(No Model.) 2 Sheets—Sheet 1.

J. S. WHEELER.

METAL PLANING MACHINE.

No. 531,489. Patented Dec. 25, 1894.

Fig. 1.

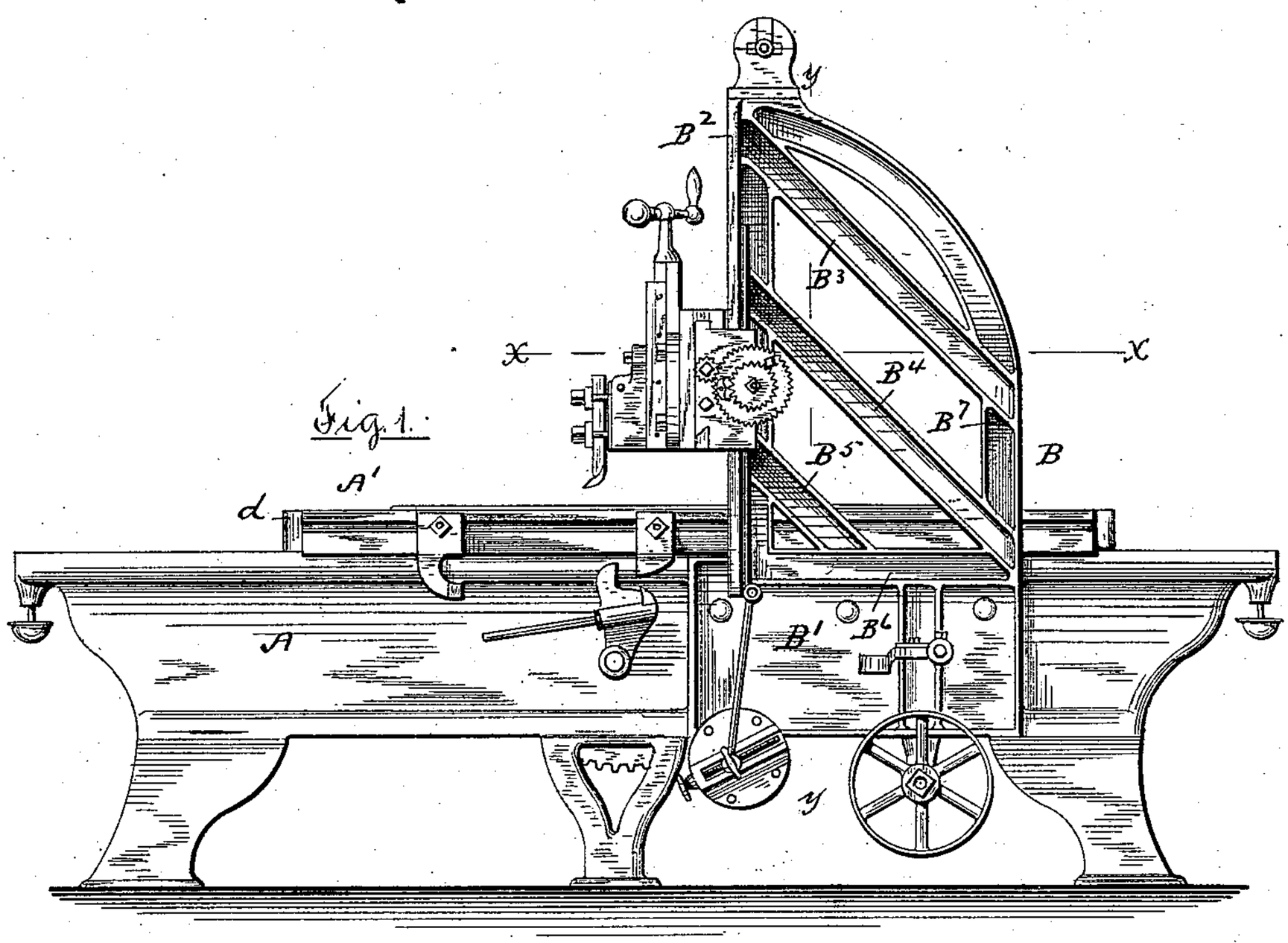


Fig. 2.

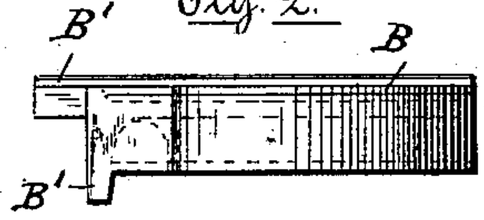


Fig. 3.

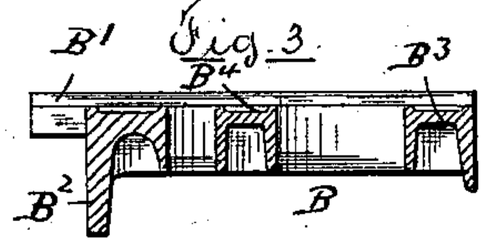
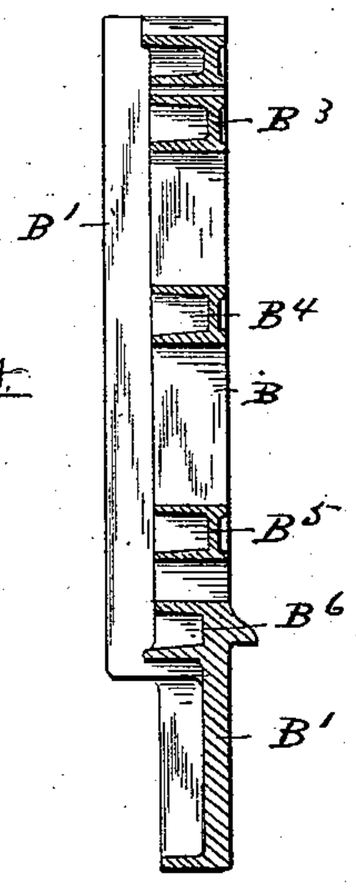


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

J. S. WHEELER.

METAL PLANING MACHINE.

No. 531,489. Patented Dec. 25, 1894.

Fig. 5.

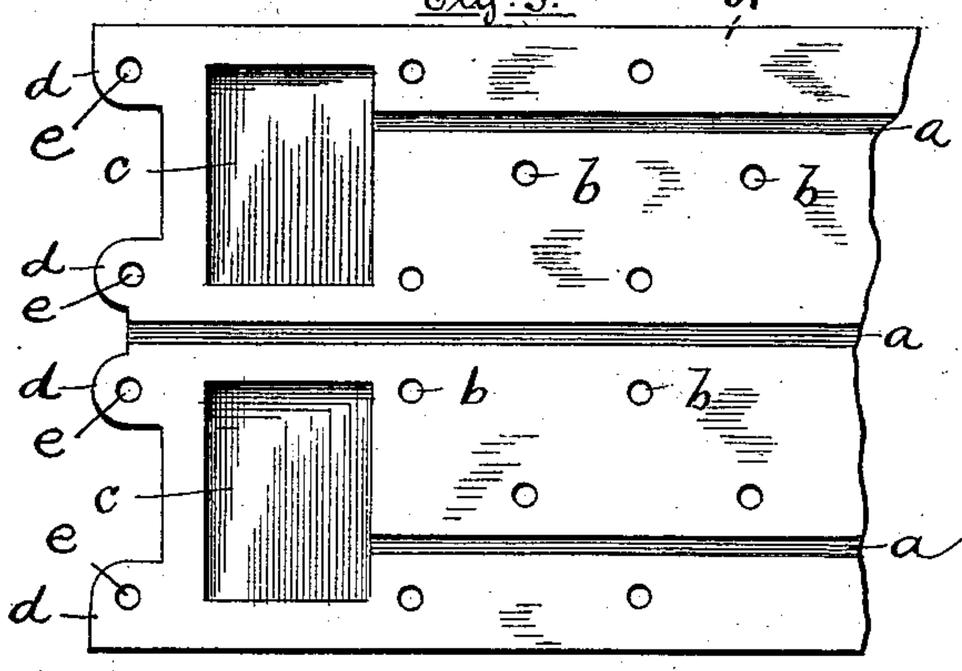


Fig. 7.

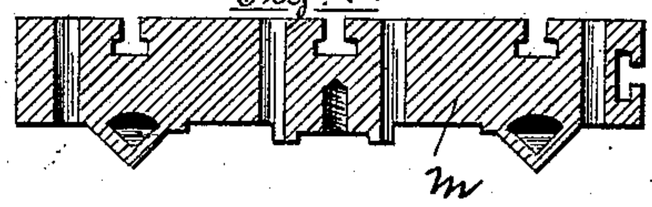


Fig. 8.

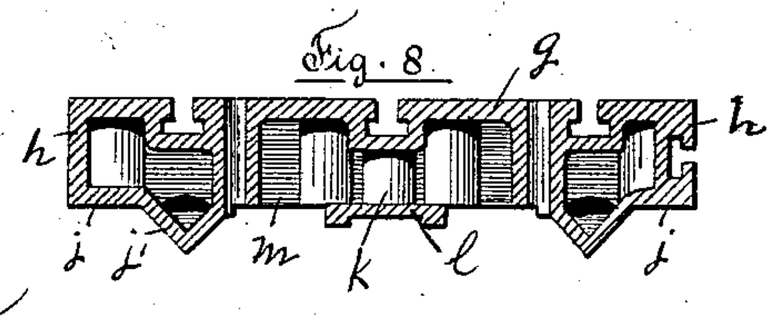


Fig. 9.

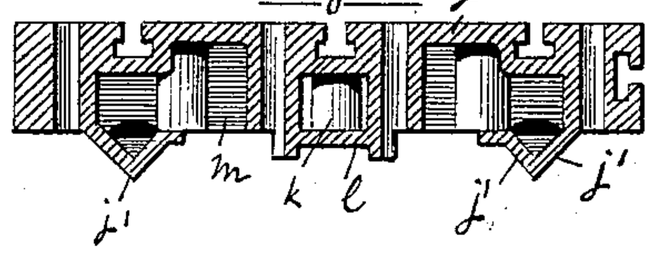
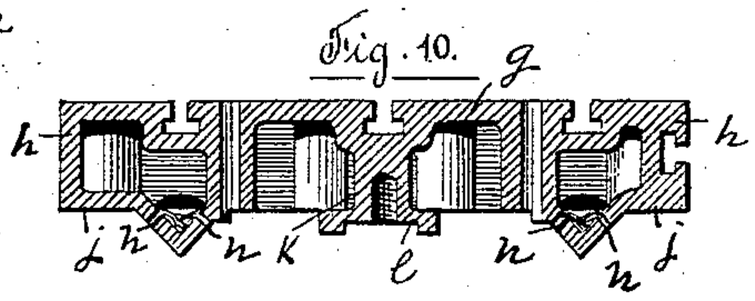


Fig. 10.



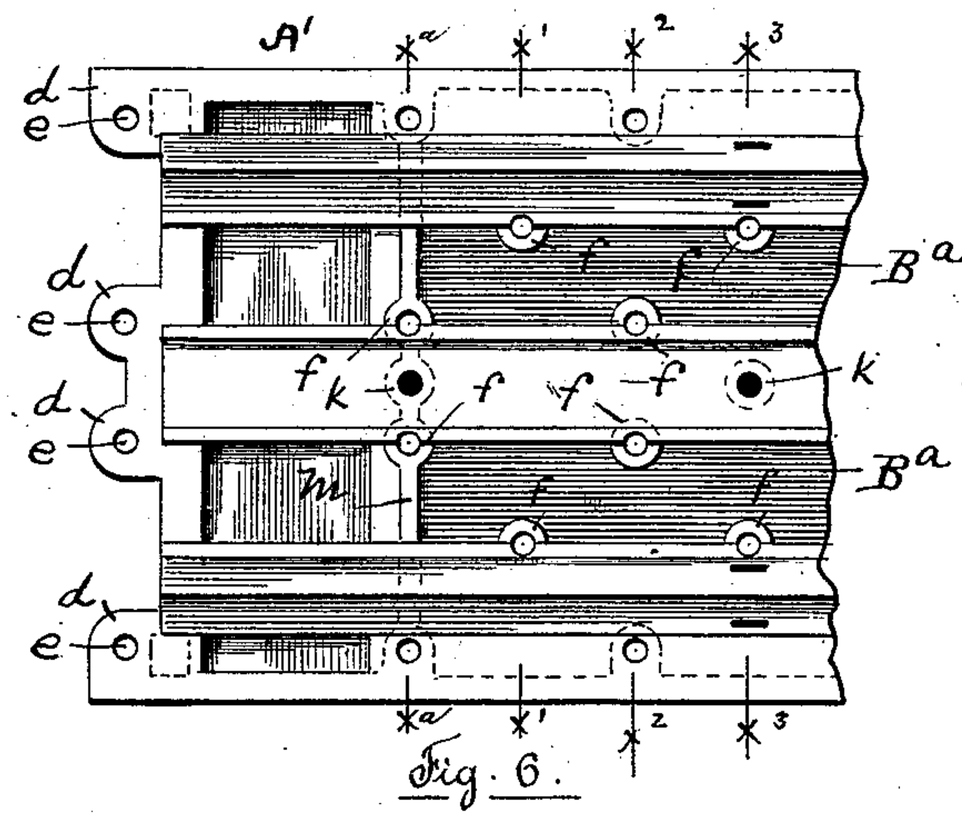
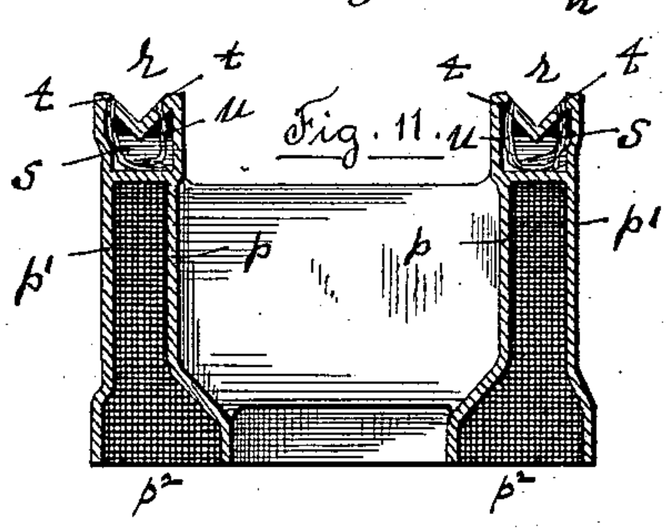


Fig. 6.

Fig. 11.



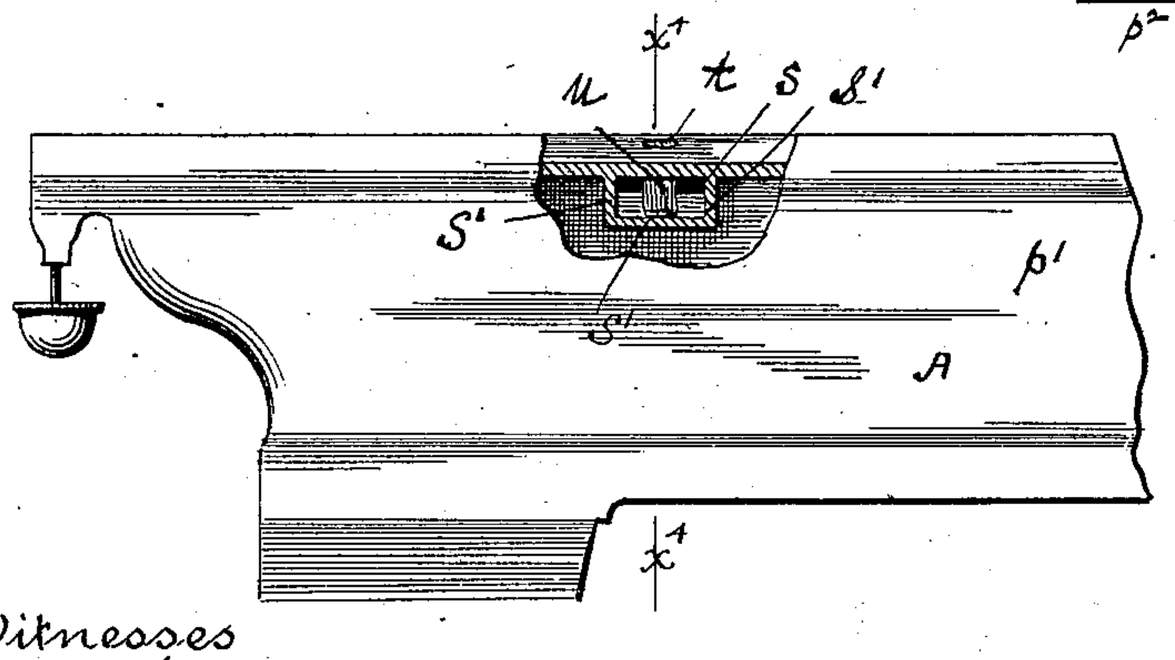


Fig. 12.

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By his Attorney
Rufus B. Fowler

UNITED STATES PATENT OFFICE.

JOSHUA S. WHEELER, OF WORCESTER, MASSACHUSETTS.

METAL-PLANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 531,489, dated December 25, 1894.

Application filed May 28, 1890. Serial No. 353,470. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA S. WHEELER, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Metal-Planing Machines, of which the following is a specification, accompanied by drawings which form a part of the same, and in which—

Figure 1 represents a metal planing machine in side elevation, embodying my invention. Fig. 2 represents a top view of one of the posts. Fig. 3 is a sectional view of the same on line X, X, Fig. 1. Fig. 4 is a sectional view on line Y, Y, Fig. 1. Fig. 5 is a top view of a portion of the table. Fig. 6 is a bottom view of a portion of the table. Fig. 7 is a transverse sectional view of the table on line X^a, X^a, Fig. 6. Fig. 8 is a transverse sectional view, on line X′, X′, Fig. 6. Fig. 9 is a transverse sectional view on line X^2, X^2, Fig. 6. Fig. 10 is a transverse sectional view on line X^3, X^3, Fig. 6. Fig. 11 is a sectional view of the bed on line X^4, X^4, Fig. 12, and Fig. 12 represents a portion of the bed of the machine, a portion of the same having been broken away in order to disclose one of the oil pockets.

Similar letters refer to similar parts in the several views.

My invention relates to certain improvements in the construction of the frame work of the machine, in the construction of the table and in certain improvements whereby the better lubrication of the table is secured.

Referring to the accompanying drawings, A denotes the bed of the machine, A′ the reciprocating table, and B one of the upright posts, attached to the sides of the bed.

The post B is cast in a single piece provided at its lower end with the flanged end B′ by which it is attached to the side of the bed A. The upright portion of the post is provided with the flange B^2, which forms the way upon which the vertical adjustment of the cutting tool is effected in the usual manner. The post is also provided with the oblique flanged ribs B^3, B^4 and B^5, one end of each of the oblique flanged brace ribs, being integrally connected with the way B^2, and their opposite ends integrally connected with the flanged frame B^6, B^7. The post is thereby rendered very rigid and able to withstand any strain upon the front of the post in the operation of the machine.

At A′ Fig. 5 is shown a portion of the top or upper side of the table upon which the work is supported and which is provided with the "T" shaped slots *a*, *a*, and a series of holes *b*, *b*, to receive pins against which the work is held in the usual and well known manner.

Depressions *c*, *c*, are formed in the upper surface of the table to receive chips, dirt, &c., incident to the operation of planing.

At the end of the table are the lugs *d*, *d*, *d*, *d*, provided with holes *e*, to receive pins, which are held in the lugs *d* outside of the surface of the table, allowing work of greater length to be held upon the table by means of the resisting pins held outside and beyond the surface of the table itself.

The table consists of a shell, cast in a single piece, and having openings B^a, B^a, upon its lower side and provided with a series of cylindrical bosses *f*, *f*, integral with the shell, to receive the holes *b*, *b*, which extend entirely through the bosses *f*, *f*, thereby affording a longer support for the pins held in the holes *b*, and allowing chips, dirt, &c., to fall through and prevent the clogging of the holes.

The shell of which the table consists extends across the top, at *g*, forming the upper surface upon which the work is supported, and at intervals it is thickened to receive the "T" shaped slots *a*. The shell also extends down the sides of the table at *h* and upon the lower side of the table toward the center at *j*, forming the "V" shaped bearings *j′*.

Through the center of the table and lengthwise thereof is a row of bosses *k*, *k*, Figs. 6, 8, 9 and 10, and integral with the central row of bosses *k* is the plate *l*, which forms a bed upon which the rack is bolted, by a series of bolts entering screw threaded holes in the central row of bosses *k*, *k*. Transverse ribs are placed at intervals across the table, one of which is shown at *m*.

The interior troughs formed by the "V" shaped bearings *j′*, are filled with oil, when the machine is in use, and the oil is fed to the bearing surfaces by means of the fibrous wicks *n*, *n*, Fig. 10.

The bed a portion of which is shown in Figs.

11 and 12, consists of a shell, cast in a single piece, and composed of an inner wall p and an outer wall p', open at the bottom at p^2, and forming a shell rectangular in form, the outer and inner walls being united at their upper edges by the walls of the "V" shaped ways r, r, along which the table is moved in the operation of planing.

At intervals along the bed and immediately beneath the "V" shaped ways r, r, are pockets s, inclosed in walls s', s', cast integrally with the bed itself. Holes are formed in the walls of the "V" shaped ways r, r, as shown at t, t, Fig. 11, communicating with the pockets s, and oil held in the pockets s, is fed to the ways by the fibrous wicks u, u. The openings t, t, are placed near the upper edges of the "V" shaped web, which unites the inner and outer walls of the bed, allowing the lubricating material, to flow down the "V" shaped ways by its own gravity.

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

The combination in the table of a planing machine, of a shell open upon the under side and having an upper surface g, upon which the work is supported and vertical sides h, a central longitudinal rib l and a series of transverse ribs m, all cast integrally in one piece and a series of bosses integral with said shell and also with said central and transverse ribs, said bosses being provided with holes to receive the work holding pins, substantially as described.

Dated at Worcester, in the county of Worcester and State of Massachusetts, this 15th day of May, 1890.

JOSHUA S. WHEELER.

Witnesses:
RUFUS B. FOWLER,
NELLIE C. STEERE.