

*W. O. Hickok.*  
*Ruling Machn.*

*No 103,743. Patented May 31, 1870.*

Fig. 2

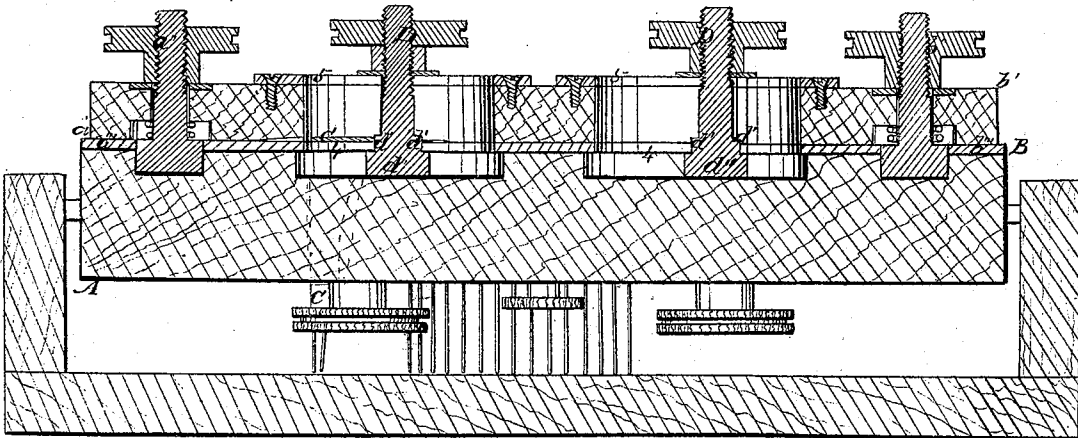
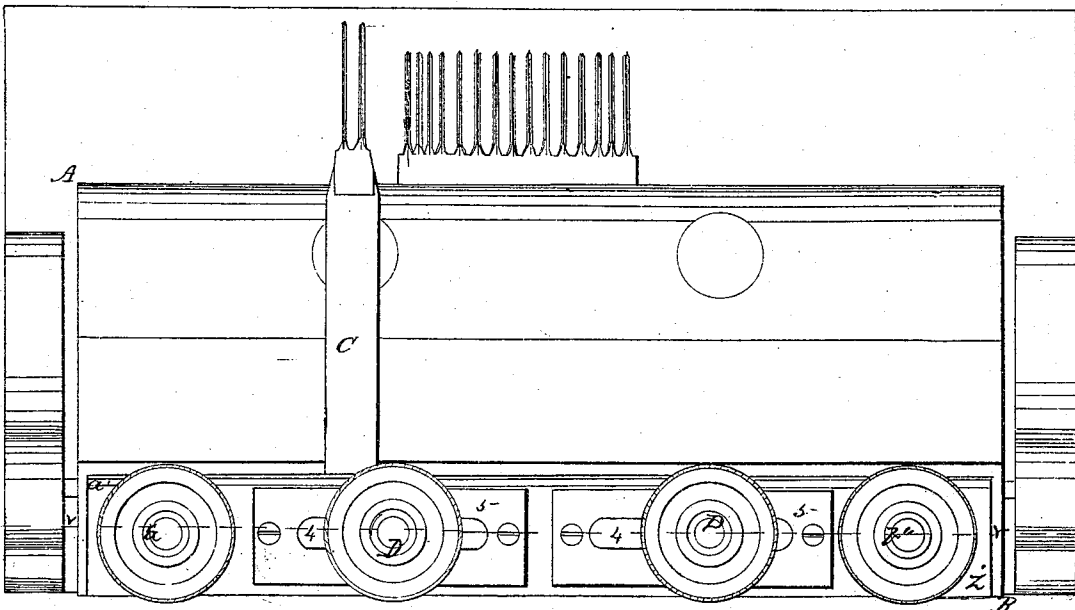


Fig. 1



Witnesses  
*S. Scherer*  
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Inventor  
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# United States Patent Office.

WILLIAM O. HICKOK, OF HARRISBURG, PENNSYLVANIA.

Letters Patent No. 103,743, dated May 31, 1870.

## IMPROVEMENT IN RULING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM O. HICKOK, of Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented certain Improvements in the Pen-Beam of Paper-ruling Machines, of which the following is a specification.

### *Nature and Objects of the Invention.*

My invention relates to the application of the bolts of the upper clamp of a paper-ruling machine pen-beam, in in such a manner that the said bolts can be readily shifted right and left along the same, the object of my invention being to enable the attendant to adjust the upper pens of the beam to any position in the clamp that may be desirable.

### *Description of the Accompanying Drawings.*

Figure 1 is a plan view of a pen-beam, having a section of the lower and a section of the upper pens applied thereto, embodying my invention.

Figure 2 is a vertical longitudinal section of the said beam, showing the parts above the dotted line *v* of fig. 1.

### *General Description.*

A B is the pen-beam.

*a' b'* the clamping-bar of the upper clamp.

*a" b"* the usual stationary spring screw-bolts and nuts near the ends of the beam, for securing the clamping-bar *a' b'* in place, and causing it to rise when required for inserting the upper pens C; and

D D the shifting-bolts.

Beneath the clamping-bar *a' b'*, there is a corresponding metallic plate, *a''' b'''*, screwed fast to the upper side of the pen-beam A B, and this plate has a

series of slots, 4 4, (see fig. 2,) each about two inches long, more or less, cut along in line with each other, and at suitable distances apart, for the reception of the square portions *d'* of the bolts D, the wood of the beam below being also being cut away sufficiently to allow the heads *d''* of the said bolts to pass freely therein from end to end.

The clamping-bar *a' b'* is slotted to correspond with the series of slots in the plate *a''' b'''*, and on the top of the bar *a' b'* each slot is provided with a correspondingly-slotted plate 5 5, which is screwed fast thereto so as to serve as a bearing for the screw-nuts of the said bolts D.

It will now be understood, without further description, that if all the clamping-bolts D between the two stationary end-bolts *a" b"* be adjustably applied to the pen-beam A B and clamping-bar *a' b'*, substantially in the manner described, any one of the sections of the upper pens C can be placed at any desired point in the clamp by shifting the said bolts D accordingly; and that this important advantage cannot be obtained when the positions of the clamping-bolts are stationary, as heretofore,

### *Claim.*

I claim as my invention—

Providing the pen-beam A B with undercut slots 4, and the additional clamp *a' b'* with corresponding slots 5 to receive the sliding bolts D or their equivalent, as and for the purpose set forth.

W. O. HICKOK.

Witnesses :

S. SCHRIEVER,

W. O. HICKOK, Jr.