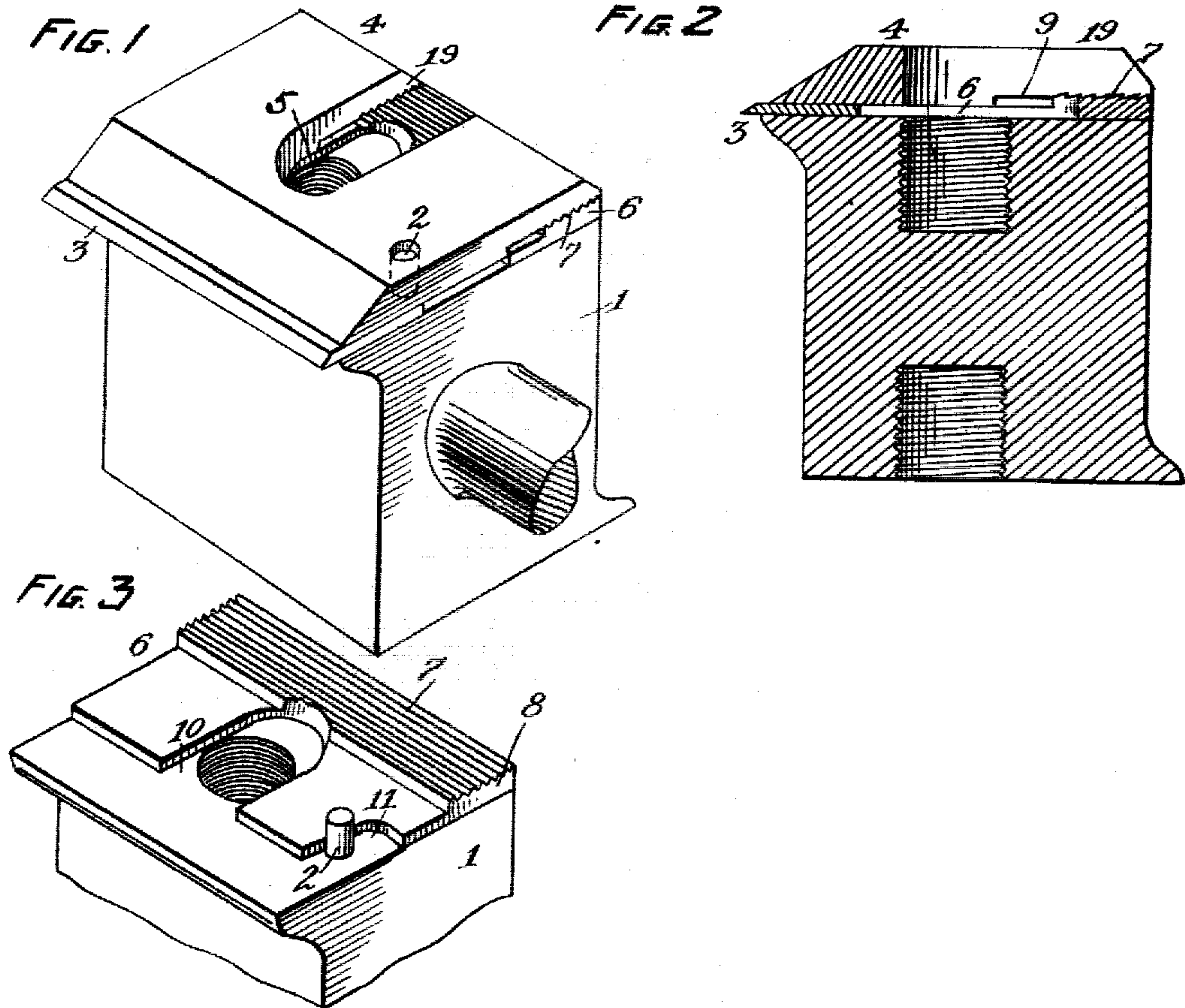


No. 811,769.

PATENTED FEB. 6, 1906.

J. B. FORBES.
PLANNER HEAD.
APPLICATION FILED JULY 8, 1905.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN B. FORBES, OF SAN FRANCISCO, CALIFORNIA.

PLANER-HEAD.

No. 811,769.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed July 6, 1905. Serial No. 268,343.

To all whom it may concern:

Be it known that I, JOHN B. FORBES, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Planer-Heads and Knives, of which the following is a specification.

In the use of revolving cutter-heads in wood-planers it is necessary that the blade or bit be rigidly secured between the cap and head to hold its cutting edge in perfect alignment and prevent it from being driven back by the rapid and forcible blows it receives by coming in contact with the material upon which it is being operated.

By the use of my invention the bit is so firmly and correctly held that the cut made by it is of a uniform depth, and as it is worn down by the necessary grindings it can be gradually advanced to project beyond the head to do its work and yet be always held as rigidly as it was when new.

In the accompanying drawings, in which the same reference-numeral indicates a corresponding part in each of the views in which it occurs, Figure 1 is a perspective view of one end of a planer-head without the clamping-bolt. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a broken view similar to Fig. 1 with the cap removed.

Referring more particularly to the drawings, 1 indicates the ordinary planer-head, which is preferably provided with the usual guide stop or pin 2.

3 is the bit or cutter, which is held in position with its front edge projecting beyond the head by the cap 4 and a bolt which screws into the recess 5. Located between the cap and the head to the rear of the bit is a block or stop 6, which is adapted to engage with the rear edge of the blade or bit and prevents its being driven back by the blow or impact which it receives when its front edge engages with the material being acted upon.

The under side of the rear edge of the cap is provided with shoulders to engage with corresponding shoulders on the rear portion of the block 6. By recessing the cap and block longitudinally the shoulders form ridges or corrugations 7, which preferably extend from end to end and in alignment with the axis of the head, so that the block is always held perfectly true, and by making the front wall of each of the recesses of the cap and the rear wall of those in the block

straight or at right angles to the flat faces of the cap and block, respectively, a very secure construction is secured, although both faces of the recesses can be inclined, if desired. The rear edge of the block is preferably made thicker where the recesses are formed, as shown at 8, to prevent its being weakened thereby, and the cap is correspondingly recessed, as shown at 9, to permit of the cap resting flat upon the blade and the block. The forward edge of the block, which is of the same thickness as the bit, is recessed or cut away, as shown at 10, to avoid engaging with the clamping-bolt and at 11 to avoid engaging with the pin 2.

As the cutting edge of the bit is worn away from use and grinding the desired amount of projection is secured by moving the bit forward the distance of one or more corrugations, the recess 9 being of sufficient width to permit of moving the block 6 forward until the bit is substantially worn out.

In using my invention the bit or cutter is clamped between the cap and head in the usual manner, with a sufficient portion projecting to engage with the material to be operated upon. The rear edge of the bit abuts against the forward edge of the block or support and is thereby rigidly held against displacement, for with the block interlocked with the cap by means of the corrugations the bit cannot move without the movement of the cap. In case there should be any inequality in the projecting portion of the blade caused by uneven grinding, as by one end projecting farther than the other, it can be readily adjusted by turning the cap, together with the bit and block, at an angle to the head. This movement is possible by reason of the enlarged opening or slot 19 in the cap and the openings 10 and 11 in the supports.

The bit is rigidly held against backward movement by a plurality of stops or shoulders, which act positively at any and all adjustments of the bit. As the invention can be used with the ordinary head by making the change in the cap and the support, the invention can be readily applied to planers now in use at a very small cost, and thereby secure the advantages of a positively-locked planer-bit.

The bit can be readily removed by simply loosening the cap without having to take it off entirely, as must be done with a broad perforated bit, and the bit upon either side of the head can be removed without loosen-

ing the one upon the other side, thereby rendering it more convenient for the purpose of repairs, as for regrinding one bit in case it should be dulled by striking an object that is
5 not struck by the other bit.

Having described my invention, I claim—

1. In a planer-head, a cap, the rear edge of which is recessed longitudinally upon its under surface and shouldered, and a support for
10 engaging with the bit and holding it in position, the rear edge of the support being thicker than the forward edge and provided with shoulders for engaging with the shoulders of the cap.

15 2. In combination with a planer-head, a cap having a recess in its rear edge, means for

securing the cap to the head, a bit held between the forward parts of said cap and head and a block held between the rear parts of said parts so that the bit will abut against the
20 forward edge thereof, said block having a thickened rear part adapted to engage with the recessed part of the cap, said thickened part and the recessed part being corrugated, the corrugations engaging with each other. 25

In testimony whereof I have affixed my signature, in presence of two witnesses, this 23d day of June, 1905.

JOHN B. FORBES.

Witnesses: 

W. S. BOYD,

M. R. SEELY.