

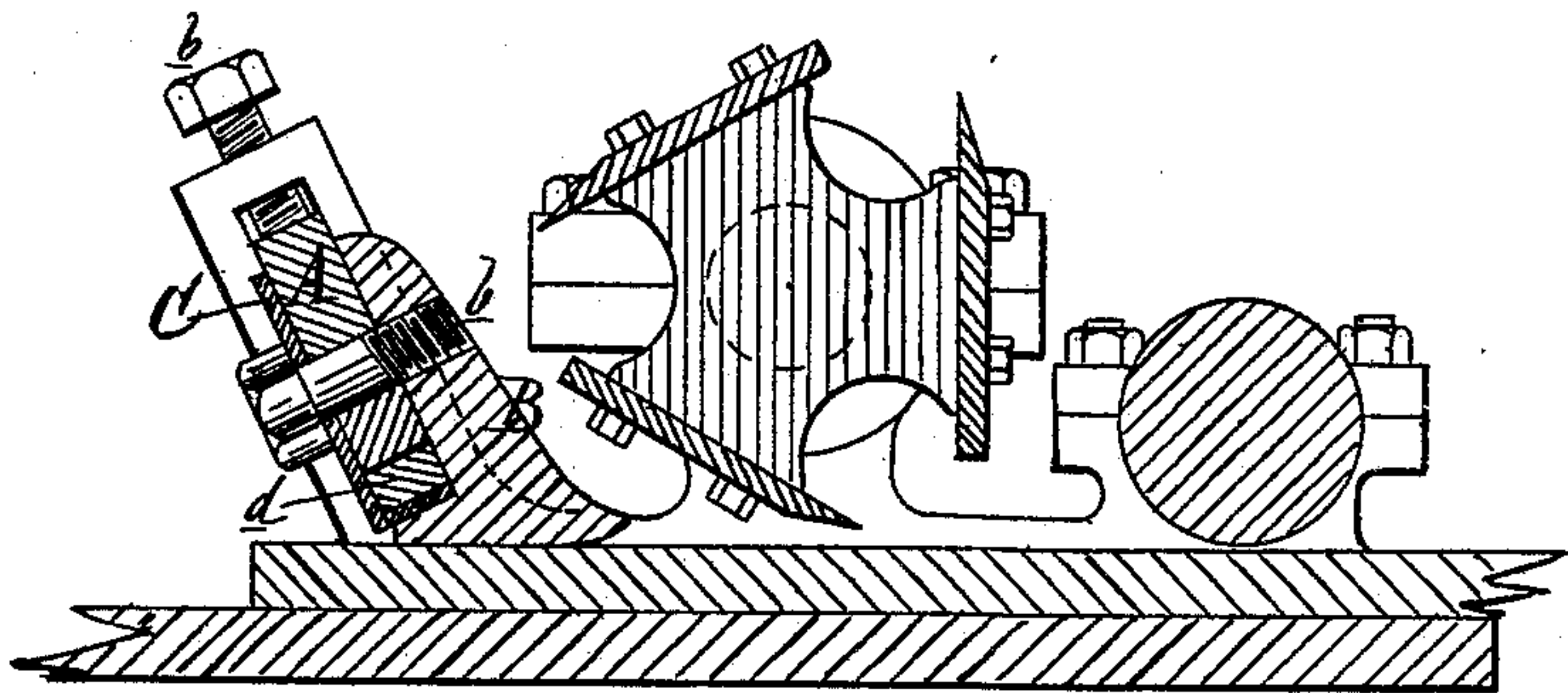
G. E. NEWALL.

PRESSURE-BARS FOR PLANING-MACHINES.

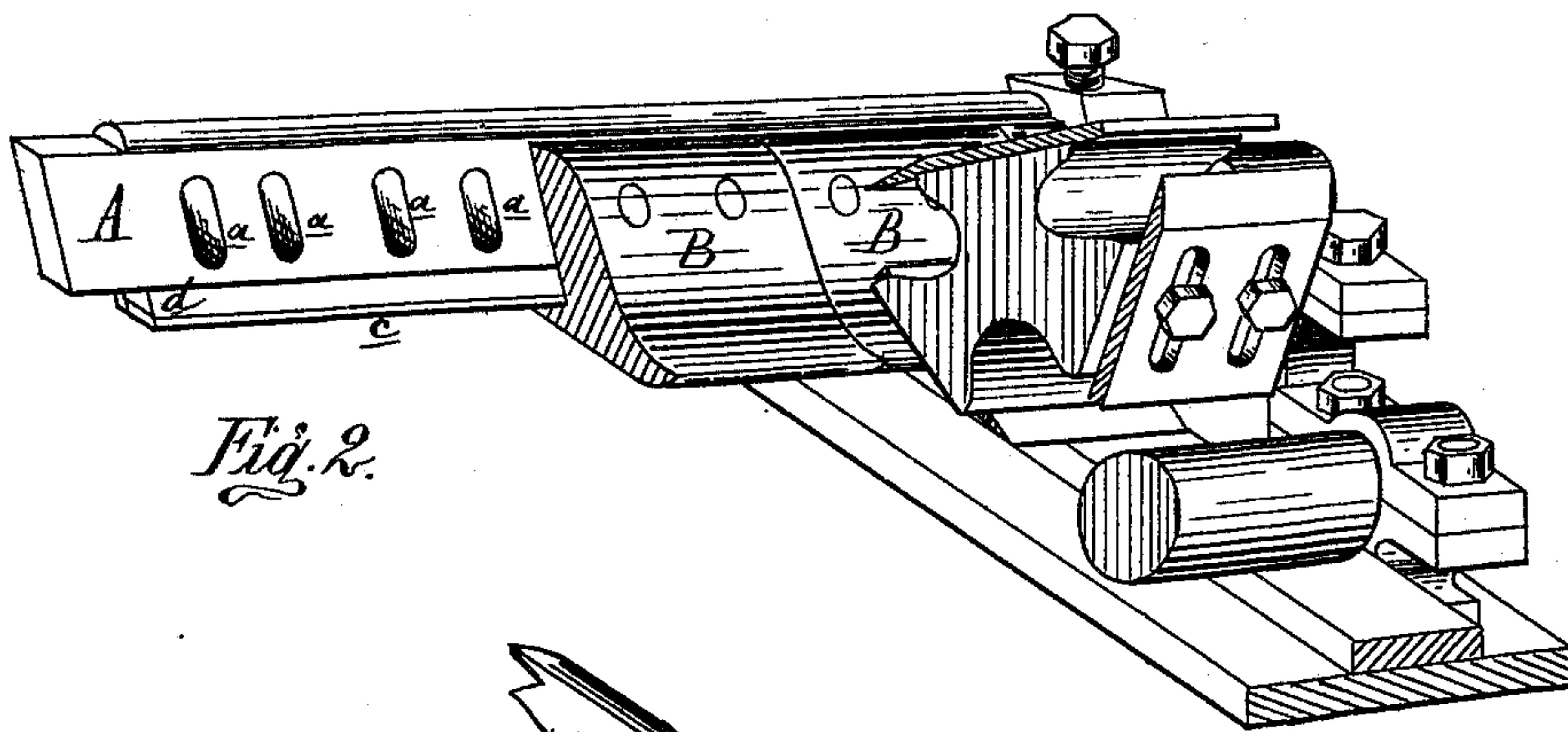
No. 188,936.

Patented March 27, 1877.

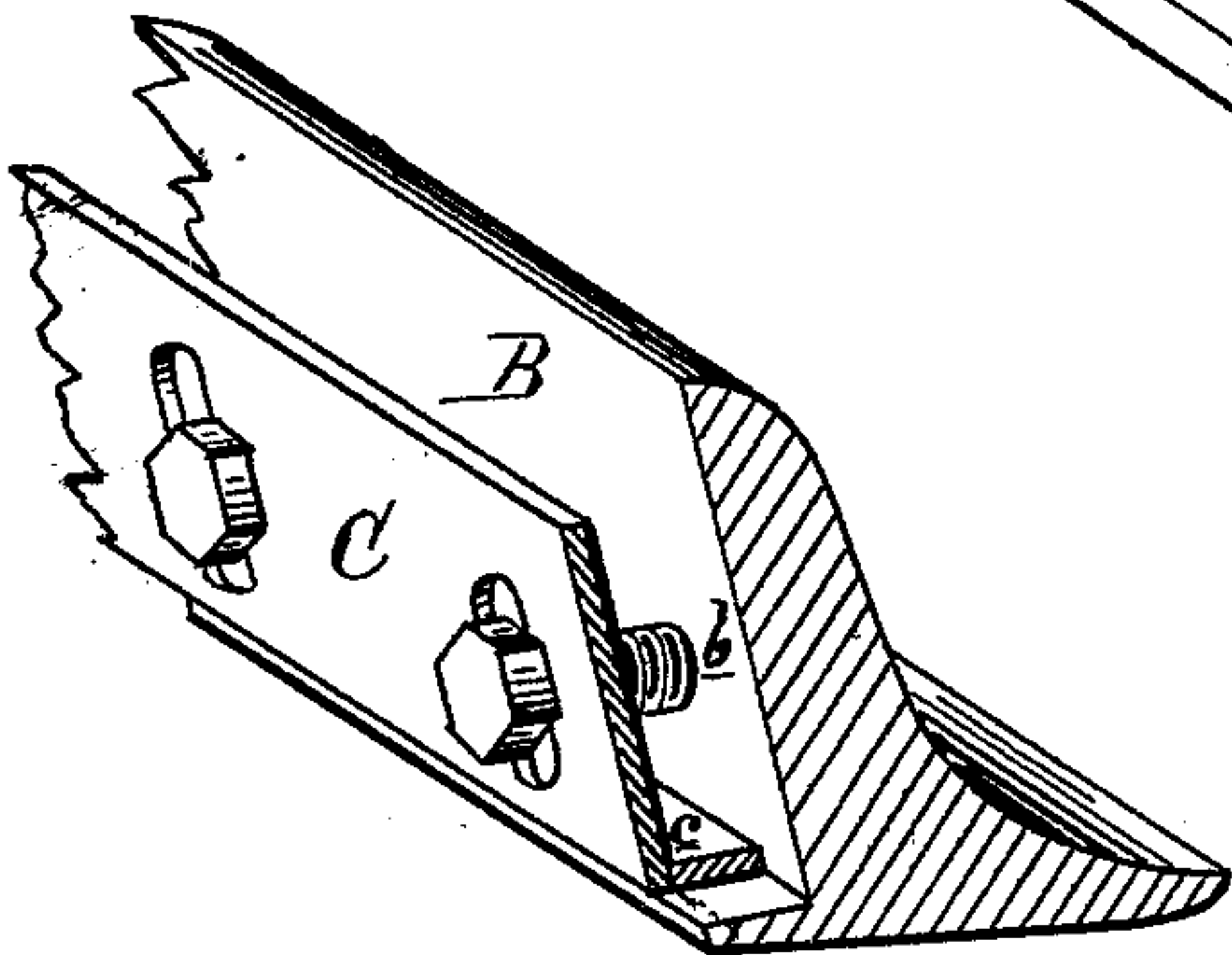
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Attest.  
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G. E. Newall  
By Atty  
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# UNITED STATES PATENT OFFICE.

GEORGE E. NEWALL, OF FLINT, MICHIGAN, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO SAMUEL N. ANDRUS, OF SAME PLACE.

## IMPROVEMENT IN PRESSURE-BARS FOR PLANING-MACHINES.

Specification forming part of Letters Patent No. **188,936**, dated March 27, 1877; application filed  
August 31, 1876.

*To all whom it may concern:*

Be it known that I, GEORGE E. NEWALL, of Flint, in the county of Genesee and State of Michigan, have invented an Improvement in Pressure-Bars for Planing-Machines, of which the following is a specification:

The nature of my invention relates to an improvement in pressure-bars transversely arranged over the beds of planing-machines for holding down thereon the work as it passes through; and my invention therein consists in the combination, construction, and arrangement of the pressure-bar, bearing-surface, and the means for securing and making the same adjustable, all as more fully hereinafter explained.

Figure 1 is a cross-section of my improved pressure-bar, showing also, in cross-section, the cutter-head and pressure-roll in front thereof, and in longitudinal section a portion of the bed of a planing-machine. Fig. 2 is a front perspective view of my improved pressure-bar, with part of the bearing-sections in place and the remainder removed. Fig. 3 is a rear perspective view of a bearing-section, its bolts, and parts of the rear washer-plate and flexible bottom plate or strip.

In the drawing, A represents a rigid and unyielding pressure-bar, having a vertical adjustability at each end in a slotted standard at the sides of the main frame of the machine. It is perforated with vertical bolt-slots *a*, through each of which passes a bolt, *b*, that is tapped into a bearing-section, B, having, approximately, the form of an inverted T, whose shank is inclined to the angle of the face of the pressure-bar, while the foot is flat and horizontal, so as to bear upon the planed surface of the board passing under it, but is also rounded at the front and rear edges, so as not to catch any irregularities in the work. The rear part of each section B extends back under the edge of the pressure-bar, and on it is laid a thin strip, *c*, of steel or other elastic metal, and between which and the bar A is interposed a thicker strip, *d*, of elastic india-rubber. The strips *c* and *d* are continuous, and extend as far under the bar, or across it, as do the sectional bearings.

A washer-plate, C, at the back of the pressure-bar, through which the bolts *b* pass, and extending down back of and below the strips *c* and *d*, serves to keep the latter in place.

The bolts *b* should not be screwed into the bearing-sections B tight enough to prevent the latter from having a free vertical play, but only enough to keep them in position.

Two of the bolts *b b* are tapped into each section B, and the shorter these are the more of them will be required to arm the pressure-bar, and better work will be done.

If the knives are ground to a slight curve on the cutting-edge, as they very frequently are, or are not set true on the cutter-head, lumber of uneven thickness will be the result.

If the bed-plate becomes worn in any one place to a greater depth than at another, by planing narrow lumber, as it frequently does, lumber of uneven surface or thickness will be the result, in which case the bearing-sections of the sectional pressure-bar will adjust themselves to any slight inequalities in the surface of the lumber, the rubber strip yielding to the upward pressure of one or more of said sections, thereby exerting a uniform downward pressure upon the lumber on the bed-plate across its entire width.

The purpose of the strip *c* is to prevent the sharp ends of the sectional bearings from cutting the rubber strip; also to make said sections yield perpendicularly, and thus keep them in their proper relative position.

I do not pretend to have invented a pressure-bar with a yielding bearing-surface divided into sections, for the same is shown in patent of Margedant, April 7, 1874, and of Patterson, April 25, 1876; but

What I claim as my invention is—

1. In a planing-machine, substantially as described, the combination, with the vertically-adjustable, but rigid and unyielding pressure-bar A, of the extended bearing-sections B, loosely attached thereto, each having a vertical movement independent of the others, and the flexible metallic strip *c* and the elastic strip *d*, interposed between said bar and sections, substantially as and for the purpose set forth.

2. In a planing-machine, substantially as described, the combination with the unyielding pressure-bar A, having a vertical adjustability at each end in a slotted standard, and provided with the slot *a*, of the T-shaped bearing-sections B, the bolts *b*, slotted plate C, metallic strip *c*, and the elastic strip *d*, all constructed

and arranged substantially as described and shown.

GEO. E. NEWALL.

Witnesses:

GEO. M. WALKER,  
EDWARD BARTHEL.