

ALLEN v. STEELE.

(Circuit Court, W. D. Pennsylvania. March 1, 1894.)

No. 37.

1. PATENTS—INVENTION—IMPROVEMENT.

Where the development of a certain industry has created a constant demand for new appliances, which the ordinary skill of those versed therein is generally adequate to devise, and which devising is the natural outgrowth of such development, the industry will not be burdened with a monopoly to each improver for every advance made, except where marked by invention somewhat above ordinary mechanical or engineering skill.

2. SAME—ANTICIPATION.

Allen's patent, No. 332,318, for a device for transmitting motion in oil-pumping apparatus, *held* to have been anticipated by Shippen's device.

This was a suit in equity by George Allen against R. W. Steele for infringement of a patent granted to complainant for a device for transmitting motion in oil-pumping apparatus.

J. H. Osmer and Jas. C. Boyce, for complainant.

W. C. Rheem and L. M. Plummer, for defendant.

BUFFINGTON, District Judge. George Allen brings this bill against R. W. Steele for alleged infringement of letters patent No. 332,318, to him granted December 15, 1885, for a device for transmitting motion in oil-pumping apparatus. The answer traverses the infringement charged, denies patentability, and sets up anticipation in a device of E. W. Shippen. The ease necessitates a brief statement of the method of pumping oil wells. Originally, each had a boiler and engine of its own. The pumping was done by communicating power to sucker rods, which extended from the top to the bottom of the well. Later, a single boiler was used, and from it steam was carried to separate engines at each of several contiguous wells. In time this method was superseded by one engine and one boiler for the entire lot, by means which we now describe.

Such engine and boiler are placed at a central point, and connection made, by a belt, with a band wheel (as much as 20 feet in diameter), and distant about 50 feet. This space is required to prevent the belt from slipping, and to obtain the best mechanical results. On either end of the shaft of the band wheel were cranks, which connected by pitmen with an oscillating pull wheel. This wheel formed the center from which rigid rods, called "pull rods," radiated to the several wells, where they were connected with the sucker rods, or pumping mechanism. Over the engine, band wheel, and pull wheel, respectively, separate buildings were then erected. This method was expensive, the appliances cumbersome, and the mechanism scattered. It was in general use in 1883, and was used by E. W. Shippen at that time in pumping his wells at Sugar Creek, Venango county, Pa. In 1882 he conceived the idea of doing away with the band wheel, its substantial foundations, and its separate

building. To this end, and for local reasons, he substituted water power and a turbine wheel for his engine. As compared with the cumbersome band wheel, his method was strikingly simple, ingenious, and effective, and to our mind embodied all the advance that has since been made in the way of pumping. About half a mile from his pull wheel, he built, or rebuilt, a dam and race, and at the end of the latter constructed stone walls, within which he placed a substantial timber frame, formed of upright side pillars securely fastened to mudsills below, and framed at the top with cross timbers. The sides of the frame were planked. The whole served the double purpose of conducting the water to the turbine wheel placed therein, and also of a frame and foundation for the wheel shaft and mechanism used in transmitting the power. Just how closely the stone walls and the interior frame were allied, and the points and methods of connection between them are concerned, is differently stated, but for present purposes it is sufficient to say that there is no question that the evidence and models established the fact that the interior frame was in itself a solid, self-sustaining structure, so constructed as to contain, sustain, and support the entire mechanical appliances for utilizing the power, and also adapted to be used as a cover for the machinery contained within its walls, and at the same time allow the radiation of power by pump-actuating rods in every direction laterally from a point above the top of the frame. Diagonally across the interior of this frame, and midway from the top, a heavy timber was securely fastened to the corner posts, and a large parallel beam was bolted to, and on the top of, the frame. Each timber was fitted with two iron boxes, through which two perpendicular and parallel shafts extended. The one reached below the under beam, and formed the shaft of the water wheel, and above that beam was provided with a small cogwheel. The other shaft was furnished with a large cogwheel, at a point to attach with the small one above mentioned, and on the upper end of the shaft (which extended above the top of the frame) a crank was placed. This was in turn connected by a pitman with a pull wheel which was securely fastened and braced to and upon the end of the parallel timber on top of the frame. From this pull wheel, pull rods extended a half-mile to the pull wheel which formed the original center of radiation to the wells. This ingenious mechanism has been in use since June, 1883, and with it a large number of wells have been continuously and successfully pumped. Over this foundation, which is part above and part below ground, a frame building of one and a half additional stories was added for storage purposes. Incidentally, it has served to protect the crank, pitman, and pull wheel from the weather and from molestation. It will obviously occur to one versed in the oil business—and, indeed, to one who is not, but who uses the adaptive faculties with which mankind is ordinarily endowed—that the ideas and methods here, for local reasons, applied to water, and at a distance of half a mile from the radiating point, could be adapted to steam engines, and at a point as close as a connecting pitman would allow to the radiating pull wheel. And it is equally obvious that the building in

Shippen's device used for storage was no necessary part of, or performed no function in, the device.

In *Crompton v. Knowles*, 7 Fed. 203, it was said:

"It is a presumption of law that all mechanics interested in upholding or defeating a patent were fully acquainted with the state of this art when they took out their patent or built their machine. * * * Each party may, then, be assumed to have borrowed from the other whatever was actually first invented and used by the other."

While Mr. Allen may not have known of this Shippen device, yet knowledge of it must be imputed to him, and, with this state of the art before him, he made application for the patent in controversy. In his specification he describes the existing method as follows:

"Hitherto it has been customary to locate the engine or other driving power in a house or on a foundation by itself, with the horizontal shaft and band wheel located fifty feet (more or less) therefrom, the pull wheel occupying a position, on still another support, some twenty feet from the band wheel. To protect the working parts of the machinery from the weather, it has been customary to build a house over the plants, and to cut holes through its sides to allow the pump-operating rods to pass through. Apart from the general inconvenience and extra expense incurred by scattering the several parts over so great an extent of ground and building a house sufficiently large to cover them, the freedom with which the pump-actuating rods might otherwise be laterally shifted has been materially interfered with. The object of my present invention is to provide a compact and economical arrangement of the engine, drive shaft, pull wheel, and pump-actuating rods whereby a single foundation and supporting frame shall serve at the same time as a house frame and a support for the engine shaft and pull wheel, and which will admit of the free lateral movement of the pump-actuating rods."

His improvement he thus describes:

"A represents a heavy framework, girded and braced by a sufficient number of beams and braces to make it steady and strong. The roof timbers of the framework preferably have but little slant, and the entire frame is covered by roofing and siding, and provided with suitable entrances. B represents an engine located in the house above described; C, the engine shaft, provided with the fly wheel, D, and bevel gear pinion, E; and F represents the upright shaft for driving the pump-actuating rods. The shaft, F, is preferably located at the center of the house, and extends upwardly through the apex of the roof. It is provided with the bevel gear wheel, G, meshing with the pinion, E, and at its upper end, above the roof with a crank, eccentric, or other equivalent device for actuating the rods, H. The pump-actuating rods, H, may either be loosely secured on the wrist pin of the crank, or they may be secured to a wheel, I, loosely mounted on the wrist pin of the crank; or they might be attached to an eccentric strap or ring loosely mounted on an eccentric wheel secured to the shaft; or they might be secured to one or more oscillating wheels, I, the latter being supported on the roof, and connected with the crank with short pitmen. From their points of attachment to the crank or shaft, the rods, H, head laterally in any desired directions to the oil wells, K, and may be freely shifted to the right or left, as circumstances may require. It is evident that the framework may be constructed in a great many different forms, and that the shaft, F, may be located in other positions than the center, and that the relative positions of the engine, engine shaft, and upright shaft may be changed, without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the construction herein set forth."

His claims are as follows:

"(1) A pump-driving shaft extending through the roof of a house, and having the pump-actuating rods attached thereto above the roof, substantially as set forth.

"(2) A supporting frame for the engine, engine shaft, and pump-driving shaft, adapted at the same time to form a house-frame, the end of the pump-driving shaft extending above the roof of the frame, for the purpose substantially as set forth.

"(3) The combination, with a supporting framework adapted to be covered by a roof and siding, and an engine located within the framework, of an upright shaft adapted to be driven by the engine, the said upright shaft extending outwardly through the roof, and a crank, or its equivalent, secured to the upper end of the shaft, adapted to actuate pump-operating rods, substantially as set forth.

"(4) The combination, with a supporting frame for the engine shaft and pump-driving shaft, adapted at the same time to form a house frame, the end of the pump-driving shaft extending above the roof of the frame, of pump-actuating rods connected with the shaft through the medium of an oscillatory wheel, substantially as set forth."

It will be noted no mention is made of the Shippen device,—of the fact that the band wheel had been already successfully dispensed with, and the necessity for large and disconnected buildings had ceased. Had that device been known to the patent office authorities, there could have been but one outcome to Mr. Allen's application, to wit, rejection. The adaptation of Shippen's mechanism to steam power, placing the engine near the center of power radiation, distributing the power from the top of the frame, and using the frame as a covering for the mechanism, were ideas which would at once suggest themselves to a mechanic skilled in that branch of work. Every element of Allen's combination was used by Shippen. From local conditions, they were spread over more ground, and did not have so compact a form; but the substance and body of the device were there, and substance rather than mere form should here avail. This adaptation was a mere carrying forward of the original design; a more extended application of the original thought. Indeed, we are satisfied that Shippen's device embodied the substantial and material steps in the advance from the band wheel to the present compact structure; that the invention, if any, was his; that Allen's adaptation to steam, his compact form, his saving of material, have been improvements in degree, and do not rise to the level of invention. Granting his rearrangement and adaptation of steam power, his use of the disk on the crank of the shaft (admittedly a mechanical equivalent of the pull wheel), his combination of the whole into a compact structure, were ingenious, useful, and economical, yet it is not such an advance from the Shippen device as involves invention.

To adopt, with some changes, the language of another, we may say that the development of this, as of every business, has created a constant demand for new appliances, which the ordinary skill of those versed in each branch has generally been adequate to devise, and which devising is the natural outgrowth of such development. Each forward step prepares the way for another, and to burden a great industry with a monopoly to each improver for every slight advance thus made, except where marked by invention somewhat above ordinary mechanical or engineering skill, is unjust in principle and injurious in consequence. We are of decided opinion that the substance of Allen's device was so anticipated in Shippen's that to

devise and construct the former, with the latter before one's eyes,—which, in contemplation of law, we must assume Mr. Allen had,—was the work of an adaptive mechanic, and not the province of an inventor. All the improvements claimed were, as compared with Shippen's device, within the category of degree. They produced no new result; the parts performed no new function,—it was simply a transposing or readjusting of Shippen's elements to changed conditions, to accomplish the same result they had before. It is true the radiation of the distributing rods in Shippen's device did not take place from the particular pull wheel situated above the framework where the actuating mechanism was placed, but this was because local conditions did not so require. Had they done so; had the wells been on all sides of the water power, instead of on one,—it is apparent the first pull wheel (or a revolving disk, which the patent says is its equivalent) could have been made the radiating center; and if the storage house interfered with the lateral movement, or the subsequent shifting, of the rods, it required no invention to dispense with a superstructure which performed no function whatever in the pumping. That left off, we have remaining a supporting frame for the power shaft and the pump-driving shaft, forming a house frame, and the end of the latter shaft extending above the frame, in combination with pump-actuating rods.

For the reasons above stated, we are of opinion the complainant's bill should be dismissed, and his patent held for naught. Such being the case, it is needless for us to discuss the alleged infringement. Let a decree be prepared.

SMITH v. MACBETH.

(Circuit Court, E. D. New York. January 1, 1894.)

PATENTS—INFRINGEMENT—MAGNETO-ELECTRIC MACHINES FOR FIRING FUSES.

The Smith patent, No. 201,296, for improvement in magneto-electric machines for firing fuses in blasting, is narrowed by its claims, as allowed, to the combination of an operating device with the switch of the condensing circuit in its path, and adapted to be opened by direct impingement of it, and is not therefore infringed by defendant's device, in which the switch is not in the path of the operating device, and is not opened by the direct impingement of any of the parts constituting the operating device.

This was a suit in equity by H. Julius Smith against James Macbeth for infringement of a patent granted to complainant.

Leonard E. Curtis, for orator.

James A. Hudson and Arthur S. Browne, for defendant.

WHEELER, District Judge. This bill is brought for alleged infringement of letters patent No. 201,296, dated March 12, 1878, and granted to the orator, for improvement in magneto-electric machines for firing fuses in blasting. The electricity is developed and accumulated in a condensing circuit by the rotation of armatures moved by a rack bar forced downward by hand and working a pinion with accelerated velocity; the condensing circuit is