CROMPTON *v.* KNOWLES AND OTHERS.

Circuit Court, D. Massachusetts. April 18, 1881.

1. PATENT—SHUTTLE-BOX MECHANISM FOR LOOMS—ALTERNATIVE DEVICE—PATENTABILITY.

Compound levers, with slot and pin connection to permit shifting of the fulcrum, being old, the substitution of a connecting rod for the slot and pin, held, to be a mere alternative device, and not patentable.

2. SAME—INFRINGEMENT—"KNOWN SUBSTITUTE"—COLORABLE VARIATION.

The true test of infringement is the use by the defendant of any thing which the complainant has invented, which includes mere colorable variations of his invention.

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In Equity.

Causten Browne, for complainant.

Chauncey Smith and *B. F. Thurston,* for defendants.

LOWELL, C. J. The parties to this suit are the same as those in No. 308,* and the plaintiff, as in that suit, relies upon a patent which he has re-issued. In this case he complains that the defendants have adopted a compound lever to operate the drop-boxes or shuttle-boxes of their loom. These shuttle-boxes are required to assume different position, three, four, and so on, according to the number of colors which are wanted in the weft. The Knowles loom of 1863, referred to in the last case, contained two trains of mechanism, such as I there described, consisting of fingers and jacks, as one party called them, or extensible and contractible links, as they were termed by the other, which reciprocated up and down, under the influence of a pattern, and by gravity, to engage with constantly rotating cylinders. In case 308 the motion given by the cylinders to the jack was used to move the levers which carried the heddles, in this

case our attention is called to similar mechanism which is used to actuate a compound lever, through which the rod which holds the shuttle-boxes is shifted into several positions. In the patent of 1863 there were described two simple levers operating with a cord and pulley; and at the present time the defendants use, as I have said, a compound lever, which admits of a greater variety of motions than could be obtained by the two levers.

The complainant is the owner of the patent of Horace Wyman, dated in 1867, and re-issued in 1875, for an improvement in shuttle-box mechanisms for looms. The specification describes levers with movable fulcrums, or a compound lever, for imparting the necessary motion to the shuttle-boxes. In the drawing, six boxes are represented. Each lever has its connecting rod, which is actuated by a crank-pin mounted on a shaft having a toothed wheel. These wheels are connected with toothed racks, which slide back and forth under the impulse of pawls which are governed by a pattern. "Each crankpin can revolve from the upper center to the lower one independent 206 of the motion of any other pin in the set, and when a pawl rocks a rocking arm the latter slides a ratchet-bar, and the ratchet-bar, through a toothed wheel, turns a crank-pin, and this pin, through the intervention of a connecting rod, shifts a lever."

The original patent claimed the mechanism generally. The re-issue has nine claims, of which the first, third and eighth are said to be infringed by the defendants.

"1. The combination of a lever, one end of which is connected to shuttle-boxes, with its actuating crank-pin and connecting rod, and another lever pivoted thereon, and the actuating crank-pin and connecting rod thereof, whereby four shuttle-boxes may be actuated; the combination being substantially such as described."

The second claim is less specific as to the number of boxes and more specific as to the combination of mechanism; claiming the levers and connecting rods, "in combination with two toothed wheels and two toothed surfaces, the toothed wheels turning the crank-pins, and the toothed surfaces moving the toothed wheels; the combination being substantially as herein set forth."

The eighth is for the combination where the lever has a shifting fulcrum, which has already been described as one form of compound lever.

The patentee says, speaking of compound levers: "Such levers are not new as applied to shuttle-box mechanism, and may be seen described in English and American letters patent prior to the date of my invention. My invention is therefore limited to certain mechanical devices in combination with such a lever or levers."

In his opening case the plaintiff put in evidence the English patent of Whitesmith & Steven, published in 1860, which describes and illustrates in much detail modes of operating shuttle-boxes by means of levers co-operating with pawls and wheels; he draws one lever with a shifting fulcrum, and describes, shortly but intelligibly, the use of compound levers in this connection. These descriptions and drawings show the levers to be connected with the crank-pins of the actuating wheels by a slot in one place and a pin in another, and this mode of connection is less vauable than that of a pitman or connecting rod to change the motion of the rotating wheel to that of the reciprocating lever. The experts differ upon the question whether the introduction of connecting rods by Wyman, supposing this to be all that he did, would make a new combination. This is the vital point of the case. Both experts agree that every mechanic knew, and for years had known, that a slot and pin and a connecting rod were alternative modes of obtaining

this change of motion. If so, the change did not require invention.

The patentable differences, then, between the English contrivance and Wyman's are not in their levers or their connection with the crank-wheels. Wyman has combined with these parts double hooked pawls and sliding, reciprocating racks, to actuate the crank-wheels, instead of single toothed pawls and wheels constantly revolving in one direction. I suppose this to be a new combination in the sense of the law, and patentable; but it is so by virtue of the novelty of these parts.

It was suggested in argument that the Whitesmith & Steven loom may not have gone into use. I think the evidence on both sides is clear that it might have been used; and I have no doubt that it is one of the patents referred to by Wyman in his specification. One reason for this opinion is that Wyman is very careful in all three of the claims in issue to make the connecting rods a part of his combination. It is altogether probable that he thought the world at liberty to use levers with slots in all such combinations, and that he himself could hold all combinations which included connecting rods. In both points I consider him mistaken. He was not bound to limit his own particular combination in that way; and, on the other hand, he could not claim the Whitesmith & Steven machine as being his by adding connecting rods to it.

If the novelty of the plaintiff's combination consists in the mechanism to which I have above referred as differing from that of the earlier patent, it follows that he cannot complain that the defendants have combined Whitesmith & Steven's levers with their own pecular mechanism, invented by them before the date of Wyman's patent. In this case, as in No. 308, 208 the doctrine of "known substitutes" was referred to. If the plaintiff, by inventing a new mode of actuating the old levers, can enjoin all known means

of actuating them, then he can enjoin Whitesmith & Steven, which, as I have already shown, cannot be maintained. I prefer, until I am better informed, the test used in case 308: Has the defendant taken anything which the plaintiff invented? Under "anything" is included mere colorable evasions. This question is already answered. If the plaintiff could not enjoin Whitesmith & Steven if they should adopt connecting rods, they cannot enjoin the defendants, who, in law, have the right to take from the earlier of two inventors, if he does not complain, whatever is common to him and the later inventor, if he takes nothing more.

Bill dismissed, with costs.

* Ante, 199.