nary motion. And it further appears that, when the attention of the court in the earlier case was called to this condition of affairs, it entertained a motion for reargument, which has not yet been decided, and which that court has intimated it will not decide until the determination of this important issue of fact in the main case (in New Jersey). Under these circumstances the case in Illinois must be considered as sub judice,—a matter not yet decided,—and therefore not entitling the complainant to a preliminary injunction as an adjudication sustaining the claims relied on. Motion denied.

WESTERN WHEEL SCRAPER CO. v. DRINNIN et al.

(Circuit Court, N. D. Illinois, S. D. July 10, 1896.)

1. PATENTS FOR INVENTIONS—PATENTABILITY—ROAD SCRAPER.
Letters patent No. 379,550, issued to the Western Wheel Scraper Company March 13, 1888, and No. 380,068, issued to said company March 27, 1888, for improvements in wheeled road scrapers, consisting of a combination of old elements to produce a machine in which vertical, horizontal, and angular adjustments of the scraper blade may be made by the man who rides it without stopping the machine, are not void for want of invention.

2. SAME—INFRINGEMENT.
Such patents are infringed by a device containing all the substantial elements of the patented machines, except that rods are substituted for chains, as a means of changing the position of the scraper blade.

Suit for injunction brought by the Western Wheel Scraper Company against William Drinnin and Charles Pate.

Bond, Adams, Pickard & Jackson, for complainant.
H. C. Hartman, for defendants.

GROSSCUP, District Judge. The bill is to restrain infringement of letters patent No. 379,550, granted to complainant, on application of S. F. Welch, March 13, 1888, and also to restrain infringement of letters patent No. 380,068, granted to complainant, on application of S. F. Welch, March 27, 1888. Both of these patents relate to road scrapers. Patent No. 379, 550, with the claim relied upon, is as follows:

To All Whom It may Concern: Be it known that I, S. Frank Welch, residing at Mt. Pleasant, in the county of Henry and state of Iowa, and a citizen of the United States, have invented a new and useful improvement in road graders, of which the following is a specification, reference being had to the accompanying drawings, in which Fig. 1 is a plan. Fig. 2 is a rear elevation. Fig. 3 is a side elevation. Fig. 4 is a detail, being a longitudinal section through the rings, F, G, and pinion, e. Fig. 5 is a detail, being a section at line, x, of Fig. 1. My invention relates to that class of road graders in which the scraper is supported by a frame mounted on wheels, and in which it can be adjusted vertically and laterally, and can be set at different angles of diagonal adjustment to the roadbed. The leading object of my invention is to provide convenient and efficient means, by the use of which the various adjustments desired can be secured, which I accomplish as illustrated in the drawings, and as hereinafter fully described. Those things which I claim as new will be set forth in the claims. In the drawings, A, A', represent the front and rear wheels of the road grader, which wheels are supported on axles as usual. B, B', are the front and rear bolsters. The front

bolster is pivoted on the front axle, and the rear bolster is rigidly attached to the rear axle. C is a frame suported by the bolsters. D is a draft hook which passes through the front axle, and is pivotally secured thereto by a king bolt. a is a loop which passes through the forward end of the draft hook, D, the forward end of the loop being connected with the tongue. b is an upward projection from the rear end of the draft-hook, D. E, E', are two bars of a bifurcated beam having an eye at its front end, which is loosely attached to the projection, b, upon the draft-hook, D. F is a flat metal ring rigidly secured to the under side of the bars, E, E'. This flat ring has a flange, c, at its lower inside edge. G is another flat ring, which has a flange, d, at its outside upper edge, which flange, d, rests loosely on the flange, c, of the ring, F, and this ring, G, can rotate freely within the ring, F, and it is held in place by the bars, E, E', beneath which it is located. H, H', are arms, the inner ends of which are rigidly secured, respectively, to the bars, E, E', and they are also secured to the plate, F, and being located above the ring, G, they aid in holding it in place. I, I, are two curved arms, the upper ends of which are rigidly secured to the flat ring, G. J is a transversely curved scraper blade, which is rigidly secured to the free ends of the curved arms, I. K is a toothed rack, which is rigidly secured to the lower side of the flat ring, G, and the rack extends nearly one-half the circumference of the ring. The rack may be made integral with the ring, G, or it may be bolted or riveted thereto. e is a pinion at the rear of the flat ring, F, and journaled thereto, which pinion engages with the rack, K. f is a shaft upon which the pinion, e, is secured, and g is a hand wheel at the upper end of the shaft, f. h is a pin arranged to engage with and lock the pinion, e, in any desired position; the pin, h, being operated by the hand lever, i. j, j, are chains attached at one end to the rear ends of the bars, E, E', or to the ring, F, which chains cross each other, and, after passing around the sheaves, k, k, are attached to the opposite ends of a spiral-grooved spool or drum, l. This drum, l, is journaled to a crosspiece, m, which forms a part of the main frame, and is secured to a shaft, n, to the upper end of which is secured a hand wheel, o. p is a pin used for locking the drum in any desired position, which pin is operated by a treadle, q. L, L', are bars loosely attached at their lower ends to the outer ends of the arms, H, H', and their upper ends are loosely attached to the opposite ends of a guide bar, M. This bar, M, can slide freely up and down in guide slots in the uprights, N, N', which are bolted to opposite sides of the main frame. O is a crosspiece secured to the upper ends of the uprights, N, N'. r, r, are brackets secured near the upper ends of the uprights, N, N', in which brackets are journaled short shafts which carry the gear wheels, s, s, and pinions, t, t. P, P, are rack bars secured to the bar, M, with which the pinions, t, t, engage. u, u, are pinions attached to the ends of the shafts, v, v, which shafts are journaled at one end near the upper ends of the uprights, N, N', and, extending rearward, are again journaled in the uprights, Q. The pinions, u, u, engage with the gear wheels, s, s. The shafts, v, v, are provided with cranks, a', and upon each shaft, v, is secured a notched wheel, b', with which notched wheels dogs, c', engage. R is a spring bar pivoted at one end to a cross spring, S, the ends of which are secured to opposite sides of the frame, C. The rear end of this spring bar, R, is connected with a chain, d', attached to the rear ends of the bars, E, E', or to the flat ring, F. In use the scraper blade, J, can be adjusted diagonally to the main frame by means of the hand wheel, g, and pinion, e, which engages with the rack, K, which is secured to the ring, G, which carries the scraper blade, and by means of the pin, h, the pinion, e, and hence the scraper blade, can be locked in any desired position. The desired lateral adjustment of the scraper can be obtained by means of the hand wheel, o, drum, l, and chains, j, and the drum, and hence the scraper, can be locked in any desired position by means of the pin, p. The scraper blade can also be adjusted vertically by means of the cranks, a', shafts, v, gear wheels, s, pinions, t, rack bars, P, and bars, M and L, L'. By operating either one of the cranks, a', either end of the scraper blade can be elevated or depressed independently of the other, as the ground to be operated upon may require. The position of the scraper blade can be changed from right to left, or from left to right, by means of the chains, j, j, drum, l, and hand wheel, g, so as to deliver the earth either outside or inside of the wheels, and as may be required by the various classes

of work to be performed. The position of the scraper blade may be changed so as to throw the earth either to the right or to the left, and all of the necessary adjustments can be easily and conveniently made, by means of the devices shown and described, by an operator suitably located on the machine. The springs, R and S, sustain a portion of the weight of the scraper blade and its attachments, thus making it more easy to adjust the blade vertically without interfering with its lateral movement.

I am aware that letters patent of the United States have been issued (one, No. 363,342, dated May 17, 1887; one, No. 370,655, dated September 27, 1887; and one, No. 370,806, dated October 4, 1887), and I do not intend to claim as my invention anything which is shown and described in either of the said patents. Neither do I intend to claim broadly the use of chains for the purpose of giving lateral adjustment to the scraper. What I claim as new, and desire to secure by letters patent, is: (1) In a road grader, the combination of a frame supported by wheels, a draft bar for the scraper, as E, E', pivotally supported at its forward end, a ring, F, a ring, G, a rack, K, secured to said ring, G, a scraper blade supported by the ring, G, and a pinion engaging with said rack, substantially as and for the purposes specified.

Fig. 1.

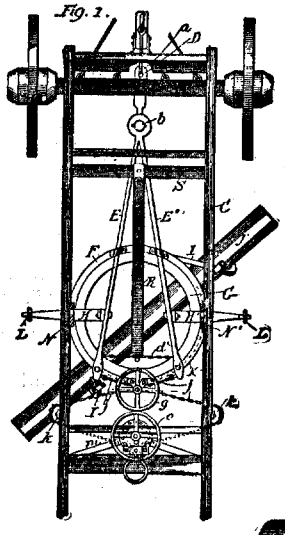


Fig. 2

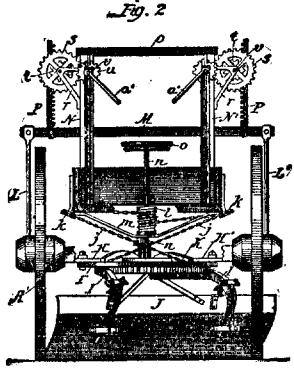


Fig. 3.

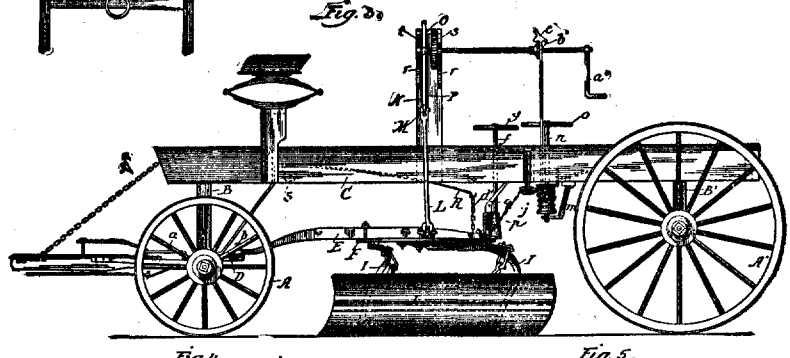


Fig. 4.

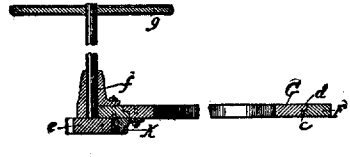
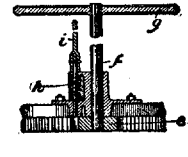


Fig. 5.

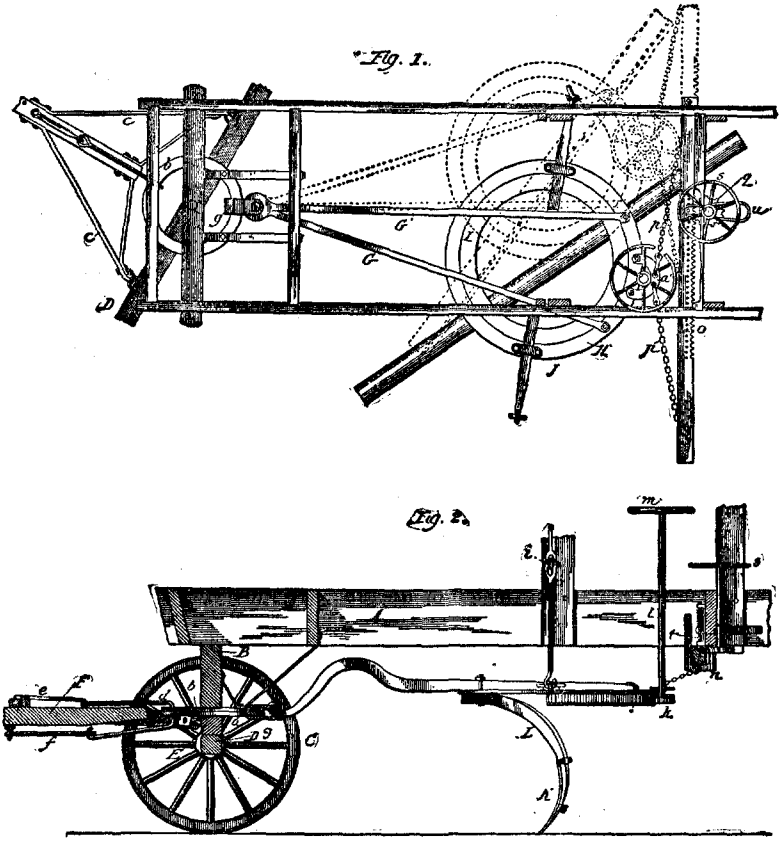


Patent 380,068, with the claim relied upon, is as follows:

To All Whom It may Concern: Be it known that I, S. Frank Welch, residing at Mt. Pleasant, in the county of Henry and state of Iowa, and a citizen of the United States, have invented a new and useful improvement in road graders, of which the following is a specification, reference being had to the accompanying drawings, in which Fig. 1 is a plan showing so much as is necessary to illustrate my invention. None of the wheels are shown in this figure. Fig. 2 is a vertical section, some parts being in elevation. My invention relates to that class of road graders in which the scraper is supported by a frame mounted on wheels, the scraper being so attached as to have various adjustments. The objects of this invention are to provide improved devices, by the use of which the draft will be upon the forward end of the scraper beam without interfering with the required movements of the forward wheels, and to provide improved devices for giving to the scraper a lateral adjustment, which I accomplish as illustrated in the drawings, and hereinafter described. What I claim as new will be set forth in the claims: In the drawings, A represents a frame, which is supported upon bolsters, as usual. B is the forward bolster. C is one of the forward wheels. The rear bolster and the rear wheels are not shown. D is the forward axle. E is a piece of wood secured to the axle, D, as usual. a is a ring of metal secured to the piece, E. b is another ring of metal connected with the bolster, B. F is the tongue, which is connected with the axle by the rods, c, and with the rings, a, b, by means of a strap, d. The forward end of the upper portions of this strap, d, is connected with a flat bar or rod, e, running back from the evener bolt. The forward end of the lower part of this strap, d, is connected with a rod, f, which goes forward to the forward end of the tongue, and at the forward end of this rod, f, a second pair of horses may be attached. g is a loop which encircles the rings, a, b. G, G', are two bars of a bifurcated beam having an eye at the front end loosely attached to the loop, g. The rear ends of the bars, G, G', are secured to a flat metal ring, H. I is another flat metal ring inside of the ring, H, and beneath the bars, G, G'. It has a flange at its outside upper edge, which rests loosely on a flange at the lower inside edge of the ring, H. J, J', are arms secured to the ring, H, and also to the bars, G, G'. K is a scraper blade secured to arms, L, L, the forward ends of which are secured to the ring, I. h are rods, the lower ends of which are respectively connected to the outer ends of the arms, J, J', and the upper ends of these rods are connected with a crossbar, i, which can be raised and lowered by suitable devices (not shown) for the purpose of vertically adjusting the scraper blade. j is a rack secured to the flat ring, I. k is a pinion engaging with the rack, j. This pinion is on a shaft, l, and can be operated by a hand wheel, m. By rotating the pinion the scraper blade can be adjusted diagonally to the main frame. M is a bar supported by straps, n, secured to the main frame. The rear edge of this bar is provided with a rack, o. p, p, are chains, one end of each of which, as shown, is connected with the ring, H; but they may be connected with the blade-supporting frame in other suitable manner, and the other end of each chain is connected with the bar, M. q is a pinion engaging with the rack, o, which pinion is on a shaft, r, and is operated by a hand wheel, s. By rotating this hand wheel, s, the bar, M, can be moved transversely, thus adjusting the position of the scraper laterally; one position being indicated by full lines, and one by dotted lines, in Fig. 1. t is a spring lock, the lower end of which is designed to enter one of a series of holes in the bar, M, for the purpose of holding the scraper in any desired lateral position. u is a pivoted lever, the forward end of which is connected with the lock, t, by means of which the lock can be disengaged from the bar, M, when it is desired to change its position. The complete machine is provided with adjusting devices and other parts (not shown) which form no part of this invention. The scraper blade is drawn by the loop, g, and the axle, D, can assume any desired position without interfering with the draft; the strap, d, moving over the ring, b, as the axle turns, and the lower ring, a, at the same time moving through the loop, g.

What I claim as new, and desire to secure by letters patent, is: * * * (2) In a road grader, the combination of a frame supported by wheels, a draft

beam for the scraper, rings, H and I, a scraper blade supported by the ring, I, a sliding rack bar, M, pinion, q, and chains connecting the rack bar, M, and ring, H, substantially as and for the purposes specified.



The defenses are invalidity of the patent, and noninfringement.

The practical objects to which the complainant's so-called combination are directed are (a) strength; and (b) easy and accurate adjustment of the blade in the following particulars: (1) In the angular direction of the blade, which qualifies in many respects the effective uses of the machine; (2) in the vertical position of the blade, which qualifies the depth of the cut; (3) in the horizontal position of the blade, it being highly essential in some instances that the blade should be thrust out horizontally beyond the wheels of the wagon, especially in the cutting of ditches, and in the finishing of the edges of ditches, etc. The complainant's scraper attains all these purposes by the combination set forth. The elements which make up this combination are not new. They have individually been employed for similar purposes in other mechanisms. I find the draft bar for the scraper, pivotally supported at its forward end, in other road scrapers. I find the ring, F, and the ring, B, substantially used for like purposes in other

mechanisms. And I find the pinions and chains for the horizontal motion described in the second patent substantially like pinions and chains used in other mechanisms. All the elements, therefore, of the complainant's device, individually, are old; and the ultimate result, a road scraper, is old. But none of the patents or devices brought to my attention as anticipations so organized these old elements into a machine, as a whole, such as the complainant's patent presents. In all of the previous road scrapers, one or more of the elements was left out, and the omission was attended with this important result: that the elements thus incompletely combined did not constitute a road scraper with that high degree of perfection whereby vertical, horizontal, and angular adjustments were readily brought about, as I have already pointed out. This readiness of adjustment, so easily made that the machine need not be stopped, and putting the machine in the power of the man who rides it, was at the date of complainant's invention a new thing in the art of road scrapers. This feature, therefore, is a distinct advance in that art. In all the machines that preceded, these adjustments could only be effected by a stoppage, and then by manual manipulation that was not only clumsy, but time-consuming, in comparison with the complainant's. The complainant's machine, as a whole, therefore, is a distinct and decided improvement upon everything that preceded. I cannot see why this is not invention. A new idea may be ingrafted upon old devices, and be so distinct from the conceptions which preceded it that, although it employs old mechanical elements, it will, notwithstanding, constitute invention. Welch's combination was a new idea. It was the result of thought directed towards avoiding the delays and clumsy manipulations attendant upon the old machines. It resulted in equipping the new road scraper with such an organization of parts that all the necessary adjustments were put within easy reach, and almost within the word of command of the man who rides it. The inventor searched, it is true, the field of old mechanical devices for the means to his end, but the end itself was a new idea; at least, a great improvement upon the old ideas. The concatenation of these old elements to this new purpose—new in the sense of avoiding the old difficulties and clumsiness of adjustment—was not, in my judgment, mere mechanical adaptation. It was the conception, the invention, the mental creation, which manifests itself in properly organizing old means to a new purpose. Neither am I impressed with the argument that the machine was a mere adding together of separate contributions. It is, as an entirety, a distinct organization, incomplete without each of its parts, and made complete only by the co-operating action of all its parts. Its novelty and its usefulness are both illustrated by the defendants copying it almost complete.

What I have said applies especially to claim 2 of the second patent. I am in much greater doubt respecting claim 1 of the first patent, but, inasmuch as both patents seem to be but separate expressions of the same conception, the latter enlarging the conception of the former, I have concluded to sustain the validity of both.

The defendant's machine is, in my opinion, a clear infringement of the second patent, if not of the first. The substitution of rods for

chains is no change or modification of those essential features that give to the complainant's machine its patentability. The rods perform the same office as the chains, though perhaps in slightly different ways.

This case impresses me as one, however, in which I should supersede the injunction, upon the defendants giving a sufficient bond for damages in case they desire to take an appeal. A decree may be entered for complainant in accordance with this opinion.

KLEIN v. CITY OF SEATTLE.

(Circuit Court of Appeals, Ninth Circuit. October 6, 1896.)

No. 287.

1. PATENTS—EVIDENCE OF INVENTION—EXTENSIVE SALES.
   The fact that a device has gone into general use, and displaced other devices, while in some cases high evidence of invention, is not conclusive of patentability, and is not sufficient to support a patent, where the changes made from the prior art are mere changes of mechanical construction, or of form, size, or materials.
2. SAME—INSULATING PINS.
   The Klein patent, No. 297,699, for an improvement in pins for holding insulators for electric wires, consisting of making the pin of wrought metal, with a soft metal head, adapted to be screwed into the insulating material, is void for want of patentable invention. 63 Fed. 702, affirmed.

In Error to the Circuit Court of the United States for the Northern Division of the District of Washington.

Gavin McNab, Byers & Byers, and Battle & Shipley, for plaintiff in error.

Frank A. Steele and John K. Brown, for defendant in error.

Before GILBERT and ROSS, Circuit Judges, and HAWLEY, District Judge.

HAWLEY, District Judge. This is an action brought by the plaintiff in error against the defendant in error to recover damages for infringement of letters patent No. 297,699, issued to the plaintiff on the 20th of April, 1884, for an improvement in pins for holding insulators supporting electric wires. The case was tried before the court, without a jury, in accordance with a stipulation in conformity with the provisions of section 649 of the Revised Statutes. It is presented to this court upon special findings of fact found by the circuit court. 63 Fed. 702. The court held the patent to be void for want of novelty and invention, and entered judgment in favor of defendant for its costs. Is this judgment sustained by the findings of fact? This is the only question presented for review. Trust Co. v. Wood, 8 C. C. A. 658, 60 Fed. 346, 348, and authorities there cited; Blanchard v. Bank, 21 C. C. A. 319, 75 Fed. 249; Grayson v. Lynch, 163 U. S. 468, 472, 16 Sup. Ct. 1064.