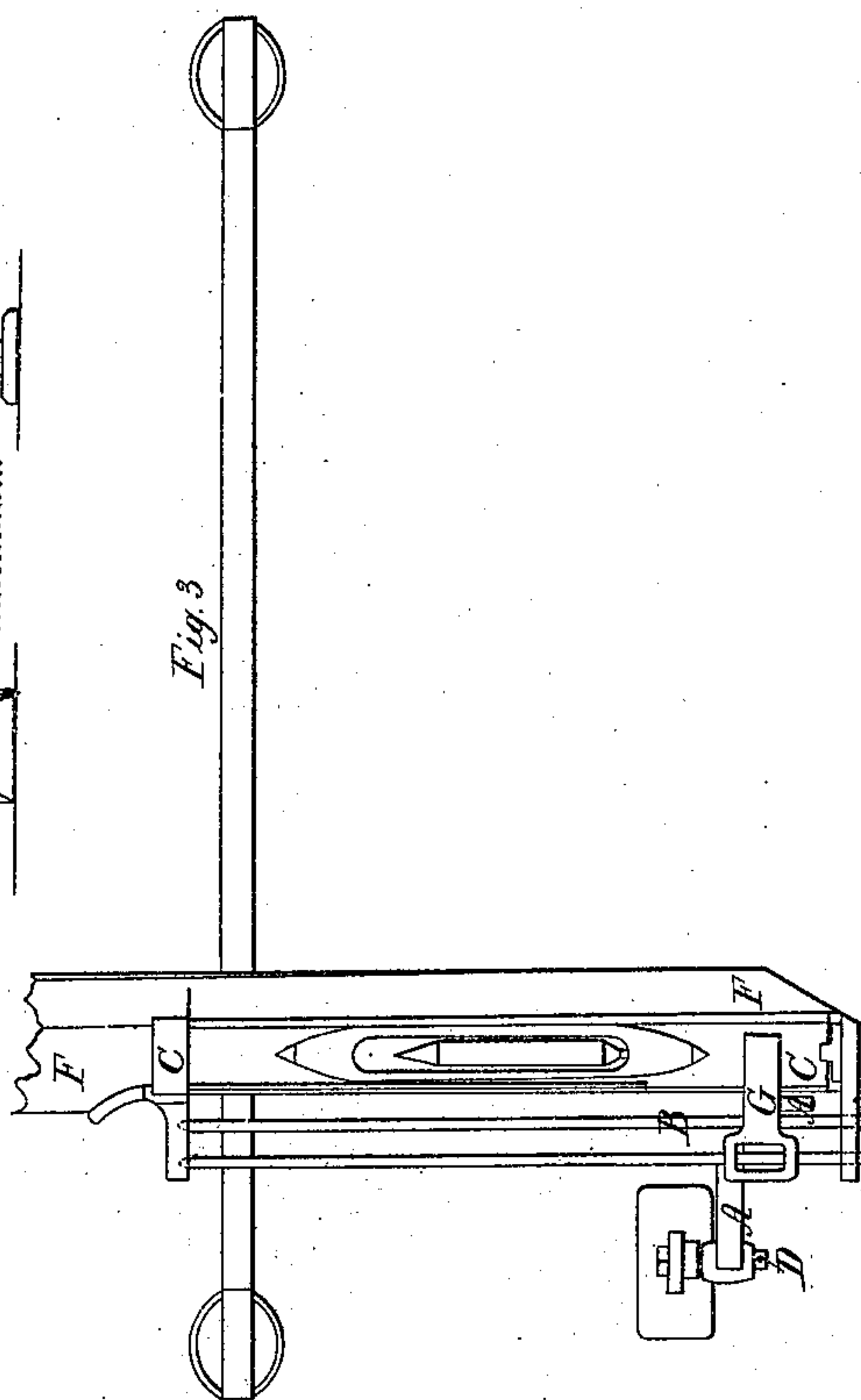
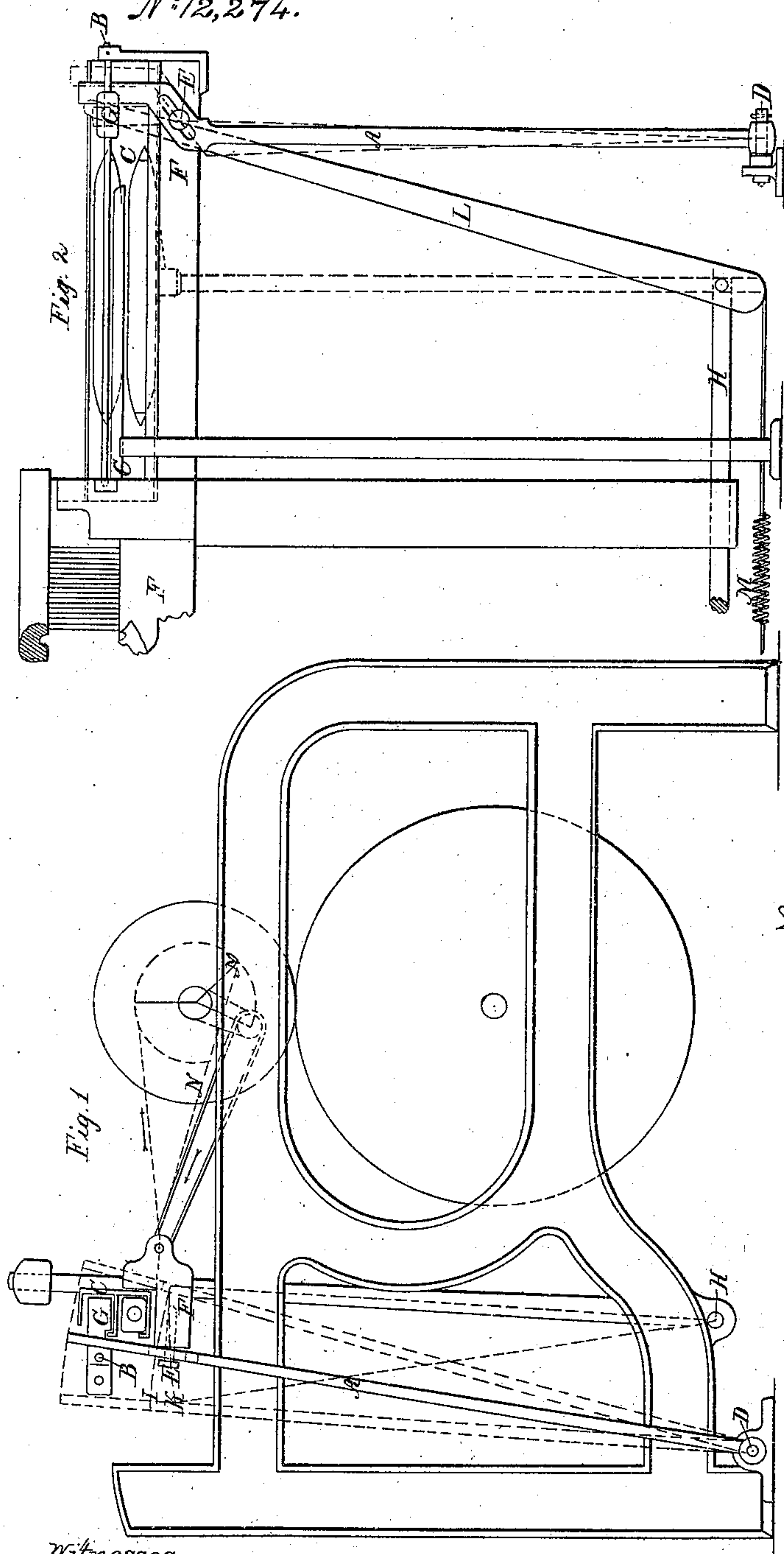


*J. Eccles.
Shuttle Check.*

Patented Jan. 23, 1855.

Nº 12,274.



*Witnesses
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Samuel P. Hall.*

*Inventor
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UNITED STATES PATENT OFFICE.

JAMES ECCLES, OF PHILADELPHIA, PENNSYLVANIA.

LOOM.

Specification of Letters Patent No. 12,274, dated January 23, 1855.

To all whom it may concern:

Be it known that I, JAMES ECCLES, of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Mode of Stopping Shuttles in Power-Looms for Weaving Figured Fabrics; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

The nature of this invention consists in a new and improved mode of stopping the shuttles, in movable shuttle boxes, of power looms, when weaving check and other figured fabrics.

I shall in the first place explain the modes adopted heretofore for stopping shuttles in movable shuttle boxes, and shall secondly show and explain my improved mode of effecting the same.

Various contrivances have been employed on power looms to prevent the shuttle tip damaging the picker, when the shuttles change their positions, for the purpose of bringing various colored filling in line with the shed. In most cases metal stops or projections have been firmly riveted inside the shuttles boxes. A corresponding shoulder is formed on the shuttles—which strikes against the metal stop. The continual concussion reduces the shoulder of the shuttles, which then forms, and acts against the stop and the shuttles boxes, on the principle of a wedge, which causes considerable breakage both to boxes and shuttles.

On revolving shuttle box power looms the picker serves as the stop,—the picker being held by an immovable casting, forming the box end. In this case, every time the shuttle box revolves, the shuttles have a tendency to force the picker along with them, but is prevented by the box end having two flanges cast thereon, which holds the foot of the picker in a proper position. It will be evident, that considerable power is required, to force the shuttle tip out of the hole, formed on the front part of the picker; when the shuttles revolve as stated.

The loom framing, shuttle box and other motions being the same in this, as in looms now in use, and well understood by those versed in the art, need not be shown on the drawings, or described in this specification

except when the improvement claimed require.

Figure 1 represents an end elevation of part of check power loom, with the improved shuttle stopper attached thereto. Fig. 2 represents a front elevation of the same. Fig. 3 represents a plan of the loom.

Corresponding letters of reference are used on the different figures on the drawing.

A represents a lever of a peculiar form, the upper part is placed between the spindle B and the two shuttle rise and fall box C. The lower end works on stud D which is held by a carrier, that is fixed on the floor. A slot or inclined groove, at an angle of about 45 degrees is formed on the lever A.

E is a pin firmly screwed to the front of lay F, said pin E fits loosely in, and traverses the slot or inclined plane of lever A. On referring to Figs. 1 and 3, it will be perceived that the stud D (on which the lever A oscillates) is nearer the front of loom than the rock shaft H. The lever A oscillates with the lay F, and in consequence of each vibrating from different centers as shown, the relative height of the pin E, and the slot of lever A is changed. When the lay F is farthest from the cloth the pin E is at the top of the slot—thereby holding the lever A and picker G forward in the shuttle box C. As the lay F and lever A moves forward, the pin E descends, and lever A rises (see lines I and K Fig. 1) so that when the reed strikes the cloth the pin E will be found at the lower part of the inclined slot of lever A, which will then have receded from the shuttle in box C. It will now be seen that a lateral motion is given to the picker G by the pin E traversing the slot of lever A as the lay F vibrates to and fro.

L represents a picking stick.

M is a spiral spring connected in the usual way to the picking stick, for the purpose of pulling the picker G back after a shuttle has been delivered. In this loom the spring M keeps the picker G close up to lever A except when the picking motion is in operation.

The operation of the above is as follows: A shuttle being shot through the warp arrives, and requires to be stopped soon after the crank has turned the back center. (See line N Fig. 1.) The picker G is then held forward in the shuttle box C, by the lever

A as above explained. And by the time the crank and lay have arrived at the position indicated on the drawing the lever A and picker G will have receded from the shuttle, about one inch. The picker and shuttles are thus kept clear of each other, at the time the shuttle box motion is changing the position of the shuttles, which is the sole use and object of a shuttle stopper. More or less action may be given to the picker G by changing the angle of the slot or inclined groove of lever A.

The above simple contrivance can be applied to power looms now in use, without disorganizing the arrangement of said loom, and at a slight cost.

Having now explained the nature and object of this improvement, and having explained the means employed heretofore, and having shown the simplest and best means, with which I am acquainted for carrying the same into effect I wish it to be under-

stood, that I shall not confine myself, to the precise form and arrangement of parts here shown, as I am aware that various contrivances can be substituted for producing the same effect upon the picker, without deviating from the main features of this invention.

What I claim as new and of my invention, and which I desire to secure by Letters Patent, is—

Moving and holding the picker forward in movable shuttle boxes, for the purpose of stopping the shuttle thereby, and causing the picker,—after having stopped the shuttle—to recede substantially in the manner described and for the purpose set forth, by the action of the lever A and pin E or their equivalents.

JAMES ECCLES.

Witnesses:

GEORGE W. COLLADAY,
FERDINAND E. HAYES.