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reversal of the decree at the instance of appellants, and in spite of the position they occupied to the contrary. It is suggested that the principles in relation to separable controversies were not so well understood in 1887 as at this date, and except for that appellants would not have attempted to remove the cause; but the petition, though imperfect, was sufficient to accomplish the result of forcing appellee into the Circuit Court, and we find ourselves at liberty to decline to deprive him of his decree on the ground that the cause was not rightfully transferred. *Decree affirmed.*

PALMER v. CORNING.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR
THE NORTHERN DISTRICT OF NEW YORK

No. 137. Argued January 8, 9, 1895. — Decided March 4, 1895.

The improvement in sewer gratings patented to Henry W. Clapp by letters patent No. 134,978, dated January 21, 1873, involved no invention.

THE case is stated in the opinion.

Mr. Edwin H. Risley for appellant.

Mr. George T. Spencer for appellee.

MR. JUSTICE WHITE delivered the opinion of the court.

The sole question in this case is whether the appliance to which the plaintiff in error claims the rights of a patentee under the grant of letters patent No. 134,978, bearing date January 21, 1873, issued to his assignor, involves invention, or is simply a manifestation of mechanical skill.

There is no doubt that in this, as in all similar cases, the letters patent are *prima facie* evidence that the device was patentable. Still, we are always required, with this presumption in mind, to examine the question of invention *vel non* upon its merits in each particular case. In the present instance the letters patent state the device to be an "improvement in gratings for sewer inlets," and describe it as follows:

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"My improvement consists in the employment of a device to elevate the grating above the opening which it covers a short distance, so that it will not become obstructed by small sticks, straws, leaves, and other small rubbish not large enough to clog the sewer or drain with which it may be connected, and at the same time will stop all matter large enough to do injury in said drain.

"My improvement may be attached to any form of grating, round or square; and consists of a cast-iron ring made to fit the collar which surrounds the opening to hold the grate in place, marked *a* in the drawing, in which I set the cast or wrought-iron pins, marked *b* in the drawing, to which the grating is firmly attached, and by means of which the grating may be elevated one to two inches, more or less, as may be desirable. These pins may be of wrought iron fitted to holes drilled in the grate and ring; or the grate, ring, and pins for elevating the grate may be cast all in one piece; or wrought-iron pins may be cast into the ring and grate when they are cast.

"The whole grating and ring may be taken out as desired, as easily as if they were not furnished with the supporting ring; and my improvement may be used with a wood or iron collar, as may be desired.

"By thus elevating the grate a space is left, through which leaves, straws, small sticks will pass freely, and the grate will be kept clear for the passage of water.

"I claim —

"The grating for sewer openings herein described, consisting of the ring *a*, supporting-pins *b*, and elevated grating, substantially as specified."

It thus appears that the whole subject-matter which is covered consists of a grate elevated above the top of the catch-basin of a sewer and resting on a ring or support placed below the top of the basin by means of pins which thus lift up the grating, between which pins are left spaces allowing the water to pass through, under the grating, the result of so elevating the grate being, it is claimed, to keep the openings on the grating proper and the openings below free from the

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debris which would otherwise accumulate thereon or against the same. There is no pretence that the claim covers a grate of any particular style of manufacture or any particular shape; in fact, it is expressly stated that the grate may be made either round or square, and that the pins may be of wrought iron, fitted to holes drilled in the grate or ring, or the grate, rings and pins for elevating the grate may be cast all in one piece, or wrought-iron pins may be cast into the ring and grate when they are cast. Viewed separately, the elements of this device certainly involve no invention. A grate over a sewer is one of the simplest of mechanical devices. The mere use of a ring of iron on which to rest such a grating is obviously nothing more than a mechanical arrangement, which involves no element of invention; and the same is the case with the use of pins or legs for the purpose of holding up a sewer grate. And it is equally clear that the leaving of open spaces between the pins and the elevating of the grate above the ring, thereby giving greater facility for the flow of water, is invention in no sense of the word. But although no one of these elements of the contrivance involves invention, it is insisted that, taken all together, they constitute a "combination," and that it is this combination which is covered by the letters patent. If a combination of unpatentable elements, as such, produces new and useful results, there can be no doubt that the combination is patentable. But there are certain conditions constituting the essential nature of a combination under the patent law, which we think are not met in this case. The law upon this subject this court has often stated:

"It must be conceded that a new combination, if it produces new and useful results, is patentable, though all the constituents of the combination were well known and in common use before the combination was made. But the results must be a product of the combination, and not a mere aggregate of several results, each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into juxtapo-

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sition, and there allowing each to work out its own effect without the production of something novel, is not invention. No one by bringing together several old devices without producing a new and useful result, the joint product of the elements of the combination and something more than an aggregate of old results, can acquire a right to prevent others from using the same devices, either singly or in other combinations, or, even if a new and useful result is obtained, can prevent others from using some of the devices, omitting others, in combination." *Hailes v. Van Wormer*, 20 Wall. 353, 368.

"The combination to be patentable must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts. There must be a new result produced by their union; if not so, it is only an aggregation of separate elements." *Reckendorfer v. Faber*, 92 U. S. 347, 357.

"In a patentable combination of old elements, all the constituents must so enter into it as that each qualifies every other; to draw an illustration from another branch of the law, they must be joint tenants of the domain of the invention, seized each of every part, *per my et per tout*, and not mere tenants in common, with separate interests and estates. It must form either a new machine of a distinct character and function, or produce a result due to the joint and co-operating action of all the elements, and which is not the mere adding together of separate contributions. Otherwise it is only a mechanical juxtaposition, and not a vital union." *Pickering v. McCullough*, 104 U. S. 310, 318.

"It is true that such a fireplace heater, by reason of the fuel magazine, was a better heater than before, just as the outstanding stove with its similar fuel magazine was a better heater than a similar stove without such a fuel magazine. But the improvement in the fireplace heater was the result merely of the single change produced by the introduction of the fuel magazine, but one element in the combination. The new and improved result in the utility of a fireplace heater cannot be said to be due to anything in the combination of

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the elements which compose it, in any other sense than that it arises from bringing together old and well-known separate elements, which, when thus brought together, operate separately, each in its own old way. There is no specific quality of the result which cannot be definitely assigned to the independent action of a single element. There is, therefore, no patentable novelty in the aggregation of the several elements, considered in itself." *Thatcher Heating Co. v. Burtis*, 121 U. S. 286, 294.

Tested by these principles, we think it evident that there is no invention in the device now before us. It is claimed that its effect is to prevent the grate from being clogged. But this effect only comes from raising the grate and leaving openings beneath it; it is an effect produced solely by the openings beneath, and is not in any way due to the presence of the grate above. Thus, even if the appliance operates as claimed, its operation is the result of no combined action, but is due entirely to the openings below. If there were no grate above the pins but a solid piece of metal or other substance, so that no water could enter the sewer except through the openings left between the pins, the tendency of the flow of the water through those openings would not be affected, and the only result would be to diminish the flow of water into the sewer in a given time by the quantity which would enter above if the place were grated. It seems manifest, indeed, that the only practical operation of this device is to increase the utility of the sewer by elevating the grate, and so rendering it easier for the water to enter. An attempt was made to show by the testimony of a person who had observed the operation of one of these grates made in a circular form, that its use resulted in giving a circular motion to the water, and that the debris was carried to the periphery of the circulating fluid and thereby prevented from accumulating on the top of the grate. But if this be true, it is manifestly a result of leaving the open spaces between the pins and having the grate circular in form. Conceding that the water just before passing through openings thus arranged would acquire something of a circular motion, this would not be by any means

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the result of any combination between the opening below and the grate above. And, moreover, it cannot be contended that the arrangement of a circular grate supported on pins with the open spaces between them constitutes the invention, for it is expressly stated that the grates may be of any form, round or square.

The judgment below, holding that no invention is involved in this arrangement, is, we think, obviously correct, and it is, therefore,

Affirmed.

MARICOPA AND PHOENIX RAILROAD COMPANY
v. ARIZONA TERRITORY.

APPEAL FROM THE SUPREME COURT OF THE TERRITORY OF
ARIZONA.

No. 195. Submitted January 28, 1895. — Decided March 4, 1895.

When Congress grants to a railway company organized under the laws of a Territory a right of way over an Indian reservation within the Territory, and the road is constructed entirely within the Territory, that part of it within the reservation is subject to taxation by the territorial government.

The question whether it is so subject to taxation is one within the jurisdiction of this court, when properly brought here, irrespective of the amount involved.

AFTER the organization of the Territory of Arizona certain land situated within its geographical limits was set apart as an Indian reservation for the use of the Pima and Maricopa Indians. Act of February 28, 1859, c. 66, § 3, 11 Stat. 401. The tract is known as the "Gila River Reservation." The Maricopa and Phoenix Railroad Company owns and operates within the Territory of Arizona 24.16 miles of railroad track, all of which lie within the geographical outlines of the Territory, as named in its organic act, but 6.24 miles are within the reservation just mentioned. This portion was constructed under the authority of the act of Congress of January 17,