G. SPIRE.

Planing-Machine.

No. 162,776. Patented May 4, 1875.

Fig. 1.

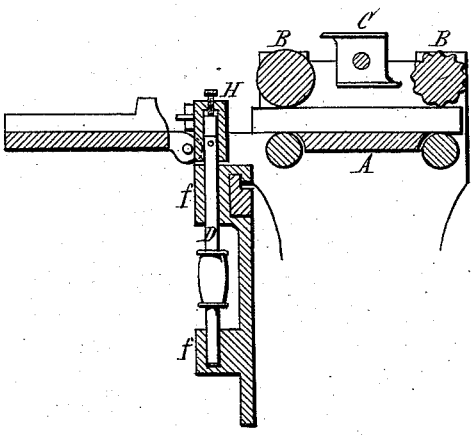

Fig. 2.

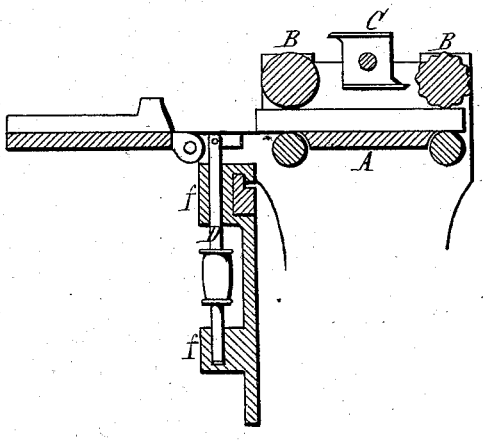

Fig. 3.

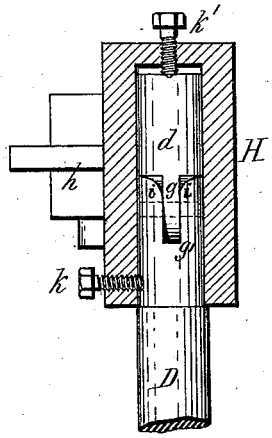

Fig. 4.

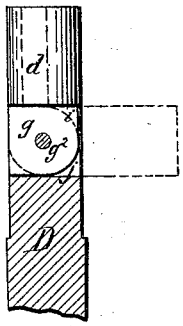

Fig. 5.

Attest:

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UNITED STATES PATENT OFFICE.

GEORGE SPIRE, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO ANDREW H. FRANK, OF SAME PLACE.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **162,776**, dated May 4, 1875; application filed February 19, 1875.

To all whom it may concern:

Be it known that I, GEORGE SPIRE, of the city of Buffalo, in the county of Erie and State of New York, have invented certain Improvements in Planing-Machines, of which the following is a specification:

My invention relates more particularly to the spindles or mandrels to which the matcher-heads are secured.

In planing-machines, as ordinarily constructed, the upper ends of these spindles project above the bed on each side of the board being operated upon. When the full width of the machine is required for planing wide boards without matching the same, these projecting spindles are in the way, and require to be lowered below the level of the bed. In raising the spindles to their former position, (after having been so lowered,) it is very difficult to bring them into their proper position for matching, and a great deal of time is necessarily spent in adjusting the same.

The object of my invention is to remedy this defect; and it consists of a spindle having its upper portion, which projects above the level of the bed, jointed to the main portion, so that the projecting portion can be readily swung down below the level of the bed, after removing the matcher-head, while the main portion of the spindle remains stationary, thereby avoiding the necessity of frequent adjustment of the spindles.

In the accompanying drawing, Figure 1 is a sectional elevation of a portion of a planing-machine, showing my improved spindle with the matcher-head secured thereto. Fig. 2 is a similar view, showing the matcher-head removed and the projecting portion of the spindle swung down below the level of the bed. Fig. 3 is a detached view, on an enlarged scale, of the upper portion of the spindle, with the matcher-head secured thereto. Fig. 4 is a view of the upper end of the spindle, showing the projecting portion, swung down, in dotted lines. Fig. 5 is a plan view thereof.

Like letters of reference designate like parts in each of the figures.

A is the bed of a combined planing and matching machine; B B, the feed-rollers, and C the horizontal cutter-head. D represents the lower or main portion of one of the vertical matcher-spindles, and *f f* the bearings in which it turns. *d* represents the upper portion of the matcher-spindle, which, in its normal position, projects above the level of the bed A. The portion *d* of the spindle is jointed to the main portion D thereof in such manner that it can be readily swung down into a horizontal position, or nearly so, when the entire upper portion of the spindle will be below the level of the bed A, as clearly shown in Fig. 2. As shown in the drawing, the portion *d* is connected to the portion D by a tenon, *g*, fitting in a mortise, g^1, in the main portion D, and held therein by a pin, g^2. The end of the portion D and the tenon *g* are rounded off on one side, as shown respectively at *i* and *j*, to permit the jointed portion to be swung to one side only, while the opposite sides of the end of the portion D and the tenon *g* are formed square or rectangular, to arrest the movement of the portion *d* in the opposite direction when it has arrived in line with the main portion D. H is the matcher-head, carrying the matching-tools *h*, and secured to the upper end of the spindle by a set-screw, *k*, in the ordinary manner, while it can be adjusted vertically by a set-screw, *k'*. The socket of the matcher-head is of such length as to receive, besides the jointed end *d* of the spindle, a sufficient length of the main portion thereof to form a rigid and reliable bearing, as clearly shown in Fig. 3.

When the matcher-head is applied to the spindle, the jointed portion *d*, being firmly clamped by the closely-fitting socket of the head, forms practically a rigid extension of the spindle, and affords all the advantages of a long solid bearing. Upon removing the matcher-head from the spindle, the portion *d* is readily swung at right angles to the main portion D, so as to bring it below the level of the bed A, when the entire width of the machine is available for planing boards.

When the matcher-heads are to be reapplied, the portion *d* is readily swung up to its

normal position, and the matcher-head slipped on and properly secured in place.

As the spindles and their bearings are not disturbed during this operation, the frequent readjusting of the same, which requires so much time and attention in planing-machines as heretofore constructed, is entirely obviated.

What I claim as my invention is—

The combination, with the bed and matcher-head of a planing-machine, of the spindle D, having its upper portion, *d*, which projects above the level of the bed, jointed to the main portion, so as to be readily swung below the level of the bed when not required to be used, substantially as hereinbefore set forth.

GEORGE SPIRE.

Witnesses:

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EDWARD WILHELM.