C. B. Cottrell,

Wood Planing Machine.

No. 21,720. Patented Oct. 5, 1858.

Fig. 1.

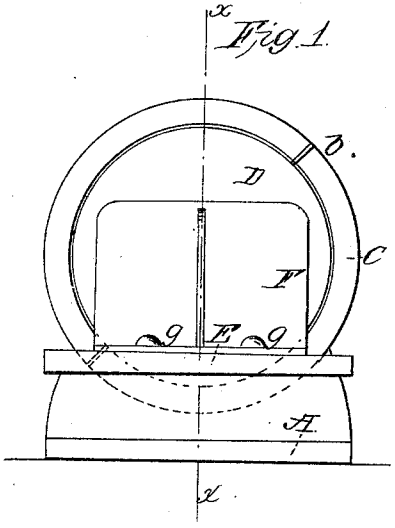


Fig. 2.

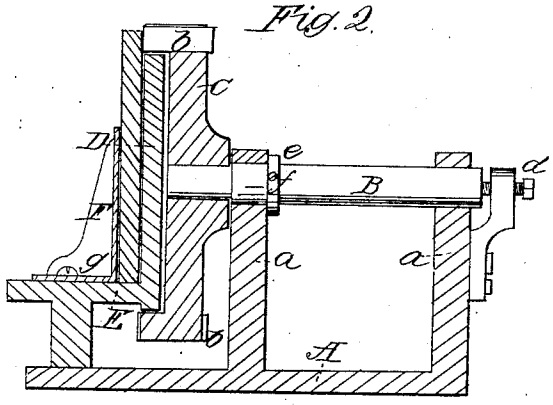
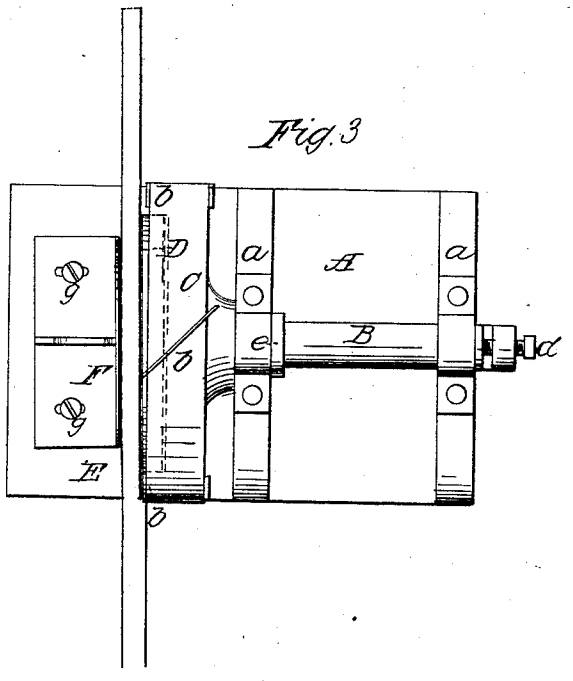


Fig. 3



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

C. B. COTTRELL, OF WESTERLY, RHODE ISLAND, ASSIGNOR TO HIMSELF AND NATHAN BABCOCK, OF SAME PLACE.

IMPROVED MACHINE FOR PLANING WOOD.

Specification forming part of Letters Patent No. **21,720**, dated October 5, 1858.

To all whom it may concern:

Be it known that I, C. B. COTTRELL, of Westerly, in the county of Washington and State of Rhode Island, have invented a new and Improved Planing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front view of my invention; Fig. 2, a section of the same, taken on the line *x x*, Fig. 1; Fig. 3, a plan or top view of the same.

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

This invention consists in the employment or use of rotating cutters and central stationary gage arranged, as hereinafter fully shown and described, and used in connection with an adjustable gage, whereby the desired work—to wit, the planing of wood—may be performed in a very smooth and perfect manner.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a bed-plate, on which two uprights *a a* are placed, and B is a mandrel, which has its bearings in the upper parts of the uprights *a a*. On one end of the mandrel B a circular cutter-head C is placed, having cutters *b* of proper form near its periphery. The cutter-head C has a circular recess *c* made in its central part to receive a gage D, which is permanently attached to a bed E. The gage D fully occupies the space between the cutters *b b*, and projects outward from the face of the head, so as to be about in line with the edges of the cutters *b*, and the gage is made to project more or less to suit the "set" of the cutters by adjusting a set-screw *d*, against which the outer end of the mandrel B bears, the collar *e* on the mandrel being adjustable and secured by a screw *f*.

The bed E is secured to the bed-plate A, and has a gage F attached to its upper surface by set-screws *g g*. The gage F is always parallel with the stationary gage D, but the latter is placed rather obliquely with the head C, as shown clearly in Fig. 3.

The operation is as follows: The cutters *b b* are set so as take off a shaving of greater or less thickness, as may be required, and the gage D is set so that its face will be in the same plane with the cutting-edges of the cutters. The board or plank G is then shoved or fed along between the adjustable gage F and the sliding gage D, the cutters *b* planing the stuff and reducing it sufficiently to allow it to pass between D and F. In consequence of having the gages D and F placed rather obliquely with the head C the board or plank is allowed to pass the cutters at the opposite side of the head without being touched by them. (See Fig. 3.) By this means the work performed by the cutters at one portion of their revolution will not be marred by them at another. The gages hold the stuff firmly while being cut, and the gage D serves as an efficient auxiliary to the cutters, preventing them from cutting unevenly and at the same time, on account of being stationary, not disfiguring the finished work—that is, the planed surface which bears against the gage.

I would remark that an annular head C need not necessarily be employed. Radial arms with cutters attached would answer the same purpose.

I am aware that rotating cutter-heads have been previously used and arranged in various ways. I therefore do not claim, broadly, such device; but,

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

The rotating cutters *b b* and central stationary gage D, in connection with an adjustable gage F or its equivalent, arranged to operate as and for the purpose set forth.

C. B. COTTRELL.

Witnesses:

CHARLES A. STILLMAN,

NATHAN BABCOCK.