June 9, 1959 P. KOLIMBAT 2,889,861

MEANS FOR MOUNTING BLADES IN WOODWORKING CHIPPERS

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Fig. 2

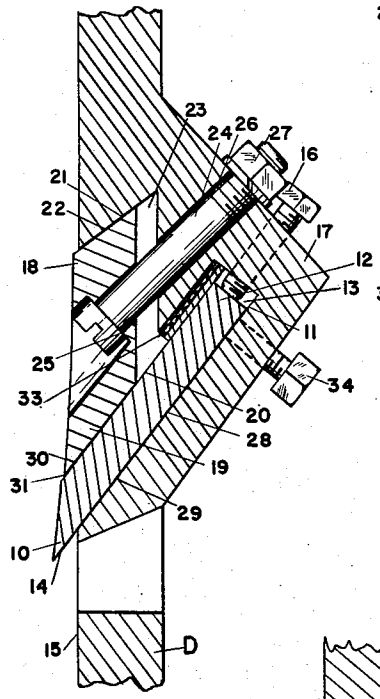


Fig. 3

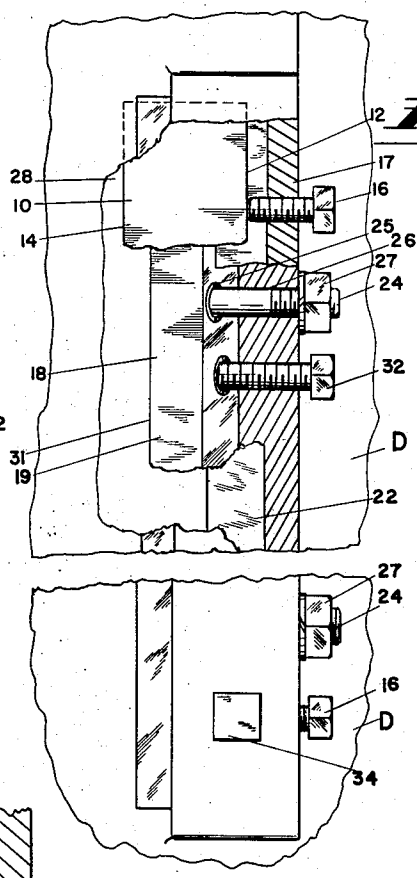


Fig. 4

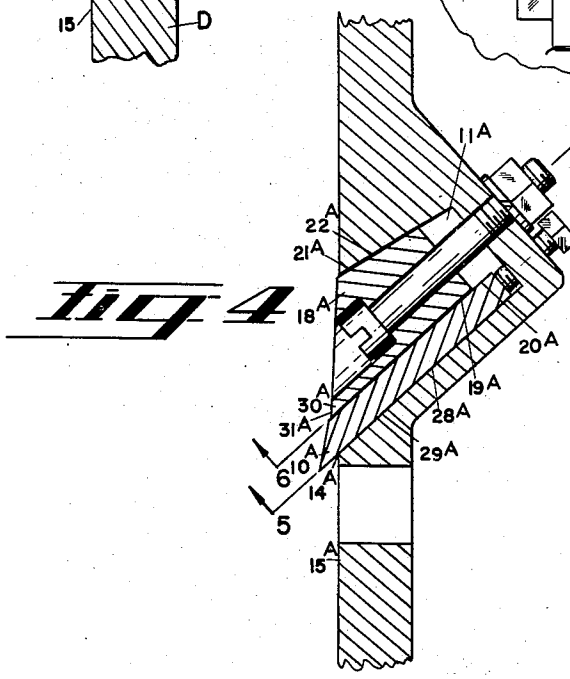
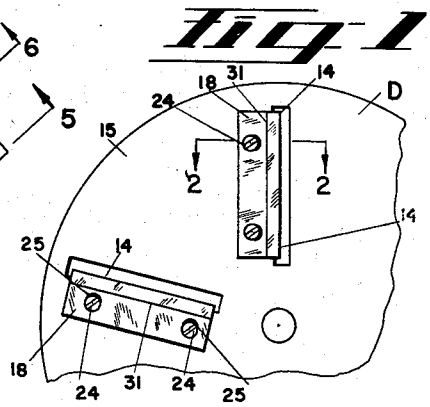


Fig. 1



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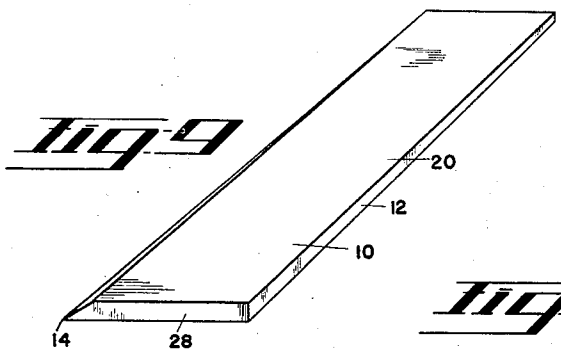


Fig. 4

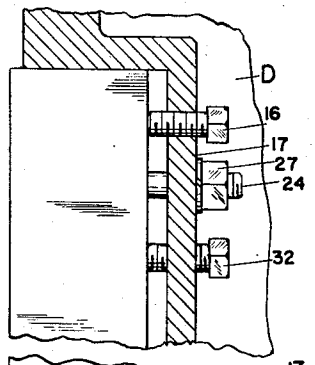
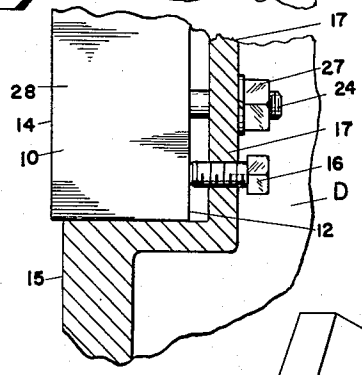


Fig. 5



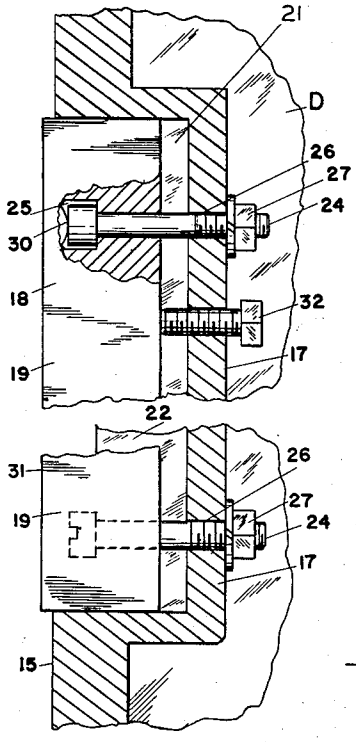


Fig. 6

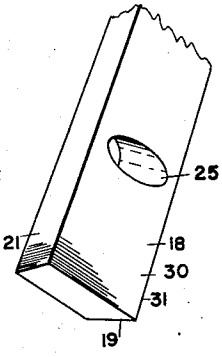


Fig. 7

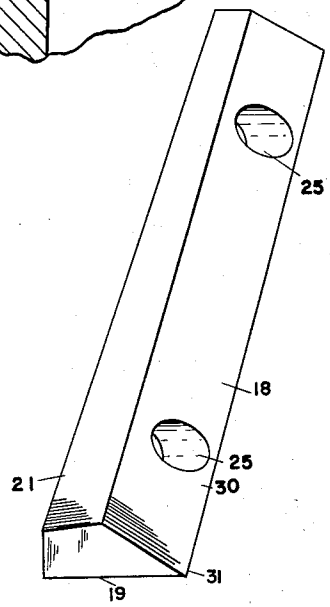


Fig. 8

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MEANS FOR MOUNTING BLADES IN WOODWORKING CHIPPERS

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Application July 17, 1957, Serial No. 672,514

1 Claim. (Cl. 144—219)

The present invention relates to a blade mounting structure in chipping machines, and more particularly to chipping machines utilizing a rotary disk carrying the cutter blades.

The primary object of the invention is to provide a cutter blade mounting in chipper cutter disks wherein the blades are secured in blade receiving sockets formed in the cutter disks by a clamping wedge.

Another object of the invention is to provide in a device of the character described above, means for accurately adjusting the position of the cutter blade within the receiving socket.

A further object of the invention is to provide in a blade mounting of the above type means for holding the blade in a predetermined position including adjustable stops working in combination with a clamping wedge.

A still further object of the invention is to provide in a chipper blade mounting means for disengaging the clamping wedge from the blade and socket when removing the blade from the disk.

Other objects and advantages will become apparent from the following specification when considered in the light of the attached drawings, in which:

Figure 1 is a fragmentary front elevation of a cutter disk incorporating the invention.

Figure 2 is an enlarged fragmentary sectional view taken on line 2—2 of Figure 1 looking in the direction indicated.

Figure 3 is a rear elevation of the blade holding socket with parts broken away and in section for convenience of illustration.

Figure 4 is a view similar to Figure 2 of a modified structure for mounting the blade.

Figure 5 is a sectional view, taken on line 5—5 of Figure 4, looking in the direction indicated, partially broken away for convenience of illustration.

Figure 6 is a sectional view, taken on line 6—6 of Figure 4, looking in the direction indicated and partially broken away.

Figure 7 is a fragmentary perspective view of the wedge illustrated in Figure 2.

Figure 8 is a perspective view of a modified wedge as illustrated in Figure 4.

Figure 9 is a perspective end view of a typical cutter blade used in both forms of the invention.

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures, the reference character D indicates generally a chipper disk of the type with which the invention is used. Cutter blades 10 are mounted in sockets 11 formed in the disk D.

As best illustrated in Figures 1, 2, 3, 8 and 9, rear edge 12 of the blade 10 is inserted within a slot 13 formed within the receiving socket 11 of the disk D. A cutting edge 14 of the cutter blade 10 projects beyond face 15 of the disk D and this distance of the projection is determined by the adjustment of set screws 16 threaded through rear wall 17 of the socket 11.

A clamping wedge 18 has a face 19 engaging a face 20 of the blade 10. An oppositely disposed face 21 of the wedge 18 engages the inner face 22 of the socket 11 outwardly of the inner end 23 thereof. The planes of the face 19 and the face 21 are formed at a converging angle to one another, as best illustrated in Figure 2. The face 19 of the wedge 18 is forced against the face 20 of the blade 10 by clamping bolts 24, which extend through holes 25 in the wedge 18 and through holes 26 of the rear wall 17 of the socket 11. Nuts 27 threaded onto the bolts 24 draw the wedge 18 into the socket 11.

Due to the slight angle between the faces 19 and 21 of the wedge 18 and the engagement between the inner face 22 of the socket 11 and the face 20 of the blade 10, inward movement of the wedge 18 forces oppositely disposed face 28 of the blade 10 against the surface 29 of the socket 11, providing a rigid and stable means holding the blade 10 in the desired adjusted position. As the blade 10 operates in its chipping operation, the set screws 16 absorb the cutting blow exerted on the cutting edge 14 of the blade 10.

In Figures 4 through 7, a modified form of blade structure is illustrated wherein a wedge 18A is formed somewhat longer and the slot 13 has been eliminated from the socket 11A which has also been elongated.

The wedge 18A has converging surfaces 19A—21A which engage between the surfaces 22A of the socket 11 and the surface 20A of the blade 10A. The blade 10A has a surface 28A which is forced into engagement with the surface 29A of the socket 11A. The wedge 18A is secured in position in the socket 11A by means identical to the means used to secure the wedge 18.

In both forms of the invention the other lower edge 30, 30A of the wedges 18, 18A respectively extends beyond the faces 15, 15A of the disk D slightly. Its trailing edge 31, 31A extending sufficiently out from the face 15, 15A of the disk to offer a rigid support to the cutting edge 14, 14A of the blade 10, 10A in the operation of the chipper.

Referring again to the preferred form shown in Figure 2, the width of the slot 13 is sufficient to allow the blade 10 to be moved to either side of the slot 13, changing slightly the angle of the point of the cutting edge 14 of the blade 10 for use with various woods. This adjustment is accomplished by use of shims 33 and a set screw 34 and by adjusting the face 19 of the wedge 18 to correspond to the shim adjustment.

In installing a blade 10 in the disk D the blade 10 is inserted in the socket 11, and the set screws 16 are adjusted to position the cutting edge 14 of the blade the desired distance beyond the face 15 of the disk, the clamp or wedge 18 is then inserted in the socket 11 and pulled tightly against the blade 10 and the inner surface 22 of the socket 11 by tightening nuts 27 on the clamping bolts 24.

When it is desired to remove the blade 10 the bolts 24 are removed from the wedge 18. A set screw 32 is threaded through the rear wall 17 of the socket 11 engaging against and loosening the wedge 18 from against the face 20 of the blade 10 and from face 21 of the socket 11.

The operation of the modification illustrated in Figures 4 through 7 is identical to the operation of the preferred form of the invention with the exception that the blade 10A cannot be adjusted angularly.

Having thus described the preferred embodiments of the invention it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the scope of the appended claim.

What is claimed is:

A cutter blade mounting for chipper machines com-

prising a generally flat circular disk, said disk having a plurality of sockets formed therein in circumferentially spaced relation opening on one side of said disk, with each of said sockets including a side wall and a rear wall integrally joined together with said disk and extending substantially perpendicularly to each other, said side wall and said rear wall projecting from the other side of said disk, said sockets each having a pair of oppositely disposed side faces converging inwardly away from said one side of said disk, a flat cutter blade positioned in said socket and having a flat face thereof engaging one of said side faces of said socket, a wedge member positioned in said socket engaging an opposite flat face of said cutter blade and the other of said side faces of said socket, threaded means extending through said wedge and said rear wall for moving and binding said wedge in engagement with said cutter blade, threaded means projecting through said rear wall engaging the inner end of said

cutter blade for adjusting the projection of said cutter blade from the open end of said socket, and threaded means extending through said rear wall for forcing said wedge out of said socket when changing blades.

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