W. C. HORTON.

Planing-Machines.

No. 147,939. Patented Feb. 24, 1874.

FIG. 1.

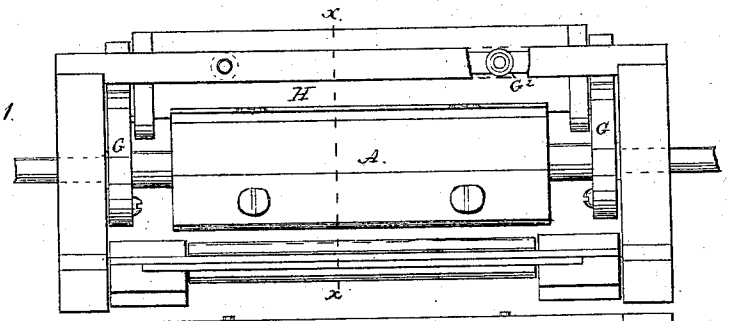


FIG. 2.

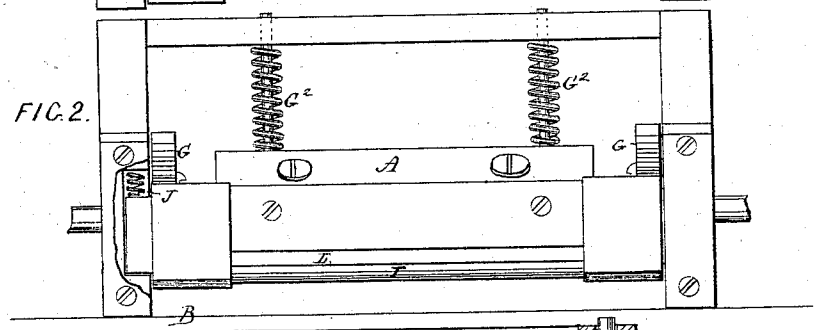
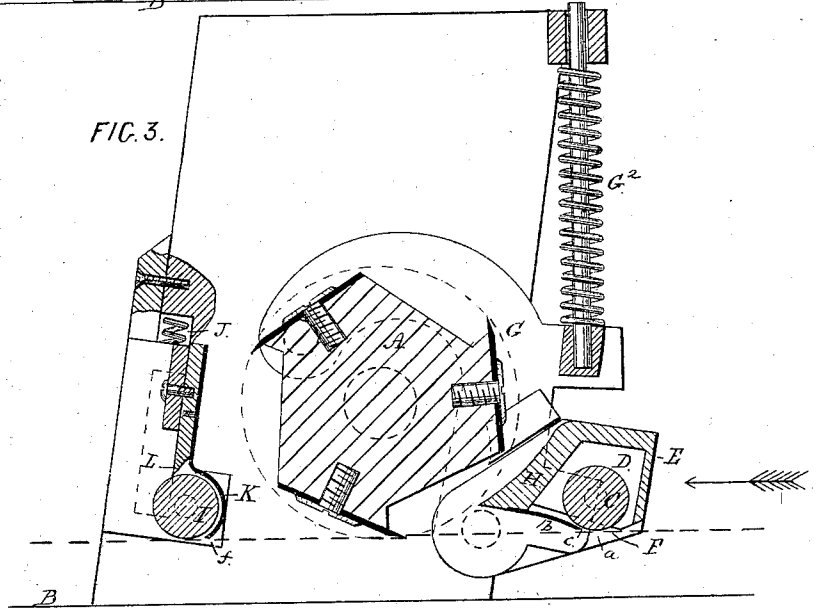


FIG. 3.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM C. HORTON, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **147,939**, dated February 24, 1874; application filed November 19, 1873.

To all whom it may concern:

Be it known that I, WILLIAM C. HORTON, of Salem, Essex county, State of Massachusetts, have invented Improvements in Planing-Machines, of which the following is a specification:

These improvements in planing-machines wholly relate to holding the material to the action of the knives of the rotary cutter; and consist of a bar or holder provided with an extension which carries an inwardly-projecting scraper whose edge is in contact with the pressure-roller carried by said bar or holder, in such a manner that the roller is scraped and cleaned while it revolves, to free it from gum or other matter taken from the board being planed, as will be fully hereinafter described. The invention further consists in arranging a scraper to bear upon the pressure-roller located on the opposite side of the rotary cutter from that above mentioned, and inclosing said roller in a guard or shield, the objects and functions of which will be fully hereinafter explained.

In the accompanying plate of drawings my improvements in planing-machines are illustrated, Figure 1 being a plan view; Fig. 2, a front view; and Fig. 3 a transverse vertical section, on an enlarged scale, in plane of line *x x*, Fig. 1.

As the present improvements in planing-machines wholly relate to the holding of the material to the action of the knives of the rotary cutter, it is not deemed necessary to herein particularly describe the other parts of such machines.

In the drawings, A represents the common revolving rotary cutter-head, and B the bed of the machine along which the board to be planed passes in the direction indicated by the arrow, Fig. 3, under the cutter-head A for being planed by the knives of such head. C, a roller. This roller C is arranged within the concavity D of a bar, E, and at each of its ends it is hung to the bar, to freely revolve. The periphery of the roller C projects beyond the open face F of the bar, and each end of the carrying bar or holder E is firmly secured to a similar circular-shaped arm, G, which arms G are hung, as ordinarily, to the carrying-frame of the rotary cutter, bringing the roller C to a bearing on the unplaned surface of the board, as at *a*, in advance of the cutting-plane of the revolving cutter-head. The roller C is held to its bearing on the board, as stated, by a yielding pressure produced by the spiral springs G^2. The bar or holder E extends from the line of pressure of the roller C upon the board, toward the cutting-plane of the rotary cutter-head, and this extension H is constructed as shown—that is, in its projection, to be above, and clear, and free of the board surface. *b*, a scraper-blade. This scraper *b* is secured to and along the extension of bar E, and has its edge *c* in contact with the roller periphery, just above its contact with the board. This scraper *b* is for scraping the roller as it revolves, and thus to clean and clear it of gum, or other matter, which may become attached to it from running in contact with the board. I, a roller. This roller I is located for pressure upon the planed surface of the board, and in such location it is applied to the parts of the machine carrying the rotary cutter-head, and adapted through springs J for an elastic or yielding pressure action. K, a hood encircling the side of the pressure-roller I, toward the rotary cutter-head. This hood is made of spring metal, and is secured to the holder for the roller I, and, by its lower edge *f*, it rests, as shown, upon the board. L, a scraper secured to holder of roller I, so as to bear directly upon the upper side of the roller. This scraper L not only scrapes, and thus keeps, the roller clean from gum, &c., but, as it rests upon the roller at its upper edge, also holds the roller the firmer against "chatter." The hood K guards the pressure-roller I against the passing of chips under it, which, were it not used, would pass under the roller, and thus by it be pressed into the planed surface, injuring its smoothness and evenness.

The pressure-roller C holds the board firmly to the action of the rotary cutter-head, and at the same time offers substantially no resistance to the travel of the board along to the cutter-head. The described extension H of the bar or holder E for the roller, prevents, in a substantial degree, the unseating of shakes and irregular fiber, and other irregularities in the board being planed, for the reason that, lying above the board, as described, it is a wall or barrier to the lifting of them, to any

practical extent, by the cutter. Furthermore, as the bar-extension H does not rest on the board, it offers no resistance to the free travel of the board toward the cutter-head.

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

1. The bar or holder E, having the extension H, and inwardly-projecting scraper *b* with its edge *c*, in contact with the pressure-roller C, all constructed and combined to operate in the manner and for the purpose herein described.

2. The scraper L bearing upon the upper side of the pressure-roller I, in combination with the spring-metal hood K encircling the pressure-roller, substantially as herein described, for the object specified.

The above specification of my invention signed by me this 5th day of November, A. D. 1873.

WILLIAM C. HORTON.

Witnesses:
EDWIN W. BROWN,
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