(No Model.)

E. G. BLANEY, Jr.

CUTTER HEAD.

No. 345,662. Patented July 20, 1886.

Fig. 1.

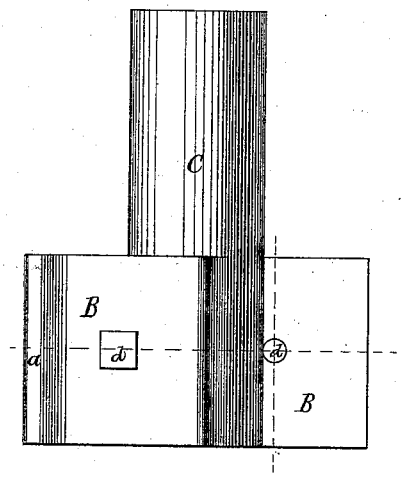


Fig. 3.

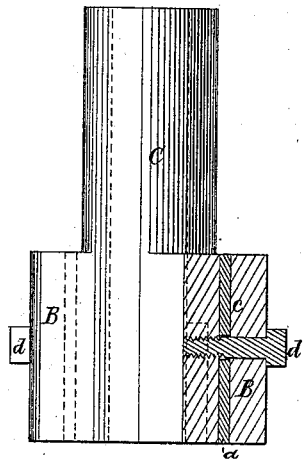


Fig. 2.

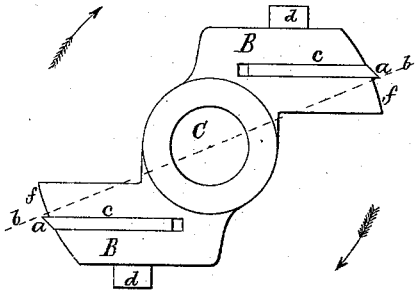
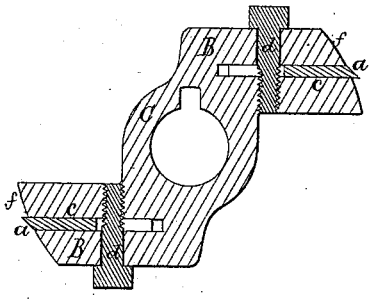


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

ELBRIDGE GERRY BLANEY, JR., OF SWAMPSCOTT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF, AND S. N. BREED & CO., OF LYNN, MASS.

CUTTER-HEAD.

SPECIFICATION forming part of Letters Patent No. 345,662, dated July 20, 1886.

Application filed December 7, 1885. Serial No. 185,018. (No model.)

To all whom it may concern:

Be it known that I, ELBRIDGE GERRY BLANEY, Jr., of Swampscott, in the county of Essex, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Rotary Cutter-Stocks; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, Fig. 2 a top view, Fig. 3 a transverse and vertical section, and Fig. 4 a horizontal section, of a cutter-head of my invention, the nature of which is defined in the claim hereinafter presented.

The cutter-head shown in such drawings is used for jointing the edge of a board, and it is not only to reduce such edge, but to do so in a manner to render it smooth, or not ragged or torn more or less, as will result in most, if not all, cases where each cutter has no arched surface, as hereinafter described, in front of and extending from it, the cutter-stock, as shown, having two cutters, *a*, each of which is arranged at an acute angle with a radial plane passing through the cutting-edge of such cutter, and also through the axis of the stock, such radial plane being indicated by the dotted line *b* in Fig. 2. The said stock is composed of a cylindrical tube, C, and two arms, B B, such arms projecting in opposite directions from such tube, but not in alignment with each other, all being as represented. The outer edge of each arm is an arcal portion of the periphery of a cylinder whose axis corresponds to that of the tube C, and from the middle of each of the said arcal portions the arm is recessed, as shown at *c*, to receive within it the cutter *a*, the recess having a width corresponding to the thickness of the cutter, in order for the cutter to be firmly supported on each of its opposite sides. Such cutter is held in the arm by a headed clamping-screw, *d*, that goes through the cutter and screws into the arm, so as to contract upon the cutter the two portions of the arm that are on opposite sides of it.

From the above it will be seen that each cutter has in advance of and extending from it a cylindrical arc, *f*, which while the cutter is in operation, prevents it from tearing or splitting the chip or shaving from the wood. In other words, the surface causes the cutter to make what is termed a "clean or even cut." Were the cutter to have its plane radial to the axis of the stock, such cutter would "scrape" the wood without taking from it a smooth shaving; but by having the cutter disposed with its plane at an acute angle to a plane going through the axis of the stock, and also through the cutting-edge of the said cutter, it, (the said cutter,) when in operation, does not scrape the wood, but takes from it a shaving, which, in consequence of the cutter having in advance of its edge the arcal surface or bearing *f*, causes the edge from which it is removed to be smooth and not torn or split, particularly when the grain of the wood is oblique to the edge to be jointed. By having the cutter supported on both of its opposite faces by the arm in which it enters, such cutter will not "chatter" or spring and produce an uneven cut, as is often the case when a cutter is supported on one face only against its sustaining arm or carrier.

My cutter-head differs from each of those represented in the United States Patents Nos. 19,806, 95,809, and 222,510, in having arms having slots extending into them from their outer edges without going through them to their inner edges, and each has a clamping-screw arranged on it transversely and applied so as to contract the arm upon the cutter arranged in it, the inherent resilience of the arm serving to loosen its hold on the collar when the screw is turned backwardly. There is also between the toe of each arm and the heel of the other an open space. Each cutter extends beyond its arm only the thickness of the chips or shaving to be removed by such cutter, it being prevented by the curved surface of the outer end of the arm from making a deeper cut. The spaces between the cutters facilitate the escape of the shavings.

I claim—

The improved cutter-stock, its cutters and their clamping-screws, constructed, combined, and arranged substantially as set forth, the same consisting of the tube C, the two arms B, slitted lengthwise partly through each, and projecting in opposite directions from such

tube, both horizontally and vertically, and each having its outer end the arcal portion of the periphery of a cylinder whose axis corresponds to that of the tube, the two cutters *a*, arranged in the slits of the arms, and each projecting from its arm the thickness of a shaving to be cut by such cutter, and screws *d*, extending into the arms transversely thereof and through the cutters, and operating while being screwed up to contract the arms upon the cutters, as explained, all being for the purpose specified.

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