acts simply as a medium through which the power is transmitted from one piston to the other, we are inclined to think that this air-impelling device is such a well-known equivalent to a spring device as to constitute an infringement. In the Stever patent for the shuttle motion for looms, there is an example of initial impulse given directly by spring. An ordinary barrel or clock spring, having been previously wound up, is let off at the proper time, and throws the shuttle to the opposite side of the machine, while a duplicating arrangement throws it back again. In the Ross loom patent of 1873, there is a similar

spring employed to drive the shuttle back and forth. In the Richardson patent of 1872, which

is also a loom mechanism, there is a car which travels across the machine and carries the shuttle. This car is impelled by the movement of the piston in a cylinder. The movement of the piston being transmitted to the shuttle carrier by a body of air interposed between them, there is, therefore, shown in this patent, an air-impelling device, having a large chamber and a small chamber, and means for compressing the air to throw a shuttle, as a mechanical substitute for the spring device used in the other patents. The patent in suit is one of considerable importance, and appears to be the first in which the idea of propelling the carrier over a way by an initial impulse was reduced to a practical form. We think it entitled to a liberal application of the doctrine of mechanical equivalents, and as defendant's device is a manifest attempt to seize upon the dominating idea of the patent, and to evade the letter of the claims, we think plaintiff is entitled to the benefit of any reasonable doubt upon the question of infringement.

5. The seventeenth claim of patent No. 325,618 is as follows:

"In a store service apparatus, the combination with a stretch wire of a wheel carrier traveling thereon, a receptacle removably locked to such carrier, and a spring cover for the receptacle held permanently by the carrier substantially as set forth."

The receptacle is locked to the carrier by a ring containing two slots in the ordinary manner in which a lamp is inserted in a lantern; from the bottom the spring is such as is sometimes used in the top of a lantern to hold the glass firmly in place. The invention consists only in combining the two, in inserting the cash box into the carrier, and in holding it firmly by the aid of the springs. As both elements of the combination are shown to exist in a lantern offered in evidence, though acting independently, we think there was no invention in combining the two, and the plaintiff's claim under this patent is not maintainable. There must be a decree for the plaintiff upon the third, fourth, and seventh claims of the first patent, an injunction, and the usual reference to a master to compute the damages.