

Case No. 14,231.

TUFTS ET AL. V. BOSTON MACH. CO.

[Holmes, 459;¹ 1 Ban. & A. 633; 8 O. G. 239.]

Circuit Court, D. Massachusetts.

Jan., 1875.

PATENTS—PRIOR STATE OF
ART—CLAIM—NOVELTY—ELEVATORS.

1. In view of the prior state of the art, the twelfth claim of the patent for improvements in hoisting-apparatus and Elevators, granted Otis Tufts, Aug. 9, 1859, which is for “passing the shipping-rods, and the cord or rod that operates the friction-brake, through the car or platform, for the object and purposes set forth,” must be construed strictly in accordance with its language, as a claim for passing the described shipping-rods, and the described cord or rod operating the friction-brake, or their equivalents, through the car or platform, for the purposes set forth.
2. The first claim of the patent for improvements in the mode of suspending and operating elevators, &c, granted Otis Tufts, May 28, 1861, which is for constructing an elevator, or hoisting-apparatus, with a series of two or more hoisting ropes or chains, having independent attachments, and winding simultaneously upon the hoisting-drum, for greater safety, substantially as described, *held* invalid for want of novelty.
3. The second claim of the patent of May 28, 1861, for “equalizing the strain upon the series of ropes or chains of my (Tuft’s) improved elevator or hoisting-machine by automatic adjustment, substantially as described,” *held* invalid for want of novelty.
4. The patent granted Otis Tufts. Dec. 11, 1866, for improvement in means for guiding elevators, *held* invalid for want of novelty.

In equity.

James B. Robb, for complainants.

Causten Browne, for defendant.

SHEPLEY, Circuit Judge. This is a bill in equity brought for alleged infringement of letters-patent issued to Otis Tufts, dated Aug. 9, 1859, and extended seven years, for improvements in hoisting-apparatus,

and adapting that apparatus for use as a passenger-elevator for carrying persons to and from the different stories in hotels and other buildings; and also of letters-patent, dated May, 28, 1861 [No. 32,441], for improvements in the mode of suspending and operating the elevator. Also for infringement of letters-patent, dated Dec. 11, 1866 [No. 60,442], for improvements in the mode of adjusting the length and tension of the ropes of an elevator; and of letters-patent, dated Dec. 11, 1866, for an improvement in elevator-guides. All of these patents were duly assigned to complainants.

The twelfth claim in the patent of Aug. 9, 1859, No. 25,061, is the one on which infringement is claimed, and is as follows: "I claim passing the shipping-rods and the cord, or rod that operates the friction-brake through the car or platform, for the object and purposes set forth."

The shipping-rods are described in the specification as passing up through the car the whole height of the building, and operating a shipper, by which the driving-belt is shipped from a fast to a loose pulley when the power is to be thrown off. The cord is also described as passing down through the car or platform so as to be accessible within the car, which operates to apply a counterpoise spring so as to put on a friction-strap brake, its office being to check, or perfectly stop, the descending motion of the car at the will of any person within the car or on the gallery. "The great advantage" (claimed) "of running the shipping-rods and the cord or rod up through the car itself is, that they are thus rendered accessible to the conductor, or any person within the car, without incurring the danger of protruding the hand or arms beyond the same while in motion."

If the twelfth claim be construed broadly as a claim for passing any rod or cord, by means of which the appropriate mechanism is operated to move the ear

up and down, or hold it nr rest, through the ear or platform, instead of outside the car or platform, it is void for want of novelty. George V. Hecker had in his flour-mill, in Cherry street, New York, an elevator which was put in twenty years ago, and which has been in successful operation since that time. A chain passed through the roof and floor of the cage or car, which operated upon a friction-clutch and a brake. The conductor or operator within the car could, by means of this chain, operate the shipping apparatus and the brake without incurring the danger of protruding the hand or arms beyond the car while in motion. This chain was connected with a brake in such a manner that the brake could be thrown off by pulling upon the chain, or put on by relaxing the pub upon the chain, a weight then causing the brake to produce friction on the friction-pulley. The pull upon the 285 chain, by raising the weight, first relieved the friction of the brake, and then threw into gear a friction-clutch, and the car ascended by the force of the motor applied through the friction-clutch. When it was desired to stop, the pull upon the chain was relaxed, and the weight threw the clutch out of connection, and the cage stopped, held in place by the brake. When it was desired to descend, a slight pull was made upon the chain, sufficient to relax the pressure upon the brake, but not to throw the friction-clutch into gear. The car then descended, under control of the brake, by force of gravity, at a speed dependent upon the will of the operator who controlled the brake. Within the car was a lever with one long and two short arms, with a friction-pulley on each of the short arms, which device was for the purpose of making the necessary pulls upon the chain which passed through the inside of the car. The friction-clutch is a well-known substitute for a shaft with a fast and loose pulley, a belt, and belt-shipper.

It is manifest, therefore, that, in view of the state of the art, the twelfth claim in the patent can only be sustained by giving to it a much narrower construction than the one claimed for it, and one strictly in accordance with the language of the claim; viz., "passing the shipping-rods and the cord or rod that operates the friction-brake through the car and platform, for the objects and purposes set forth." The defendant does not infringe the twelfth claim, thus construed, or any other claim, of the patent of Aug. 9, 1859.

Infringement is also alleged of the first and second claims of the patent of May 28, 1861, which are as follows: "1st Constructing an elevator or hoisting-apparatus with a series of two or more hoisting ropes or chains, having independent attachments and winding simultaneously upon the hoisting-drum for greater safety, substantially as described. 2d. Equalizing the strain upon the series of ropes or chains of my improved elevator or hoisting-machine, by automatic adjustment substantially as described."

To construct "an elevator or hoisting-apparatus, with a series of two or more hoisting-ropes or chains, having independent attachments and winding simultaneously upon the hoisting-drum," was not new at the date of this patent. Letters-patent of Great Britain to Frederick Levick and Joseph Field-house, sealed Jan. 13, 1854, describe a hoisting car or carriage with two hoisting-ropes wound around the same spirally grooved drum. The ends of both of these ropes are attached to a connecting chain which passes under a pulley attached to the top of the ear. Another chain is attached to the first-described chain in such a manner that the chain surrounds the pulley. If one breaks, the other, with the chain, forms a loop around the pulley, and sustains the car. The second chain converts the attachment into an independent attachment of each rope, and, when one rope breaks, the other rope will continue to sustain the

weight of the car. Mr. Renwick, the expert, correctly states that "the ropes act precisely as if they were attached to the two ends of a horizontal lever, whose centre, upon which it could turn, was secured to the top of the car." In the patent of 1861, the patentee, Tufts, says: "I do not confine myself to the precise method herein described of effecting the automatic adjustment of the strain upon the hoisting-ropes, as I sometimes accomplish the same by a rocking lever when two ropes are used."

It is plain, that, in the Levick and Field-house elevator, the two ropes when intact have equal strain upon them, and that, if one of the ropes should break, the weight of the car would be supported by the other rope. If the chain should break under the pulley, the car would fall, as it would in the form last described of the Tufts elevator, if the attachment to the car at the centre of the rocking lever should fail. It is contended that the purpose of the two ropes in the Levick and Fieldhouse machine was to keep the cage in the centre of the shaft and that, therefore, the Levick and Fieldhouse patent does not anticipate the first claim in the patent of 1861. The answer to this is, first that, whether they were placed there for the purpose of greater safety or not, they effected that result, and, secondly, that the patentees evidently contemplated that as one of the beneficial result to be attained by the use of two ropes instead of one, as there is no conceivable use for the cross-chain before described, except, in case of the breakage of one rope, to form a loop around the pulley, thus attaching the surviving rope to the car.

In the elevator which was placed in the mill of the Parsons Paper Company, at Holyoke; Mass., in 1856, there were two hoisting-ropes] having independent attachments to opposite arms of a rocking lever. They jointly and equally took the strain of the weight of the car, and each rope was sufficient to sustain the

load put upon the machine. This elevator has been in constant use; and when one rope has broken, the elevator has been worked several days with the remaining rope. The ropes in the Holyoke elevator did not, it is true, wind around a drum, but were passed around a series of pulleys, and the free ends of the ropes were attached to counterpoise weights; but these two means of winding up a rope to which a weight is attached are well-known substitutes for each other.

Without adverting to the other patents, which have been introduced in evidence, and relied upon in defence on this branch of the case, enough has been stated to show that the first claim of the patent of 1861 is void for want of novelty. The second claim in this patent is, "equalizing the strain upon the series of ropes or chains of my improved elevator or hoisting-machine by automatic adjustment, substantially as described." This 286 claim can only be construed as a claim for the described means of performing this function, and for well-known substitutes or equivalents of those described means. The means the patentee describes are three. One of those modes is by means of a rocking lever, or system of rocking levers, to the ends of which the suspensory ropes are attached. The Holyoke elevator and the Levick and Fieldhouse elevator both anticipate this claim. One had a rocking lever, and the other had a device which operated in the same way and produced the same result. If the claim is valid, defendant is not proved to have infringed it; for there is no evidence in the record tending to show that the contrivance used by the defendant of a series of pistons fitting into a set of cylinders with connecting pipes, the cylinders being filled with an incompressible fluid, were at the date of the patent known substitutes for either of the means of adjustment described in the patent.

The patent of Dec 11, 1866 (No. 60,441), so far as the second claim is concerned, which is the one alleged

to be infringed, relates to “means for manipulatory relative adjustment, within reasonable limits, of the series of ropes or chains, which are independently attached to the winding drum and to the car of the elevator, so that an equal degree, or very nearly equal degree, of tension can be had upon each rope or chain of the series, by proper attention or manipulation on the part of the party having such an elevator in charge.” The patentee states in his specification that considerations of saving in the first cost of construction render it desirable in many instances to substitute for an automatic adjustment of the ropes or chains a means for adjusting them from time to time, as occasion may require; in other words, that the means of manipulatory adjustment in the patent No. 60,441 were intended as a substitute or alternative means for the automatic adjustment described in the patent of May 28, 1861 (No. 32,441). The defendant has put into its elevators means of mechanical manipulatory adjustment; but they do not perform the function described by Tufts as a substitute for the automatic adjustment, because the tension on the ropes or chains cannot be varied by any manipulation of the nuts. Owing to the presence of the equalizer, the means of automatic adjustment in the defendant’s elevator, the nuts or the stumps may be screwed up or down to their fullest extent on any rope, without any variation of the tension on that or any other rope. As defendant does not infringe, it is not necessary to consider the question of novelty of this claim.

The patent of Dec. 11, 1866, relates to means by which an elevator is so guided as to prevent the sway thereof, and the noise consequent upon contact with the ways by which the elevator is guided. The claim is as follows: “I claim combining the suspended car of an elevator with the ways or rails which confine it, by means of guides kept by springs constantly in contact with wild ways or rails, when said guides are so

arranged as to be capable of motion towards and from the rails." In the provisional specification filed April 6, 1858, in the office of the commissioner of patents for Great Britain, accompanying the petition of Louis Tetar van Elven for a patent, which did not proceed to the Great Seal, but which specification was printed by Byre & Spottiswoode, is a clear and accurate description which contains all the features of this claim. Defendant's exhibit No. 13 is a model of the device described in the Tetar van Elven specification. It fully anticipates every feature of this claim.

Bill dismissed.

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