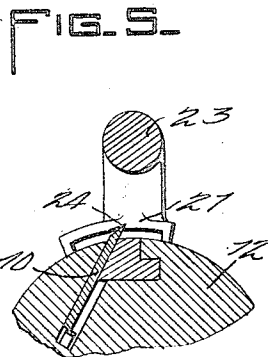
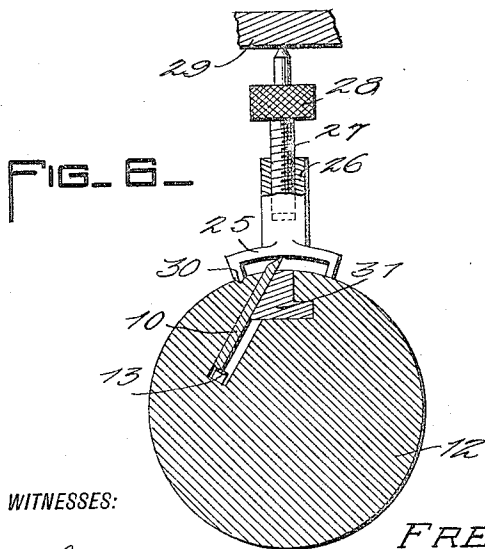
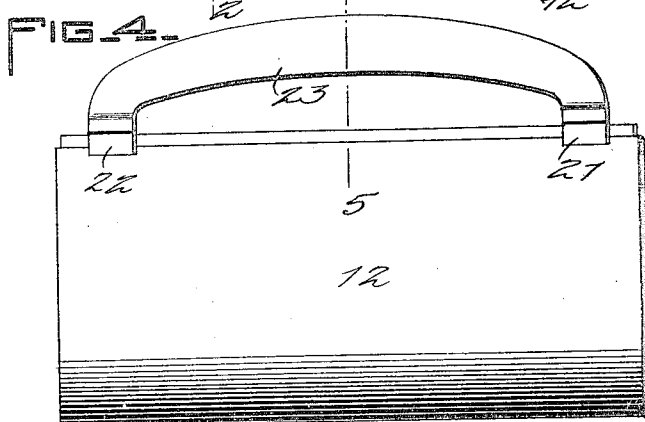
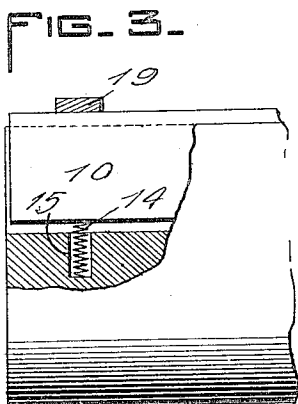
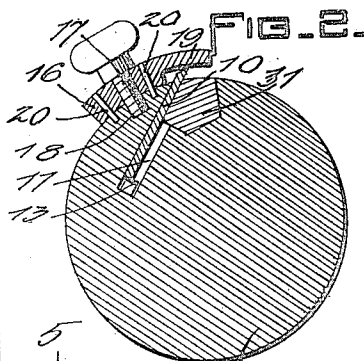
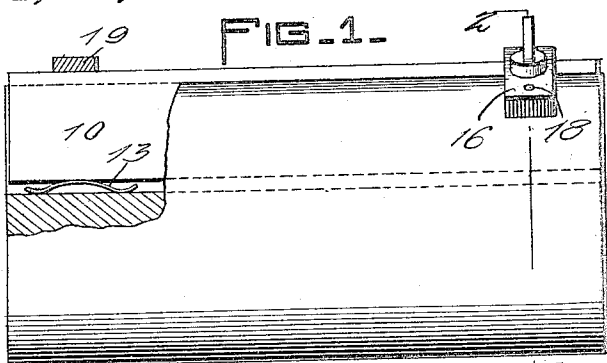


F. J. WUESTHOFF.
 KNIFE SETTING GAGE.
 APPLICATION FILED MAY 17, 1916.

1,225,552.

Patented May 8, 1917.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK J. WUESTHOFF, OF SAN FRANCISCO, CALIFORNIA.

KNIFE-SETTING GAGE.

1,225,552.

Specification of Letters Patent.

Patented May 8, 1917.

Application filed May 17, 1916. Serial No. 98,052.

To all whom it may concern:

Be it known that I, FREDERICK J. WUESTHOFF, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented a certain new and useful Improvement in Knife-Setting Gages, of which the following is a specification.

My present invention relates particularly to an improved gage for use in setting the knives of cutter heads used in wood working machinery of various types, which heads are, as well known, from one to thirty-six inches in length and hold from two to eight knives.

It is essential that the knives of cutter heads of this type be accurately set as they are jointed at high speed of the cutter head to form flat heels thereon which produce a scraping cut on the lumber. If the knives are not set true in the first instance, this heel becomes of too great width on some of the knives, resulting in poor work and often compelling a regrinding of the knives.

It is therefore my object in providing a gage to obviate the foregoing disadvantage and enable accurate setting of the knives without requiring any particular skill in the setting operation.

Heretofore it has been the custom to set the knives with a hammer and gib used first at one end and then at the other of each knife, but this method is very unsatisfactory, particularly on long knives as in driving down one end, the opposite end of the knife is almost universally displaced more or less.

In the accompanying drawings I have shown several constructions embodying my invention, whereby the disadvantages existing heretofore may be overcome, all as better understood by reference to the following description, pointing out in particular the construction shown in the drawing, wherein—

Figure 1 is a side elevation, the cutter heads being partly broken away and in section.

Fig. 2 is a cross section taken substantially on line 2—2 of Fig. 1.

Fig. 3 is a side view of one end of a cutter head, partly broken away and in section.

Fig. 4 is a side elevation, illustrating a modified form.

Fig. 5 is a sectional view, taken substantially on line 5—5 of Fig. 4, and

Fig. 6 is a cross section illustrating another modified form.

Referring now to these figures, it will be seen that, in the several forms of my invention, the blade 10 is set within its groove 11 of the cylinder 12 and disposed at its inner edge upon springs at opposite ends of the groove 11, such as, for instance, flat springs 13 as shown in Figs. 1, 2, and 6, or coiled springs 14 as shown in Fig. 3, the former being disposed within the base of the groove while the latter are disposed within cavities 15 of the head communicating with the groove.

According to the form of the invention as seen in Figs. 1, 2, and 3, the gage consists of a pair of gage plates 16, each of which is adapted to be secured to the cylinder 12 by a thumb screw 17 extending through its body and into a threaded opening 18 in the periphery of the cylinder, and each of which is provided with a gage extension 19 arranged to overlie the outer edge of the blade 10 as clearly seen in Fig. 2, the body of each gage plate 16 also having dowel pins 20 arranged to enter conformable recesses in the periphery of the cylinder to maintain the gage plate in properly aligned position with respect to the cylinder and its blade 10.

In the form of the invention shown in Figs. 4 and 5, the two gage plates 21 and 22 are connected by a curved bridge 23 forming a handle by which the two gage plates may be pressed firmly and evenly into contact with the peripheral surface of the cylinder 12, each gage plate having in its lower gage surface a groove 24 which receives the outer edge of the blade 10 and thus, in addition to setting the blade, cooperates therewith to prevent relative displacement of the gage and maintain the same in proper alignment with both the cylinder 12 and its blade at all times.

In the form of the invention shown in Fig. 6, there are two gage plates as in Figs. 1 and 2, of which one is seen at 25, provided with an outer internally threaded tubular portion 26 into which engages the screw 27 of an adjusting member including a knurled hand-piece 28 and for bearings between the gage plate and a rigid portion 29 of the machine in connection with which the cylinder or cutter head 12 is mounted, the gage plate 25 having a tapering rib 30 arranged to enter a conformable V-shaped groove in the periphery of the cylinder 12 in order to

maintain the gage plate in proper position relative to the cylinder and its blade 10 at all times.

Thus, in operation, and in the use of my invention, the usual gib for securing the blade, as indicated at 31 in Figs. 2, 5, and 6, is disposed in position to loosely and slidably support the blade 10 in each instance, and the gage plates are then pressed toward the periphery of the cylinder 12 until they firmly and evenly engage said periphery, pressing the blade 10 inwardly adjacent its opposite ends and against the tension of springs 13 or 14 as the case may be, in order to secure perfect set. The gibs 31 are then tightened to securely clamp the blades and hold the set thus accomplished.

In the case of Figs. 1, 2, and 6, the pressure of the gage plates against the periphery of cylinder 12, is accomplished through mechanical means, viz. the thumb screws 17 in Figs. 1 and 2, and the adjusting screw 27 in Fig. 6. Either of these forms is well adapted for lengthy cutter heads.

In Figs. 4 and 5, however, the pressure of the gage plates against the periphery of the cylinder 12 is accomplished by hand, and is well adapted for effective operation in connection with short cylinders.

I claim:—

1. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and pressure means including a screw carried by each gage plate for forcing its first mentioned surface against the cutter head.

2. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said

plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and relatively engaging means carried by the cutter head and each gage plate whereby to maintain said gage plates in uniform relation to the cutter head and to the blade.

3. The combination with a cutter head and its blade, of means for setting and gaging the blade including gage plates adjacent opposite ends of the blade, each of said plates having a surface movable into firm even contact with the periphery of the cutter head and also having a gage surface overlying and bearing upon the outer edge of the blade, and means whereby to maintain said gage plates in uniform relation to the cutter head and to the said blade.

4. The combination with a grooved cutter head and its blade adjustable in the groove, of springs in the groove inwardly against which the blade is movable to set position, and gage plates for bearing against the outer edge of the blade adjacent opposite ends thereof, having surfaces movable into firm even contact with the periphery of the cutter head, to limit inward adjustment of the blade.

5. The combination with a grooved cutter head and its blade adjustable in the groove, of springs in the groove inwardly against which the blade is movable to set position, gage plates having gage surfaces bearing against the outer edge of the blade adjacent opposite ends thereof, and means whereby to force the said gage plates into firm even contact with the periphery of the cutter head whereby to move the blade to set position against the tensions of the said springs.

FREDERICK J. WUESTHOFF.

Witnesses:

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