

(No Model.)

H. F. CAMPBELL.

PRESSER BAR.

No. 395,380.

Patented Jan. 1, 1889.

Fig: 1.

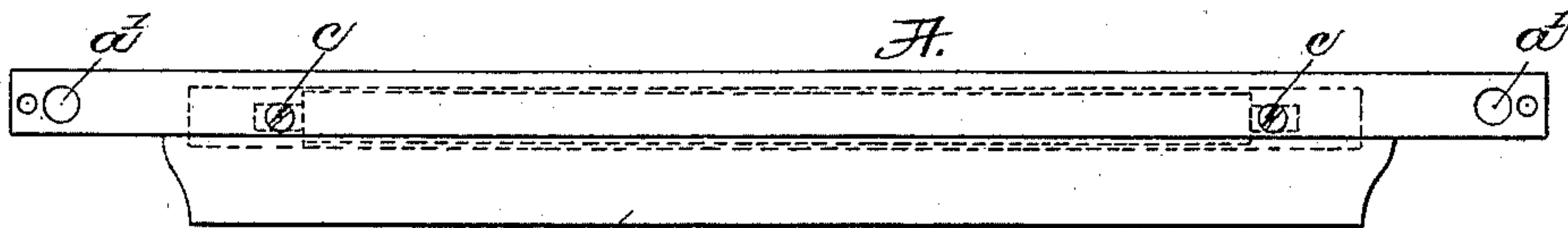


Fig: 2.

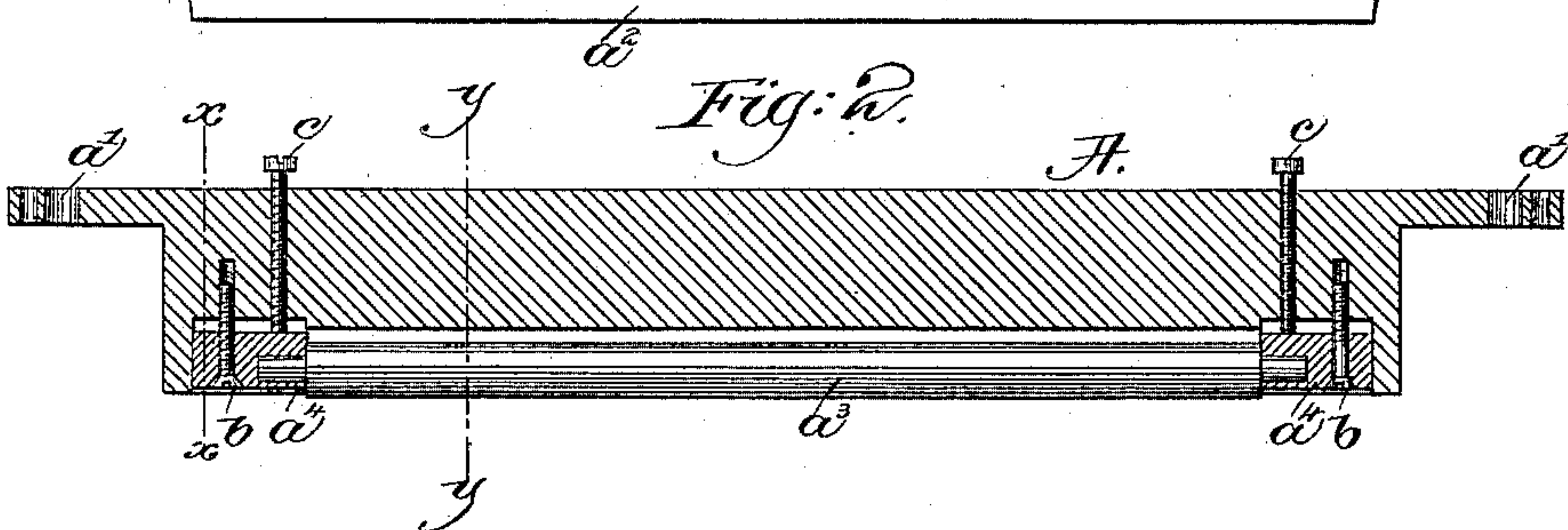


Fig: 3.

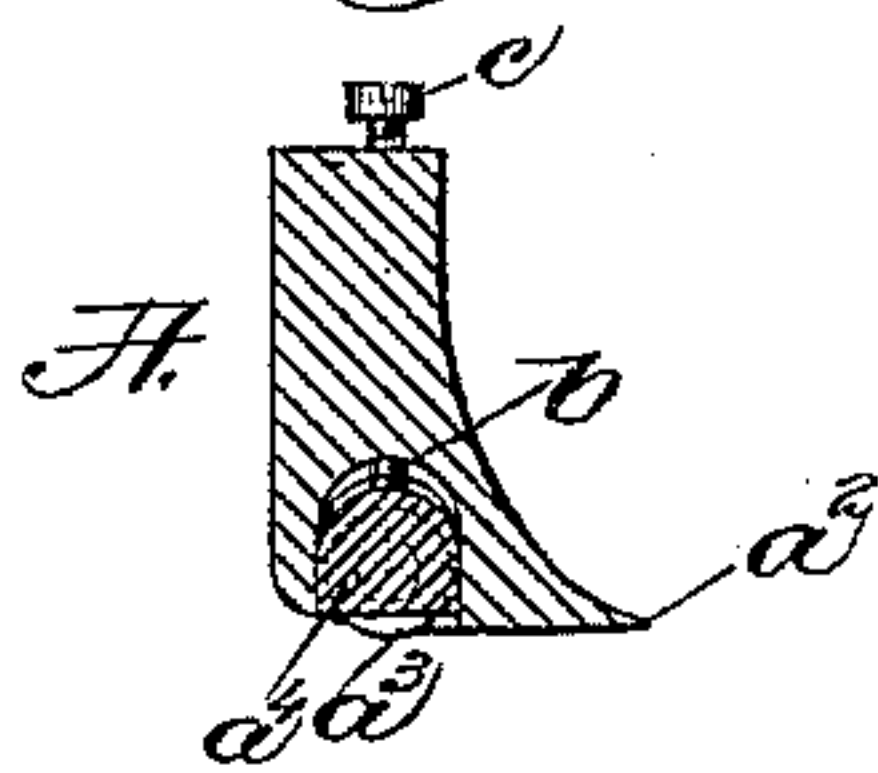
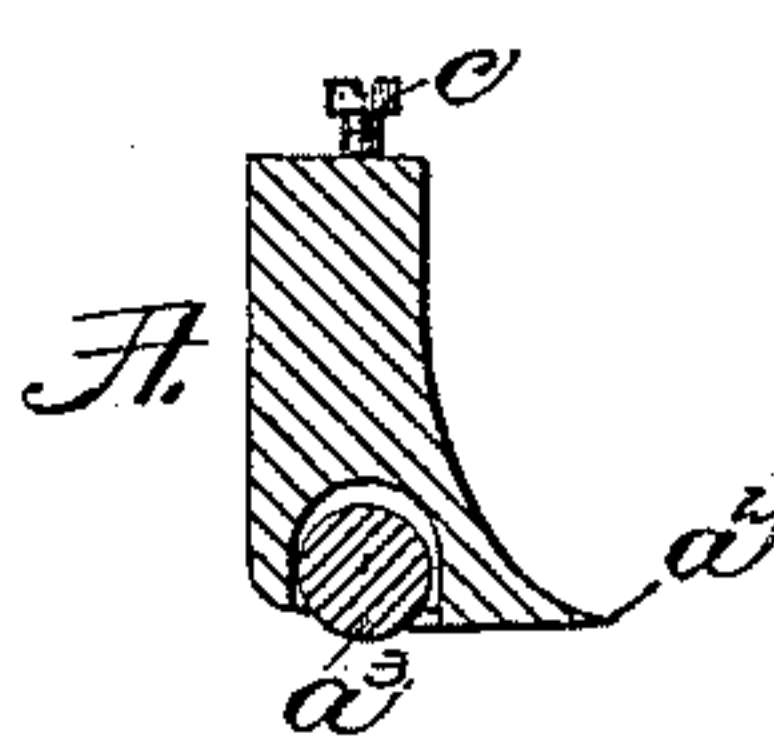


Fig: 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY F. CAMPBELL, OF MALDEN, MASSACHUSETTS.

PRESSER-BAR.

SPECIFICATION forming part of Letters Patent No. 395,380, dated January 1, 1889.

Application filed March 27, 1888. Serial No. 268,623. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. CAMPBELL, of Malden, county of Middlesex, State of Massachusetts, have invented an Improvement in Presser-Bars, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In wood-planing machines as now commonly built much difficulty is experienced in passing under the presser-bar the boards or other pieces or strips of wood to be planed or dressed because of the friction between the under side of the presser-bar and the board or other pieces of wood, and especially is this the case when the wood is moist or sappy or contains pitch; and, further, the pressure of the broad lower side of the presser-bar on the wood is, under such circumstances, liable to scratch and mar the planed surface of the board.

This invention has for its object to overcome the difficulties referred to, and I accomplish my object by constructing the presser-bar with a groove on its under side to receive a roller of steel or other suitable material, the said roller having bearings in adjustable boxes fitted in or secured to the said bar and capable of rotation in said boxes, but being prevented from vertical movement therein.

Figure 1 is a top view of the presser-bar detached from the planing-machine; Fig. 2, a longitudinal section of the presser-bar shown in Fig. 1, the roller which forms the bearing-surface of my improved presser-bar being in elevation; Fig. 3, a section of Fig. 2 on line x , and Fig. 4 a section of Fig. 2 on line y .

The presser-bar (designated as a whole by the letter A) is herein shown detached from the planing-machine with which it is used, it being in practice supported above the bed of the said machine in any suitable or convenient manner—as, for instance, by uprights (not shown) extended through openings a' at the side of the said bar. The presser-bar is provided with the usual lip, a^2 , and is grooved at its under side to receive a roller, a^3 , having bearings in boxes a^4 , herein shown as fitted snugly in said groove and secured to the bar by screws b , (see Fig. 2,) screwed from the under side up through the bearings of the roller into the presser-bar. The roller a^2 projects

below the under side of the bar, as shown in Fig. 3, and as the board or other piece of wood is pushed forward by the feeding mechanism of the planing-machine it passes readily under the bar. The roller bears upon the upper face of the wood, serving to hold the latter firmly upon the bed of the machine. The roller a^2 is rotated by the forward feed of the wood, and presses upon the said wood only at the point of contact with it, thereby reducing the friction of the bearing-surface upon the wood to a minimum, thus enabling the wood to be fed forward with the least possible expenditure of power. The friction of the ordinary bar on the wood is very considerable, especially when the wood is damp or gummy or contains pitch.

The presser-bar herein shown in practice engages the material after it passes the knives and helps to feed it through the machine. It also holds the boards or material firmly down upon the bed, so that no chipping or gouging of its surface can take place. The lip of this bar will now fall down upon or very near the work to prevent it springing, but the pressure will come upon the roller.

The boxes a^4 of the pressure-roller may be adjusted vertically in the bar A without changing the position of the presser-bar on the machine to regulate the distance between the lip of the said bar and the work by means of adjusting-screws b —as, for instance, the roller may be lowered from the position shown in Fig. 2 by turning the screws b to withdraw them from the bar, and when in the desired or adjusted position the screws c will be turned down in contact with the boxes a^4 , thus firmly receiving the said boxes in adjusted position, the screws b preventing the boxes and rollers from dropping down and the screws c from moving upward.

When the work being planed is thin or fragile, the roller must be adjusted with relation to the lip of the presser-bar, so as to fall an infinitesimal distance below the plane of the said lip, thereby preventing the trembling of the material under the action of the knife and consequent gouging or chipping of the material. By such adjustment the wavy appearance too frequently seen in veneering and work of fine finish is entirely obviated.

I claim—

The presser-bar provided with the lip a^2 and grooved at its under side, combined with the roller a^3 , and boxes a^4 , fitted in the said groove, and means to adjust said boxes and
5 roller vertically independently of the presser-bar, whereby the position of the roller with relation to the presser-bar may be changed, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two sub- 10 scribing witnesses.

HENRY F. CAMPBELL.

Witnesses:

JAS. H. CHURCHILL,
FREDERICK L. EMERY.