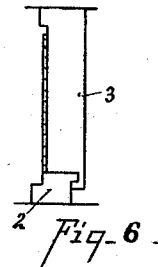
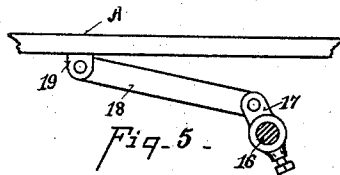
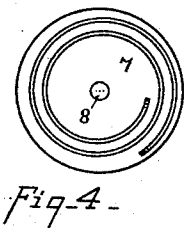
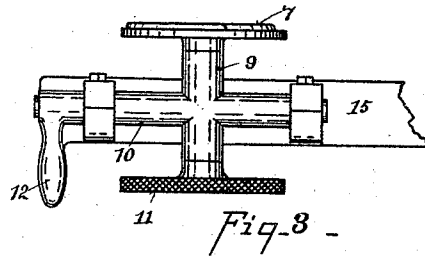
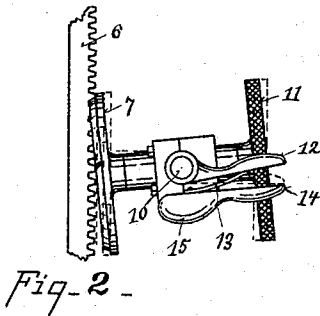
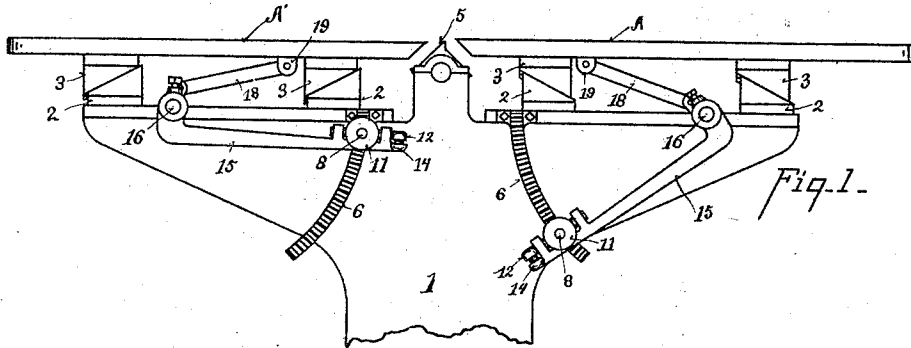


(No Model.)

G. W. BUGBEE & F. DANNER.
PLANING MACHINE TABLE.

No. 470,358.

Patented Mar. 8, 1892.



Witnesses

C. W. Miles,
J. L. Simon

Inventors:

George W. Bugbee & Frederick Danner
By their Attorneys W. H. A. Bond

UNITED STATES PATENT OFFICE.

GEORGE W. BUGBEE AND FREDERICK DANNER, OF CINCINNATI, OHIO,
ASSIGNORS TO THE EGAN COMPANY, OF SAME PLACE.

PLANING-MACHINE TABLE.

SPECIFICATION forming part of Letters Patent No. 470,358, dated March 8, 1892.

Application filed April 9, 1891. Serial No. 388,282. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. BUGBEE and FREDERICK DANNER, citizens of the United States, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Planing-Machines, of which the following is a specification.

Our invention relates to an improved method of adjusting a sectional planer-table, the various features of which will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

15 Figure 1 is a side elevation of our table. Fig. 2 is a detail sectional elevation of the adjusting device. Fig. 3 is a top plan view of the same. Fig. 4 is an elevation of the worm-wheel shown in Fig. 2. Fig. 5 is a detail section of one of the adjusting-links. Fig. 6 is an elevation of the inclined ways.

1 represents the frame of the planer, upon the upper end of which is mounted a series of inclined ways 2, which receive the converse inclined feet 3, which slide thereon. These inclined feet depend from the tables A A'. There are preferably four inclined feet and ways for each table A A', so as to secure a parallel movement of the same.

5 5 represents the planer-bit, which is journaled to the frame 1. The tables A A' are adjustable vertically, so as to regulate the depth of cut, and one table is lower than the other in practice, so as to regulate the amount of cut. It is desirable in practice to make a very fine adjustment, so as to regulate the shaving or amount of cut as the stuff passes over the table. This is accomplished by the following instrumentalities:

40 6 represents segmental racks, one for either table, secured to the frame 1.

7 represents worm-wheels respectively mounted on shafts 8, which shafts journal in the sleeves 9 of the rock-shaft 10.

45 11 represents a hand-wheel on the opposite end of shafts 8 for driving the worm-wheels 7. The outer end of rock-shaft 10 is a handle 12.

13 represents a spring rigidly attached to the outer end of arm 15, which is formed into

a handle 14, similar to handle 12. The free end of the spring presses against handle 12 to hold the shaft and sleeve 9 in an inclined position, as shown in full lines, Fig. 2. This maintains the engagement of the worm 7 with the rack 6. The rock-shaft 10 is mounted in lugs upon the adjusting-arm 15, which journals upon the rock-shaft 16, which is in turn journaled on the frame 1. Shaft 16 is provided with an ear 17, which is hinged to a link 18, which is in turn hinged by ear 19 to the table A or A', so that as arm 15 is depressed by the worm 7, the link 18 moves inward, causing the table to move in the same direction, and as it moves upon inclines it will be raised upward as it moves inward.

The tables A and A' are each mounted in the same manner, and the mechanism for either side is each the counterpart of the other, so that each table may be adjusted by its individual worm. As the worm is driven in the oppositedirection to elevate the inner end of arm 15, the outer end is depressed, moving the table through the link 18 outwardly and downwardly. Ordinary adjustments of the tables may be made by moving the hand-wheel 11 to drive the worm and shaft. If a more radical adjustment is required, the handle 12 is depressed, rocking the sleeve 9, and its contained shaft 8 with the rock-shaft 10, disengaging the connection of the worm 7 with the rack 6, bringing the parts into position shown in dotted lines, Fig. 2. The arm 15 will then be free to move up or down, so as to make a re-engagement with the segmental rack 6 in a higher or lower position, as desired.

Having described our invention, what we claim is—

1. In a planer, the combination, with a vertically-adjustable table and its supporting-frame, of a rack secured to said frame, a worm-wheel engaged with said rack, a hand-wheel on the worm-wheel shaft, and an adjustable link mechanism connecting the table and worm-wheel shaft, substantially as described.

2. In combination with a sectional table of a planer mounted upon inclines, the adjusting mechanism consisting, essentially, of the link

mechanism carrying the worm 7, engaging with the rack 6, rigidly fixed to the standard, said worm being mounted upon the rock-shaft 10, adapted to be disengaged from the rack 6, substantially as specified.

3. In combination with the arm 15, operating the link mechanism for adjusting the table, the worm mechanism mounted upon the rock-shaft 10 and held in normal engagement with the rack 6 by means of spring 13, substantially as specified.

4. In combination with the rack 6, the worm-adjusting mechanism mounted upon the rock-shaft 10, the hand-wheel 11 for driving the worm 7, the handle 12, and spring 13 for holding the worm in normal engagement and allowing shaft 10 to be rocked and disen-

gage the worm by depressing the handle 12, substantially as specified.

5. In a planer, the combination of the tables A A', mounted upon inclines and each operated by independent adjusting mechanism consisting substantially of the link, lever, rack 6, worm 7, adjustably mounted upon rock-shaft 10, and means for holding the worm normally in engagement with the rack, substantially as described.

In testimony whereof we have hereunto set our hands.

GEORGE W. BUGBEE.
FREDERICK DANNER.

Witnesses:

C. W. MILES,
T. SIMMONS.