H. ATKINSON.

Machines for Planing Timber.

No. 204,781. Patented June 11, 1878.

FIG. 1

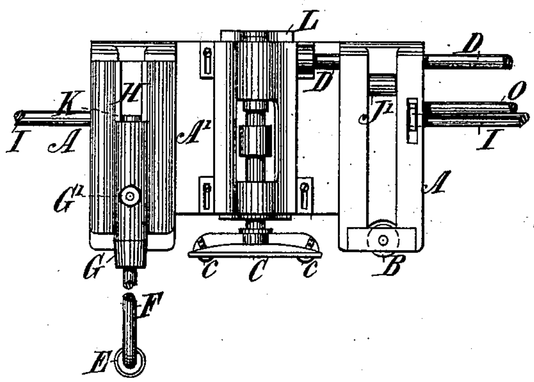


FIG. 4

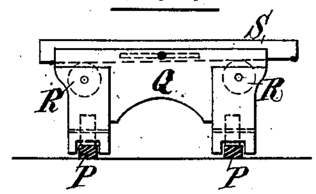


FIG. 2

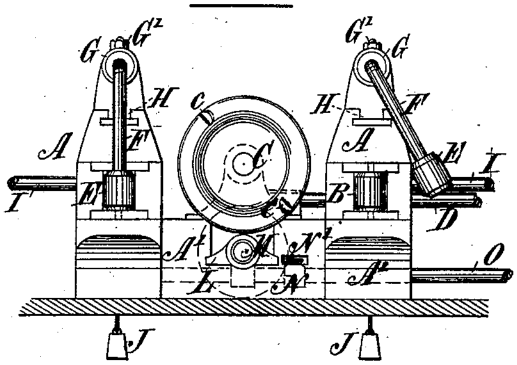


FIG. 3

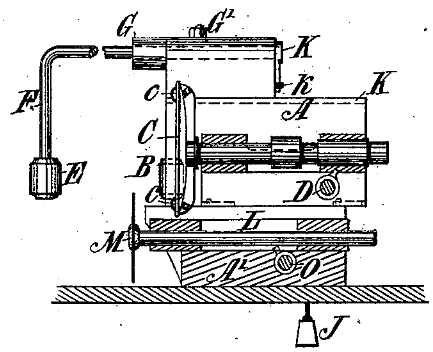


FIG. 6.

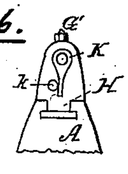
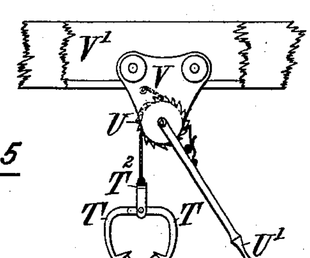


FIG. 5



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY ATKINSON, OF ETCHEMIN, QUEBEC, CANADA.

IMPROVEMENT IN MACHINES FOR PLANING TIMBER.

Specification forming part of Letters Patent No. **204,781**, dated June 11, 1878; application filed July 7, 1877.

To all whom it may concern:

Be it known that I, HENRY ATKINSON, of Etchemin, in the county of Levis and Province of Quebec, Canada, have invented certain new and useful Improvements in Apparatus for Preparing Timber for Shipment; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is for the purpose of performing more speedily and effectually, and at little cost, the operation of dressing the sides of squared timber floated down any water-course for shipment, so as to remove therefrom the score-marks, cuts, &c., or any unsound or bruised wood, and bring the timber to market in a merchantable condition.

The way in which this has been generally performed up to this time is by hewing the logs with broad-axes—an operation which can only be performed in a tidal river or estuary, and at certain times of the tide.

My invention, which usually performs its work after the logs have been "butted," may be used in combination with the ordinary means for that purpose, or with any specific device, such as that which I have invented for the purpose and described in the specification which I have filed in the Patent Office, and may be thus described: A frame capable of being moved back and forth on its bed carries a revolving cutter-head, by which the operation is performed on each side of the log in its turn, the log itself being run up to the machine on a carriage so constructed as to allow the cutter to follow its general outline, and the log being held up to the cutter by suitable devices for the purpose.

This machine is intended to be placed in a floating mill or ponton provided with a screw-propeller or other suitable means to enable it to move from place to place, and, although primarily and specially designed for dressing squared timber, may be used for sawing up such timber, or for "slabbing" or cutting up logs.

For full comprehension, however, of my invention, reference must be had to the annexed drawings, in which—

Figure 1 is a plan view of the machine, showing the upper part of one side of the frame removed. Fig. 2 is a front view of the same. Fig. 3 is a longitudinal sectional elevation. Fig. 4 is a view of the carriage. Fig. 5 is a view of transferring apparatus. Fig. 6 is a rear elevation of part of the stand.

Similar letters of reference indicate like parts.

A is a frame or carriage of the construction shown in Figs. 1, 2, and 3, having formed on it bearings for stationary rollers B, and preferably set on a bed or lower frame, A′.

Between the parts of the frame carrying these rollers is arranged a revolving cutter-head, C, having two or more cutters, *c*, inserted near its circumference, and being mounted on a spindle carried in proper bearings and driven from any going part of the machinery. This cutter-head is, when in motion, brought up to the timber to be dressed by means of a shaft or roller, D, operated by a crank or other device, the lumber being held up close to the stationary rolls B B by means of rolls E E on the ends of arms F F, carried loosely in sockets G G, and secured therein at any desired point by nuts G′. These sockets slide in guides H H, which, in their turn, can be moved back and forth on the frame A by means of a roller, I, operated by a crank or equivalent device, and are held back by weights J hung to them by cords passing over rollers J′, so as to draw back the arms F with the rollers E upon them, and hold the timber to be dressed firmly between these and the rolls B.

These arms F F can be turned up when required, so as to yield, and thus avoid breakage should the logs strike them, and, on falling back, are held in their places by levers K at their free ends coming against stops *k* secured to the sockets G, thus giving sufficient resistance to the action of the cutting-head to prevent the timber from slipping.

Immediately below the cutter-head C and in the bed A′ is a slide, L, carrying a saw-arbor, M, and in connection with it is an arm or projection, N, carrying the saw-guide N′, the whole of this being moved back and forth by means of a roller, O, or like device, in any usual way.

In front of the machine, and close up to it, are placed tracks P, on which run carriages Q, constructed as shown in Fig. 4, having cut in their upper surfaces grooves, in which run rollers R R, carrying blocks S, on which the

timber rests, so as to allow of lateral movement when it is brought up to the dressing-machine. Should this dressing-machine be (as will be the case in most instances) placed in the same mill as the machine for "butting" the logs, and be opposite to it, the timber may be transferred from the butting-machine to the carriage Q by the device now to be described.

Two curved arms, T T, terminating in flat ends T^1 T^1, are suspended by a ring or loop, T^2, at the end of a rope or chain attached to a ratchet-wheel, U, and wound up on it by the lever U′, the spindle of this ratchet-wheel (which has, as shown, a proper retaining catch or pawl) being carried in bearings formed in a carriage, V, moving in guides V′, placed at intervals across the mill, at any suitable height above the floor.

The operation of my invention is as follows: The log to be dressed is placed upon the blocks S, resting upon the rollers R R in the carriages Q, which are then run along so as bring the log up to the dressing-machine, where it is held firmly between the rollers B B and E E, (the arms F F, which hold the latter, the sockets G, in which they rest, and the guides H, carrying these last, being drawn inward by the weights J, as described,) and, passing gradually along, is dressed by the action of the revolving cutter-head C, run forward by the shaft or roller D, and driven from any suitable shafting, the operation being repeated, if required, on all four sides. The timber is then ready for shipment.

The cutter-head is enabled to accommodate itself to any uneven contour of the timber at will of the operator, the timber being brought into the desired position by means of rollers R R, allowing the blocks on which the log rests to move laterally in the carriage, the mechanism for drawing back the rollers E, which gripe the log, offering only a yielding resistance.

If the log is to be taken from the butting-machine, it is griped by the ends of the arms T, lifted off the carriage by means of the ratchet-wheel U, wound up by the lever, and run across and placed on the carriage Q, as before mentioned.

Should it be desired, as in some cases, to saw up the log, instead of preparing it for shipment, all that is needed is, by a screw, crank-handle, lever, or other mechanical means, or by simply drawing the log on the bed A′, to move back the frame A A, and with it the cutter-head C, as shown in Fig. 3, (the bearings of this spindle being slotted to allow of this movement,) and then to run forward the bed L, carrying the saw-arbor M and saw-guide N′, and mount on the former a circular saw of suitable size, a slot being made in the floor to allow it to work.

If desired, the whole of the bed A′ of the dressing-machine may be made to move back at will, and in any case a proper device, such as a wedge, is adopted to keep the frame and bed in place.

Having thus described my invention, what I claim is as follows:

1. In a machine for dressing timber, the combination, substantially as specified, of an overhung cutter-head provided with cutters in its front or face side, the vertically-arranged stationary rollers, and the vertically-arranged self-adjusting rollers.

2. In an apparatus for dressing timber, the combination, with the frame A, of the guides or slides H H, (carrying either rigidly or adjustably the sockets G G,) drawn back by weights, &c., and capable of forward motion, all substantially as and for the purposes herein set forth.

3. The combination, with the sockets G, provided with stops *k*, of arms F, carrying rollers E and provided with levers K, all as and for the purposes described.

4. In a machine for dressing timber, the combination, substantially as specified, of the cutter-head, the rollers B and E for guiding the log, and the carriage for moving the log, said carriage being provided with laterally-shiftable blocks S, mounted on rollers or wheels for the support of the log, so that the latter will readily move laterally under the action of the said guide-rollers.

HENRY ATKINSON.

Witnesses:
A. PLAISANCE,
ED. GUAY.