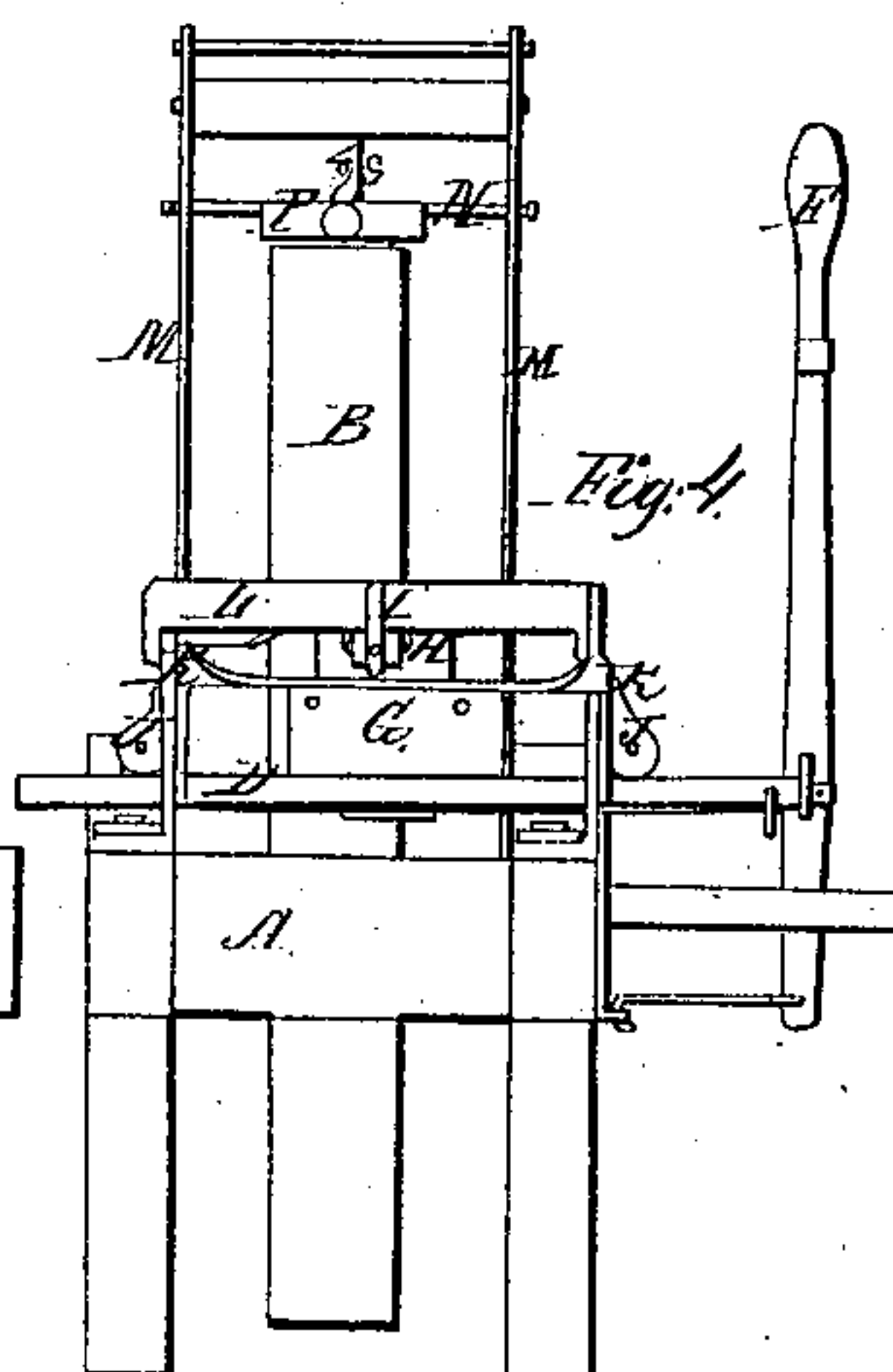
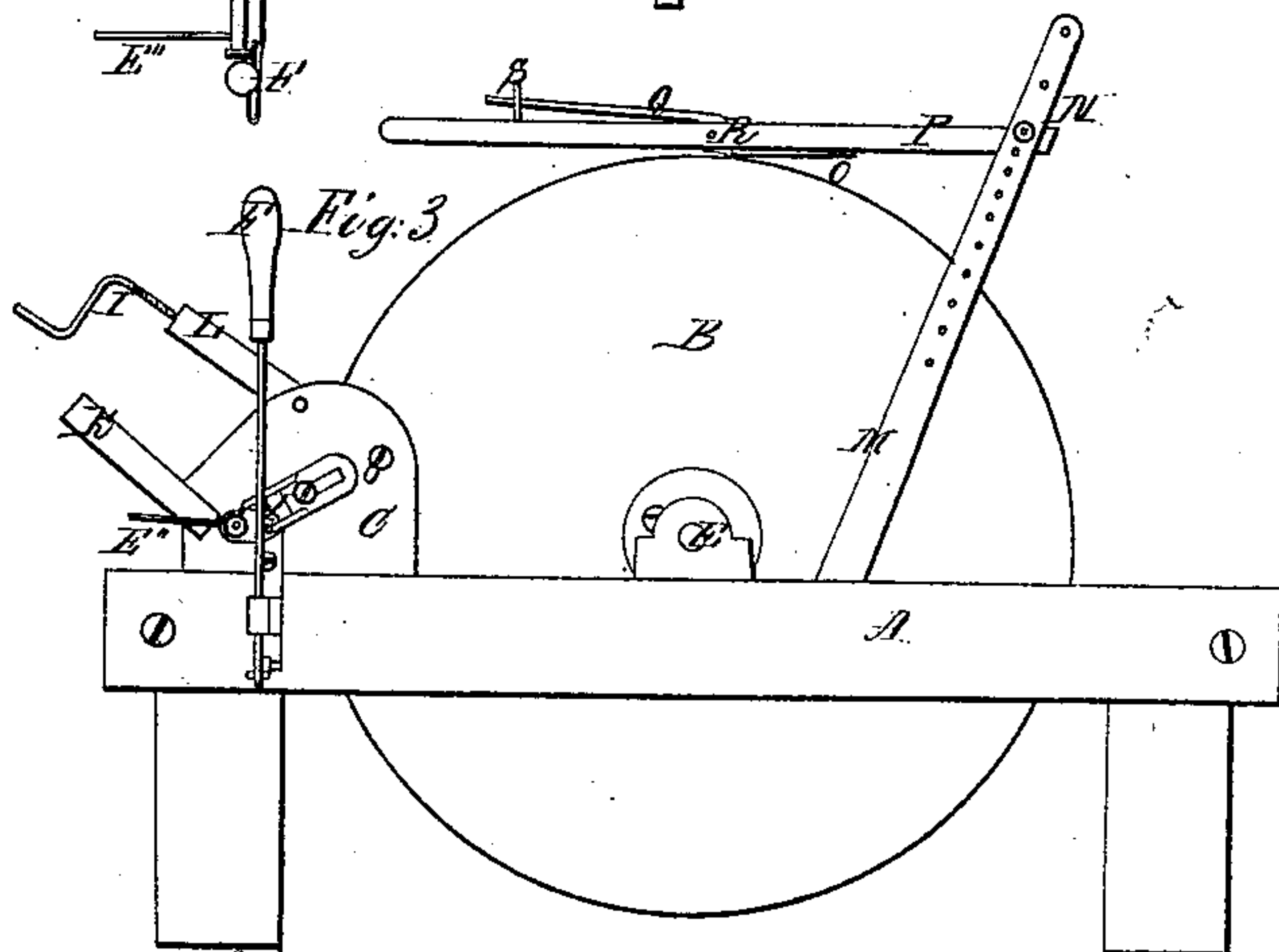
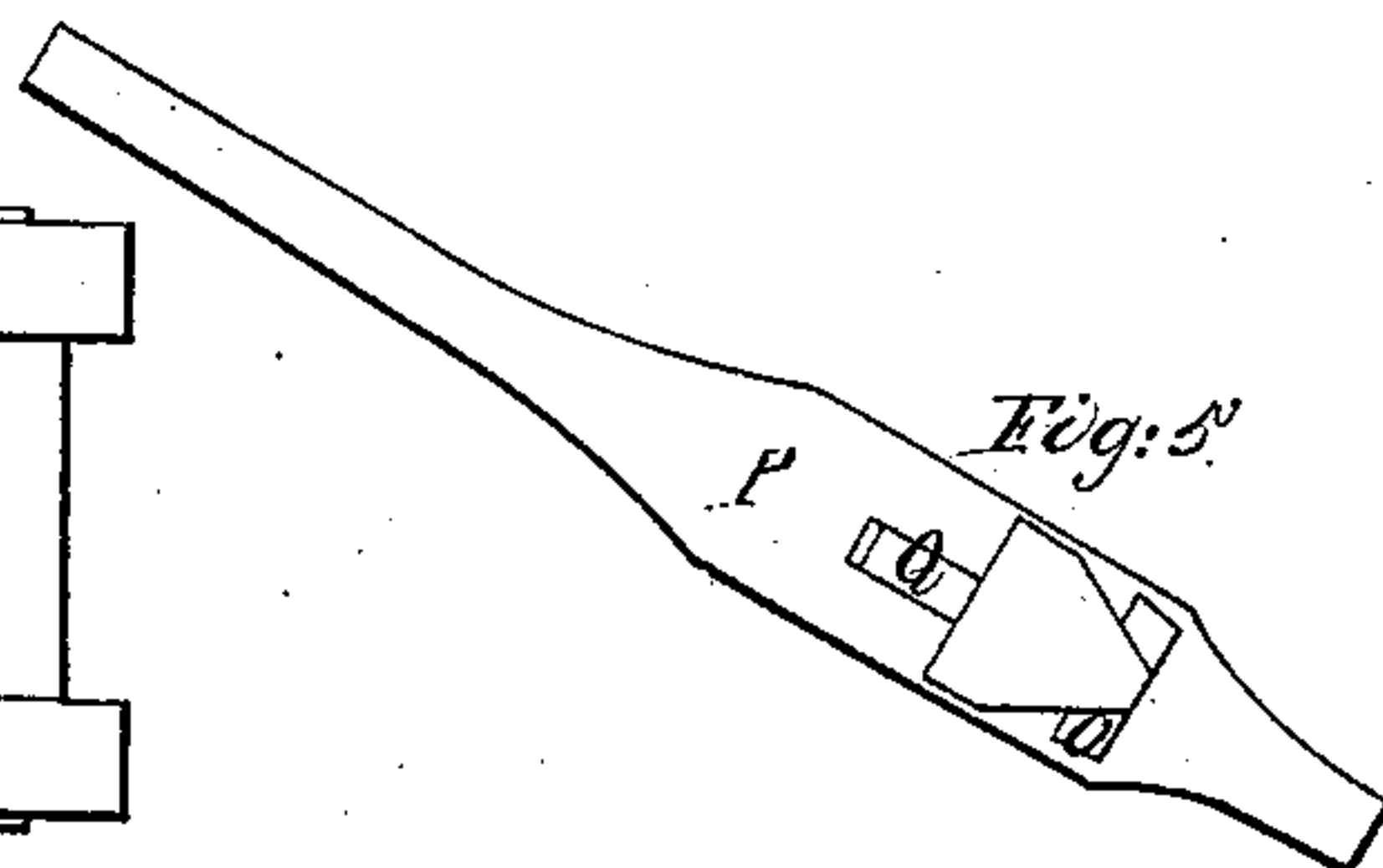
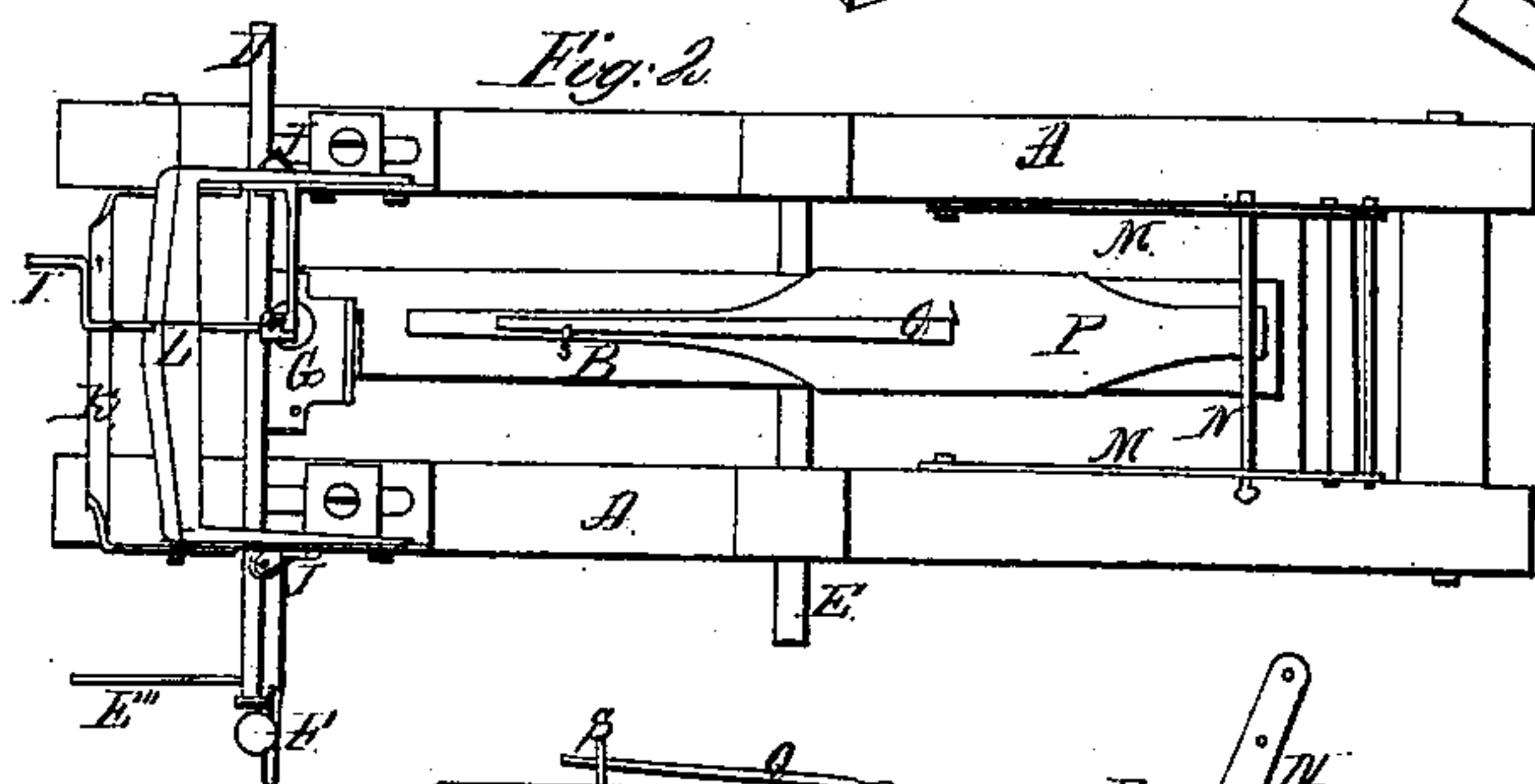
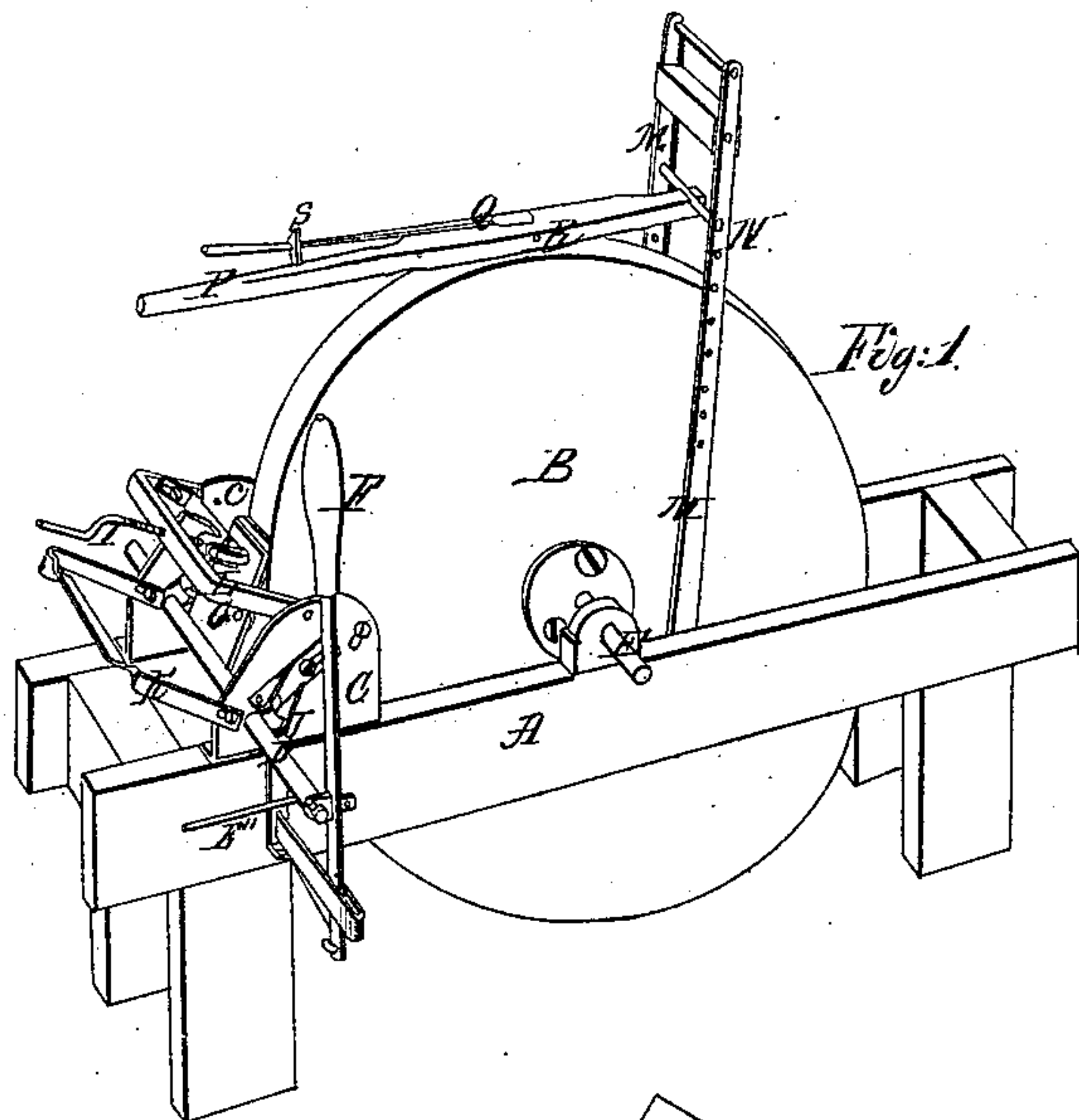


E. W. Nichols,

Edge-Tool Grinder.

Nº 29,512.

Patented Aug. 7, 1860.



Witnesses:
John Smith
William Conkey

Inventor:
Everett W. Nichols.

UNITED STATES PATENT OFFICE.

EBENEZER W. NICHOLS, OF WORCESTER, MASSACHUSETTS.

HOLDER FOR POLISHING-WHEELS.

Specification of Letters Patent No. 29,512, dated August 7, 1860.

To all whom it may concern:

Be it known that I, EBENEZER W. NICHOLS, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and Improved Apparatus for Holding Articles up to a Grindstone or Polishing-Wheel for the Purpose of Grinding or Polishing the Same; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2 a plan view from above; Fig. 3 a side view; Fig. 4 an end view, and Fig. 5 a plan view from below of my improved clamp for holding articles for "surface grinding" detached.

A, represents the frame; B, the grindstone. One end of the frame A, is surmounted by my improved apparatus for holding articles to be ground to any required bevel or otherwise. It consists of two upright standards C, fixed to the frame, one upon each side.

D, is a shaft that passes through these standards parallel with the grindstone shaft E. The shaft works easily in the standards and is susceptible of both a rotary and longitudinal movement by means of the handles E'', and F. A clamp G, for holding the article to be ground, is fixed to this shaft between the standards C.

H, is a roller that presses upon the back of the clamp during the process of grinding and its pressure is regulated by the screw I.

J, represents two rollers against which the shaft D, works which render its longitudinal movement easy during the process of grinding, and prevents its wearing "out of true."

K, is a gage to enable the operator to place each article in precisely the same position in the clamp.

Its operation is as follows: The shaft D, is moved longitudinally by means of the handle F, until the clamp G, is removed from beneath the roller H, then by means of the handle E'', the shaft D, is turned on its axis until the clamp G, comes to the gage K.

The article to be ground is now placed in the clamp and adjusted to the gage, and the clamp closed. The clamp is now turned back to the face of the stone. The operator then places one hand upon the handle F, and the other upon the screw I. A few movements, back and forward, of the handle F, and a slight turning of the screw at the same time, soon finishes the article. The bar L, in which the screw works, is sufficiently stiff to prevent the stone from getting out of true.

The whole apparatus is susceptible of easy adjustment as the stone wears away.

M, represents two straps hinged to the frame A, and coupled together at their top. These straps have each a series of corresponding holes for the reception of the rod N. This rod forms a fulcrum for one end of my improved clamp for holding articles for surface grinding, it is so constructed as to grasp the article by its edge, so that its entire surface can be finished without changing its position in the clamp. It consists of a stationary jaw O, fixed to the flat portion of the handle piece P, and a lever jaw Q, that passes through the handle piece and works on a fulcrum R, and a hook S, to hold the lever jaw to its closed position. The article to be ground is placed with its edge against the stationary jaw. The lever jaw is then brought to bear against its opposite edge by depressing the handle end of the lever jaw, and placing it under the hook S. The operator then places one end of the handle piece under the fulcrum rod N, and holds the other end in his hand and brings the article T, to bear upon the grindstone, the straps M, being hinged to the frame, so that the operator is enabled to bring the whole surface of the article, easily and equally, to the action of the grindstone.

This invention is particularly adapted to the edging, and facing of mowing and reaping machine knives, and it enables the operator to perform the work with ease, expedition, and accuracy, and the grindstone always remains perfectly true.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the bar L, screw

I, roller H, and gage K, in combination with shaft D, clamp G, rollers J, and the handles E'', and F, when employed substantially as, and for the purpose, specified.

- 5 2. The clamping device for holding articles by their edge, consisting of the handle piece P, lever jaw Q, stationary jaw O, and

hook S, when arranged and employed substantially as specified.

EBENEZER W. NICHOLS.

In presence of—

C. A. HILL,

WM. GREENLEAF.