

DUDGEON *v.* WATSON AND ANOTHER.

*Circuit Court, S. D. New York.*

December 18, 1886.

1. PATENTS FOR INVENTIONS—LETTERS PATENT NO. 187,765, OF APRIL 15, 1873—HYDRAULIC JACK—IMPROVEMENT IN DIRECT-ACTION PUMPING ENGINES.

Letters patent No. 137,765, of April 15, 1873, to Richard Dudgeon, for in improvement in hydraulic jacks, the structure being this: A ram works in a water-tight cylinder, and by the injection of water or other liquid, by means of a force-pump, into a chamber at the bottom of a cylinder, the ram rises, lifting the load; the ram is lowered by permitting the liquid to escape: *held*, not anticipated, or defeated for lack of invention, by the patent granted to Worthington and Baker, April 8, 1849, for an improvement in direct-action pumping engines.

2. SAME—LETTERS PATENT NO. 297,975—HYDRAULIC JACK—INFRINGEMENT.

Letters patent No. 297,975, granted to one Richard H. Dudgeon, May 6, 1884, and by him assigned to complainant, for an improvement in hydraulic jacks: 1873, No. 137,765. By the improved device a smooth bearing is given to the plunger or piston while taking its extended stroke when the ram is lowered. This is accomplished by boring the reverse passages in the walls of the independent internal cylinder in which the plunger operates. This cylinder is so constructed that it can be removed, and the apparatus which it contains renewed or repaired. In the defendant's structure a short section of the ram cylinder is cut off, and the internal cylinder is so cast as to fill up the space thus left; the result being that the latter is not supported by the screw-threads

of the valve-block as in the patent, but by being made to fit closely to the ram cylinder. The two methods are equivalent, and plaintiff's patent *held* to be infringed.

In Equity. Action for infringement of patents for improvements in hydraulic jacks.

*Edmund Wetmore, (Phillips Abbott with him,)* for complainant.

*Charles N. Judson and James McKeen,* for defendants.

COXE, J. This is an equity action for the infringement of two patents owned by the complainant. Both are for improvements in hydraulic jacks. The first, No. 137,765, was granted to the complainant, April 15, 1873. The second, No. 297,975, was granted to Richard H. Dudgeon, May 6, 1884, and by him assigned to the complainant. The defenses are want of novelty and non-infringement.

The patent of April 15, 1873, will first be considered.

A hydraulic jack is a portable machine for lifting heavy bodies a short distance. A ram works in a water-tight cylinder, and by the injection of water or other liquid, by means of a force-pump, into a chamber at the bottom of the cylinder, the ram rises, lifting the load. The ram is lowered by permitting the liquid to escape. Prior to the invention the lowering process was accomplished by means of a long, stiff wire connecting with the ingress valve in such a manner that, when the pump handle was depressed to its lowest limit, both the ingress and egress valves were opened, and a continuous passage for the liquid was made from the ram cylinder back to the reservoir. In practice it was found that this mechanism frequently got out of order, and the impossibility of lowering the ram was followed by the most disastrous consequences. It was to remedy these annoying and dangerous defects, so detrimental to the usefulness of the wire jack, that the complainant invented the improvement in question. The object of the invention is to permit the liquid to flow freely from the ram cylinder through the egress valve, and around the ingress valve, not through it, as formerly, without the intervention of any delicate or perishable mechanism. The wire is discarded. The new jacks have superseded the old ones in popular favor.

The claims are as follows:

"(1) The combinations and arrangement of the pump-plunger, constructed with longitudinal passages, the pump-barrel, and the reverse passage, substantially as before set forth.

"(2) The combination and arrangement of the pump-plunger, the pump-barrel with its reverse passage, the egress-valve, and the guard thereof, substantially as before set forth."

When it is remembered that the description is addressed to those versed in the art, there is no difficulty as to the proper construction of the first claim. It is for a sub-combination intended to be used in hydraulic jacks. Even though the method for tripping the egress

valve should be wholly unlike that described in the patent, even though the use of this valve should be rendered unnecessary by the introduction of other valved passages, still the patentee desired to secure the right to convey the liquid from the ram cylinder back to the reservoir, around, instead of through, the ingress valve, by the described means. There is no reason why he cannot do this.

It is said that the patent is anticipated, or defeated for lack of invention, by the patent granted to Worthington and Baker, April 3, 1849, for an improvement in direct-action pumping engines. The object of the by-passes in this apparatus is to relieve the steam-piston of the strain upon it by the pressure of the water in the pump-barrel; thus permitting the piston to complete its stroke freed from the resistance of the water. The object of the Dudgeon invention, as has been seen, is very different. Indeed, though possessing some features in common, the two are dissimilar in appearance, operation, purpose, principle and result. The one might suggest the other to an inventor, but not to a mechanic. It required a creative faculty, not usually found in the slow, non-perceptive brain of the skilled workmen, to construct the hydraulic jack of 1873 from the steam-pump of 1849.

Assuming that the connection between the two is as intimate as the defendants insist, it is, nevertheless, true that he who possessed the genius to perceive that the principle of the one could be utilized to remedy the serious defects of the other, was something more than a dexterous and intelligent automaton. For 24 years the imperfections in hydraulic jacks were known. For 24 years men of experience and capacity had been endeavoring to remedy these imperfections. For 24 years the combination of the Worthington and Baker steam-pump had been accessible to an army of skilled mechanics. That the idea which occurred to Dudgeon never occurred to one of these is of itself a sufficient answer to the theory now advanced, in the light of accomplished facts, that the combination of the pump is an equivalent for the combination of the jack.

Without pausing to enter into a more minute and elaborate discussion of the Worthington and Baker reference, it suffices to say that the position taken by the complainant's expert witness, Mr. Ben wick, is sustained by the proofs; and the reasons assigned by him in support of his opinion seem entirely fair and logical.

As to the infringement of the patent there can be no doubt. The defendants have seized upon the complainant's discovery, and have produced a jack which works in substantially the same manner, and accomplishes the same result by similar or equivalent mechanisms. Of course, there are differences in the two structures, but they are of form rather than of substance. There is no functional distinction. The defendants cut away more of the pump-plunger, and less of the pump-barrel, than the complainant. The methods of forcing the liquid around the ingress valve when the ram is lowered are identical

only instead of the longitudinal passages in the plunger the metal is cut away around its entire circumference, making a much wider channel. In the pump-barrel, on the contrary, instead of cutting the surface away around its inner periphery, as in the patent, the defendants, at the same point, substitute reverse passages bored through the wall of the barrel. The new apparatus is an improvement upon the old, but every feature of it is covered by the claims of the patent. The defendants have widened in one place, and narrowed in another place, the complainant's channels, but they do not for this reason acquire the right to use the invention.

The patent of May 6, 1884, remains to be considered. It is for an improvement upon the jack of 1873. In this patent the inventor has, speaking generally, accomplished what the infringing jack, just referred to, accomplishes. It is a more perfect machine. By the improved device a smooth bearing is given to the plunger or piston while taking its extended stroke when the ram is lowered. This is accomplished by boring the reverse passages in the walls of the independent internal cylinder in which the plunger operates. This cylinder is so constructed that it can be removed, and the apparatus which it contains renewed or repaired. The advantages over the 1873 patent may be summarized as follows: More perfect action, increased durability, greater ease in repairing, less difficulty in construction.

The second claim, which is alone in controversy, is as follows:

"The combination, with the hollow piston, B, and independent cylinder, C, provided with internal fluid passages, c, of the valve-block or plug, E, valve, e, and a packing, G, and nut or binding-piece, F, substantially as shown and described."

It is not seriously argued that the structure covered by this claim is anticipated, but it is said that, considering the prior patents, there was no invention displayed in producing it. In view of the conceded advantages of the improved jack, the fact that no prior patent suggests the entire combination of the second claim, and no skilled mechanic ever thought of the improvement, if a doubt existed upon this question, it should be resolved in favor of the patent.

The defendants infringe. Prior to this suit they made the jack according to the formula of the complainant's patent, and the patent granted to the defendant Watson, July 15, 1884, shows the same construction of the independent cylinder, valve-block, etc. After the bill in this action was served the defendants made the changes by which they seek to escape infringement. In the defendants' structure a short section of the ram cylinder is cut off, and the internal cylinder is so cast as to fill up the space thus left; the result being that the latter is not supported by the screw-threads of the valve-block, as in the patent, but by being made to fit closely to the ram cylinder. The two methods are equivalents. The defendants' cylinder is "independent" in the sense of the patent. It performs all the functions

that the Dudgeon cylinder performs. All the other differences are based upon or are incident to this unimportant change. It is very clear that the defendants accomplish all that the patent sought to accomplish, and by similar or equivalent means.

There are some changes which, at first sight, seem important and substantial, but when analyzed are of form merely, and force the conviction, when the other circumstances are considered, that they were adopted simply and solely for the purpose of avoiding the complainant's patent.

The complainant is entitled to the usual decree.