The proof in the case also shows several patents on plows prior to the Starling patent where the plows were organized so as to raise the forward end of the plow-beam first, among which are the Baker patent of December, 1860; the Frasier patent of April, 1861; the Sattley patent of February, 1864; the Davenport patent of February, 1864; and the Davenport patent of February, 1866. So that the advantage of first raising the point of the plow, instead of the heel, in order that the forward movement of the team would aid in running the plow out of the ground, was well known in the art long before the complainant's patent. And although the lifting devices of these old patents may not have been the same as used by complainant, the forward end of the beam was lifted, and the advantages of doing so well understood, before this patentee adopted his method; and it certainly did not require inventive genius to apply to any plow, at the date of complainant's patent, the idea of lifting the forward end of the plow-beam first in order to secure the aid of the team in running the plow out of the ground, and in any of these old bail plows that end could be secured by locating the bail forward of the center of resistance.

For these reasons, I conclude that the first claim of the complainant's patent is void for want of novelty. Bill dismissed for want of equity.

FOOS MANUF'G CO. v. SPRINGFIELD ENGINE & THRESHER CO.

(*Circuit Court of Appeals, Sixth Circuit.* October 6, 1891.)

1. PATENTS FOR INVENTIONS—INVENTION—PRIOR ART—CRUSHING-MILLS.
Letters patent No. 359,588, issued March 15, 1887, to James F. Winchell, for a crushing and grinding mill, consisting of the "combination with a main shaft and grinders and a moving conveyor of a plurality of intergeared crushers, mounted to crush the material for the conveyor, and having protuberances which extend approximately in line with each other, one of said crushers being geared with the main-shaft," being a combination of old elements, are void for want of invention, in view of the prior state of the art, as shown by the Roberts mill, which the patentee had seen, and by the Baldwin patent, (No. 1,199,) of June 26, 1839, the Beal & Hale patent, (No. 4,895,) of December 17, 1846, the Newlous patent, (No. 8,425,) of October 14, 1851, the Nichols patent, (No. 9,330,) of October 12, 1852, the Wilson patent, (No. 12,977,) of May 29, 1855, the Vascomb & Guirand patent, (No. 20,310,) of May 10, 1883, the Hope patent, (No. 22,807,) of February, 1859, and the McCulla patent, (No. 29, 612,) of August 14, 1860.

2. SAME—INFRINGEMENT.
Even if considered valid, the patent must be limited to the particular structure described, and is not infringed by a mill in which the projections on the crushers are not in line with each other, and the crushers, instead of being geared to the main shaft, are geared to a counter-shaft, which derives its motion from the main shaft by means of a belt.

44 Fed. Rep. 595, affirmed.

Appeal from the Circuit Court of the United States for the Western Division of the Southern District of Ohio.

Suit by the Foos Manufacturing Company against the Springfield Engine & Thresher Company for infringement of a patent. Judgment dismissing the bill. Affirmed.

H. A. Toulmin, for appellant.
Bowman & Bowman, for appellee.
Before BROWN, Circuit Justice, and JACKSON, Circuit Judge.

JACKSON, Circuit Judge. This is a suit in equity, brought in the circuit court of the United States for the western division of the southern district of Ohio, for the alleged infringement of the first claim of letters patent No. 359,588, granted March 17, 1887, on an application filed November 16, 1885, to the complainant, as assignee of James F. Winchell, for improvements in crushing and grinding mills. The circuit court (Judge SAGE, presiding) entered a decree dismissing the bill, with costs. The opinion of the court is reported in 44 Fed. Rep. 595, and it appears therefrom that the dismissal of the bill was placed upon three grounds: *First.* That in view of the state of the art, as shown in prior patents, and machines in use before the date of said Winchell's application for letters patent on his improvements in crushing and grinding mills, there was no patentable novelty in his alleged invention. *Second.* That the combination attempted to be made and covered by the first claim of said letters patent was merely the aggregation of old and well-known devices, each operating in the old way and producing no new result, and was therefore void, under the well-settled rule announced by the supreme court in *Hailes* v. *Van Wormer*, 20 Wall. 353; *Pickering* v. *McCullough*, 104 U. S. 318; *Royer* v. *Roth*, 132 U. S. 201, 10 Sup. Ct. Rep. 58; and *Heating Co.* v. *Burtis*, 121 U. S. 286, 7 Sup. Ct. Rep. 1034. And, *thirdly*, that defendant's machine did not infringe, even assuming the validity of complainant's patent. The complainant, in support of its appeal from the decree dismissing its bill, has assigned for error the foregoing findings and rulings of the court below, in connection with others, not deemed necessary to notice specially, in the view we take of the case.

The invention sought to be covered by said letters patent, as stated in the specification, "relates to certain new and useful improvements in crushing and grinding mills, for reducing corn-cobs, roots, bark, bones, and the like substances—*First*, to a broken state; and, *secondly*, to a granular or finer state." The specification and drawing disclose two crushing and one grinding device. The initial crushing device, consists of two cylinders placed horizontally opposite and rotating towards each other, each being provided with teeth, projections, or protuberances extending "approximately in line with each other." "The crushers are sufficiently near to each other to cause the crushing protuberances of the respective (initial) crushers to stand either in line with each other, as seen in Fig. 2, or to lap each other, or to not quite reach each other," and one of said crushers is geared with the main shaft. The material to be reduced is first broken by this device, and then drops into the second device, consisting of a cylinder and concave provided with a moving conveyor, where it is still further reduced; and from thence, by means of the conveyor, it is carried to the vertically arranged grinding disks, where the final operation is performed in the way of reduction. Each of said de-

vices is a combination in itself, and operates separately and successfully upon the material to be reduced. It is clearly shown that each of said devices or separate features of the mill, and the operation thereof, was old and well known. The claim based thereon, and alleged to be infringed, is as follows:

"In a mill, the combination with a main shaft and grinders and a moving conveyor of a plurality of intergeared crushers, mounted to crush the material for the conveyor, and having protuberances which extend approximately in line with each other; one of the said crushers being geared with the main shaft."

Without passing upon the question whether this claim is for a mere aggregation of old devices or elements, operating in the old way, and producing no new results, and therefore void, as held by the court below, under the decisions referred to above, and reaffirmed in the more recent cases of *Florsheim* v. *Schilling*, 137 U. S. 64, 11 Sup. Ct. Rep. 20; *Mill Co.* v. *Walker*, 138 U. S. 124, 11 Sup. Ct. Rep. 292; *Setter Co.* v. *Keith*, 139 U. S. 530, 11 Sup. Ct. Rep. 621; *Electric Co.* v. *La Rue*, 139 U. S. 601, 11 Sup. Ct. Rep. 670,—we are clearly of the opinion that complainant's patent is void for lack of invention, within the rule laid down in *Aron* v. *Railway Co.*, 132 U. S. 84, 10 Sup. Ct. Rep. 24; *Day* v. *Railway Co.*, 132 U. S. 98, 10 Sup. Ct. Rep. 11; *Gardner* v. *Herz*, 118 U. S. 180–193, 6 Sup. Ct. Rep. 1027. It is shown by the testimony, and clearly appears from an inspection of the two mills, that what Winchell, the patentee, did, was simply to add to the old Roberts mill the intergeared initial crusher, so as to produce two crushing operations instead of one, and thereby remedy in some degree the defect in said Roberts mill. This initial crusher arrangement was frequently sold separate, and added to the old Roberts mill. It is further shown that, as far back as 1876, Roberts had attached to his mill the double or initial breaker, and operated the same in cutting and crushing weeds; that said Winchell saw the mill thus operated with initial or double breakers as early as the fall of 1876, and that he was not the first to conceive the idea of making such an attachment to existing mills. This Roberts mill shows substantially, if not identically, the second and third devices of complainant's mill, with the same mode of operation; and after Winchell had seen the double crushers, cutters, or breakers attached to that mill, and operated so as to give a double crushing reduction to the material experimented with, it was not open to him to appropriate the idea or suggestion, and make it the subject of a valid patent. Again, when the state of the art, as disclosed in the prior patents produced in evidence, is considered, we think it clear that the improvements made by Winchell involved only the exercise of mechanical skill, and did not rise to the dignity of invention, such as the law requires in order to justify a patent therefor. A brief reference to the prior patents which we think sustain this conclusion will be sufficient. In the Baldwin patent, (No. 1,199,) dated June 26, 1839, "for improvement in the machinery for crushing and grinding corn and cob for stock, and corn and other grains for stock and family use," there are two crushing cylinders, with teeth or protuber-

ances in the form of deep flutes, which perform the initial operation of reduction, followed by further reduction of the material by means of grinders, of which there appear to be two,—a coarser and finer,—the latter being connected with a concave bed. The specification states that—

"This machine is applicable, and we intend to apply it to, the crushing and grinding of various kinds of grain, etc. We do not claim to be the inventors of toothed iron cylinders, or to be the first who have applied them to the crushing and grinding of corn and other grains. But we claim to be the inventors of a machine for that purpose, such as is herein described, in which the article to be crushed and ground is acted successively upon by crushing and grinding cylinders standing in pairs, the one over the other, and combined with a small grinding cylinder and cave, constructed and operated substantially in the manner set forth."

In the Beal & Hale patent, (No. 4,895,) dated December 17, 1846, for a new and improved machine "for cracking and crushing corn and cobs together," and also for grinding other material, there are found two crushing cylinders, of different sizes, having teeth which pass between each other, the cylinders moving in opposite directions. These cylinders perform the initial crushing or breaking operation upon the material to be reduced. Underneath the main cylinder is placed a hinged, adjustable concave, adapted to the same, with projecting teeth similar to those on said cylinder. The teeth in the concave pass between the teeth of the main cylinder, and a set-screw is provided for regulating the distance between the concave and the main cylinder. The operation of the mill is thus described:

"The corn on the cob, or other substances to be crushed, is placed in the hopper over the [initial crushing] cylinder, and is drawn in between them. The rapid motion of the teeth on the main cylinder crushes and breaks the substance against the slower moving teeth on the [other] cylinders. The article then is carried between the concave and main cylinder, and is again crushed and broken up still finer between the stationary teeth on the concave and the teeth on the main cylinder."

Here we have two crushing devices and operations. In the Baldwin patent are found one crushing and two grinding devices and operations. It would hardly involve invention to supplement the two crushing devices of the Beal & Hale patent with the addition of a grinding device, so as to produce what complainant's counsel consider the essential merit of the patent sued on, viz., that of a double or dual crushing and a single grinding arrangement. Nor would it involve any exercise of the inventive faculty to drop one of the grinding devices of the Baldwin patent, and substitute therefor either the first or second crushing device of the Beal & Hale patent. In the Newlous patent, (No. 8,425,) dated October 14, 1851, we find initial crushing cylinders in connection with grinding cones, so constructed as to produce gradual and successive reduction of the material. The specification states that "the corn in the ear, to be crushed, is thrown into the hopper, and as the crushing cylinders revolve inward, and towards one another, the ears of corn are

seized by the teeth plates, [on the cylinders,] and crushed into small fragments, which fall between the cylinders into a receptacle below," where it is kept stirred, to prevent packing, and from thence into the grinding cones, consisting of two sets or sections; the first, at the smaller end, being provided with large, coarse teeth, and the second, towards the larger end, with the finer teeth, turned in the opposite direction, by means of which arrangement there is, after the initial crushing, first a coarse and then a finer grinding of the material. In the Nichols letters patent, (No. 9,330,) dated October 12, 1852, "for a new and useful machine for crushing and grinding cobs, corn, and other substances," we find from the specification and drawings that the initial crushing device was composed of two cylinders, the substances to be crushed and ground being first operated upon by the teeth on one cylinder into annular grooves in the other cylinder; and it is said in the specification that—

"Series of teeth on one cylinder, acting into continuous grooves in the periphery of another cylinder, I find to be much more efficient and rapid for crushing and grinding purposes than when the teeth on said cylinder act between series of teeth on another cylinder."

In the Wilson patent, (No. 12,977,) dated May 29, 1855, for an improvement "in machines for crushing and grinding corn," we find two initial crushing rollers, provided with V-shaped teeth, which serve to prepare for crushing the grain for the final grinding operation. In the Vascomb & Guirand patent, (No. 20,310,) dated May 10, 1883, for an improvement in grinding-mills, there is shown breaking rollers with teeth, and adjustable, so as to suit for breaking the cob as well as the corn, together with a cylindrical grinder and concave, also adjustable, so as to be made to suit the size of the pieces of cob or other material as it comes from the breaking device. In the William H. Hope letters patent, (No. 22,807,) dated February, 1859, for a new and useful portable mill, "for cutting, crushing, and grinding corn on the cob, grinding all kinds of grain into meal and flour, and grinding roots, herbs, bark, etc.," there are found initial crushing cylinders with V-shaped teeth, thick at their base, and running to a sharp edge, with downward inclination on one and upward inclination on the other cylinder. Where the mill is not needed as a corn and cob crusher and cutter, these cylinders are so arranged as to be detached. Below these cylinders, devices are arranged for two other crushing or grinding operations, according to the fineness of the reduction desired. In the P. G. McCulla letters patent, (No. 29,612,) dated August 14, 1860, for an improved grinding-mill, there appear two crushing cylinders, provided with teeth placed in a spiral line or position; the teeth on one cylinder being in line with the centers of the spaces between the other. The grinding apparatus employed in connection with said cylinders is adjusted longitudinally so as to grind finer or coarser, as may be desired, and the mill is so constructed to crush only, without grinding, or to grind only, without crushing, or to perform both operations; and it is stated in the specification that if corn and cob, or other substances, require to be crushed before grinding, they are fed into the proper receptacle and between said cylin-

ders, which draw in the substances, owing to the direction in which they turn; and, further, that—

"The crushing device may be fed without difficulty, and is not liable to choke or clog, as is the case with the usual crushing device, which is formed of a single toothed cylinder and stationary toothed concave. This latter device is quite liable to clog and troublesome to feed,—difficulties which are avoided by my invention."

This suggestion of the advantages of the double toothed crushing cylinders over the single toothed cylinder and stationary concave Winchell adopted and applied to the Roberts mill, which embodied the second and third features of his machines or improved mill. Any skilled mechanic, acquainted with the state of the art relating to crushing and grinding mills, and of the defects connected with and to be remedied in the Roberts mill, could and would readily, without the exercise of any inventive faculty or genius, have added the intergeared initial cylindrical crushers, provided with teeth or protuberances to draw in the substances to be crushed and ground, as shown in the foregoing prior patents. Such carrying forward or application of ideas or devices and their operation, disclosed in earlier patents, does not constitute invention. It is to be noticed that the patentee does not seek to patent the means and method adopted for bringing the old devices together. In view of the devices disclosed in the prior patents referred to, and in the Roberts mill, we are of the opinion that complainant's letters patent, (No. 359,588,) dated March 17, 1887, are lacking in patentable novelty, and are therefore void.

While this conclusion renders it unnecessary to consider other questions or assignments of error, it may be proper to state that, if said patent could be sustained, it would, under well-settled rules, have to be limited and confined to the particular structure or machine described and covered by the first claim, and that, being thus limited, it is not infringed by the appellee's mill, as the court below correctly held. The decree of the court below, dismissing the bill, is accordingly affirmed, with costs.

THE ITATA.

UNITED STATES *v.* THE ITATA.

SAME *v.* TWO THOUSAND CASES OF RIFLES, etc.

(*District Court, S. D. California.* March 8, 1892.)

PENALTIES AND FORFEITURES—NEUTRALITY LAWS—FURNISHING ARMS TO FOREIGN INSURGENTS—REV. ST. § 5283.

The steam-ship Itata, a vessel belonging to a foreign insurgent party, but not being a vessel of war, came into the territory of the United States, and there received on board a cargo of munitions of war purchased there by an agent of the insurgents. The cargo was not for the equipment of the Itata, but was to be transported