YOUNG *ET AL. V.* JACKSON.

Circuit Court, S. D. New York. July 31, 1890.

PATENTS FOR INVENTIONS—NOVELTY—MACHINE FOR SAWING STONE.

Letters patent No. 222,720, issued February 17, 1880, to Hugh Young, to Improvements in a machine for sawing stone, consisting of the combination with a reciprocating saw-gate of means for feeding and withdrawing the saw-blade towards or away from the guides governing its reciprocating motion, without impairing the parallelism of the saw-blade to the guides, are void for want of novelty, being merely such a combination of different inventions previously patented as to allow each to work out its own effect without contributing any new function or mode of operation to the other.

In Equity. Bill for infringement of patent.

Edwin H. Brown, for complainants.

George Whitfield Brown, for defendant

WALLACE, J. The patent in suit, No. 222,720, granted February 17, 1880, to Hugh Young, covers improvements in a machine for sawing stone, The invention to which the first claim of the patent relates Consists, as the specification states, "in certain novel constructions and combinations of parts, whereby a reciprocating saw-sash, moving along guides, has combined with it means for the feeding and withdrawing the saw toward or away from said guides." That claim, which is the only Claim now alleged to be infringed, is as follows:

"In machines for sawing stone, the combination, with a reciprocating sawgate or sash, of means for feeding and withdrawing the saw-blade toward or away from the guides governing its reciprocating motion without impairing the parallelism of the saw-blade to said guides, substantially as specified."

As described in the specification and illustrated in the drawing, the machine consists of a main frame and a secondary frame or saw-gate. The saw-gate or sash is the ordinary rectangular frame in which mill saws are stretched, formed of two ends, each of which is composed of two posts, and the ends are connected by a transverse bar. The ends of the saw-gate are supported by guides attached to the main frame, which allow the gate to be reciprocated on the line of the guides. The reciprocating motion is communicated by any suitable mechanism. The saw-gate carries a blade, which is set in a plane parallel to the guides, and is attached to carriers capable of being moved within the gate to and from the direction of the guides. The specification states:

"The blade is not carried directly by the gate, but by carriers, which are arranged so as to be capable of a synchronous movement within the ends of the gate, or, in other words, of a movement in direction at right angles, or thereabouts, to the reciprocating movement of the gate, to effect the feed and withdraw the blade, and this without affecting or interfering with the parallelism of the blade to the guides."

The arrangement of the carriers which permits this movement consists in part of the posts of the gate ends, Which serve to guide the carriers; aha allow them to play in a plane at right angles to the guides, and in part of the devices for actuating them simultaneously and on a perfectly

parallel line with one another. These actuating devices are preferably indicated in the specification as consisting of feed-screws, one threaded to each carrier, which are connected with one another, and controlled by a cross-shaft with spur-gear arranged on the transverse bar of the gate. In operation the blade is attached to each end of one of the carriers by tension buckles or straps, and the carriers are actuated by the screws to feed the blade to a position to abrade the stone to be sawed; the saw-frame is then reciprocated, thus reciprocating the blade; and, when the work is done, the blade may be withdrawn by the screws from the place pf its reciprocation. The claim is a broad one for a combination of the saw-gate with the means for feeding and withdrawing the blade so that the blade will be constantly maintained parallel with the line of its reciprocating movement. The means for feeding and withdrawing the blade consist of those which hold or carry it, and those which control its transverse movements, and include carriers between which the blade can be strained or stretched, together with any suitable means to move the carriers synchronously, and maintain them constantly on a perfectly parallel line.

The question in the case is whether there is novelty in such a combination, in view of the prior state of the art as disclosed by earlier patents or publications. A machine is shown in the patent to Funk of January 28, 1873, which describes a saw-gate which is reciprocated on guides longitudinally, and having a blade reciprocated by the gate, and attached to carriers capable of being raised and lowered in the gate itself, so as to be fed and withdrawn from its work without moving the gate. In that machine the blade is stretched between the two ends or legs of the gate, and attached to carriers (or slides) in each leg, which play in guides. The blade is raised and lowered in the gate by a cord and windlass attached to the main frame Of the machine, and connected with the carriers by a yoke depending above the gate, the arms of which are attached to the carriers. By turning the windlass the carriers are raised in the guides synchronously, thus raising the blade from the place of it reciprocation. By relaxing the windlass the carriers and blade drop to the place of reciprocation by gravity. A machine having all the elements of the claim except the independently adjustable blade With its holding devices is described in the patent of young, Young & Hubert, of February 16, 1876. In that machine the blade is attached rigidly to the legs of the gate, and the gate itself is moved to and from the place of the reciprocating work, thus moving the blade; by feed-screws in each leg controlled from above by a shaft with spur-gear. The legs move simultaneously, and maintain the blade perfectly parallel at all times with the line of its reciprocating movement. The patent to Stearns of September, 19, 1876, describes a machine in which the saw is mounted upon and reciprocated in the main frame of the machine, and fed to and withdrawn, from the place of its, reciprocation by feed-screws threaded in carriers in the legs of the frame, and rotated by a connecting shaft with intermediate gearings arranged on the transverse

bar of the frame. The devices for actuating the blade, transversely are the same as are described

in the patent in suit, and move both carriers simultaneously and on a perfectly parallel plane. The provisional specification of Graham & Graham, filed with the English commissioner of patents July 31, 1876, describes a sawing-machine having a novel method of mounting and actuating the reciprocating blade. They state:

"We employ a strong, rectangular frame, which reciprocates or runs upon pulleys in suitable guides in an outer frame, and within this frame we mount one or more blades for carrying the diamond cutters so as to be capable of being raised or lowered with respect to such frame in a perfectly parallel direction by a vertical screw at either end, geared together in order to adjust such blade to the thickness of the stone requiring to be cut; and which screws also serve to feed the blade as the cutting operation proceeds. We also employ a right and left handed quick-threaded screw at either end for the purpose of raising the blades and cutters from contact with the groove being cut in the stone during that portion of the stroke when the diamonds are not cutting. These screws are actuated by star wheels fixed upon their upper extremities."

None of the earlier patents describe a sawing-machine having a saw-gate distinct from the main frame, and reciprocating on guides, which is provided with carriers which permit the blade to be moved independently of the gate itself towards and away from the line of the reciprocating movement by devices which maintain the carriers in a positive and constant parallelism to the line of the guides, and actuate them synchronously. The Graham provisional specification is only valuable as indicating that Young was not the first to conceive the idea of mounting and actuating a blade in a reciprocating saw-gate so that it could be fed and withdrawn from the place of its reciprocating work, and Held perfectly parallel during these operations, independently of the gate itself. The machine of the Funk patent does not contain the combination of the claim, because it does not have the devices which actuate the transverse, movements of the blade, nor devices which perform the function of those of the claim. The carriers are not controlled or actuated by devices which maintain them in rigid parallelism with one another, but are controlled by a loose connection with the main frame. The windlass actuates the blade in one direction only, viz., away from the line of its reciprocating movement. The devices do not feed the blade towards the place of its reciprocation, nor maintain it in a positive and constant parallelism with the reciprocating guides. The machine of the Young, Young & Hubert patent does not have carriers which allow the blade to be moved transversely to its reciprocating movement, independently of the gates. The machine of the Stearns patent has no reciprocating saw-gate, and this patent is an anticipating reference only, because the devices which control and actuate the carriers towards and away from the place of reciprocation are the devices of the claim in controversy. But the Funk machine has all the elements of the claim in controversy, except those devices which maintain the carriers and actuate them in a positive and constant parallelism with each other, and the Stearns machine has

these devices. It is manifest that these devices could be removed from the carriers in the Stearns machine and substituted for the

yoke, cord, and windlass in the Funk machine; and that to transfer them into the latter, and bring them into efficient, co-operation with all the other parts, it is only necessary to thread the feed-screws to the carriers and attach the intermediate bearing to the saw-gate, just as the screws are threaded and the gearing is attached in the Stearns machine. It would be patent at a glance to any competent mechanic, having the two machines before him, that the devices for controlling the carriers of the Stearns machine could be imported into the Funk machine, and substituted for the devices performing that function in that machine, by merely attaching them as they were attached before; and that When this should be done, they would perform precisely the same functions in the Funk machine they do in the Stearns machine, and that the other devices of the Fuck machine would perform their normal functions and no other. When the devices from both of these machines are thus brought together into juxtaposition they severally and conjointly do the same work they did before; the saw-gate reciprocates, the Carriers hold the blade, and the actuating devices maintain the carriers in a positive parallelism, and move them synchronously with, each other, just as they did originally. It is not invention merely to bring old devices into such a new juxtaposition as will allow each to work out its own effect without contributing any new function or mode of operation to the Other. In reaching the conclusion that the Funk machine is the machine of the claim in controversy when the devices for controlling the carriers of the Stearns machine are substituted for its devices to do this work, the circumstance is not overlooked that in the machine of Stearns and Funk the blade is stretched in the carriers instead of being Strained. If the claim in controversy includes devices for straining the blade in the carriers it is perfectly obvious that any competent mechanic would adopt the one mode or the other of hanging the blade according to the character of the work to be done and the thickness of the blade. The bill is dismissed.

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