

(No Model.)

J. A. TUCKER.

PICKER STAFF OPERATING MECHANISM FOR LOOMS.

No. 462,340.

Patented Nov. 3, 1891.

Fig. 1.

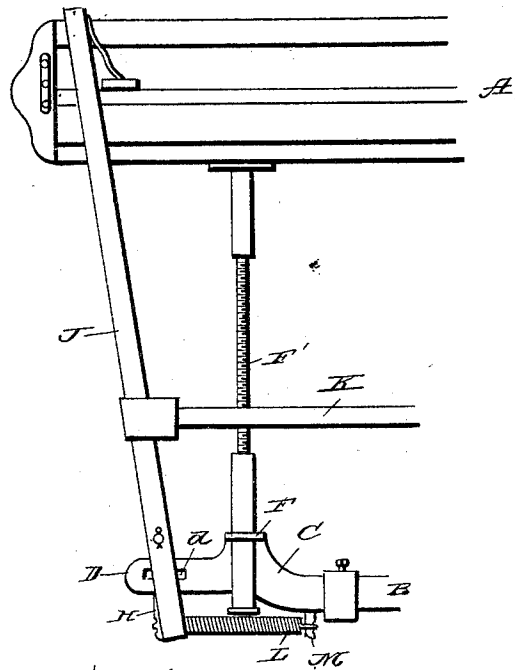


Fig. 2.

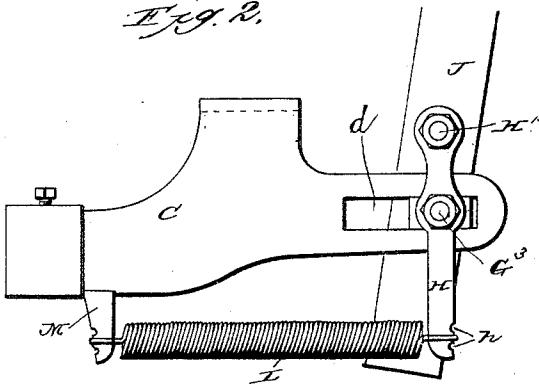


Fig. 3.

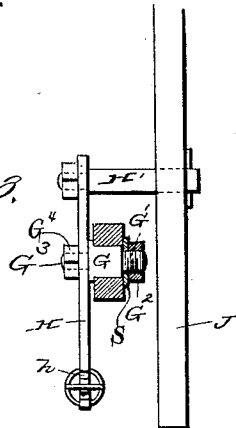
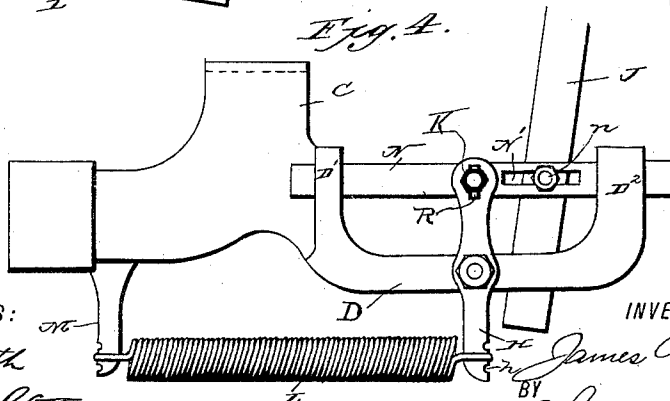


Fig. 4.



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JAMES A. TUCKER, OF LEOMINSTER, MASSACHUSETTS.

PICKER-STAFF-OPERATING MECHANISM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 462,340, dated November 3, 1891.

Application filed August 13, 1890. Serial No. 361,917. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. TUCKER, of Leominster, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Picker-Staff-Operating Mechanism for Looms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention has for its object to provide an improved picker-staff support and check which will receive the shock both when the shuttle is received and when started, and further simplifying and cheapening the cost of the parts.

To these ends the invention consists in certain novelties of construction and combinations of parts, all as will be hereinafter described, and the novel features pointed out particularly in the claims at the end of this specification.

Referring to the drawings, Figure 1 is an elevation of one end of the lay-frame of a fly-motion loom showing the application of my invention; Fig. 2, a view of the side of the bracket and staff-support not shown in Fig. 1. Fig. 3 is a view, partly in cross-section, showing the staff-support and a portion of the staff; Fig. 4, a side view of a modification.

Similar letters of reference in the several figures indicate the same parts.

The letter A indicates the lay-beam, B the lay-shaft, the bearings and lay-operating mechanisms not being shown, as they are well known in the art and form no part of my present invention.

To the end of the lay-shaft B is secured a casting or bracket C, having the forwardly-extending arm D, provided with a longitudinal slot *d* therein and the bearing or socket F for the shuttle-box-operating rod F', which may be of any ordinary or preferred construction. Mounted in the slot *d* in bracket C is a block or bolt G, having on one side a bolt or threaded portion G', with which cooperates a nut G², having a washer S beneath the same and serving to clamp the block in any position in the slot to which it may be adjusted, and on the side of extension D, op-

posite this nut, is a pintle G³, having a nut G⁴ thereon.

H represents a lever constituting the shaft-support pivoted beneath the nut G⁴ on the pintle G³ and carrying in its upper end a pin H', upon which is pivoted the picker-staff J of the usual or any preferred construction, said staff being actuated by means of the bar or strap K, connected thereto above its pivotal point, as usual. The lower end of lever H is preferably provided with a series of notches *h* on one side, and with one or the other of these is engaged one end of a spring L, said spring being connected at the other end to a depending arm M, as shown. It will thus be seen that when the staff J is moved by the strap to knock the shuttle not only will the staff move on its pivot H', but the staff-support H will also be moved on its pivot G³, which will throw the lower end outward and cause the spring L to be put under tension, which will, by pulling the lower end of the support inward, throw the lower end of the staff outward again. The staff being supported on the support H, which is held in normal position by the spring L, the jar caused by the impact of the shuttle is taken up by said spring, and in starting the staff to knock the shuttle back any resistance of the shuttle or shock is relieved by the movement of the support for the lower end of the staff on its pivot against the spring. The position of the staff can be adjusted, when desired, by adjusting the block or bolt G in the slot *d* and securing it again, and also the tension on the staff J of the spring can be adjusted by engaging the outer end with the lever H nearer to or farther from the pivotal center, as will be understood.

The mechanism employed is not liable to get out of order and can be made cheaply and be easily applied, and may be readily adjusted by one not a skilled workman.

In Fig. 4 is shown a modified arrangement in which, instead of adjusting the lever H in the arm D, I provide the latter with two bearings D' D² in line and pivot the staff on a slide N operating therein, the lever H being pivoted directly or by means of a link to said slide. As a means of adjusting the staff relative to the slide, I form a slot N' in the latter,

in which the pintle pin or bolt *n* is adjustable, as will be readily understood. The connection between the pivot of the staff and the spring-pressed lever, it will thus be seen, may be either a direct connection, as the pin *H'*, in Figs. 1, 2, and 3, or the intermediate portion of the slide *N*, the latter form having the advantage of carrying the weight in bearings on the bracket instead of directly on the lever *H*.

Numerous further modifications will suggest themselves to those skilled in the art, and I therefore do not desire to be confined to precisely the arrangements shown herein.

I claim as my invention—

1. In a loom, the combination, with the lay-frame, the bracket thereon, and the spring-pressed lever pivoted on the bracket, of the pivoted picker-staff, and a connection between the pivot of the staff and the spring-pressed

lever, and operating mechanism for the staff, substantially as described.

2. In a loom, the combination, with the lay-frame and the bracket thereon, of the lever pivoted on the bracket, the picker-staff pivotally supported on the lever, the spring connecting the lever and bracket, and the operating rod or strap, substantially as described.

3. In a loom, the combination, with the lay-frame and the bracket, having the slot therein, of the bolt or block adjustable in said slot, the lever pivoted thereon, the picker-staff pivoted on the lever, the spring operating on the lever end, and the operating rod or strap, substantially as described.

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Witnesses:

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