

(No Model.)

E. H. HANSON.
WOOD PLANING MACHINE.

No. 345,503.

Patented July 13, 1886.

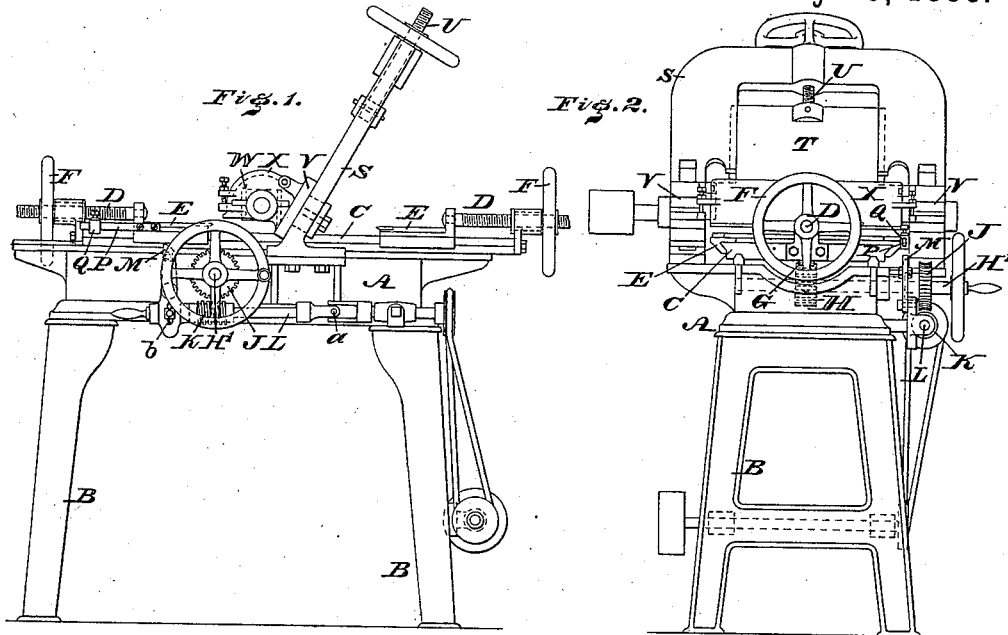


Fig. 3.

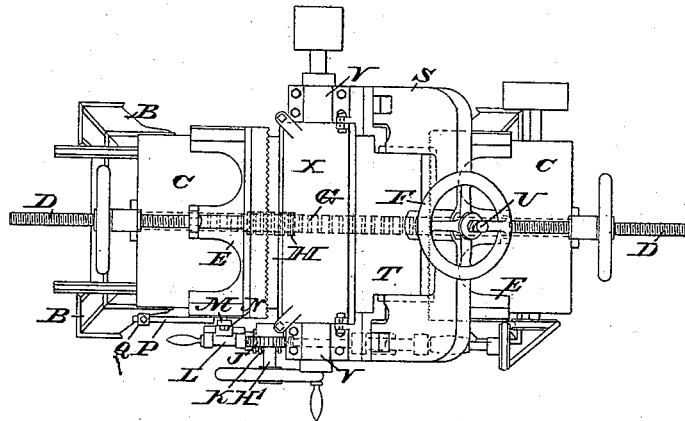
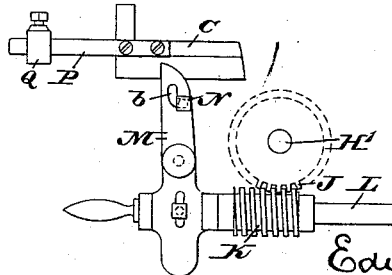


Fig. 4.



WITNESSES:

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WOOD-PLANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 345,503, dated July 13, 1886.

Application filed March 25, 1886. Serial No. 196,469. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. HANSON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Wood-Planing Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 represents a side elevation of a planing-machine embodying my invention. Fig. 2 represents an end view thereof. Fig. 3 represents a top or plan view thereof. Fig. 4 represents a side elevation of a detached portion on an enlarged scale.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a planing-machine provided with means for conveniently and 20 firmly clamping the article to be planed.

It further consists of a planing-machine provided with means for vertically adjusting the cutter or planer head true or in parallel lines.

It further consists of means for throwing the 25 machine in and out of gear.

Referring to the drawings, A represents a table or stand, which is mounted on legs B and supports a carriage, C. On the opposite ends of the carriage are supported horizontally-arranged screws D, the inner ends of which are 30 secured to clamps E, the latter being mounted on the carriage C, said screws having fitted to them screw wheels or nuts F, which are swiveled to the supports of the screws, whereby the clamps may be moved in opposite directions, and thus tightened against or moved from the article to be planed, according to requirements. The carriage has secured to its under side a rack-bar, G, with which meshes 40 a pinion, H, whose shaft H' is mounted on the table or stand A, and has keyed or otherwise secured to it a worm-wheel, J. Meshing with the latter is a worm, K, whose shaft L is formed of sections pivoted together, as at a, whereby the section which carries the worm K may be 45 lowered, so as to throw said worm out of gear with the worm-wheel, and raised to cause said worm to gear with said wheel, power being communicated to said shaft L in any suitable manner. Connected with the end of said 50 shaft, adjacent to the worm, is an arm, M,

whose upper part is pivoted, said arm being provided with an angular or curved slot, b, which receives a stud, pin, or bolt, N, secured to the table A, which, when it occupies the 55 horizontal part of said slot, retains the arm M in its uppermost position, whereby the worm K remains in gear with the worm-wheel.

Connected with the carriage is a horizontally-extending arm, P, which carries a stop, 60 Q, so disposed that when the carriage has about advanced to full extent said stop strikes the arm M, whereby the vertical part of the slot b is in line with the bolt N, and thus the arm is permitted to drop, throwing the worm- 65 wheel out of gear with the worm, so that motion of the carriage ceases, without, however, stopping the motion of the shaft L.

Rising from the table is an arm or yoke, S, in whose inner sides is guided a slide, T. The 70 upper end of said slide has secured to it a screw, U, which is fitted to the head or crown of said arm, and the lower end of said slide has formed with or secured to it the bearings or supports V of the rotary cutter or planer 75 head W, said supports having hinged to them the cover or guard X of the cutter.

The article to be planed is secured between the clamps, and the cutter vertically adjusted relatively to the depth that the article is to be 80 planed. The arm M is now raised by its handle and engaged with the bolt N, whereby the worm and worm-wheel are in gear, and the power of the shaft L is communicated to the same, whereby the carriage is advanced and 85 the article thereon accordingly planed. When the carriage has about completed its advancing motion, the stop Q strikes the arm M, and the latter drops, thus disengaging the worm from the worm-wheel, so that the worm-wheel is at 90 rest and the motion of the carriage ceases. The carriage may now be run back by operation of the hand or crank wheel on the shaft H', after which the wheels F are operated, thus causing the clamps to recede from the 95 planed article, and thus the latter may be removed from the carriage.

The invention will be found serviceable for planing wood of various kinds, especially the wooden backs of stereotype-plates, in order 100 to make them type-high; but to this I do not limit the use of the machine, as stereotype

and electrotype metal may also be planed by the same.

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

1. A planing-machine formed of the following parts: a frame, a carriage with a yoke rising therefrom, a slide working in said yoke, a screw fitted in said yoke and secured to said slide, a rotary cutter or planer head having bearings in said slide, a rack secured to said carriage, a rotary shaft carrying a pinion meshing with said rack, a sectional shaft having one of its journals mounted on the frame, and having a worm meshing with a worm-wheel on said rotary shaft, an arm provided with a stop, said arm being secured to the carriage, a slotted arm secured to the sectional shaft, and a bolt passing through the slot of said arm and secured to the frame, all of said parts being combined and arranged substantially as described.

2. A planing-machine having a carriage with

a rack, a rotary shaft carrying a pinion meshing with said rack, and a worm-wheel, a rising and falling sectional shaft carrying a worm adapted to mesh with said worm-wheel, a slotted arm carried by said rising and falling shaft, a pin secured to the frame of the machine and passing through the slot of the arm on said sectional shaft, and a stop connected with the said carriage, all substantially as described.

3. The frame A, in combination with the carriage C, mounted thereon and provided with a rotary cutter, the arm P, having the stop Q and a rack, the shaft H', journaled in the frame A and carrying a pinion, H, and worm-wheel J, the pivoted sectional shaft I, having worm K and arm M, the said arm M having slot b, and the pin N, secured to the frame A, and passing through the slot b, all substantially as and for the purpose set forth.

EDWARD H. HANSON.

Witnesses:

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