(No Model.) 2 Sheets—Sheet 1.

J. H. CROWLEY.

PICKER CHECK FOR LOOMS.

No. 346,400. Patented July 27, 1886.

FIG. 3.

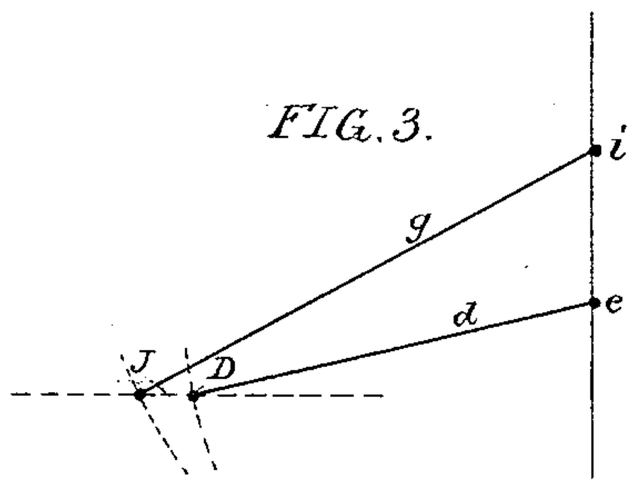


FIG. 4.

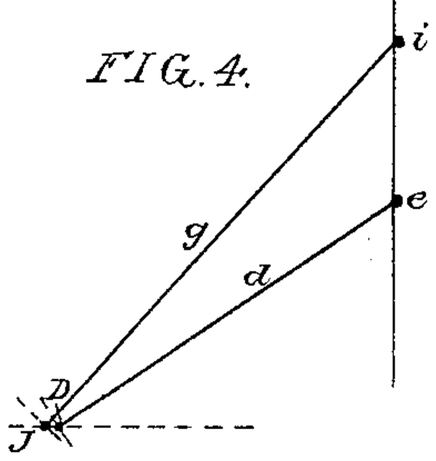
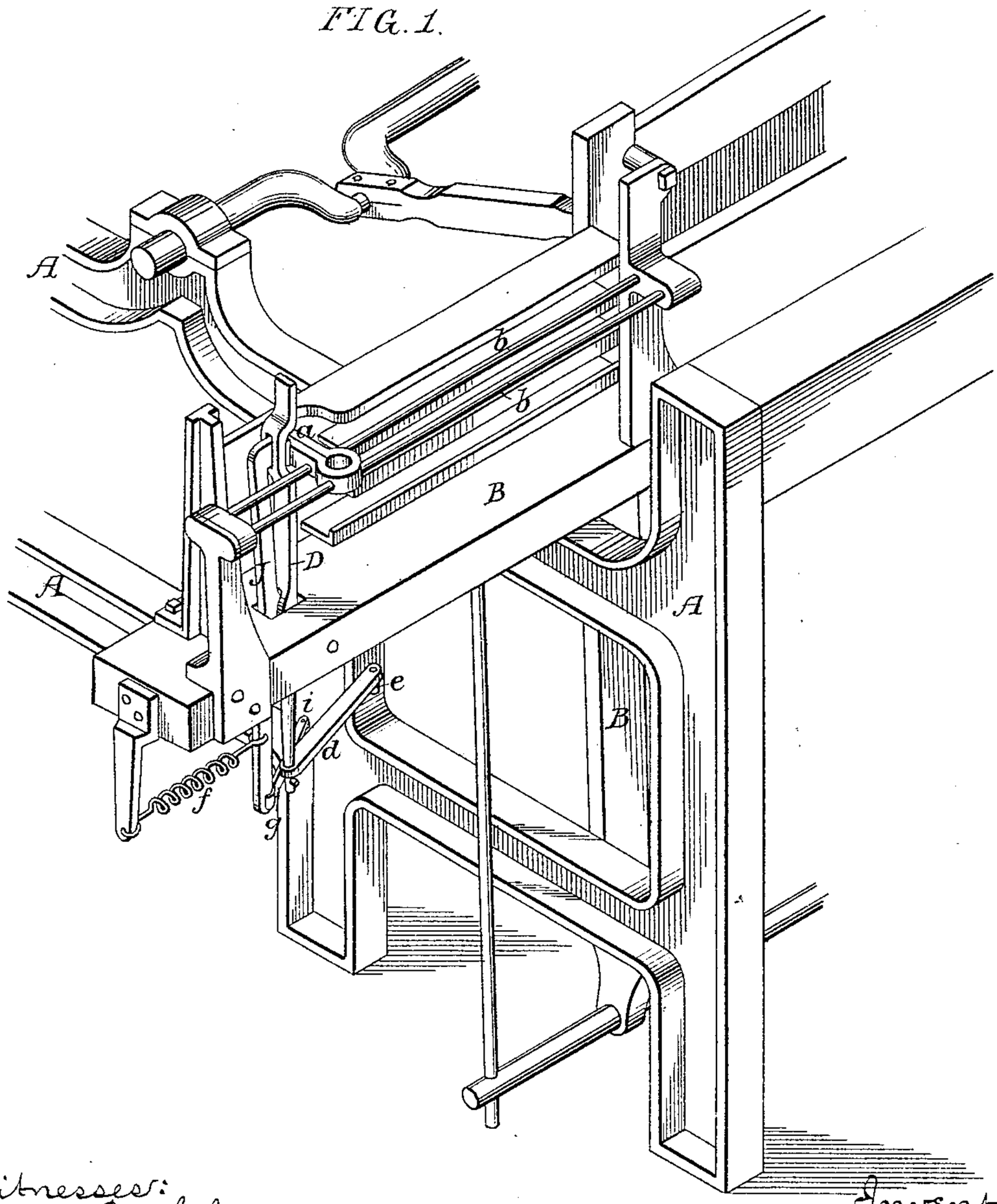


FIG. 1.



Witnesses:
George E. Gibson.
Harry Drury

Inventor:
J. H. Crowley
by his Attys.
Howson & Sons

(No Model.) 2 Sheets—Sheet 2.

J. H. CROWLEY.

PICKER CHECK FOR LOOMS.

No. 346,400. Patented July 27, 1886.

FIG. 2.

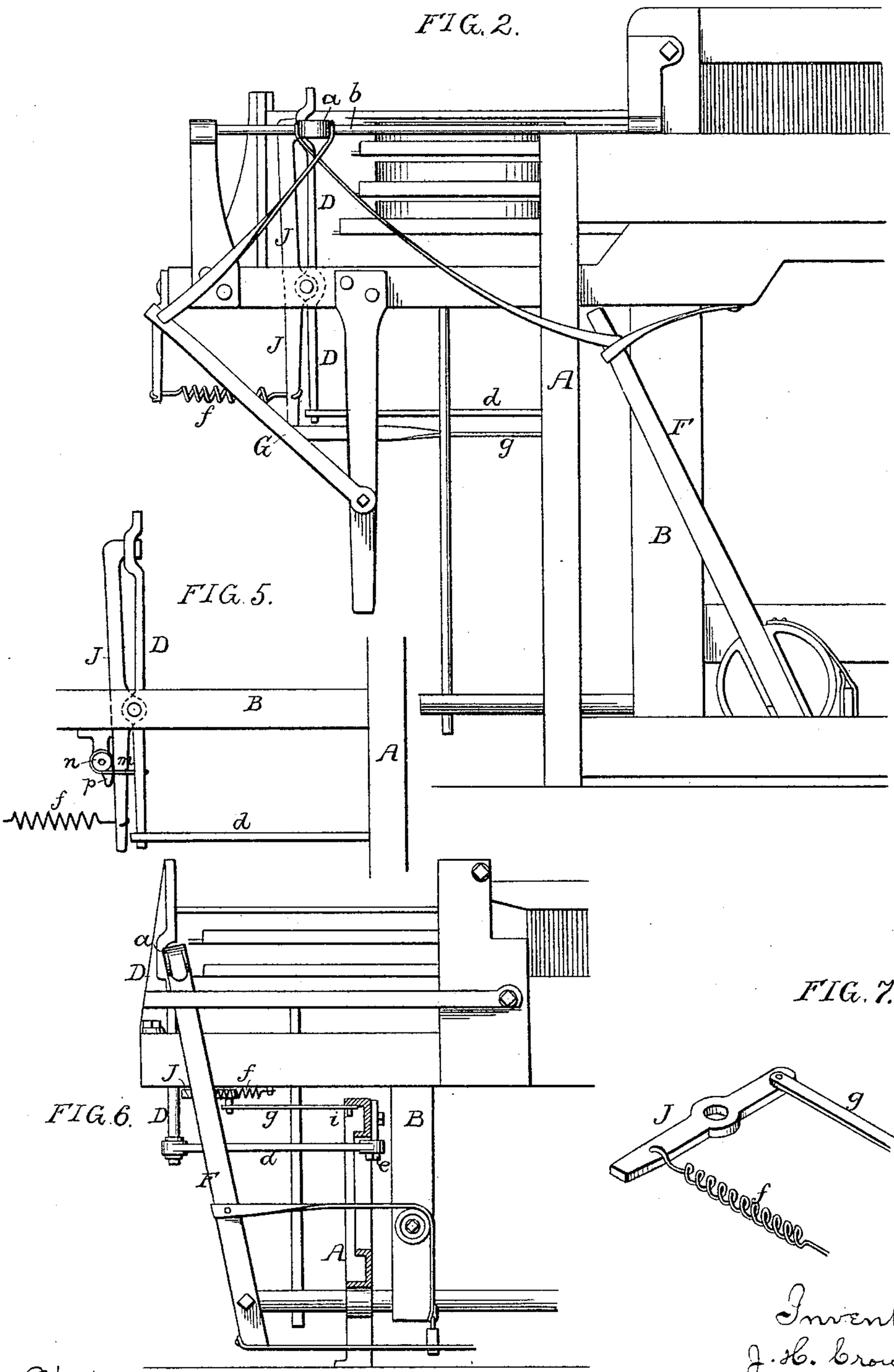


FIG. 5.

FIG. 6.

FIG. 7.

Witnesses:
George E. Gibson.
Harry Drury

Inventor:
J. H. Crowley
by his Attys:
Howson & Sons

UNITED STATES PATENT OFFICE.

JOHN H. CROWLEY, OF PHILADELPHIA, PENNSYLVANIA.

PICKER-CHECK FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 346,400, dated July 27, 1886.

Application filed July 9, 1885. Serial No. 171,037. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. CROWLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Picker-Checks for Looms, of which the following is a specification.

My invention relates to that class of checks which limit the outward movement of a picker as a shuttle enters the box, and are then withdrawn as the lathe swings forward, so that the picker will not catch upon the tip of the shuttle and interfere with the movement of the boxes.

The object of my invention is to so construct a picker-stop of this character that it will afford a yielding stop for the picker, and thus prevent the injury of the same, caused by the forcible contact of the tip of the shuttle therewith.

In the accompanying drawings, Figure 1 is a perspective view of sufficient of a loom to illustrate my invention; Fig. 2, a front view of the same with the picker-operating devices; Figs. 3 and 4, diagrams illustrating the operation of the retracting device forming part of my invention, and Figs. 5, 6, and 7 views showing modifications of the invention.

A represents part of the frame of the loom, and B part of the lathe hung to the frame at the lower end and vibrated by connection with the crank-shaft of the loom, as usual. The lathe has the usual guide for the shuttle-boxes, and pivoted to the outer portion of the lathe is a lever, D, the upper arm of which is recessed for the reception of the picker *a*, which is guided upon suitable rods, *b*, and is operated by the picker-staff F, retracting-bar G, and connecting-straps, as usual. The lower arm of the lever D is connected by a rod, *d*, to a fixed stud, *e*, on the frame of the loom, this fixed pivot of the rod being so located that as the lathe swings forward the outer end of the rod will be drawn inward, owing to the arc of a circle in which its swings, the lower arm of the lever D being likewise drawn inward, so as to move the upper arm outward and permit such an outward movement of the picker as will insure its clearing the tip of the shuttle when the boxes are moved. This is the common form of picker-stop, and it is objectionable, because it provides a rigid bearing for the picker when the latter is struck by the tip of the shuttle entering the box, the consequence being that the pickers are rapidly worn, so that they have to be frequently renewed. Moreover, the tip of the shuttle enters the picker to such an extent that the outward movement of the upper end of the lever D, on the forward movement of the lathe, is not sufficient to enable the picker to clear the tip of the shuttle; hence the object of the device is not attained.

In carrying out my invention I employ a supplementary lever, J, the upper arm of which projects through a slot in the lever D, and forms the stop for the picker, the lower arm of said lever J being acted upon by a spring, *f*, and being connected by a strap, *g*, to a fixed stud, *i*, on the frame of the loom some distance in the rear of the stud *e*. The tendency of the spring *f* is to thrust the upper end of the lever J inward; hence when the picker strikes the same it must overcome the tension of the spring *f* before it can move the lever J outward sufficiently to permit said picker to come in contact with the rigid lever D. In consequence the movement of the picker is retarded to such an extent before it comes in contact with a fixed stop that the tip of the shuttle will not exercise such a destructive effect as usual. As the upper end of the lever J projects inward to a greater extent than that of the lever D, it must be moved to a greater extent than said lever D on the forward swing of the lathe. This is effected by connecting the strap *g*, which controls said lever J, to the frame of the loom at a point in the rear of the attachment of the rod *d*, which controls the lever D, so that the outer end of the strap *g* will swing in a different arc from that followed by the outer end of the rod *d*, and will draw the lower arm of the lever J inward to a greater extent, as shown by the diagrams, Figs. 3 and 4. This construction, however, is not absolutely necessary to the proper carrying out of my invention. For instance, in Fig. 5, I have shown another form of device, whereby the differential movement of the levers is effected with the rod *d* alone, a strap, *m*, being connected to the lever D and secured to a drum, *n*, which is hung to a pin on the frame of the lathe, and has a cam,

p, for acting on the lever J as the lathe swings forward and the lower arm of the lever D is drawn inward.

In applying my invention to that class of looms in which the picker is rigidly secured to the upper end of the picker-staff, I prefer to pivot the lever J to the under side of the lathe, as shown in Fig. 6, one arm of the lever being acted upon by the spring *f*, and projecting in front of the lathe, so as to form a yielding stop for the picker-staff, and the other arm of the lever being connected by the strap *g* to the fixed stud *i* on the frame of the loom.

I claim as my invention—

1. The combination of the lathe of the loom, the picker, the lever D, forming a rigid stop for the picker, the supplementary lever J, forming a yielding stop for the same, and mechanism, substantially as described, whereby a differential movement of the two levers is effected on the forward movement of the lathe, as set forth.

2. The combination of the lathe and frame of the loom, the picker, the lever D, forming a rigid stop for the picker, the supplementary lever J, the spring acting thereon, a rod connected to the lower arm of the lever D and to the frame of the loom, and a connection between the lever J and the frame of the loom at a point in the rear of the connection of the rod *d*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. CROWLEY.

Witnesses:

JOSEPH H. KLEIN,

HARRY SMITH.