

S. E. Holbrook.

Gimblet.

N^o 103,461.

Patented May 24, 1870.

Fig: 1

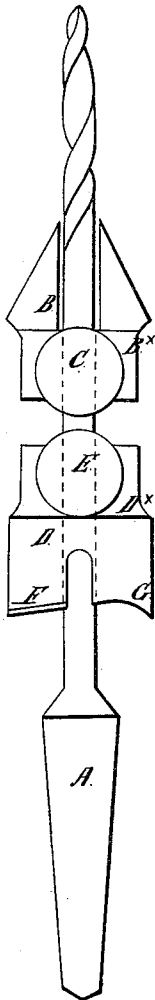
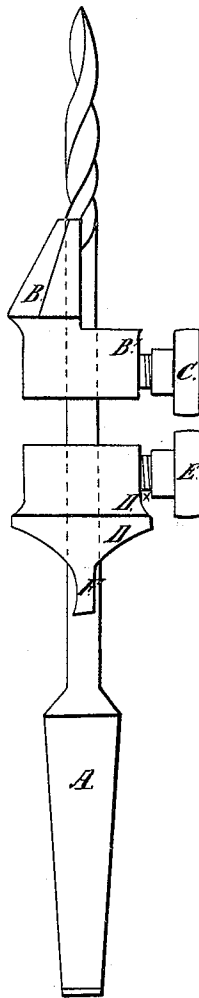


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL ELLIOT HOLBROOK, JR., OF CHARLESTOWN, MASSACHUSETTS.

IMPROVEMENT IN COUNTERSINKS.

Specification forming part of Letters Patent No. 103,461, dated May 24, 1870.

To all whom it may concern:

Be it known that I, SAMUEL ELLIOT HOLBROOK, Jr., of the city of Charlestown, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Countersink-Gimlet; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings with letters of reference marked thereon.

The nature of my invention is that of a gimlet or auger, to which, my device being attached, a facility is given of countersinking or reaming the top of the hole bored, or, at pleasure, sinking into the same an enlarged bored aperture for the insertion of plugs; or, by reversal of my tool or device, I convert the same into a stop, to prevent the too great penetration of the gimlet or auger.

In the drawings annexed, Figure 1 is a view of my device from one side. Fig. 2 is a view of the same from a side at right angles to the first named; and

In the drawings, A, Figs. 1 and 2, is my gimlet, for which I sometimes substitute an auger. This gimlet is made in the usual shape of gimlets, and needs no further description, as I claim nothing in the peculiar construction of the gimlet. B, Figs. 1 and 2, is my reaming device, the object of whose use is the enlargement of the top of a bored hole so as to admit of the insertion of the top of a screw, and leaving the upper surface of the same flush with the surface of the bored plank or other substance into which the gimlet makes a hole. My reamer is thus made: It is a short tube, B^x, Figs. 1 and 2, fastened, when in use, to the shaft of the gimlet, by a thumb-screw, C, Figs. 1 and 2, or a set-screw, which tube bears above (and firmly attached to it, being cast in the same piece) a truncated cone, D, Figs. 1 and 2, bored through its center, so as to admit the passage of the gimlet (or auger) shaft. This cone is cut away in an axial line, (see Fig. 2,) so that but half of it is left—the edge seen in Fig. 2, and on the left hand in Fig. 1, being the cutting-edge. I cut away or chamfer this cutting-edge in any convenient manner. I use this device, also, in another way. Withdrawing it from the gimlet-shaft, I reverse it, and, replacing and fastening it again, by means of the thumb-screw C, it answers as a stop, to

prevent the too great penetration of my gimlet or auger.

Where many holes are to be bored, as in the building of ships, &c., the advantages of the use of this device are too obvious to need further enlarging upon.

The next portion of my invention is the countersinking portion, which gives the name to my device. D, Figs. 1 and 2, is my countersinking device, composed of a thick cylinder of metal, D^x, Figs. 1 and 2, bored through the center, so as to admit of the passage of the gimlet-shaft, and secured to it, like my reaming device, by a thumb or set screw, E, Figs. 1 and 2. From one end of this cylinder D^x (the lower end, as seen in the drawing,) proceeds a plate of steel or other metal, F, Fig. 2, F G, Fig. 1, which, on one side, at F, Fig. 1, of the gimlet-shaft, is fashioned, at its lower end, into a cutter, whose use is to remove, by horizontal cutting, a ring of wood surrounding the bored aperture, and at the other side G, Fig. 1, is so fashioned as that, at the farthest point from the center of the gimlet-shaft, a sharp point projects downward, whose use is to inscribe the incised circle which describes the periphery of the proposed enlargement of the bored aperture.

And the operation of my device is this: When I propose to bore a hole in a plank, and ream the top of the same, so as to admit of the sinking of the head of a screw, I place the device B and C on the gimlet, and fasten it by the thumb or set screw C. Having bored the hole in the usual manner, I continue the boring action till the cutting-edge of my reamer has cut the conical aperture made by it to a sufficient depth, when the operation is finished.

To bore a hole to a certain depth, I withdraw, reverse, replace, and refasten my reaming device B and C at any distance desired from the point of the gimlet, when, the point of the gimlet having penetrated to the desired distance, the farther penetration is automatically stopped. My countersinking device is susceptible, by reversion, of the same use.

To countersink, I place my countersinking arrangement D and C in the position occupied in the drawing by the reamer B, reversing it so that the cutting parts are toward the gimlet-point, and operate in the same manner as hereinbefore explained as to the reamer, cut-

ting to any depth desirable, according to the thickness which I want my plug to be.

I do not confine myself to any particular bevel of my reamer, or to any peculiar fashion of the cutting portion of it, or of the countersinking device; nor to the use of my devices in combination with gimlets or augers solely, as I use them on drills, also, used for boring metals and other substances; but

What I claim herein as of my own invention, and desire to secure by Letters Patent, is—

As a new article of manufacture, the adjustable reamer A and countersink D, both constructed as described, and arranged in combination with a bit or gimlet, to operate as and for the purpose described.

SAMUEL ELLIOT HOLBROOK, JR.

Witnesses:

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