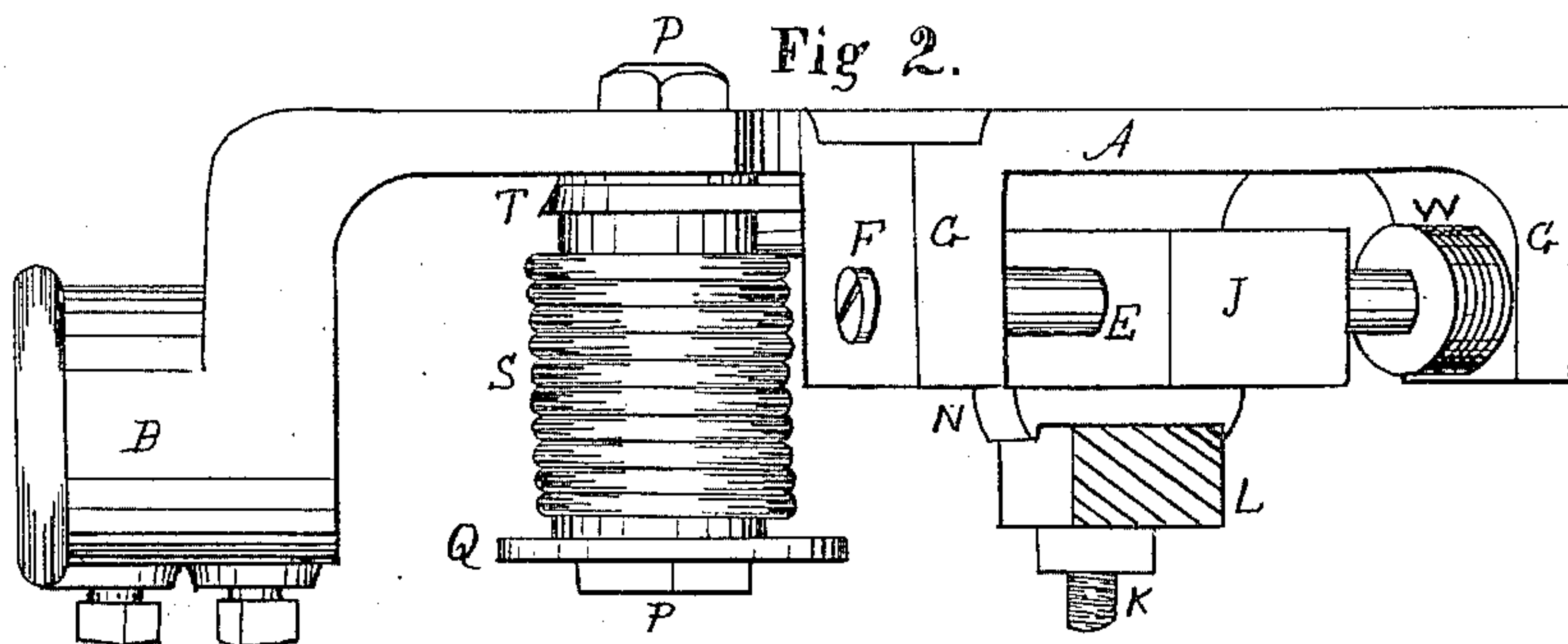
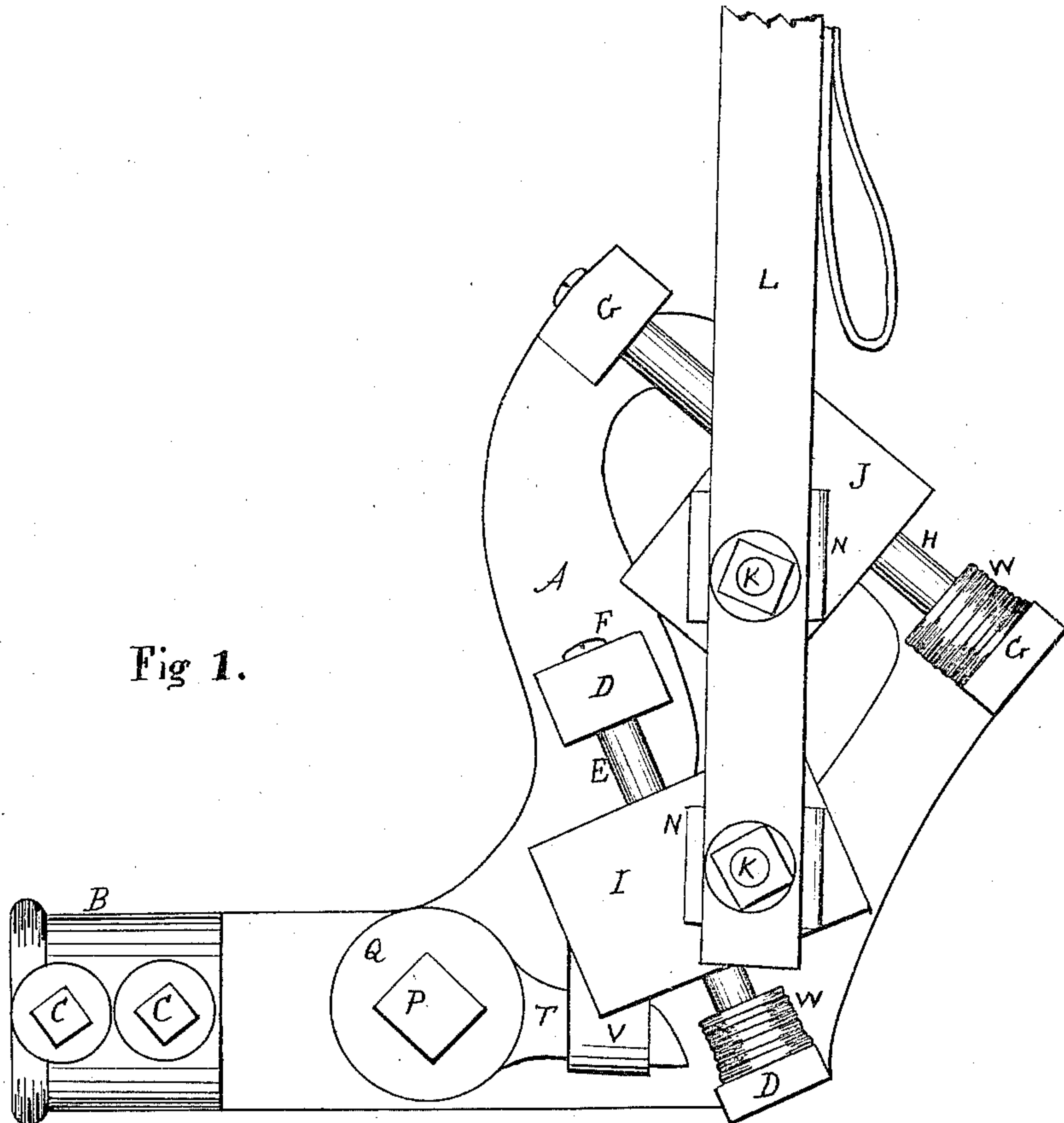


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Picking-Mechanisms for Looms.

No. 156,627.

Patented Nov. 10, 1874.



WITNESSES.

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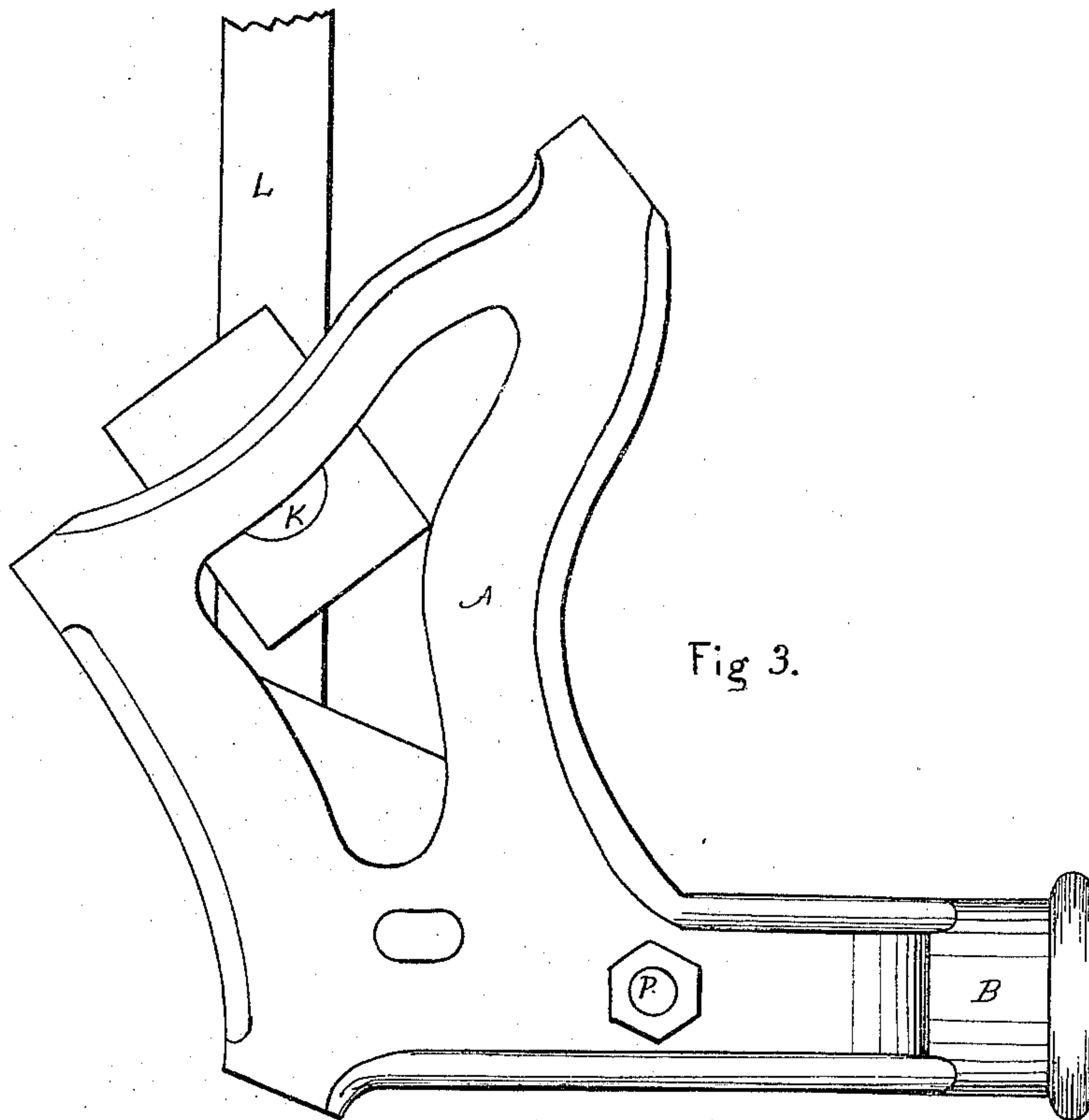


Fig 3.

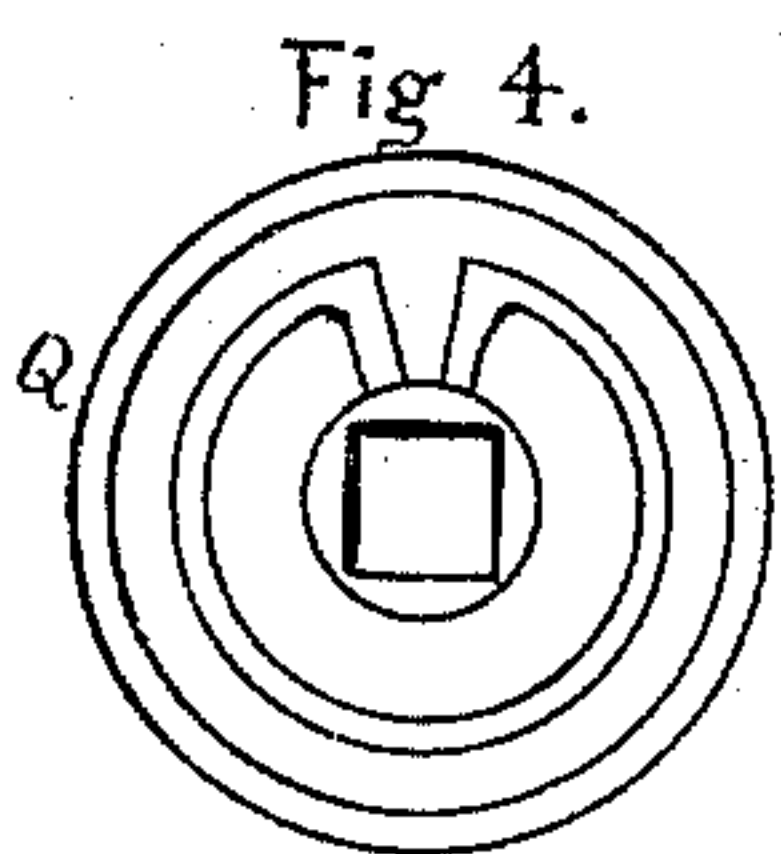


Fig 4.

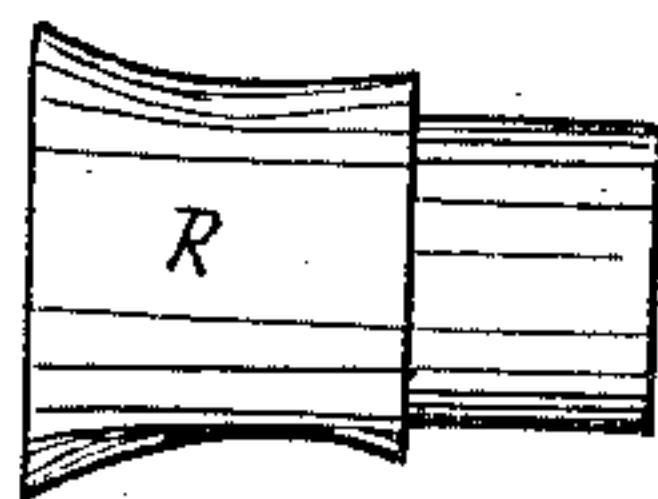


Fig 5.

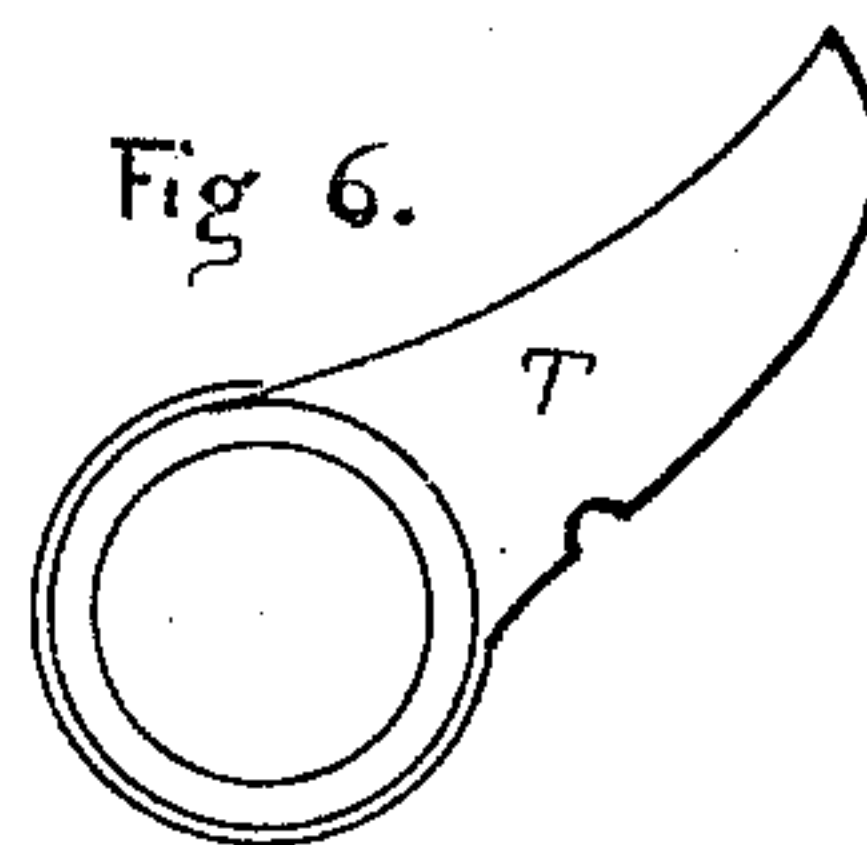


Fig 6.

WITNESSES.  
*Joseph Barth.*  
*John S Barnwell*

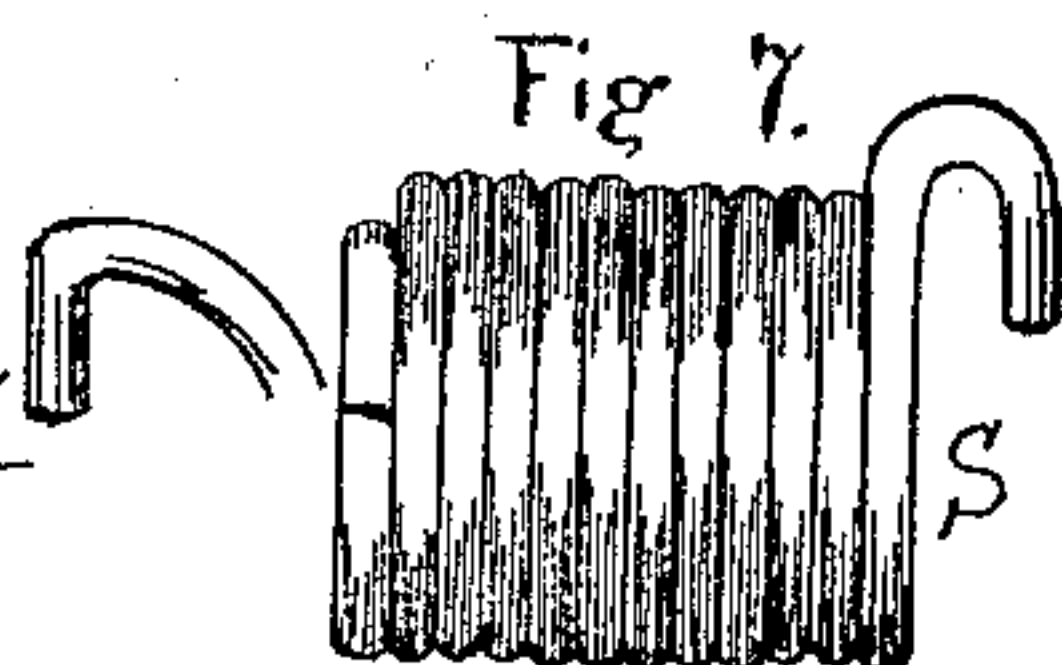


Fig 7.

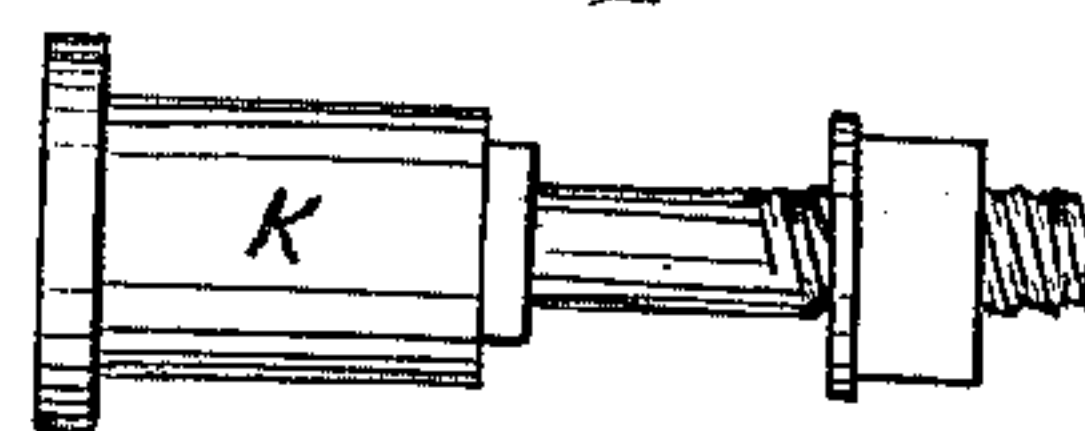


Fig 8.

*Gardner W. Brooks*  
*By his Atty J. Dennis Jr*



# UNITED STATES PATENT OFFICE.

GARDNER W. BROOKS, OF MANCHESTER, NEW HAMPSHIRE.

## IMPROVEMENT IN PICKING MECHANISMS FOR LOOMS.

Specification forming part of Letters Patent No. **156,627**, dated November 10, 1874; application filed October 3, 1874.

*To all whom it may concern:*

Be it known that I, GARDNER W. BROOKS, of Manchester, Hillsborough county, in the State of New Hampshire, have invented certain new and useful Improvements in Picker-Motions for Looms; and I hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings forming part of this specification.

The nature or essence of my invention consists in two rods inclined at different angles, upon which rods or ways two blocks traverse and carry pivots on which the picker-staff works, so as to carry the end of the staff, which drives the shuttle parallel, or nearly parallel, with the race-board of the lay.

Figure 1 is an elevation of a picker-motion with my improvement. Fig. 2 is a plan of the same. Fig. 3 is an elevation of the back side. Figs. 4, 5, 6, 7, and 8 are same parts in detail.

In the accompanying drawings, A is a cast-iron stand, made in the form shown, or in such other form as will answer the purpose, and provided with a perforated hub, B, by which it is fastened to the rock-shaft of the loom and secured by the set-screws C C. This stand A has two lugs, D D, projecting from its face and perforated to receive the rod E, which is held in its place by the set-screw F in the upper lug D; or the rod E may be reduced at the lower end, and a screw cut on it and fitted to a female screw cut in the lower lug D, to hold it in place. The lugs D D are so arranged on the stand A as to hold the rod E at about an angle of sixty-eight degrees to the rock-shaft which supports the stand A. There are two other lugs, G G, on the stand A, arranged to hold the rod H at an angle of about forty degrees to the rock-shaft. Upon the rods E and H the wooden blocks I and J are fitted to traverse freely in both directions, when required. The blocks I and J are perforated for the bolts K K, which connect them to the picker-staff L. These bolts K K are made in the form shown in Fig. 8, the large part next to the head turning freely in the blocks I and J, and the square part passes into plates N N on the picker-staff; and the small part passes through the picker-staff L, and receives the washer and nut, which fasten them firmly in the picker-staff, and at the same time draw the plates N N tight to the staff, which plates are pro-

vided with flanges, which come each side of the staff, to prevent its splitting.

The picker-staff L is made about thirty and one-half inches long from the rock-shaft to the point where it strikes the shuttle, which point will traverse nearly or quite parallel with the lay of the loom, and throw the shuttle very accurately when the staff is vibrated by a leather strap applied around it above the stand A.

The blocks I and J traverse on the rods E and H as the picker-staff is swung, to make the upper end traverse parallel, or nearly parallel, with the race-board of the lay.

To draw the picker-staff back after it has thrown the shuttle, I make a hole in the stand A for the bolt P, which is square under the head, to fit the plate Q. On this bolt there is a block, R, made large at the end next to the plate for the coiled spring S, and small at the other end for the finger T, which passes through the loop V fastened to the block I, which is pulled down by the spring S, to draw the picker-staff back after it has thrown the shuttle.

One end of the spring S hooks over the finger T and the other catches in a notch in the plate Q, so that, by unscrewing the nut on the bolt P, the spring may be adjusted as desired.

Some washers, W, of leather or other material, may be put on the rods E and H, to stop the blocks I and J when the picker-staff is drawn back, to ease the blow of the picker-staff and prevent the filling from being thrown off the shuttle spindle or bobbin.

I contemplate that skillful mechanics will be able to vary the angles of the rods E and H, and the length of the picker-staff, to adapt them to the conditions and circumstances in which they wish to use them.

What I claim as my invention and improvement in the above-described picker-motion is—

1. The combination of the rods E and H with blocks I and J and picker-staff L, constructed to operate substantially as described, for the purpose set forth.

2. In combination with the rods E and H, with blocks I and J and picker-staff L, the coiled spring S and finger T, arranged to draw back the picker-staff, as described.

Witnesses:

J. F. KENNARD,  
B. P. CILLEY.

G. W. BROOKS.