

(Model.)

F. B. THOMPSON.

GAGE FOR ADJUSTING PLANER KNIVES.

No. 300,533.

Patented June 17, 1884.

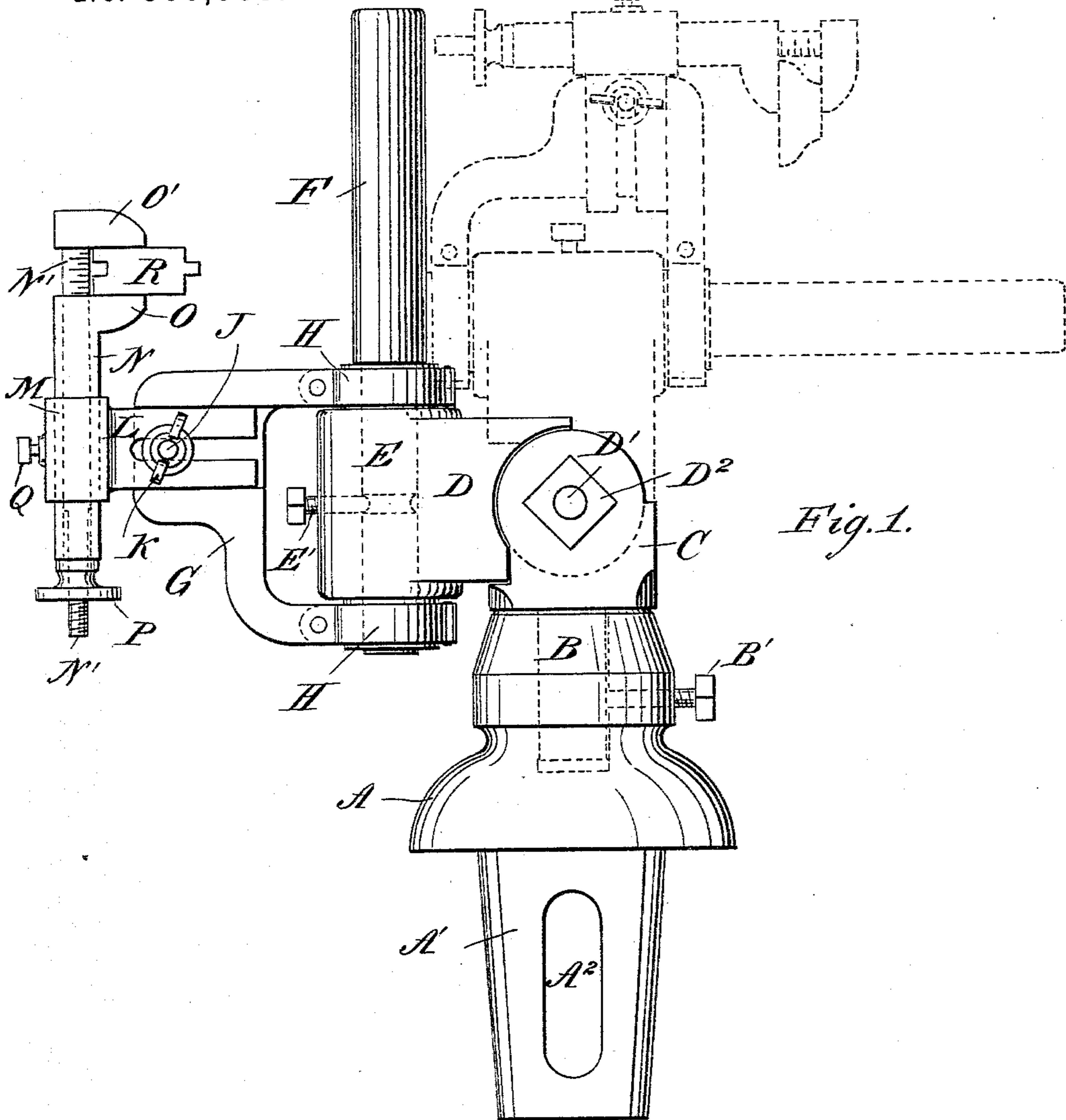


Fig. 1.

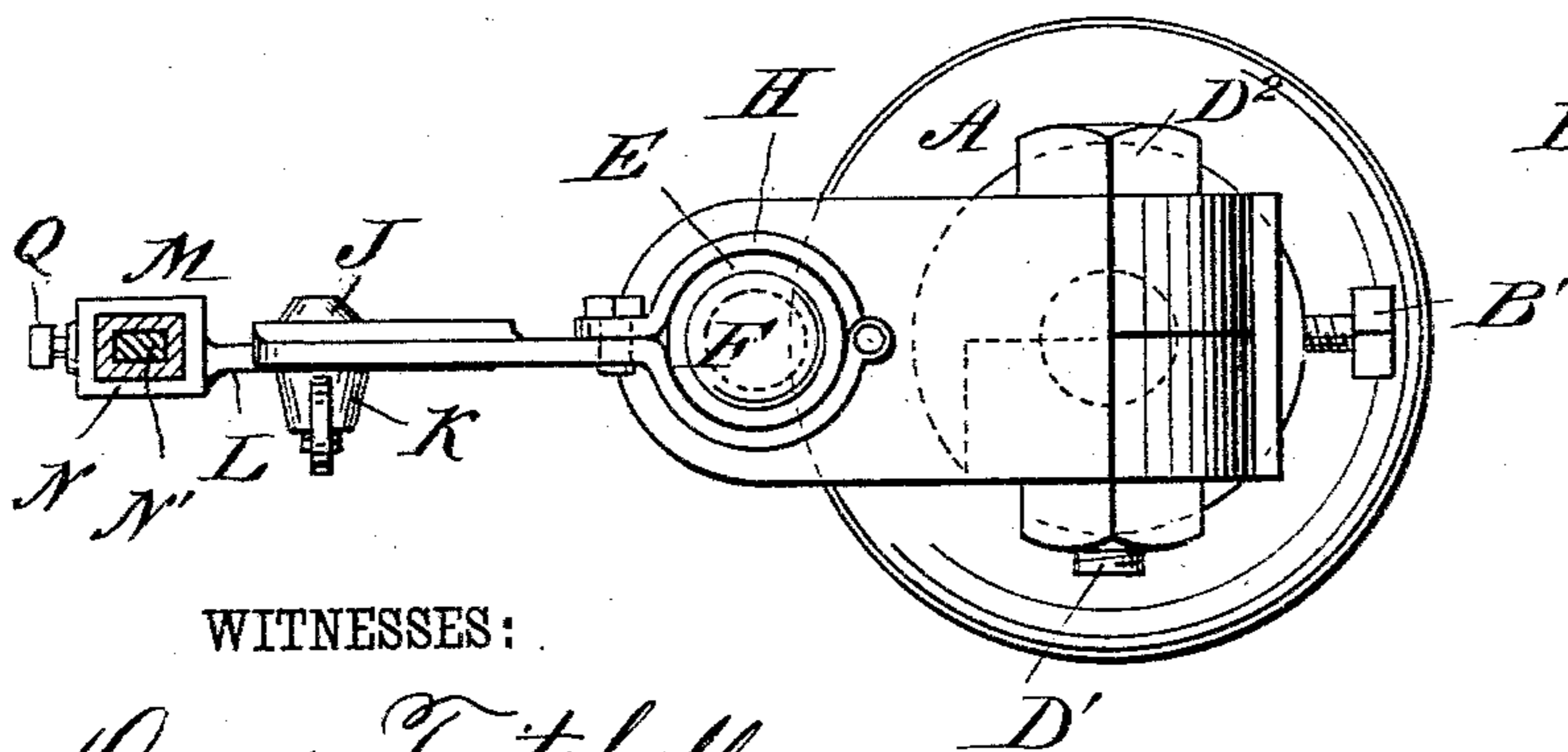


Fig. 2.

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GAGE FOR ADJUSTING PLANER-KNIVES.

SPECIFICATION forming part of Letters Patent No. 300,533, dated June 17, 1884.

Application filed October 13, 1883. (Model.)

To all whom it may concern:

Be it known that I, FRANCIS B. THOMPSON, of Beaumont, in the county of Jefferson and State of Texas, have invented a new and Improved Machine for Holding Planing-Machine Side Heads, of which the following is a full, clear, and exact description.

All work on the edges of lumber prepared in planing-mills for market, whether jointed square, beveled, molded, or matched, is done by means of "side heads" of various shapes and forms working on the "side spindles" of planers. These side heads are generally used in pairs—one right and the other left hand in their revolutions. To these side heads are bolted cutters or bits suited to the different forms of work, and there are usually from two to five or more of these bits. Better work is done if these bits are separate and each adjusted to do its part of the work. In time these bits must be filed or otherwise sharpened to do their work, or replaced with bits of other shapes. It is necessary that these bits should cut accurately, as it is generally the case that both side heads on a planer should cut to a corresponding depth or distance from one or both sides of a board. With the appliances now in use in planing-mills this accuracy of adjustment is seldom attained.

My machine is designed for use in planing and other mills where side heads are used to supply the need of a convenient appliance for holding the side heads in best position for filing, sharpening, or setting the bits, to afford a strong machine for holding the side heads firmly and securely in any position that the workman may desire while sharpening or adjusting the bits to the desired pattern.

The object of my invention is to provide a new and improved machine for holding the side heads of planing-machines so as to admit of their being set, adjusted, gaged, and filed.

The invention consists in a mandrel mounted in a sleeve adapted to swing and turn on a suitable base, which mandrel is combined with a device for holding a pattern-block, according to which the side head is to be adjusted, which pattern-holding device is held on the sleeve in which the mandrel is held to turn.

The invention also consists in various parts

and details and combinations of the same, as will be fully described and set forth hereinafter.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side view of my improved machine for holding the side heads of planing-machines. Fig. 2 is a plan view of the same, parts being shown in section.

The base-piece A is provided with a downwardly-projecting stem, A', adapted to be passed into a hole in a bench or table, which stem is provided with a longitudinal slot, A², through which a wedge can be passed for locking the base-piece on the bench or table. The base-piece A is provided with a socket for receiving the spindle B, which can be locked in place in the base-piece by means of a binding-screw, B'.

To the top of the spindle B a block, C, is fastened, to which a block, D, is pivoted by a pintle, D', provided with a nut, D².

On the block D a sleeve, E, is formed, through which a mandrel, F, passes, which can revolve in the said sleeve, but is prevented from moving in the direction of its length by a binding-screw, E', which passes into an annular groove in the mandrel F, as shown in dotted lines. This mandrel is of the same size as that on the planing-machine on which the side head is mounted. A frame or yoke, G, is held by two hinged collars, H, on the ends of the sleeve E, and through the said yoke or frame a screw-bolt, J, passes, on one end of which a winged nut, K, is screwed. A forked plate, L, is held by the bolt J and the winged nut K on the yoke or plate G, and is provided at its outer end with a transverse squared sleeve, M, through which a hollow stem, N, passes, which is provided at one end with a jaw, O, through which hollow stem N a stem, N', passes, which is provided at the outer end with a jaw, O'. The lower end of the stem N' is screw-threaded, and on the said screw-threaded end a nut, P, is mounted, by means of which the jaws O and O' can be drawn together or separated. That part of the stem N' adjoining the jaw O' is provided with scale-graduations. The squared sleeve M is provided with a binding-screw, Q,

for locking the hollow stem N in place in the squared sleeve. A pattern-block, R, of any desired shape, is held between the jaws O and O', as shown, the graduations on the stem N' showing the thickness of the said pattern-block. The pattern-block can be held a greater or less distance from the mandrel F by moving the forked plate L outward from the frame G, and the said block can also be held a greater or less distance from the lower end of the mandrel F by moving the device holding the block in the direction of the length of the said device through the squared sleeve M and then locking it in place. As the block D is pivoted on the block C, the spindle F can be held in a vertical position, as shown in Fig. 1 in full lines, or in a horizontal position, as shown in Fig. 1 in dotted lines.

The operation of the machine is as follows: A side head is placed on the mandrel F, and the parts of the machine are adjusted to the desired position. The side head holds the same relative position to the pattern-block R, secured between the jaws O O', as said head would hold to the lumber when at work on the side spindle of the planer. The bits, when gaged to this pattern-block, will reproduce the pattern in the lumber. Thus by adjusting the mandrel F at the desired angle by means of the hinged standard D C, the machine is made to hold the side head in any position from upright to horizontal, or may be changed from right to left by means of the socket in base-piece A. In all of these positions the pattern-block R retains the same position relative to the bits of the side head.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a swingingsleeve and a mandrel mounted to turn therein, with a pattern-holding device, also secured to said sleeve in a plane parallel with the mandrel, whereby the side head of a planing-machine may be placed upon the said mandrel and its bits adjusted to correspond to the pattern-block, substantially as set forth.

2. The combination of a base-piece constructed to be secured to a bench or table, a sleeve held to swing and turn on the same,

and a mandrel held to turn in said sleeve, with a device for holding a pattern-block, also secured to said sleeve, whereby the sleeve carrying the mandrel and pattern-holding device may be swung or turned to any desired position and still occupy the same position relatively to each other, substantially as set forth.

3. The combination of the base-piece A, provided with stem A' and slot A², block C, mounted to turn in a socket therein, block D, hinged vertically to said block C, and transverse sleeve E, formed in said block D, with the mandrel F, mounted to turn in said sleeve, and a pattern-holding device, also secured to said sleeved portion, and in a plane parallel with the said mandrel, substantially as set forth.

4. The combination, with a base-piece of a sleeve held to turn and swing on the same, of a mandrel held in the said sleeve, a frame G, held on the sleeve, a forked plate, L, held on the frame G, and a pattern-block-holding device held in the outer end of the plate L, substantially as herein shown and described, and for the purpose set forth.

5. The combination, with the base-piece A, of the sleeve E, held to turn and swing on the same, the frame G, held on the sleeve E, the forked plate L, held on the frame G, the hollow stem N, provided with the jaw O, the stem N', provided with the jaw O', and the nut P, mounted on the lower threaded end of the stem N', substantially as herein shown and described, and for the purpose set forth.

6. The combination, with the base-piece A, of the sleeve E, held to turn and swing on the same, the mandrel F, the frame G, held on the sleeve E, the forked plate L, held on the frame G by a screw-bolt, J, and nut K, the hollow stem N, provided with the jaw O, the stem N', provided with the jaw O', which stem is provided with scale-graduations, and the nut P, screwed on the threaded end of the stem N', substantially as herein shown and described, and for the purpose set forth.

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Witnesses:

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