No. 633,452. Patented Sept. 19, 1899.

C. R. HARVIN.

MATCHER HEAD.

(Application filed Feb. 2, 1899.)

(No Model.)

FIG. 1.

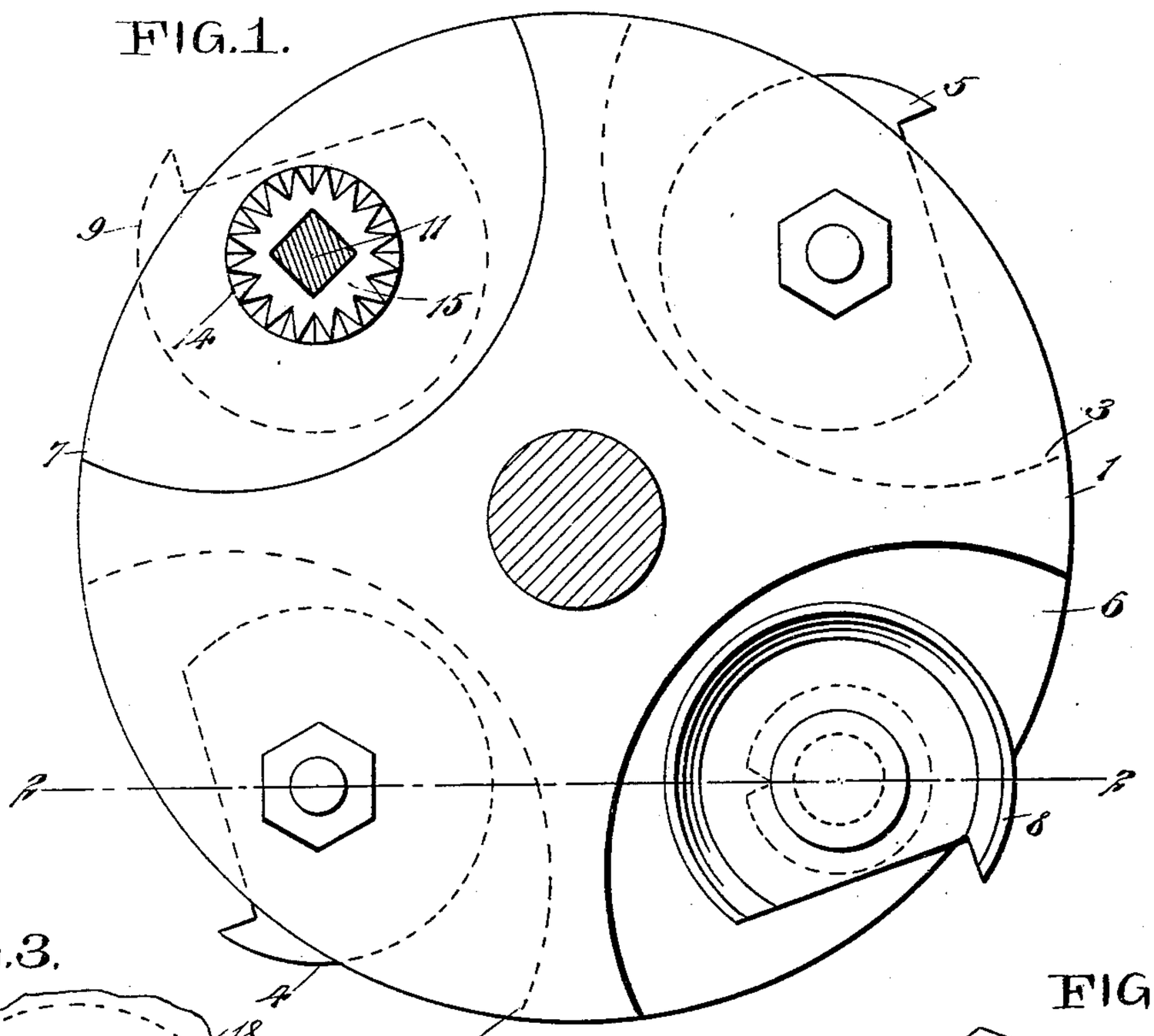


FIG. 3.

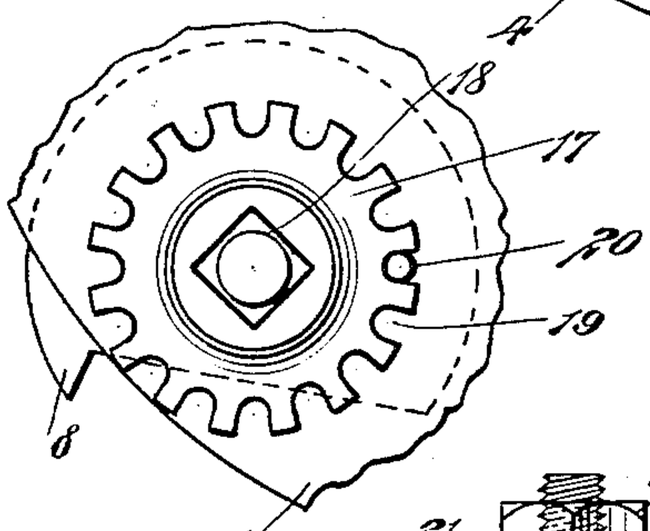


FIG. 2.

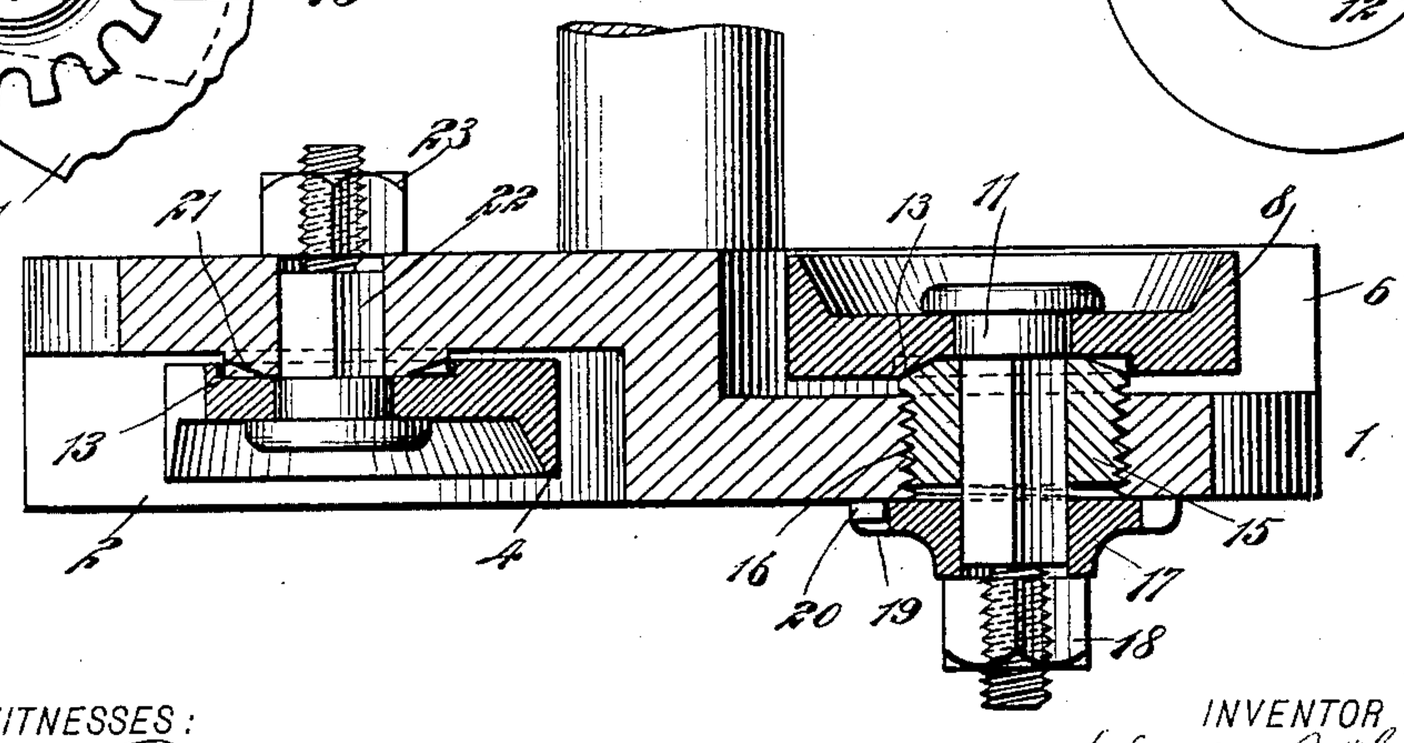
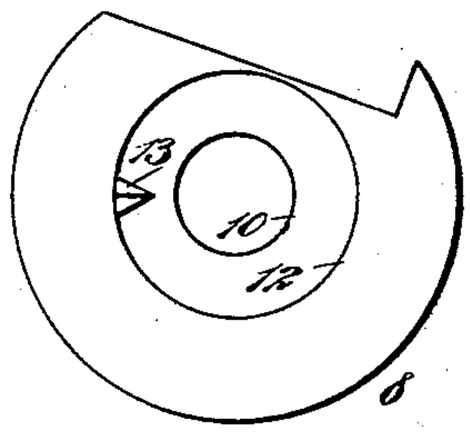


FIG. 4.



WITNESSES:

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MATCHER-HEAD.

SPECIFICATION forming part of Letters Patent No. 633,452, dated September 19, 1899.

Application filed February 2, 1899. Serial No. 704,239. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. HARVIN, of Manning, in the county of Clarendon and State of South Carolina, have invented a new and Improved Matcher-Head, of which the following is a full, clear, and exact description.

This invention relates to improvements in matcher-heads for planing-mills; and the object is to provide a simple means whereby the cutters or bits may be vertically adjusted to adapt the device to different widths of tongues or grooves, and, further, to provide a simple means to prevent the cutters or bits from slipping backward when the device is in use.

I will describe a matcher-head embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a top plan view and partial section, with one of the cutters or bits removed, of a matcher-head embodying my invention. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a bottom plan view of a portion of the device, showing an adjusting mechanism employed; and Fig. 4 is an inner face view of one of the cutters or bits.

Referring to the drawings, 1 designates the cutter head or carrier, having on its under side diametrically opposite depressions or seats 2 3 to receive the bottom cutters or bits 4 5, and on its upper side it has diametrically opposite seats 6 7 to receive the upper cutters or bits 8 9.

In devices of this character it is not usual to adjust vertically the bottom cutters or bits. The upper cutters or bits, however, are to be adjusted vertically to adapt the device to different thicknesses of floor-boarding or to the different widths of tongues or grooves to be formed. I will therefore describe the means for adjusting the upper cutters or bits.

Each upper cutter or bit has a central opening 10, through which the round portion of a bolt 11 passes, the head of the bolt bearing upon the upper side of the cutter or bit. The under side of the cutter or bit has an annular depression 12, at one side of which is a tooth 13, adapted to engage in either one of a series of notches 14, formed in the upper end of an exteriorly-threaded sleeve 15, engaging in a tapped opening formed through the head 1. The bolt 11 has a portion of its length angular in cross-section, and this portion passes through a correspondingly-shaped opening in the sleeve 15 and also through a correspondingly-shaped opening in a washer or locking device 17, and the end which projects beyond the washer 17 is provided with a screw-thread engaged by a nut 18. The washer 17 is provided on its periphery with a series of notches 19, with either one of which a lug 20 on the under side of the cutter-head may be engaged.

In adjusting an upper cutter the nut 18 is to be loosened sufficiently to allow the washer 17 to drop downward clear of the lug 20, so that by engaging the said washer with a suitable tool it may be rotated, and this movement of the washer will rotate the bolt 11, and consequently rotate the sleeve 15 in a direction to raise or lower it, as desired. After adjustment vertically the cutter is to be raised to clear its tooth 13 from the notch 14, in which it is engaged, so that said cutter-head may be rotated to bring its cutter portion outside of the cutter-head, as indicated in Fig. 1. When in this position, the cutter or bit is to be lowered to engage its tooth 13 in a notch 14. Then the washer 17 is to be moved to engage the lug 20 in one of its notches 19, after which the device may be tightened by screwing up the nut 18.

The bottom cutters or bits have a tooth 13 on their inner faces, as before described, and adapted to engage any one of a series of notches formed in a boss 21, provided on the under side of the cutter head or carrier, so as to hold the cutter or bit as rotatively adjusted. The bottom cutter or bit is clamped in position by means of a bolt 22, having a portion angular in cross-section and engaging in a correspondingly-shaped opening in the cutter-head, and a nut 23 is provided on the outer end of the said bolt.

It will be seen by my improvement that the upper cutters or bits may be quickly and readily adjusted, both vertically and rotatively, without wholly removing them from the cutter head or carrier.

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

1. In a matcher-head, a head or carrier, a cutter or bit carried thereby, a sleeve adjustable in the head or carrier and having a notched end to receive a tooth on the cutter or bit, a bolt passing through said cutter or bit and having a portion angular in cross-section passing through a correspondingly-shaped opening in the adjusting-sleeve, and a locking device for said bolt, substantially as specified.

2. The combination with a head or carrier, of a cutter or bit having a depression in its inner face and a tooth at one side thereof, a sleeve adjustable in said head or carrier and having a series of notches on its end to receive said tooth, a bolt passing through the cutter or bit and having a portion angular in cross-section passing through a correspondingly-shaped opening in the sleeve, a washer engaging with the outer end of said angular portion of the bolt, and having notches in its periphery to receive a lug on the head of the carrier, and a clamping-nut on the bolt, substantially as specified.

3. In a matcher-head, a head or carrier, a cutter or bit having a depression in its inner face, and a tooth at one side of said depression to engage in any one of a series of notches formed in a boss on the head or carrier, a clamping-bolt having a cylindrical portion for engaging in a correspondingly-shaped opening in the cutter or bit, and an angular portion for engaging in a correspondingly-shaped opening in the head or carrier, substantially as specified.

CHARLES R. HARVIN.

Witnesses:
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JOSEPH SPROTT.