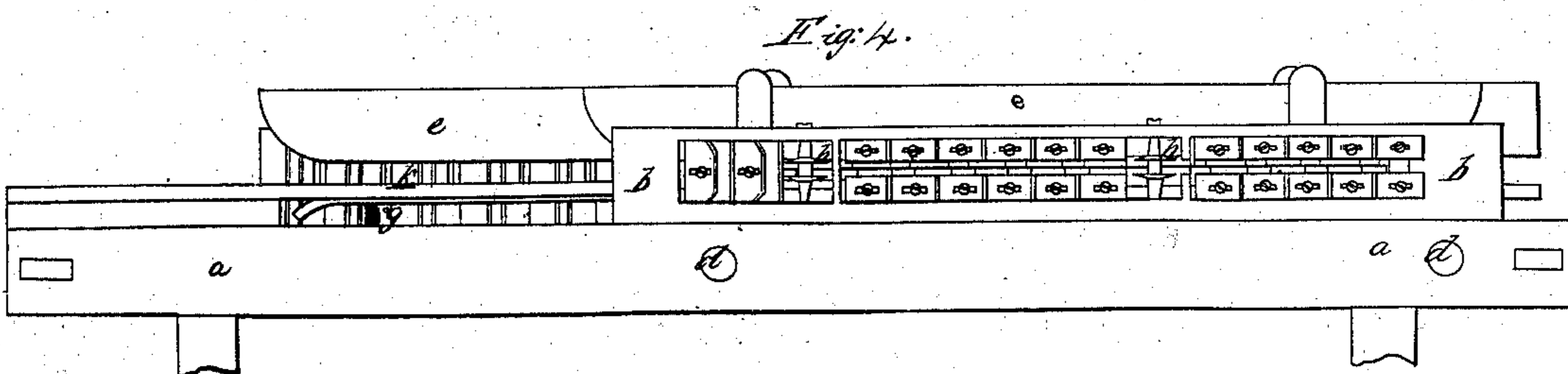
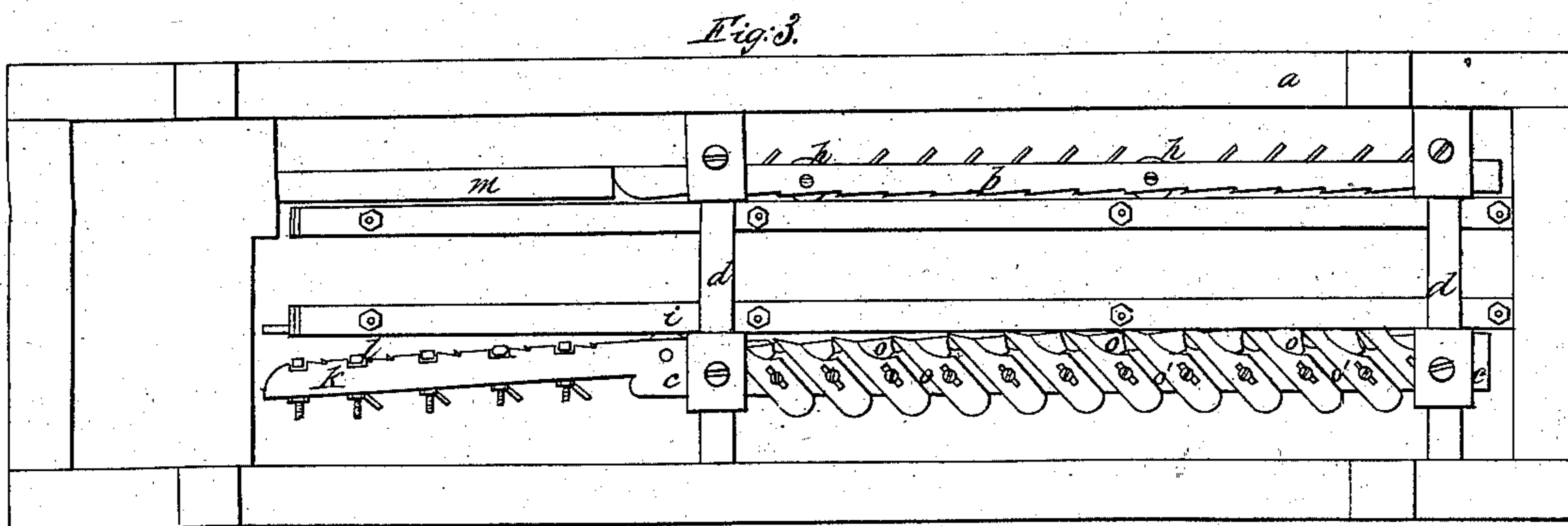
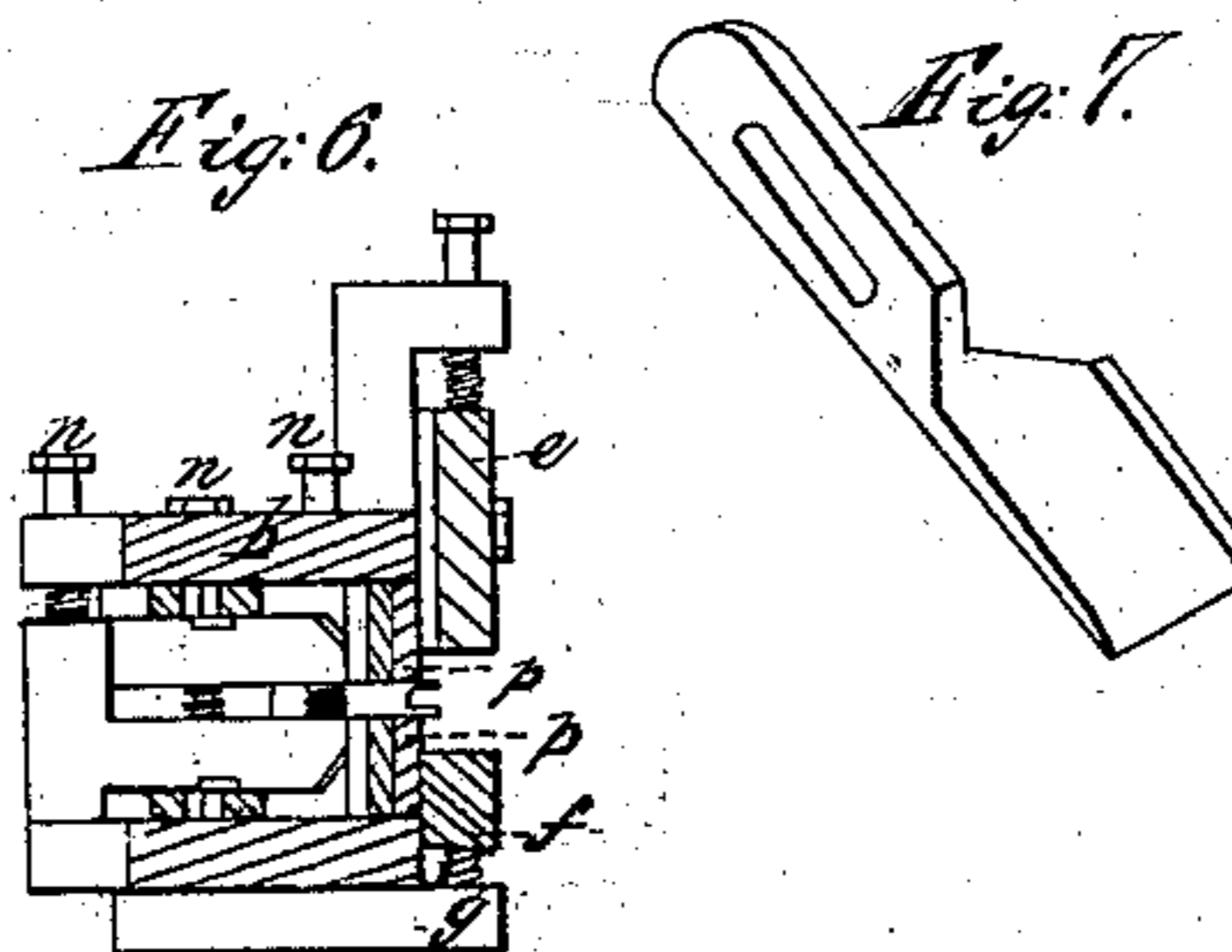
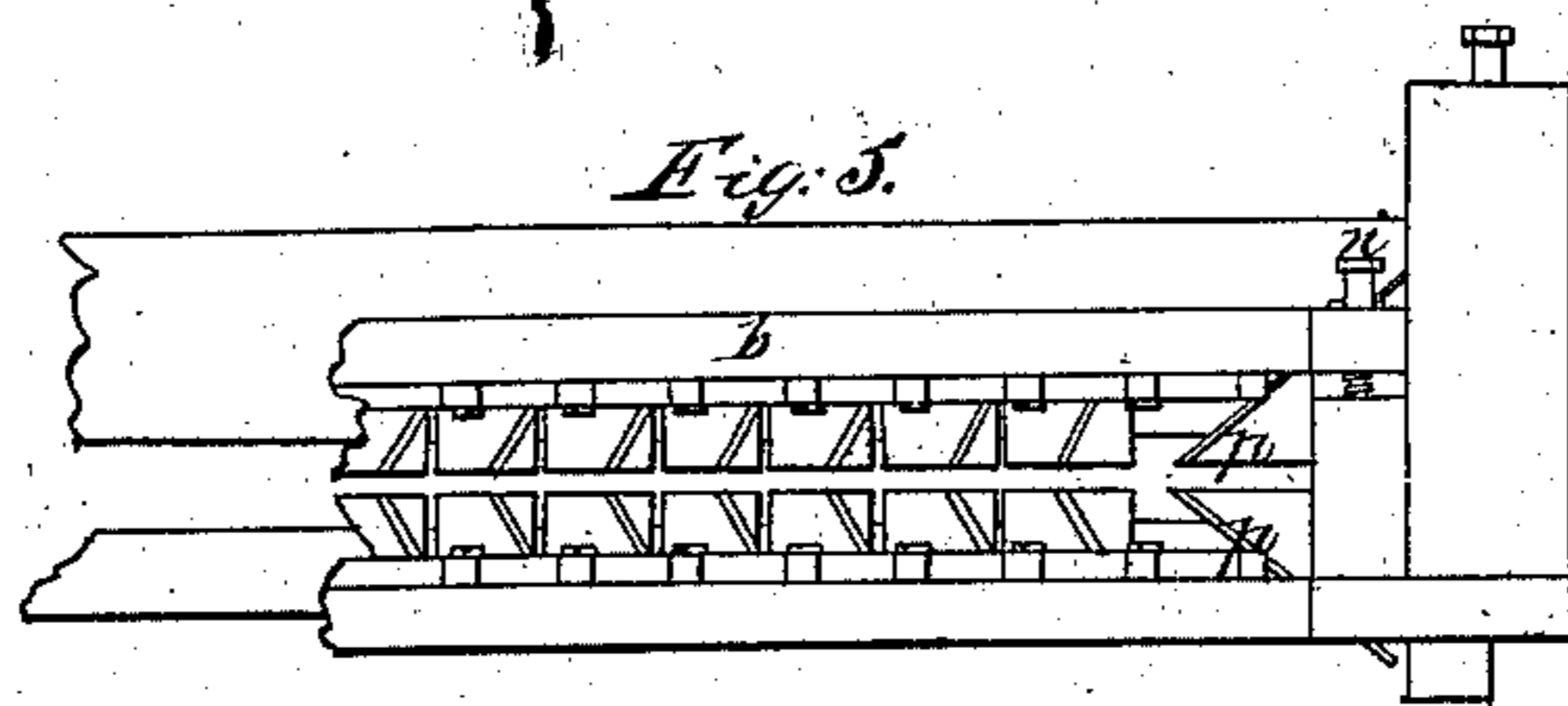


Crosby & Edgcomb,
Wood Planing Machine,

No 8,870,

Patented Apr. 13, 1852.



UNITED STATES PATENT OFFICE.

RANSOM CROSBY AND HENRY D. EDGCOMB, OF NEW YORK, N. Y.; SAID EDGCOMB
ASSIGNOR TO SAID CROSBY AND SAID CROSBY ASSIGNOR TO RANSOM CROSBY, JR.,

MACHINE FOR TONGUING BOARDS.

Specification of Letters Patent No. 8,870, dated April 13, 1852.

To all whom it may concern:

Be it known that we, RANSOM CROSBY and HENRY D. EDGCOMB, of the city of New York, in the county of New York and State of New York, have invented certain Improvements in Machinery for Tonguing and Grooving Boards, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 3 is a plan; Fig. 4, an elevation of the tonguing side; Fig. 5, a side view of the double tonguing stock; Fig. 6, section of same.

Great difficulty has been encountered in the employment of stationary knives or planes for the purpose of tonguing and grooving boards, for although it would seem that the ordinary construction would act as efficiently for that purpose as upon the surface practical experiment has shown insurmountable difficulties to its employment on account of clogging, which could not be overcome by the most careful adjustment. Our improvements have been made with a view to overcome these difficulties, and we find by experiment that we have obviated them by the within described apparatus entirely.

The machine consists of a frame (*a*) to which the several parts are attached.

(*b*) is the stock in which the cutters are set for forming the tongue on the board. This stock is fixed to the frame (*a*) and has projections on its inner sides, to which the plane bits are attached, in two lines, one on each side of the tongue, leaving an open space between the stock, which may be made in two parts so as to be adjustable to different sizes of tongues as shown in Fig. 5 where the upper part of the stock with its cutters can be moved to or from the lower portion by the screws (*n*).

(*c*) is the stock containing the cutters for plowing the grooves and also the planes which reduce the board to the proper width as it enters the machine. This stock is made to slide to or from the other stock (*b*) on the bars of the frame (*d*) by means of screws passing through the frame, and made to turn together by bevel wheels or other suitable contrivance, so that the stocks shall

always be parallel to each other, and move so as to adapt the machine to different widths of boards, but to this stock we make no claim.

Attached to the tonguing stock is a straight edge (*e*) which serves to guide the board in connection with another straight edge (*f*) attached to the stock, and made to press upward by the springs (*g*). This straight edge keeps the board in contact with the upper one (*e*) and adapt themselves to the varying thicknesses of the lumber.

A single pair of cutters (*h*) may be employed, or they may in some cases be omitted altogether. The planes remove the wood on each side of the tongue, and are so arranged in the stock as to allow of the free escape of the shavings; every part of the stock between the planes being cut away excepting so much as is just sufficient to produce the proper support and action of the cutters, which prevents all difficulty from the clogging or stoppage of the shavings. The planes are placed in succession each one being set a little deeper than the one preceding it, so as to remove the wood in thin shavings.

The movable stock (*c*) contains the cutters and planes for plowing the groove. The rolling cutter (*i*) is made of two disks. These cutters as well as those for forming the tongue may have a lip or edge turned forward on the cutting sides, next the tongue, as shown in Fig. 7, showing a tonguing cutter detached, which makes better work when the lumber is wet or cross-grained. That part of the stock on one side of the planes is cut away so as to allow a free escape to the chips and prevent choking, and those portions (*o*) forming the bed of each plane iron is only attached to the underside of the cap piece (*o'*) or to the upper side of the bed piece of the plane stock leaving an open space between by which we effectually prevent clogging by leaving the throat of the plane entirely open.

In cases where the boards are required to have a bead next to the joint we form two planes see Fig. 5, so as to cut the bead, as the board passes through the machine.

At the forward end of the stock (*c*) are placed the planes (*k*) for the purpose of reducing the board to the proper width preparatory to cutting the tongue and groove. Between the plane irons are spring bars or

rollers (*l*) which are adjustable and serve to keep the boards pressed firmly against the straight edge (*m*) on the opposite side during their passage into the machine.

5 The plane irons and cutters are colored blue in the drawings.

Having thus fully described our apparatus what we claim therein as new and which we desire to secure by Letters Patent 10 is—

The arrangement of two sets of stationary rabbeting cutters for tonguing boards in separate stocks substantially as herein described with a space between them for the 15 escape of shavings the sides of the stock being substantially parallel to the face of the board and each other and the surfaces of

their soles being substantially perpendicular thereto, the plane irons being inclined in the usual way to the soles and backs of the stocks 20 and the cutters in their length being substantially parallel to the sides thereof.

We are aware that two sets of cutters in separate stocks have been differently arranged and for an analogous purpose and 25 we therefore do not claim them except in the arrangement and position substantially as above described.

RANSOM CROSBY.
HENRY D. EDGCOMB.

Witnesses:

WM. B. MEECHY,
W. C. CARPENTER.