

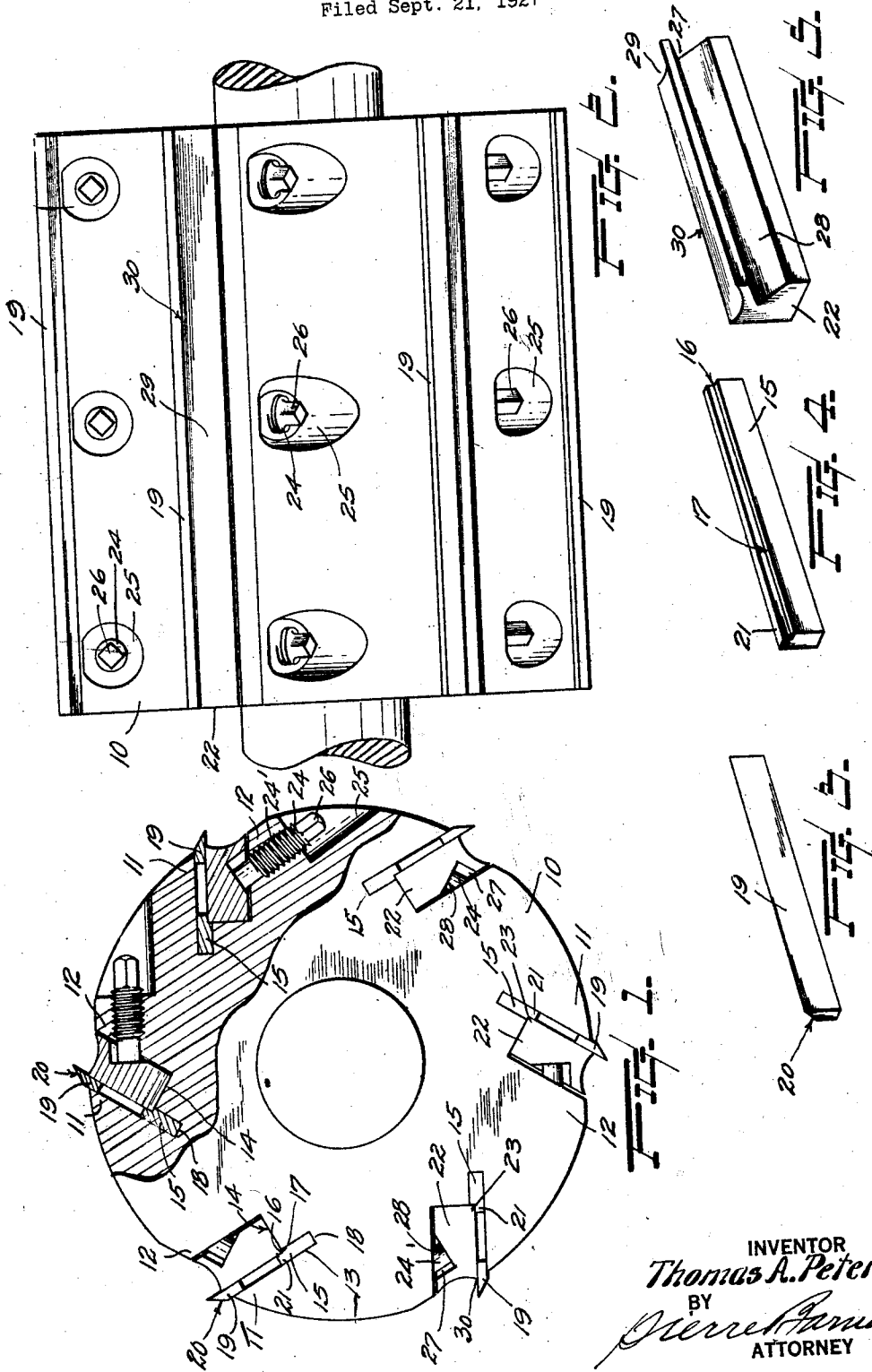
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CUTTER HEAD

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CUTTER HEAD.

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This invention relates to cutter-heads for wood working machines, such as planers, or the like.

The object of the invention is the improvement of cutter-heads of this character with a view to increase its efficiency and reduce the cost of manufacture.

A more specific object is to provide a cutter-head which is adapted for the use of narrow cutter blades, and which is provided with means for rigidly holding the blades in adjusted positions.

Another specific object is to provide a cutter-head with means which will enable the blades being firmly clamped to the body of the head in close proximity to the periphery thereof.

Other specific objects and advantages of the invention will appear in the following description.

The invention consists in the novel construction, adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawing,—

Figure 1 is a view partly in end elevation and partly in transverse section of a cutter-head embodying my improvements; Fig. 2 is a front elevation of Fig. 1; Fig. 3 is a perspective view of a cutter-blade; Fig. 4 is a perspective view of a seat strip; and Fig. 5 is a perspective view of a blade-clamping strip; the elements illustrated in Figs. 3, 4 and 7 being shown detached from the head.

According to the present invention, a cutter head comprises a cylindrical body 10, of steel or other suitable material, having circumferentially spaced apart longitudinal slots located between front and rear walls 11 and 12, of the body 10.

Said slots are disposed somewhat tangentially of the body, each slot being formed with a rear portion 13 of greater depth or extension than the front portion which terminates at a bottom seating surface 14 which is disposed at right angles, or nearly so, with respect to the slot surfaces of the respective walls 11 and 12. Provided in the rear portion 13 of a slot and extending outside of the plane of the surface 14 is a metal strip 15 which is provided with a reentrant angle 16 (Fig. 4) arranged to have one of its sides 17 in the plane, preferably, with the bottom surface 14 of the respective recess when the strip 15 is seated against the bottom 18 of rear portion of slot extension 13.

For each slot is provided a narrow cutting blade 19 which is beveled, as at 20, upon its rear side and is of a thickness equal to the thickness of the reduced portion 21 of a strip 15.

22 represents a blade clamping-strip, one for each slot, and is adapted to have its inner rear corner, or heel, 23 fit within the reentrant angle 16 of a seat strip 15 and against the outer side surface of the reduced portion 21 of the strip.

The rear surface of the clamping-strip is adapted to bear against a cutter blade to clamp the same against the respective body wall 11. To effect the clamping function of a strip 22 there is provided for each of them one or more set screws 24, three being shown in Fig. 2, taking in threaded holes, as 24', provided in the respective body wall 12 and extending from recesses 25 into which the respective screw heads 26 are sunk interiorly of the cutting circle of the cutter head.

The set screws 23 are disposed at an angle approximating 35° with respect to the plane of the respective cutter blades, and to afford suitable bearing surfaces upon the clamping strips, each of the latter is formed with a reentrant angle 27 in its front side to provide the bearing surface 28 above referred to.

As shown in Fig. 5 the reentrant angle of a clamping strip extends the entire length of the same to enable the strip to be located at selected positions lengthwise of the body 10 to accommodate the positions of the set screws for different lengths of cutter blades and with respect to different endwise locations of the blades.

The outer surface of each clamping strip is provided with a concave groove 29, the arc of which extends to the edge 30 which abuts against the respective blade, thus adapting the clamping strips to serve as chip breakers.

In planers for wood working machines it is important that the planer blades be rigidly secured in their adjusted positions to the body, or cylinder, of the head. This is accomplished in the present invention by means of the clamping strips 22 each having a heel bearing upon a seat strip 15 and about which the clamping strip is swung as a fulcrum through the instrumentality of the respective clamp screws. The seat strips 15 are also held in place by the provision of

reentrant angles within which fit the clamping strips.

By the provision of a groove 27 in a clamping-strip of the entire length of the strip, short strips may be used with short blades and located in most advantageous positions for holding the blades.

What I claim, is,—

1. A cutter head provided with a groove having a side-wall provided with a seating surface, and screw threaded holes extending through the opposite wall of the groove, a cutter blade, a narrow strip, a clamping member adapted to bear along its opposite edges against the cutter blade and strip respectively, and screws engaging in said holes for regulating the clamping member for securing both the cutter blade and the strip to the cutter head.

2. A cutter-head for woodworking ma-

chine, comprising a cylinder having a longitudinal groove, a cutter-blade, a seating strip having a reentrant angle to provide the strip with an edge portion of approximately the thickness of said cutter-blade, a clamping strip having in one of its sides a groove extending longitudinally thereof, and a plurality of set screws extending through threaded holes provided in one of the walls of the groove of said cutter-head and into the groove of the latter, said screws serving to cause the clamping strip to bear against the reduced portion of said seating strip and against the cutter-blade to clamp the latter against the other wall of the cutter-head groove.

Signed at Onalaska, Washington, this 26th day of August, 1927.

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