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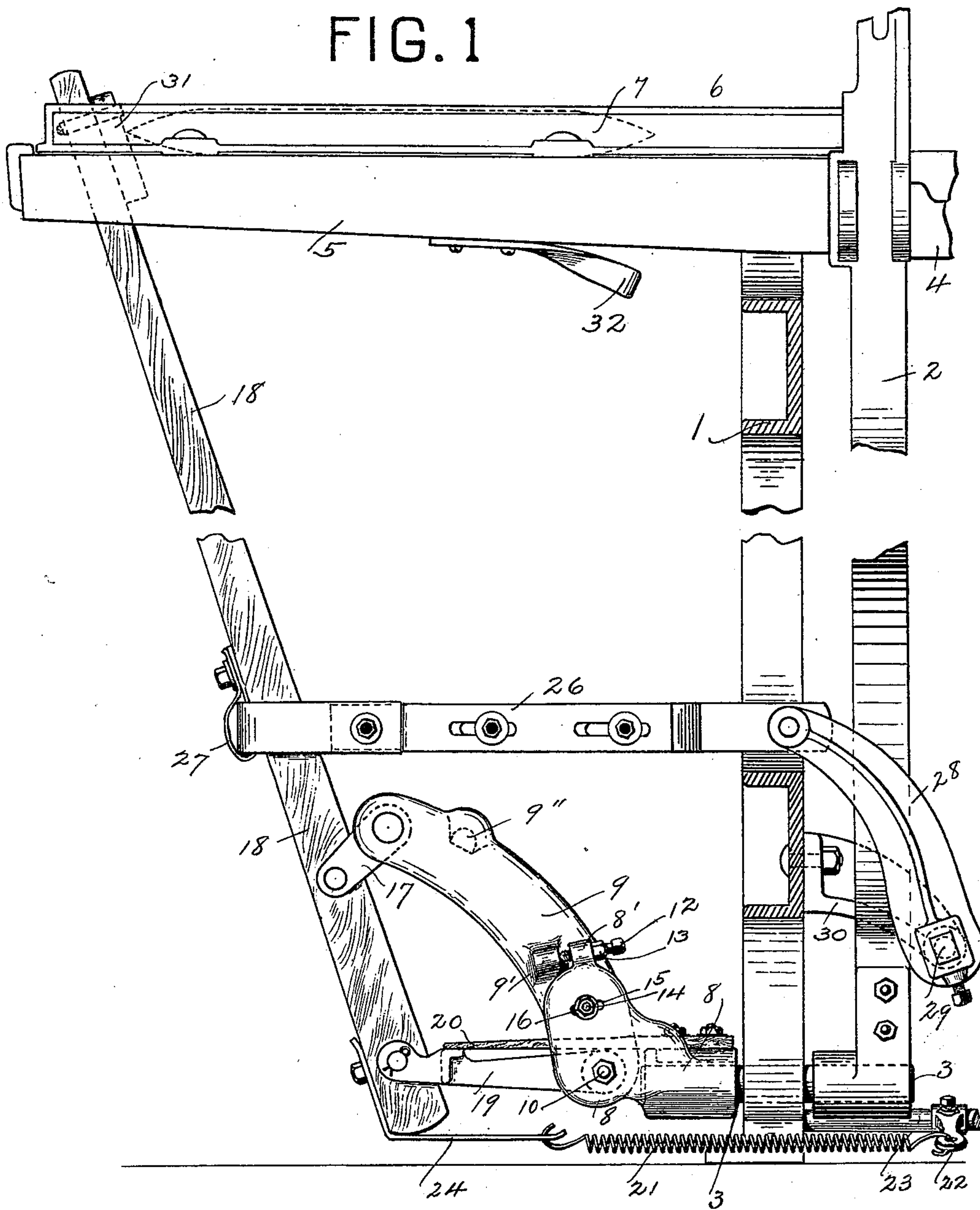
G. F. HUTCHINS.
PICKING MOTION FOR LOOMS.

(Application filed Aug. 2, 1898.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE F. HUTCHINS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE CROMPTON & KNOWLES LOOM WORKS, OF SAME PLACE.

PICKING-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 621,303, dated March 14, 1899.

Application filed August 2, 1898. Serial No. 687,478. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. HUTCHINS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Picking-Motions for Looms, of which the following is a specification.

My invention relates to the picking-motion of a loom, and particularly to that class of picking-motions in which the picker is secured in a fixed position to the upper end of the picker-stick and the picker-stick is so supported and operated that that part of the picker which engages the point of the shuttle has a horizontal motion or a motion parallel with the lay. In this class of looms the rocker shaft or pin on which the rocker-iron of the picker-stick is secured must be parallel with the lay. Any slight variation in level of the rocker shaft or pin from its proper position will cause a variation in the parallel motion of the picker at the point where it engages the shuttle.

The object of my invention is to provide means for overcoming any variation from its proper level of the rocker shaft or pin on which the rocker-iron of the picker-stick is secured and to obtain an exact horizontal or parallel movement of the picker where it engages the shuttle in case there is any such variation. Heretofore in this class of picking-motions to which my invention relates the supporting-arm of the rocker-iron on which the picker-stick is supported has been made integral with or rigidly attached to the rocker-iron, so that the position of said supporting-arm relatively to the rocker-iron could not be varied.

My invention consists in certain novel features of construction of the mechanism for supporting the picker-stick, as will be hereinafter fully described, and the nature thereof indicated by the claim.

Referring to the drawings, Figure 1 shows one end of a loom-frame and a picking-motion embodying my improvements. The picker-stick is shown in its outward position. Fig. 2 corresponds to Fig. 1, but shows the picker-stick and the other parts of the picking mechanism in their reverse positions; and Fig. 3 is

a cross-section through the rocker-iron on line 3 3, Fig. 2, looking in the direction of arrow *a*, same figure.

In the accompanying drawings, 1 is the loom side.

2 is the lay-sword, fast at its lower end on the rocker-pin 3, mounted in bearings in the lower end of the loom side 1.

4 is the lay, and 5 the projecting end of the lay, carrying the shuttle-box 6 for the shuttle 7. (Shown in dotted lines.)

8 is the rocker-iron, fast on the rocker shaft or pin 3.

9 is the supporting-arm of the picker-stick. The arm 9 is made separate from the rocker-iron 8 and is supported thereon on a pin 10, on which said arm has a pivotal motion to adjust the position of said arm. This adjustment is in this instance obtained by a screw 12, screwing in and out of a screw-threaded lug 8' on the rocker-iron 8, with its inner end bearing against a projection 9' on the arm 9. A check-nut 13 holds the screw 12 in its adjusted position.

After the arm 9 has been adjusted on the rocker-iron 8 it is held in its adjusted position by a bolt 14, secured to the arm 9 and passing through a hole 15 in the rocker-iron 8, and a nut 16 is screwed onto said bolt.

The outer end of the arm 9 is connected by a link 17 with the picker-stick 18, one end of the link being pivotally attached to the arm 9 and the other end to the picker-stick 18. The lower end of the picker-stick 18 is pivotally attached to the outer end of an arm 19, the inner end of which is pivotally attached to the rocker-iron 8 by the pin 10. A flat spring 20 is secured at one end to the upper end of the rocker-iron 8, and at its other end bears on the outer end of the arm 19 and acts as a check to receive the shuttle and also as a check to the forward motion of the picker-stick.

A spring 21 is attached at one end to a collar 22, fast on a rod 23, and at its other end, through a strap 24, to the lower end of the picker-stick 18, and acts to draw the picker-stick into its outer position at its upper end, as shown in Fig. 1, in the usual manner.

The lug-strap 26 is connected at its outer end by a loop 27 to the picker-stick 18 and at

its inner end to an arm 28, fast on the picker-shaft 29, mounted to turn in bearings 30, secured to the loom side 1, in the usual way.

The inward movement or rocking of the picker-shaft 29, through arm 28 and lug-strap 26, will cause the picker-stick 18 to move inwardly as far as the strap 32 will permit and will cause the picker 31 to have a parallel motion at the point where it engages the shuttle.

10 If the rocker shaft or pin 3 is not at its proper level, the rocker-iron 8 will be out of position, and this variation of position will be multiplied at the upper end of the picker-stick, so that the picker 31 at the point where
15 it engages the shuttle will not have a horizontal or parallel motion. Therefore if the rocker-iron 8 and supporting-arm 9 are made rigid or integral the position of the rocker shaft or pin 3 will have to be adjusted or
20 changed to obtain a horizontal motion of the picker; but by making the supporting-arm 9 separate from the rocker-iron 8 and adjustable thereon it is only necessary to adjust the position of the supporting-arm 9 on the
25 rocker-iron 8 so as to overcome any slight variation in the proper position of the rocker shaft or pin 3.

The advantages of my improvements will be readily appreciated by those skilled in the
30 art.

It will be understood that the details of construction of some of the parts of my improvements may be varied, if desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In the picking-motion of a loom of the class described, the combination with the rocker shaft or pin, the rocker-iron fast thereon and the picker-stick pivotally attached at its lower end to the outer end of an arm, and said arm pivotally attached at its inner end to the rocker-iron, and a flat spring attached at one end to the rocker-iron with its other end bearing on the outer end of said arm, to act as a
40 check for the shuttle, of the picker-stick-supporting arm, a movable link connecting the same with the picker-stick, and said supporting-arm pivotally connected at its lower end with the rocker-iron, and adjustable thereon, and means for adjusting the position of said
45 arm on the rocker-iron, to overcome any variation in the proper position of the rocker shaft or pin, and for holding the supporting-arm in its adjusted position, substantially as
50 shown and described.

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Witnesses:

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