elty in the devices by which he was able to make his valve 22 answer for both service and quick-action work, in connection with the restricted passage, B, and for any other patentable novelty in the forms of his mechanism. The widely different forms in which he has illustrated his devices in the two above-mentioned patents show that, taking what Westinghouse had discovered and demonstrated to be the underlying principle of a quick-action brake, a skillful and inventive mechanic can devise many forms for applying it. But. in his specification of patent No. 481,135, Boyden alleges that his device differs essentially from Westinghouse's patent No. 360,070, and involves a new mode of operation. The question whether it does or does not was the very question then pending in this suit, and, so far as the examiner passed upon it in allowing the specification to stand, he did so upon the ex parte application of Boyden, and unassisted by testimony as to the state of the art at the date of the Westinghouse patent, and without testimony as to the scope of the Westinghouse quick-action invention, and its great importance and merit; and therefore without the opportunity of judging whether or not it was a pioneer invention of a fundamental character, entitled to a construction coextensive with the invention, or was simply a patent for an improvement in a known art, to be restricted to the form of the device shown in the model and illustrations. The determination of that question is the starting point in the consideration of the controversy, and, in my judgment, the fact that Westinghouse was the first discoverer of the vital underlying invention should turn the scale in his favor. The complainants are entitled to a decree for an injunction and account, with a reference to a master in the usual form.

GURNEY v. OAKES et al.

(Circuit Court of Appeals, First Circuit. February 13, 1895.)

No. 107.

PATENTS-INFRINGEMENT-DEVICE FOR BUILDING CARRIAGE TOPS. The Oakes patent, No. 378,457, for an adjustable form for setting and building carriage tops, held infringed, as to claims 1 and 3, by a device made in accordance with the Quimby patent, No. 458,252. 62 Fed. 269, affirmed.

Appeal from the Circuit Court of the United States for the District of Massachusetts.

This was a bill by Judson E. Oakes and others against James W. Gurney for infringement of a patent. The circuit court rendered a decree for complainants (62 Fed. 269), and defendant appealed.

James E. Maynadier, for appellant.

William H. Clifford, for appellees.

Before COLT and PUTNAM, Circuit Judges, and NELSON, District Judge.

COLT, Circuit Judge. This case turns on the infringement of the first and third claims of letters patent No. 378,457, granted to Cummins C. Oakes, February 28, 1888, for an adjustable form for setting and building carriage tops. The invention in this device resides in the adjustable feature of its different parts. Previous to this invention, it was customary to set the framework of carriage tops upon the finished carriage seat. This method was open to several objections. By means of the patented apparatus, carriage tops can be built separately from the carriage body, and made of any height and width to fit carriage seats of different sizes. The device consists of two base blocks having bolted to their under sides horizontally sliding bars, by which means they can be moved towards and from each other. Rising from the outer ends of these blocks are upright standards supporting horizontal crossbars which have small grooved blocks on their outer faces. This framework composes the support for the bow, bow sockets, and carriage-top rails of the carriage top; the crossbars support the upper ends of the bow sockets, which are received and held in proper position by the grooved blocks, while their lower ends are brought together and pivoted to the carriage-top rails, which are secured to the bases. By means of the sliding bars and connecting mechanism, the bases are made adjustable to each other, and so regulate the width of the carriage top; by means of the vertical slots and connecting mechanism in the crossbars, the crossbars are made adjustable, and so regulate the height of the bow sockets and carriage top; by means of the horizontal slots and connecting mechanism in the crossbars, the grooved blocks are made adjustable, and so regulate the relative position with respect to each other of the bow sockets; by means of the vertical slots and connecting mechanism in the supports of the carriage-top rails, the bow sockets are made adjustable to the bases, and so regulate the distance of the carriage top from the bases or from the seat of the carriage. The first claim of the patent is for the combination of the adjustable moving bases with their sliding bars; the upwardly projecting standards; the connecting bars with the grooves on their outward faces; and means for securing the carriage-top rails to the bases. The third claim is for the combination of the adjustable connecting bars provided with the adjustable blocks.

It is manifest that the defendant's device, which is constructed under the Quimby patent, No. 458,252, dated August 25, 1891, has the same general adjustable features, and accomplishes the same result, as the patent in suit. The defendant contends that he does not infringe these claims of the patent, by reason of certain specific differences in the mechanical construction of his apparatus; but we are of opinion—First, that the screw threads and connecting mechanism of the defendant's device are plainly the equivalent of the sliding bars and connecting mechanism of the Oakes patent; second, that the inner faces for the reception of the bow sockets used in the defendant's form are the equivalent of the outer faces described in the patent; third, that the defendant has substantially the same or equivalent means for securing the bow sockets of the carriage top to the base of the form. With respect to the last point, the controversy turns on the signification of the words "means for securing the carriage top rails to the base of the form." which are found in the first claim. While the defendant's device, strictly speaking, has not any carriage-top rails, it has projecting horizontal points to which the lower ends of the bow sockets are attached, and which correspond to the horizontal projections of the carriage top rails of the patent, and it has the same adjustable means for attaching these horizontal points to the base of the form as are found in the Oakes patent. If we cut off all the carriage-top rails except the horizontal projections, we find the defendant uses the same means for accomplishing the same result. The carriage top rails are not made an element of the combination of this claim. The defendant uses all that portion of the rails which is necessary to secure the bow sockets to the base of the form. The pins in defendant's apparatus which receive the lower ends of the bow sockets are manifestly the same as the horizontal ends of the carriagetop rails of the patent, and these horizontal points are made adjustable in defendant's apparatus, by means of a slot and a clamping thumb nut, in precisely the same way as the horizontal points of the patent.

As to the third claim, the conclusion of the majority of the court is in favor of the plaintiffs below. The defendant admits the use of the adjustable blocks, and seeks to avoid infringement on the ground that the crossbars of his device are not adjustable. The only difference in mechanical construction between the two devices is that the bow sockets in the defendant's apparatus are made adjustable by means of the pins moving in the slots of the vertical arms attached to the outer edges of the base blocks, instead of by means of the adjustable crossbars of the patent; in other words, the point of adjustability is transferred from the upper to the lower ends of the bow sockets. This difference arises from the fact that the defendant's apparatus does not contain the carriage-top rails, but it is plain that he uses the same or equivalent means for accomplishing the same end. We do not understand that the defendant seriously contests the patentability of either of these claims, but the case really turns on the question of infringement. This is not a case where the defendant has left out from the alleged infringing apparatus one element of the combination described in the claim of the patent; nor is it a case where the patentee, by reason of the prior art, is restricted to the specific form of mechanism set forth in his claim; and therefore the authorities cited by the defendant do not apply to the present case. The decree of the circuit court is affirmed.

v.66f.no.6-64

BUEL v. KNAPPMAN et al.

(Circuit Court, E. D. New York. February 26, 1895.)

PATENTS-INFRINGEMENT OF COMBINATION PATENT-CHALK-DROP MACHINE. The Buel patent, No. 343,755, for a machine for making and drying chalk drops, the claim being for a combination of several elements, *held* not infringed by a machine which lacked some of the elements of the combination.

This was a bill by Arthur Buel against William Knappman and others for infringement of a patent.

H. Albertus West, for complainant. Franham & Stevens, for defendants.

WHEELER, District Judge. This suit is brought upon the first claim of letters patent No. 343,755, dated June 15, 1886, and granted to the plaintiff for a machine for making and drying chalk These drops had been made before with a funnel-shaped drops. vessel, having a handle and rubber stop for, by a blow, forming them upon boards, where they were dried. The specification sets forth that the "invention relates to an apparatus designed more especially for drying white lead and other pigments or comminuted pasty substances: and the invention consists principally of means for depositing the substance to be dried in small cones or hillocks upon a traveling belt or apron to which heat is applied," and describes a machine having "an endless belt or apron placed upon drums, one of which may be revolved by hand or other power for causing the belt to travel slowly, which is heated by hot air or steam supplied through a pipe; and the pigment or other material to be dried is supplied to the upper surface of the belt in small cones or piles, from a hopper which has a series of openings made in its bottom, and is given an up and down motion for that purpose. The hopper is held by trunnions in slots in uprights of the main frame, and is given a slow upward and a sudden drop or downward motion by means of cams on the drive shaft. The drop motion of the hopper may be accomplished in various other ways, and, in order to cause the material to be dropped in perfectly formed cones, the outlets are made conical."

The claim is for:

"(1) In a drying apparatus, an endless drying belt, and a hopper having holes in its bottom, combined with means, substantially as described, for lifting and dropping the hopper for depositing the material to be dried in small cones or hillocks upon the drying belt, substantially as and for the purposes set forth."

In the alleged infringing machine no drums or endless belt or heat were used. The hopper was raised and let fall by a string over the uprights, and the drops were formed on slides, on which they were taken away and dried. It lacks the drying belt of the combination of this claim, construed with the specification or by itself; and really has nothing of that combination but the moving