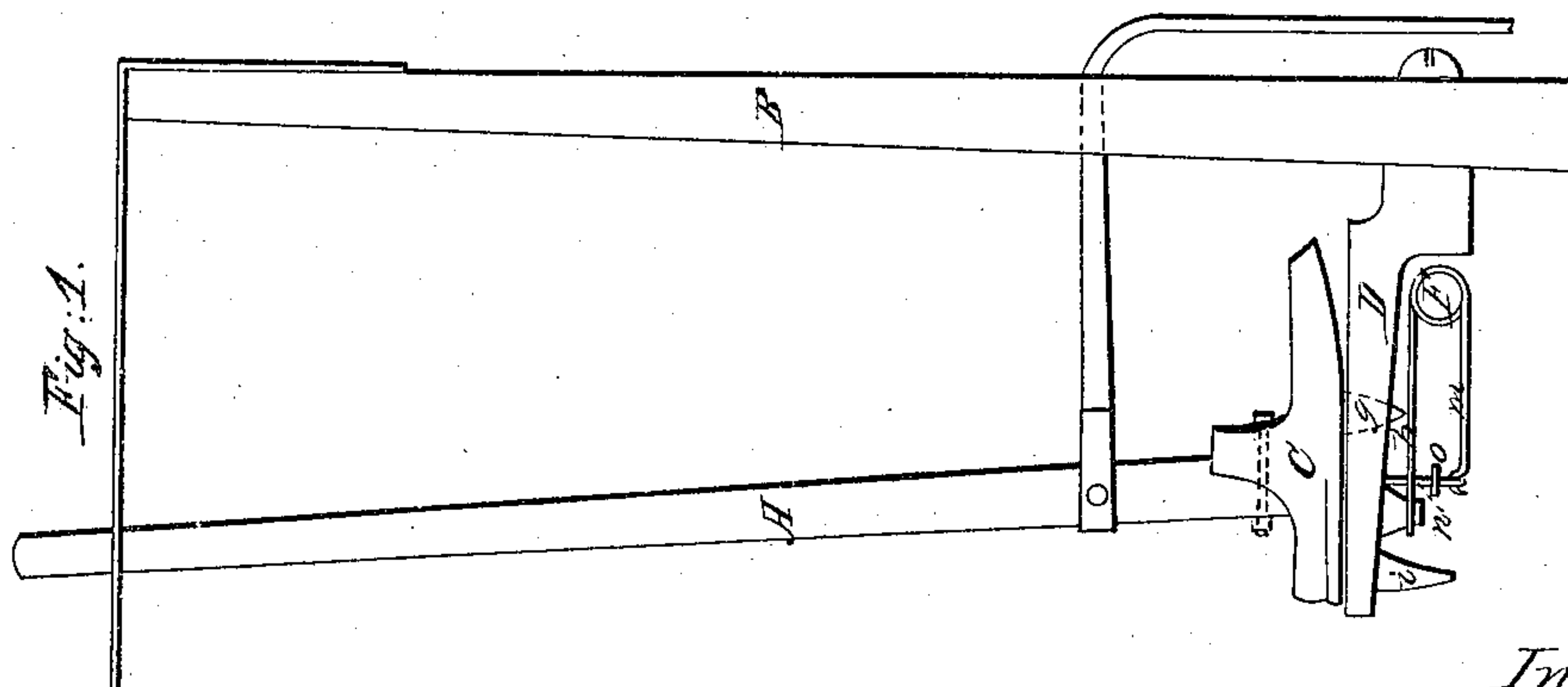
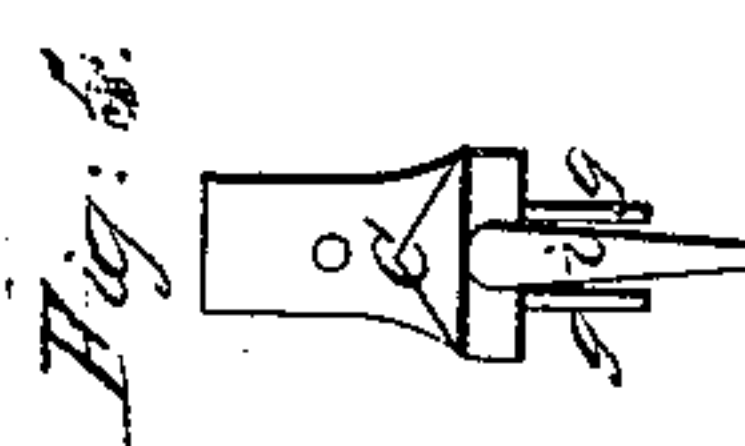
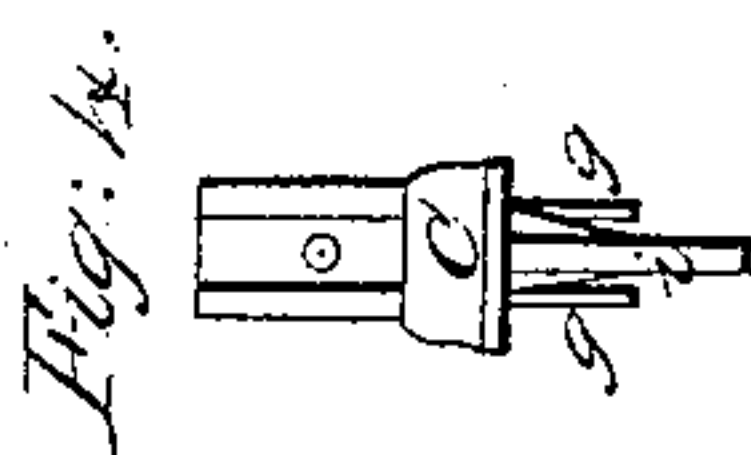
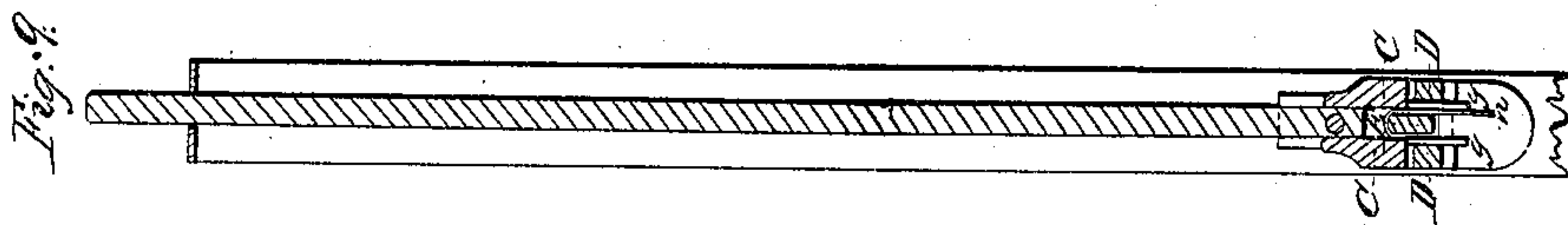
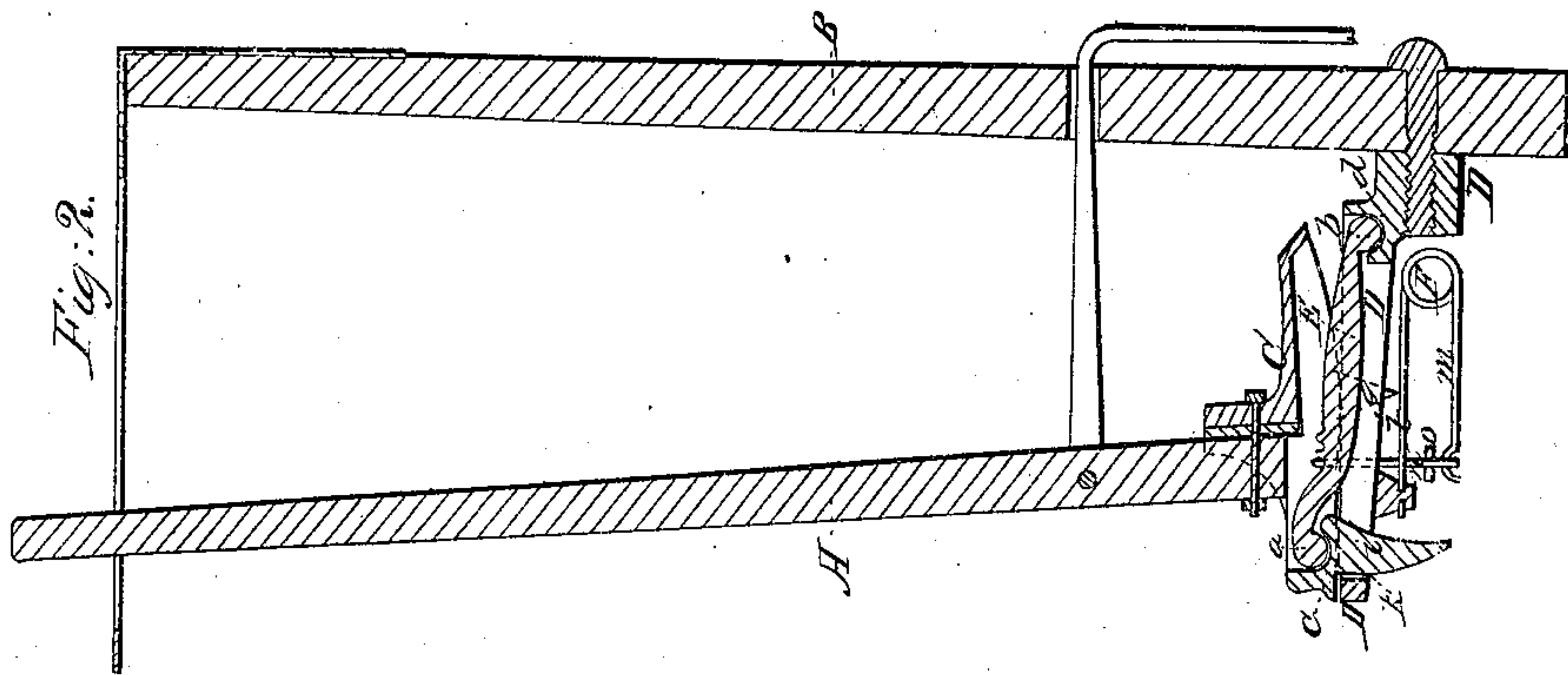


E. Robbins. Shuttle Motion.

N^o 34,647.

Patented Mar. 11, 1862.



Witnesses:
F. R. Hale &
W. H. Levi

Inventor:
Elisha Robbins

UNITED STATES PATENT OFFICE.

ELISHA ROBBINS, OF MILFORD, MASSACHUSETTS.

PICKER-MOTION FOR LOOMS.

Specification of Letters Patent No. 34,647, dated March 11, 1862.

To all whom it may concern:

Be it known that I, ELISHA ROBBINS, of Milford, in the county of Worcester and State of Massachusetts, have invented a
5 new and useful or Improved Picker-Motion for Looms; and I do hereby declare the same to be fully described in the following specification and illustrated in the accompanying drawings, of which—

10 Figure 1, is a side elevation and Fig. 2, a longitudinal section of it. Fig. 3, is a top view, Fig. 4, a front end view and Fig. 5, a rear end view of the rocker to be hereinafter described. Fig. 6, is a top view, and
15 Fig. 7, a side view of the radius arm, while Fig. 8, is a top view of the support piece or rail of the rocker. Fig. 9, is a transverse section of the rail, rocker and picker staff, the said section being taken through the
20 hook and stop of the spring which is arranged underneath the said rail or support piece.

In the drawings, A denotes the picker staff and B, the sword of the lay of a loom.
25 The said staff, at its foot is fastened to a rocker, C, which rests on a rail or support piece, D, that extends from the sword B, as shown in the drawings. I combine with the said rocker and its support piece, a
30 radius arm, E, which I arrange within the two or in a recess made in either or both of them. The inner end of the said arm is jointed to or pivoted in the support piece while the outer end of the said arm is simi-
35 larly connected with the rocker at or near its heel. I prefer to construct the arm with rounded projections, *a*, *b*, at its opposite ends to enter respectively two oil cups, *c*, *d*, arranged one, in the support piece and the
40 other in the rocker as shown in the drawings. Furthermore, I construct the rocker with two projections or guides, *g*, *g*, to extend downward from its middle, and embrace or straddle the arm and enter or pass
45 into the opening, *h*, made through the support piece, D. The outer sides of these guides rest against the sides of the said opening. The object of these guides is not only to preserve the radius arm in place,
50 but to prevent the rocker arm from being thrown laterally off its supporting rail while the picker motion may be in operation. At the heel of the rocker, there is a horn or heel guide or stop, *i*, formed and
55 arranged as shown in the drawings. This guide or stop enters an opening, *k*, of the

support piece and serves as a back stop to prevent the disengagement of the radius arm and its rocker during the rearward movement of the picker staff. It also op- 60
erates to advantage in other respects.

Underneath the support piece, D, a spring, F, having the form shown in the drawings is arranged its upper arm, *l*, at its outer end being fastened to the support piece. The 65
outer end of the lower arm, *m*, of the said spring is jointed to a hook or link, *n*, which extends downward from the radius arm and carries a washer or stop, *o*, which by being raised against the arm, *l*, of the spring dur- 70
ing the forward throw of the picker staff serves to arrest the said movement without a sudden concussion or blow. The spring is thus made to answer two purposes viz, that of retracting the picker staff, and that of 75
easing the stoppage of it, at the termination of its forward movement.

The object of the radius arm arranged and combined with the picker staff, rocker, and its supporting piece or rail is not only 80
to produce therewith a compound motion of the staff, parallel to its operation with respect to the shuttle, but to steady the movement of the rocker, and prevent the great wear which takes place, when a curved arm 85
is used to project downward from the middle of the rocker and through the support piece and operate as a stop to arrest the motions of the picker staff, such a curved arm being explained and exhibited in the 90
United States Patent No. 24668, and lettered G.

The oil cups arranged in the rocker and its support piece as described, serve to hold oil for the lubrication of the joints or bearing 95
surfaces of the radius arm. The arrangement of the radius arm is such that it is completely covered by the rocker or so works within it and the supporting rail as to be protected by both from dust or waste 100
threads or yarns.

I do not claim the rocker and its support piece, applied to, or combined with the picker staff. Nor do I claim arranging the rocker and support piece so that they shall 105
be within the link or radius arm and the ears or guides, such being as shown in the patent of N. S. Bran, dated January 22, 1861.

I claim—

1. My improved arrangement of the radius arm, E, its spring, F, and the guides, 110

g, g, viz, within the support piece, D, and the rocker, C, whereby they are covered and protected from dust and accidental displacement or injury.

5 2. Also, the arrangement of the heel guide or back stop *i*, with the rocker and the support piece.

3. Also, the arrangement and combina-

tion of the oil cups with the rocker the support piece and the radius arm applied to the 10 latter and the rocker.

ELISHA ROBBINS.

Witnesses:

W. G. LEVI,

F. P. HALE, Jr.