

Opinion of the Court.

We base our decision, however, on the grounds we have indicated, first, because it does not appear that the plaintiff had any part in executing the contract in violation of the law of Wisconsin forbidding the transaction of business on Sunday; and, second, because the contract, though signed by the defendant on Sunday, was not delivered by him, and did not take effect on that day.

We are of opinion that the Circuit Court erred in rendering judgment for the defendant upon the findings of fact.

The judgment is reversed, and the cause remanded, with directions to grant a new trial.

PHILLIPS and Others *v.* DETROIT.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF MICHIGAN.

Argued April 22d, 1884.—Decided May 5th, 1884.

Patent.

The construction of the pavement described in the letters patent for "a new and useful improvement in street and other highway pavements" granted to Robert C. Phillips, December 5th, 1871, demanded only ordinary mechanical skill and judgment, and but a small degree of either, and required no invention.

The facts which make the case are stated in the opinion of the court.

Mr. George H. Lothrop, for appellants.

Mr. D. C. Holbrook, for appellee.

MR. JUSTICE WOODS delivered the opinion of the court.

This was a suit in equity brought by Robert C. Phillips, Eugene Robinson, and Jesse H. Farwell, who were the exclusive licensees of Phillips for the State of Michigan, to restrain the defendant, the city of Detroit, from infringing letters patent granted to Phillips, December 5, 1871, for "a new and

Opinion of the Court.

useful improvement in street and other highway pavements." The specification and claim of the patent were as follows:

"My improvement consists mainly in the use of wood of any suitable kind in its natural or undress state; that is, in the form of round blocks or sections of small trees or the branches of trees from which the bark has been removed, cut as nearly at right angles to their length as may be, generally in lengths of about six inches, their diameters varying from three to twelve inches. These are placed upon end upon a bed or foundation composed of a stratum or layer of broken stone about eight inches deep, upon which a course of coarse sand or gravel of, say, six inches in depth is spread, the whole properly rolled or rammed so as to be solid and presenting an even or uniform surface for the blocks to rest upon. Upon this surface the blocks are placed upon end, as nearly together as may be, in such manner as to form an even or uniform surface. They are then rolled or rammed heavily so as to force them well down upon the bed. The spaces or openings between the blocks are then filled with good, hard, coarse gravel and sand and again rolled or rammed, after which the whole is covered with gravel or sand to a depth of about one inch, when the travel may be turned on. As stated above, these blocks may be composed of any suitable wood, but locust is preferred. White oak, white cedar (*arbor vitae*), chestnut, yellow pine, and others afford good material. . . . I thus produce a pavement which can be laid as easily and with less expense than cobble-stone pavement, and which has been found in practice to be more durable than the most approved wooden pavement hitherto in use. I do not claim broadly the use of wooden blocks in the state in which they are cut from the tree or branches; nor yet do I claim the foundation of stone or gravel and the filling of the spaces between the blocks with sand or gravel separately considered; but what I do claim as my invention and desire to secure by letters patent is a wooden pavement composed of blocks of any desired wood, cut from the trunks or branches of trees or saplings of any desired length in their natural form, the bark only being removed, placed with their fibres vertical upon a bed of broken stone and gravel or sand, or either of them, the spaces between the blocks being filled with gravel or sand, the whole made compact by ramming, rolling, or other proper methods, as herein shown and described."

Opinion of the Court.

The answer of the defendant admitted that it had caused to be laid a pavement, such as is described in the patent of the complainants, and by way of defence alleged want of novelty in the improvement covered by the patent.

Upon final hearing the Circuit Court dismissed the bill on the ground that, in view of the state of the art, the patent did not describe any patentable invention. From this decree the complainants appealed.

We think the decree of the Circuit Court was right. The patent purports to be for a combination. The alleged combination consists in a pavement formed by blocks of wood, cut from the trunks or branches of trees, set with their fibres vertical upon a bed of broken stone, sand or gravel, the spaces between the blocks being filled with sand or gravel. The kind of wood of which the blocks are composed and their length and diameter, are immaterial. The placing of the blocks with their fibres vertical is shown to be an old method long antedating the patent, and is so obviously the only practicable mode of placing them that its suggestion in the patent cannot be called invention. The specification expressly disclaims, as a part of the patent, the use of wooden blocks in the state in which they are cut from the tree or its branches, the foundation of stone or gravel, and the filling of the spaces between the blocks with sand or gravel, separately considered. The only thing, therefore, left for the patent to cover is the bringing together of these three old and well known elements in the construction of a pavement—namely, the wooden blocks, the foundation, and the filling.

In passing upon the novelty of the alleged improvement covered by this patent, we are permitted to consider matters of common knowledge or things in common use. *Brown v. Piper*, 91 U. S. 37; *Terhune v. Phillips*, 99 U. S. 592; *King v. Gallun*, 109 U. S. 99; *Ah Kow v. Nunan*, 5 Saw. 552. We therefore take into consideration the fact that the common and well known method of constructing pavements in use long before the date of the Phillips patent, was to prepare a foundation or bed of gravel or sand, place the blocks, boulders or bricks of which the pavement was to be made upon this bed, and fill the spaces

Opinion of the Court.

between them with sand or gravel, or both mixed. Familiar instances of pavements thus made are the cobble-stone pavements usually laid in streets, and the brick pavements usually laid upon sidewalks. This is the method pointed out in the specification of the Phillips patent. It is conceded in the disclaimer embodied in the specification that the use of wooden blocks like those described in the specification is not new, and the evidence shows that such blocks, set vertically, had long been employed in the construction of pavements. The improvement described in the appellant's patent consists, therefore, in simply taking a material well known and long used in the making of pavements, to wit, wooden blocks set vertically, and with them constructing a pavement in a method well known and long used. It is plain, therefore, that the improvement described in the patent was within the mental reach of any one skilled in the art to which the patent relates, and did not require invention to devise it, but only the use of ordinary judgment and mechanical skill. It involves merely the skill of the workman and not the genius of the inventor. The following cases illustrate the subject.

In *Hotchkiss v. Greenwood*, 11 How. 248, the substitution of a well known porcelain door-knob for a clay knob, in combination with a particular shank, was held to be no invention. So, where the patentee had taken a fire-pot from one stove, a flue from another, and a coal reservoir from the third, and had put them into a new stove, where each fulfilled the office it had fulfilled in its old situation and nothing more, the patent was held void for want of invention. *Hailes v. Van Wormer*, 20 Wall. 353.

In *Smith v. Nichols*, 21 Wall. 112, it was held that "a mere carrying forward a new or more extended application of the original thought, a change only in form, proportions, or degree, the substitution of equivalents doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent."

The case of *Reckendorfer v. Faber*, 92 U. S. 347, is much in point. The patent was for an improvement which was described in the specification as follows: "I make a lead pencil

Opinion of the Court.

in the usual manner, reserving about one-fourth the length, in which I make a groove of suitable size, A, and insert in this groove a piece of prepared India rubber, secured to said pencil by being glued at one edge. The pencil is then finished in the usual manner, so that on cutting one end thereof you have the lead B, and on cutting the other end you expose a small piece of India rubber C ready for use." This device was held not to be patentable, and it was declared that "the law requires more than a change of form or juxtaposition of parts, or of the external arrangement of things, or of the order in which they are used to give patentability."

In *Atlantic Works v. Brady*, 107 U. S. 192, is found one of the most recent and emphatic declarations of this court upon the subject. It was there said, that the design of the patent laws was to reward those who make some substantial discovery or invention which adds to our knowledge or makes a step in advance in the useful arts, and that it was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. In *Howe v. Abbott*, 2 Story, 190, it was held that the application of a process to palm leaf to curl it for mattresses, the same process having been used to curl hair for mattresses, was not patentable. In the case of *Kay v. Marshall*, 8 Clark & Fin. 245, it was said to be no invention to use for spinning flax, which had been so macerated that its fibres were shortened, an arrangement of rollers borrowed from cotton spinning machinery. See also *Stimpson v. Woodman*, 10 Wall. 117; *Rubber Tip Pencil Company v. Howard*, 20 Wall. 498; *Slawson v. Grand Street Railroad Company*, 107 U. S. 649; *King v. Gallun*, 109 U. S. 99.

The cases cited are conclusive of this. We are of opinion that, taking into consideration the state of the art, no invention was required for the construction of the pavement described in the patent, and that it demanded only ordinary mechanical skill and judgment and but a small degree of either.

The decree of the Circuit Court is affirmed.