

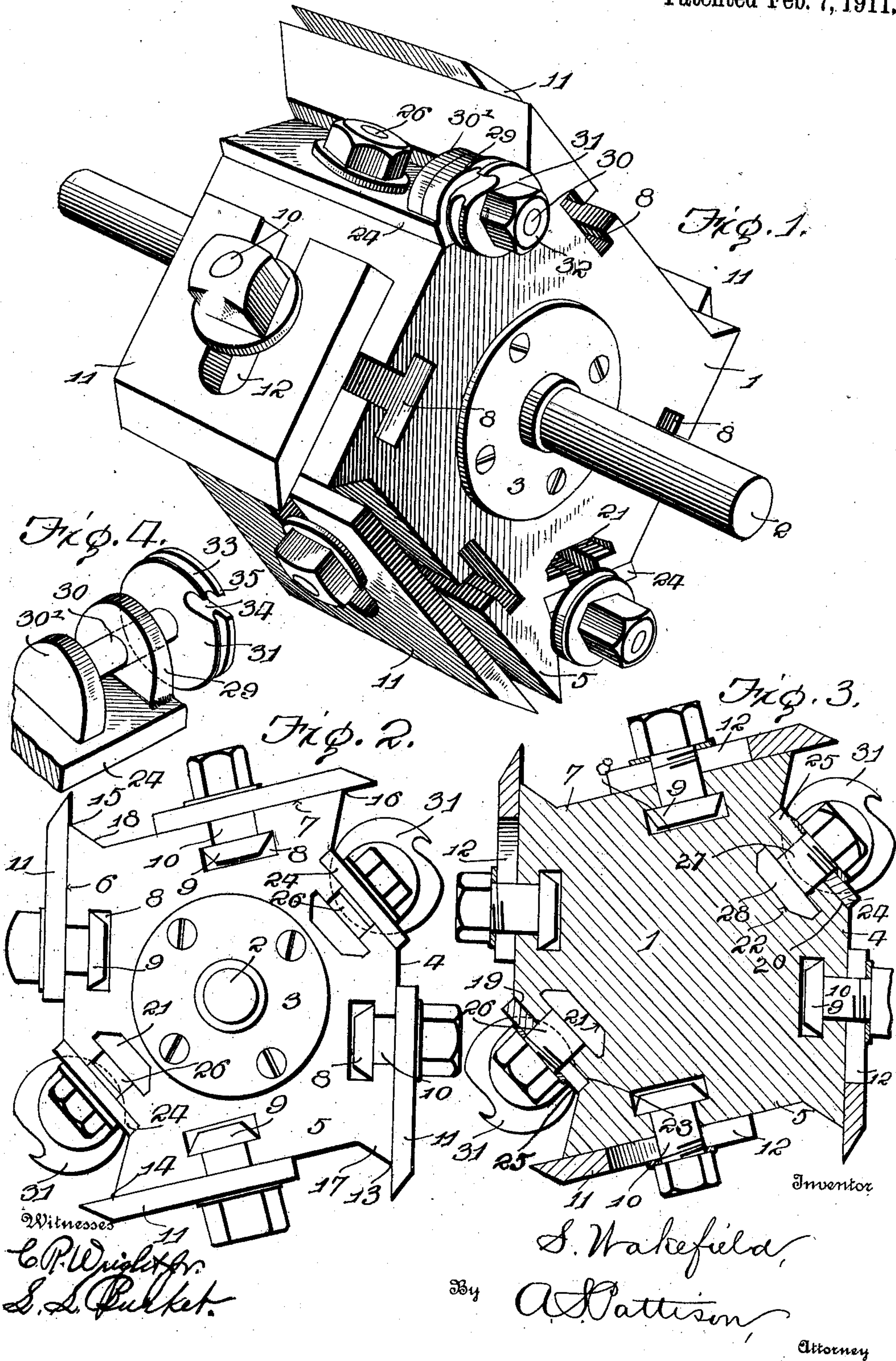
S. WAKEFIELD.

CUTTER HEAD.

APPLICATION FILED MAY 8, 1909.

983,330.

Patented Feb. 7, 1911.



UNITED STATES PATENT OFFICE.

SEYMOUR WAKEFIELD, OF BURLINGTON, VERMONT.

CUTTER-HEAD.

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Specification of Letters Patent.

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Application filed May 8, 1909. Serial No. 494,790.

To all whom it may concern:

Be it known that I, SEYMOUR WAKEFIELD, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Cutter-Heads, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in cutter heads for planing machines.

The object of my invention is to provide a cutter having means whereby one or two beaders can be readily attached to the head without removing any of the cutters and thus the attaching of the beader or beaders do not in any way affect the cutting qualities of the head.

Another object of my invention is to provide a more simple, cheap and effective combined cutter and beader.

In the accompanying drawings—Figure 1 is a perspective view of my improved cutter head. Fig. 2 is a side elevation, and Fig. 3 is a transverse sectional view of Fig. 2. Fig. 4 is a perspective of my improved beader removed from the cutter head.

Referring now to the drawing, 1 represents my improved cutter head, which, as shown, is of an angular form in cross-section and of any desired length according to the kind and character of work to be planed. The cutter head is made of metal and having at each end a journal 2, which may be in the form of shafts extending longitudinally through the head, or may be in separate journals, as shown in the drawing, and each journal having a flange 3 by means of which it is screwed or bolted to the head all of which can be varied without departing from my invention.

As before stated the head is of an angular form having four flat sides 4, 5, 6 and 7, which are provided with longitudinal grooves 8 in which the dovetail heads 9 of the securing bolts 10 pass, and by means of which the cutters 11 are firmly clamped and held in their adjusted position on the flat surfaces of the cutter head. The said cutters are provided with slots 12, which extend longitudinally of the cutters and through which the bolts 10 pass, and by means of which the knives can be adjusted in or out for causing the cutters to cut a thick or thin shaving as desired.

As shown in the drawings, the sides 4 and

6 are parallel and the sides 5 and 7 are parallel. The side 4 is at an obtuse angle to the side 5; the side 5 at an acute angle to the side 6, the side 6 at an obtuse angle to the side 7, and the side 7 at an acute angle to the side 4, whereby the points 13, 14, 15 and 16 are all in a circumferential alinement with the shaft, so that the cutters carried thereby will all cut upon the rotation of the head. In order to give the sides 4 and 6 a longer surface the sides 5 and 7 are extended outwardly as indicated at 17 and 18, thus bringing the points 13 and 15 in a circumferential line with the points 14 and 16, whereby all the knives cut as desired. The relative angles of one flat surface to its succeeding and preceding surface sets all the cutters at the same plane in respect to the cutting surface and provides means whereby a greater flat holding surface may be had for the beaders which I will now proceed to describe. The sides 4 and 6 are cut away at opposite ends forming the flat surfaces 19 and 20, at an obtuse angle to the said sides 4 and 6, but leaving the points 14 and 16 for abutting surfaces and support for the outer end of the cutters. The surfaces 19 and 20 are provided with dovetail grooves 21 and 22, which extend transversely of the cutter head. Resting upon said surfaces 19 and 20 are plates 23 and 24, each of which is provided with a transverse slot 25 and extending through said slot 25 are bolts 26 and 27, having dovetail heads 28 in the grooves 20 and 21, whereby the plate may be adjusted outwardly or transversely of the head or entirely removed as desired. The said plates 23 and 24, at one end, are each provided with a laterally and outwardly extending lug 29. Extending transversely through said lugs or ears are bolts 30 and mounted upon said bolts on the outside of the ears are the beaders 31, which are clamped to the ears by nuts 32. The beaders as shown are of a disk form having a circumferential groove 33 in its outer periphery and said groove having the cut-away portion 34 terminating in the semi-circular portion 35 forming the cutting edge for forming the bead. The beaders, as shown, are on opposite sides of the head and thus cut evenly and while I have shown but a single disk upon each bolt it will be understood that two or more may be placed thereon for cutting two or more beads or other styles of beaders may be used.

The construction above shown and described produces an angular cutter head having four flat surfaces, upon which the cutters are firmly clamped and the surfaces cut at an obtuse angle whereby the cutters are set at the proper angle to the cutting plane without any adjustment which is not the case of devices of this character heretofore produced. The device also produces a combined cutter and beader whereby one or two beaders may be attached without removing any of the cutter blades and in the least interfering with the cutter, thus the cutting qualities of the cutter head is not affected.

The bolt 30 is provided with a head 30' which has one side cut away to form a flat surface to rest against the plate whereby the bolt is held against rotation when tightening the nut for clamping the header against the ear or lug.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A cutter head, comprising an angular body-portion, cutters carried by four flat surfaces thereof, the body portion having two opposite flat peripheral surfaces cut away and forming flat surfaces at an acute angle to the flat cutter surfaces, and beader carrying members carried by said flat surfaces and beaders carried by said members.

2. A cutter head, comprising an angular four sided body portion having each side at an angle to the sides in advance thereof and the diametrically opposite sides being parallel, said sides having dove-tail transverse grooves therein, cutters resting against the sides and bolts with their heads in said dovetail groove and securing the cutters thereon, the body portion having two opposite sides cut away and forming flat peripheral surfaces at an obtuse angle to the side and having a dovetail transverse groove, a beader carrying plate resting upon the flat surface and adjustably secured thereon, laterally extending ears carried by one end of said plate, bolts extending through said ears and beaders on said bolts.

3. A cutter head, comprising an angular four sided body-portion having each side at an angle to the side in advance thereof, the opposite sides being parallel and all the sides having dovetail transverse grooves, cutters resting against said sides and having securing bolts passing therethrough and having their heads in the dovetail grooves and clamping the cutters thereon, the two opposite sides having cut-away portions forming flat peripheral surfaces at an obtuse angle to the side and said flat surface having dovetail transverse grooves, said cut-away portion being in diametrically opposite side corners, and said sides having an extended end in the opposite two corners, plates resting upon the flat surfaces and having bolts passing therethrough and having their heads in the dove-tail slots, laterally extending ears carried by one end of said plate, bolts extending through said ears, beaders composed of disks having circumferential grooves and cut-away transverse slot intersecting said groove and clamped upon the ears by the bolts.

4. A cutter head, comprising an angular four sided body portion having two opposite sides at an acute angle to the sides in advance thereof, and at an obtuse angle to the side in rear thereof, cutters carried by the four surfaces, the body having two opposite surfaces cut away and forming flat surfaces at an obtuse angle to the flat cutting surfaces, beader plates resting upon said flat surfaces, means for securing the beader plates thereon, laterally extending ears carried by one end of said plates and having openings therein, bolts passing through said openings and having squared heads engaging the plates and holding the bolts against rotation, beaders on said bolts on the outside of said ears and nuts on the bolts and clamping the beaders against the ears.

In testimony whereof I affix my signature in presence of two witnesses.

SEYMOUR WAKEFIELD.

Witnesses:

CHARLES E. ALLEN,
WILLIAM M. BUXTON.