Inventor:

JOSEPH SLOMER

By Joseph Bannett
To all whom it may concern:

Be it known that I, JOSEPH SLOMER, a citizen of the United States, residing at Waukegan, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Carpenters' Planes, of which the following is a specification.

My invention relates to carpenters' planes, and has for its object to provide certain improvements in the construction and operation of the movable forward sole plate section thereof, as hereinafter more definitely will be pointed out and claimed, reference being had to the accompanying drawing, in which:

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Fig. 1 is a side elevation of the plane.
Fig. 2 is a central longitudinal section of the fore part of the plane.
Fig. 3 is a section taken on line 3—3 of Fig. 1 and broken away on one side thru the bit throat.

Figure 4 is a detail perspective view of the lower end of my cutting bit.

In all of the views the same reference characters are used to designate similar parts.

The plane is made preferably of metal. The type of plane used to illustrate the invention is a jack plane, although it is adaptable for other types of planes, such as smoothing planes, block planes, fore planes, joining planes and the like.

The stock 5 has an integral sole plate section 6, in rear of the bit seat 7, and a forward section 8 which is vertically and bodily movable in parallel lines so that the bottom surface of the section 8 is always in a horizontal plane parallel with the bottom surface of the rear fixed sole plate section 6.

The sole plate sections 6 and 8 are separated by a throat 9, all of the sole plate 8 in front of the throat being vertically movable and all of the section 6 in rear of the throat being fixed to the stock 5. The side walls 10—10 of the stock are separated in front of the throat, except for a lower bridge wall 11 and an upper bridge wall 12. The latter is provided with a hollow socket 13. The sole plate section 8 has a hollow, internally threaded hub 14 which is guided by and vertically movable in the fixed hub 15.

A plate 15 is fixed to the bridge wall 12 by screws 16.

A screw-threaded stem 17 is fixed to the pressure knob 18 at its upper end. Its lower threaded end 19 passes thru plate 15 and is threaded into the hub 14 of the sole plate 8.

A washer 20 is secured to the stem 17 and overlies the top of the socket 13 and between it and the plate 16. This prevents axial movement of the stem.

It will now be apparent that when the pressure knob 18 is rotated the sole plate section 8 will be raised or lowered with respect to the fixed sole plate section 6 and that the bottom surfaces of these sections will be and remain always in parallel planes.

It becomes desirable to lock the sole plate 8 in adjusted position. To this end the part 21 of stem 17, just below the knob 18, is threaded for a check nut 22. This nut has a handle 23 by which it may conveniently be rotated. When the nut 22 is brought firmly into contact with the upper surface of plate 15 the stem 17 cannot be rotated and thus the sole plate 8 is fixed in adjusted position.

The cutting bit 25 is wider at its cutting end at 26—26 than the Shank part 27. The width of the bit between 26—26 is equal to the width of the stock 5.

The parts 26—26 of the bit extend thru notches 28 made thru the side walls 10—10 of the stock. These notches are substantially parallel with the bit seat 7 and intersect the throat 9. By this means the bit can make a cut the entire width of the plane stock.

The side walls 10—10 of the stock are upwardly flaring on their inside surfaces, as shown, at 28 to permit some lateral movement of shank 27 of the bit 25.

It is desirable to maintain the cutting edge 29, of the bit 25, in the same horizontal plane with the bottom surface of the fixed, rear sole plate section 6.

The adjustment to vary depth of cut is all accomplished by varying the relative height of the fore plate 8.

The plane is provided with the usual toe or handle 30 for its manipulation and the usual screw 31 to hold the bit on its seat.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:

1. A plane, comprising a stock, an integral rear sole plate section thereon, a forward sole plate section having a hub centrally disposed on its upper face, a bridge wall carried by said stock and receiving and guiding said hub vertically movable therein, and a pressure knob having a stem threaded...
into said hub and adapted by rotation to vary the vertical adjustment of said forward sole plate section.

2. A plane, comprising a stock, an integral rear sole plate section thereon, a forward sole plate section having a hollow internally threaded hub centrally disposed on its upper face, a transverse bridge wall fixed to said stock and formed with a socket adapted to receive and guide said hollow hub, a pressure knob having a screw-threaded stem adapted to engage said internally threaded hub, means preventing endwise movement of said stem with respect to said bridge wall, and a check nut for said stem.

In testimony whereof I hereunto set my hand.

JOSEPH SLOMER.