E. F. GORDON.

Adjustment of Planing-Machine Tables.

No. 221,805. Patented Nov. 18, 1879.

Fig. 1.

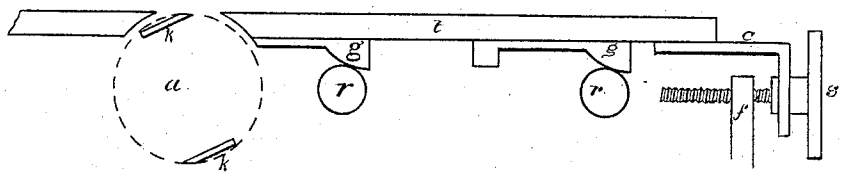


Fig. 2.

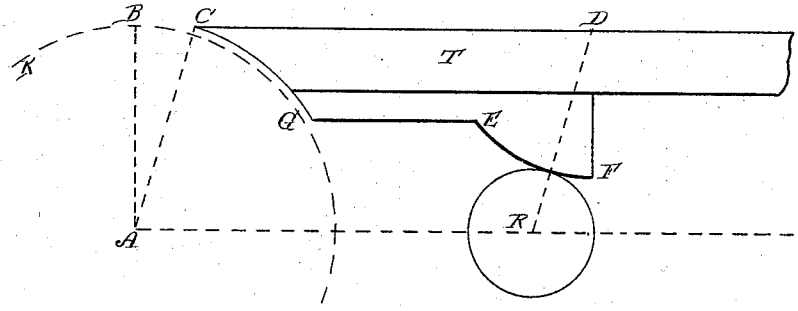
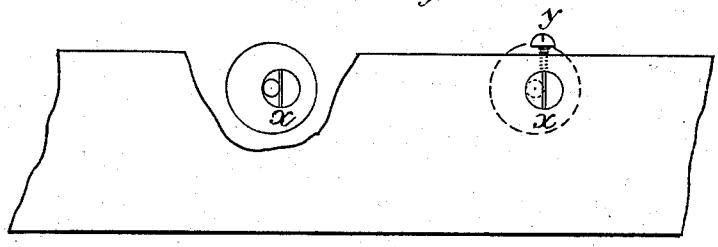


Fig. 3.



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EDWARD F. GORDON, OF CONCORD, NEW HAMPSHIRE, ASSIGNOR TO JOHN A. WHITE, OF SAME PLACE.

IMPROVEMENT IN ADJUSTMENTS OF PLANING-MACHINE TABLES.

Specification forming part of Letters Patent No. **221,805**, dated November 18, 1879; application filed October 27, 1879.

To all whom it may concern:

Be it known that I, EDWARD F. GORDON, of Concord, in the county of Merrimack and State of New Hampshire, have invented certain Improvements in the Mechanism for Raising and Depressing the Tables for Buzz-Planers, of which the following is a specification, reference being had to the accompanying drawings, which are hereby made a part hereof.

In the drawings, Figure 1 is a side view of part of my mechanism. Fig. 2 is a diagram, illustrating the principle on which it is constructed; and Fig. 3 shows the manner in which I adjust my rollers, as hereinafter explained.

Referring to Fig. 1, *a* represents the circle described by the knives of a buzz-planer; *k k*, the knives; *t*, a table; *r r*, rollers, upon which the table moves. *c* is an angular arm, fastened to the under side of my table, having a slot in the front thereof, which passes down in a groove in the screw *s*, so as to rise and fall with the table, while the screw remains stationary. *f* represents a part of the frame of the machine, in which the screw *s* works. *g g* are bearing plates or guides, which move upon the stationary rollers *r r*.

It will be seen that as the table is drawn back from the knives by the action of the screw *s* it will descend till the rollers take effect on the straight part of the guides or bearing-plates, and the edge of the table will descend upon the arc of a circle, such that it will be a constant distance from and parallel to the circle described by the revolution of the knives.

For a full illustration and demonstration of this principle I refer to Fig. 2.

A is the center of revolution of the knives. From A erect the perpendicular A B, and lay off B C equal to half the opening desired to be given in the table, and draw A C. From the center of the roller R draw R D parallel and equal to A C. From R describe a circle the size of the roller, and with D as a center describe the arc E F, touching the periphery of the roller, and from E draw E G parallel with the top of the table. As the table is drawn back it will descend upon a circle having a radius, R D, and the edge next the knives will move upon a circle parallel with the circle of revolution of the knives until the straight line E G touches the roller, when the table will move in a straight line away from the knives. The centers upon which the rollers revolve are fixed in eccentric studs *x x*, Fig. 3, which are confined in the position to which they may be adjusted by the set-screws, one of which is shown at *y*.

This device is necessary because of the extreme difficulty, amounting to an impossibility, of drilling the holes for the axes of the rollers exactly in line, so that the table will bear equally on each roller. By turning this eccentric stud the rollers may be adjusted exactly to the table, and when brought into proper position the eccentric stud is fastened there by the set-screws *y*.

I claim as my invention and desire to secure by Letters Patent—

1. The guides or bearing-plates *g g*, constructed as shown and described, combined with the rollers *r r*, and the table *t*, operated by suitable mechanism, substantially as set forth.

2. The combination of the guides or bearing-plates *g g*, rollers *r r* angular arm *c*, hand-wheel and screw *s*, for the purpose of raising and depressing the table, as described.

3. In a mechanism for raising and depressing planer-tables, the studs *x x*, having holes eccentrically arranged for receiving the ends of the rollers *r r*, and the set-screws *y y*, substantially as set forth.

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Witnesses:
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