

A. H. FRANK & G. SPIRE.

PLANING-MACHINE.

No. 171,510.

Patented Dec. 28, 1875.

Fig. 1.

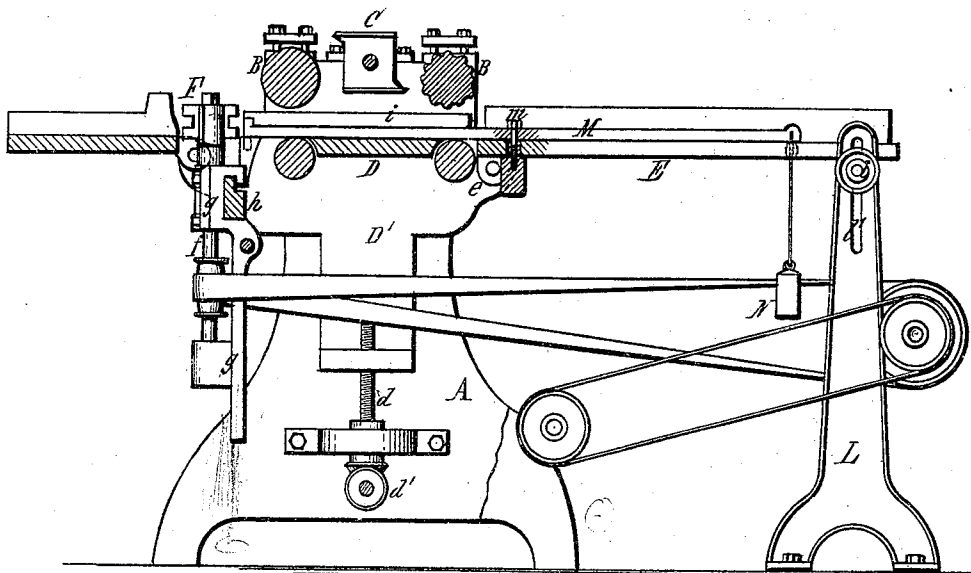


Fig. 2.

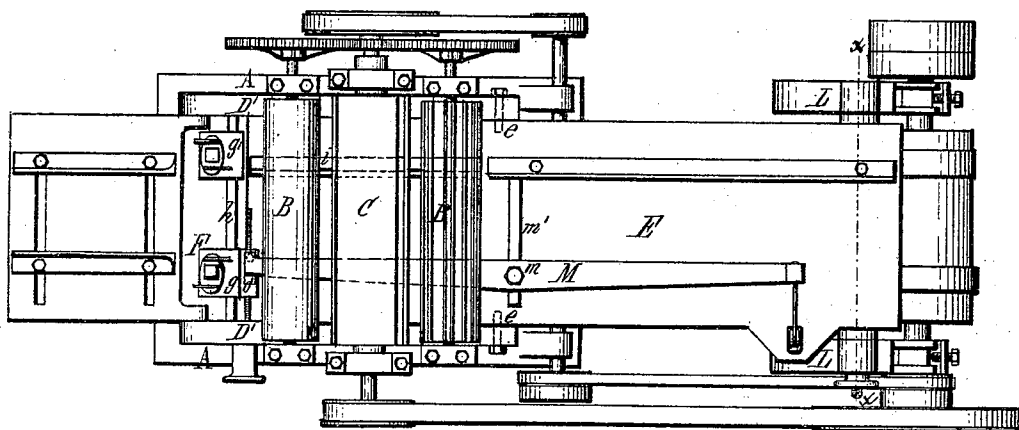


Fig. 3.

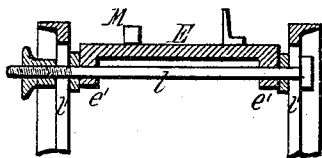
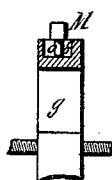


Fig. 4.



Attest:
Geo. J. Bonner
Edouard Wilhelm

Inventor:
Andrew H. Frank
Geo. Spire
by Jay Hyatt
Atty

UNITED STATES PATENT OFFICE

ANDREW H. FRANK AND GEORGE SPIRE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **171,510**, dated December 28, 1875; application filed February 19, 1875.

To all whom it may concern:

Be it known that we, ANDREW H. FRANK and GEORGE SPIRE, both 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:

The first part of our invention relates to the combination and arrangement of a chip-breaking lever with the adjustable bearing of the matching-spindle, as will be hereinafter more fully described.

The second part of our invention relates to a bed and feed table, hinged together and rendered vertically adjustable to adapt them to lumber of different thicknesses.

In the accompanying drawings, Figure 1 is a longitudinal elevation, partly in section, of a planing-machine provided with our improvements. Fig. 2 is a plan view thereof. Fig. 3 is a cross-section in line *x x*, Fig. 2. Fig. 4 is a front view, partly in section, of the adjustable matcher-bearing, with the head of the pressure-lever.

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

A A are the side frames of the machine, B B the feed-rollers, and C the revolving cutter-head, supported in fixed bearings formed in the side frames. D is the main bed, arranged between the side frames A A, and cast with two downwardly-extending side pieces, D', fitting between the side frames. The bed D is raised and lowered by two screws, *d*, engaging with the side pieces D' and actuated by gear-wheels *d'*. *ff* are the matcher-spindles, revolving in bearings *g g'*, supported on a cross-piece, *h*, by a screw, *k*. *i* is the fixed edge-guide, secured to the bed D. All of these parts are old and well known, except the peculiarity in the construction of the bearing *g*, as will be hereinafter explained. E is the feed-table, forming an extension of the bed D to the side piece D', of which it is hinged, as shown at *e*. L L are two standards arranged at the opposite end of the feed-table E for supporting the same. As represented in the drawing, the feed-table is connected to the standards L by means of a horizontal screw-bolt, *l*, passing through lugs or ears *e'* on the under side of the feed-table,

and through vertical slots *l'* in the standards L. The bolt *l* is readily raised or lowered in the slots *l'*, so as to support the feed-table at any desired height. M is the pressure-lever, pivoted to the upper side of the feed-table at *m*, its head being immediately in front of the adjustable matcher-head F, while its opposite end is provided with a weight, N, tending to press the head of the lever against the edge of the board being dressed. The pivot *m* of the lever M is laterally adjustable in a transverse slot, *m'*, of the feed-table, so as to adapt the lever to boards of different widths. The head of the lever M, which bears against the edge of the board, is provided with a pin, *o*, extending downwardly into a transverse slot, *o'*, formed in an upper-extension of the adjustable spindle-bearing *g*, so that the head of the lever will follow the movements of the bearing when the same is adjusted, while it is at the same time free to yield or recede in adapting itself to the irregularities of the edge of the board. The inner end of the slot *o'* serves as a stop for the pin *o*, and prevents the head of the pressure-lever M from swinging inwardly farther than necessary, or so far as to obstruct the feeding in of the board.

It is obvious that the pressure of the lever M against the edge of the board, being due to the weight N, will be the same in all positions of the lever, whether the latter be swung outwardly to a greater or less distance, while the range of movement of the lever is only limited by the length of the slot *o'*.

The hinging of the feed-table E to the bed D forms a yielding connection, which enables the bed to be slightly raised or lowered without requiring the front end of the feed-table to be adjusted or the bolt *l* to be loosened. For considerable adjustments of the bed D, however, the front end of the feed-table is readily raised and lowered accordingly.

We are aware of the existence of Letters Patent No. 121,028, and do not, therefore, wish to be understood as laying claim to anything therein shown.

What we claim as our invention is—

1. The combination, with the bearing of the adjustable matcher-spindle, provided with slot

o', of the weighted pressure-lever M, provided with stop-pin *o*, substantially as and for the purpose hereinbefore set forth.

2. The combination, with the cutter-head A, feed-rollers B B, and vertically-adjustable bed D, of the feed-table E, hinged thereto, standards L, and adjustable connecting-bolt *l*, sub-

stantially as and for the purpose hereinbefore set forth.

ANDREW H. FRANK.
GEORGE SPIRE.

Witnesses:

JNO. J. BONNER,
EDWARD WILHELM.