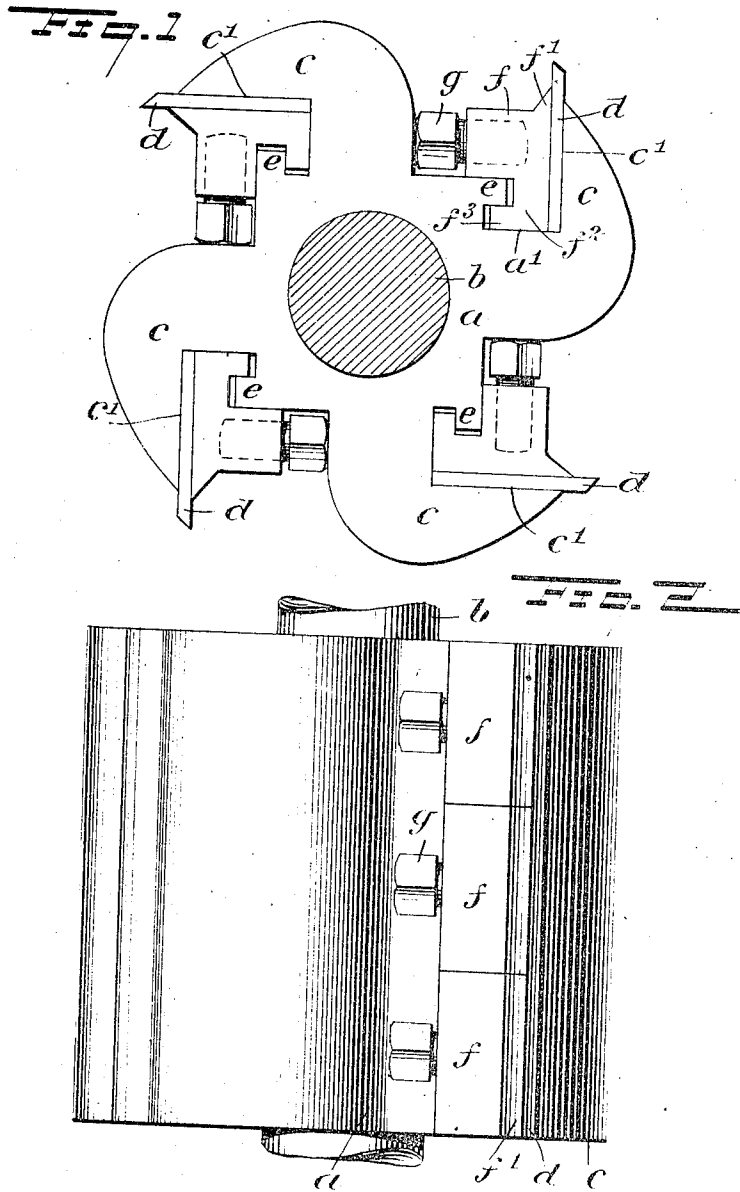


K. S. FAUCETTE.
CUTTER HEAD.

APPLICATION FILED DEC. 14, 1905.

1,013,540.

Patented Jan. 2, 1912.



WITNESSES:

John Bergstrom
Charles Owens.

INVENTOR

Karl S. Faucette

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

KARL SCHURZ FAUCETTE, OF PORTLAND, OREGON.

CUTTER-HEAD.

1,013,540.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed December 14, 1905. Serial No. 291,690.

To all whom it may concern:

Be it known that I, KARL S. FAUCETTE, a citizen of the United States, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Cutter-Head, of which the following is a full, clear, and exact description.

This invention relates primarily to cutter heads designed to be used in connection with wood planing machines, and has for its object to provide means adapted to firmly clamp the cutters and hold them against any vibration or springing, to enable the cutters to be adjusted to extremes for taking up the wear arising from grinding the cutters, and to enable thin cutters to be used instead of the heavy ones now commonly used.

Two important points must be kept in mind in the construction of cutter-heads: 1. The width of the longitudinal channels for the knives and holding means is limited, for cutter-heads are necessarily of small diameter—from 6 to 8 inches—and there is not much stock available out of which to cut four longitudinal channels without weakening the cutter-head, and yet four knives are required in order to permit a fast feed, since two knives would require the feed to be only half so fast, and thus very slow. 2. The clamping bars must be of ample thickness, so as not to spring under the stress of the clamping screw, for that would cause an inefficient hold of the knives. In applicant's device these conditions have all been taken care of. Four knives are provided, and the clamping means hold the knives rigidly in place, and yet ample stock is left in the cutter-head to insure strength and rigidity.

Other objects relating to the specific construction and special arrangement of the several parts of my invention will be understood from the following description and accompanying drawings, in which drawings—

Figure 1 is an end view of a cutter head embodying my invention; Fig. 2 is a plan of the same; and Fig. 3 is a perspective view of a clamping plate.

As illustrated in the drawings, the cutter head is comprised of a central or body portion *a* fixedly secured in any suitable manner to a rotatable shaft *b*, and provided with longitudinal channels having oppositely disposed walls, one of which *c'* is adapted to bear against and support cutters

d which bear at their sides against said walls and extend at their cutting edges beyond the outer portion of retaining members *c*, as shown in Fig. 1. The cutters *d* are clamped and held against the retaining members by clamping plates *f* which are preferably constructed in sections, as shown in Fig. 2, although they may be made entire if desired. The cutter head is provided with laterally extending longitudinal ribs *e* formed at the bottom of the channels between the retaining members, and with longitudinal recesses between said ribs *e* and the bottom *a'* of the channels, which recesses are adapted to receive ribs *f'* extending laterally from the lower portion *f'* of the clamping plates, and forming recesses between said ribs *f'* and the body of the clamping plates, as shown in Fig. 1, adapted to receive the laterally extending ribs *e* formed in the cutter head at the bottom or lower portion of said channels. By means of such construction the clamping plates are held in locking engagement with the cutter and heads and adapted to be adjusted laterally in the cutter heads so as to clamp cutters of varying thicknesses. Set screws *g* have a threaded engagement with the clamping plates and the heads of the set screws bear against the wall of the channel opposite to the wall thereof retaining the cutters as shown in Fig. 1. If desired, the clamping plates *f* may be provided with an outwardly extending flange or rib *f'* continuous with the face of the clamping plates thereby increasing the bearing surface of the clamping plates on the cutters without extending unnecessarily the body of the clamping plates. By means of such construction the set screws may be readily adjusted in the clamping plates and held against loosening by the adjacent walls of the longitudinal channels. The cutters are kept clamped firmly and uniformly on both sides, exposing only the edge of the cutters, thus holding the cutters against vibration or springing in the cutter head and the consequent disadvantages which commonly follow said springing or vibration of the cutters. By means of this construction moreover thin cutters may be employed thereby avoiding the necessity and disadvantages of the heavy cutters as heretofore used. And the cutters may be adjusted to extremes for taking up the wear consequent from grinding the cutters which operation cannot be performed in the construction

commonly used owing to the slots in the cutters which limit the range of adjustability.

In the construction herein shown and described, I have embodied my invention in its preferred form. I do not desire to be limited to such construction, however, as other means having similar capabilities may be used without departing from my invention.

I claim:

1. The combination of a cutter head having a longitudinal channel, a clamping bar adjustable in the channel, interlocking means between the bar and the bottom of the channel, a cutter between the bar, and one wall of the channel, and screws in the bar with their heads engaging the outer wall of the channel.

2. A cutter head having a longitudinal channel, a longitudinal rib at the bottom of said channel, a clamping plate adjustable laterally in said channel and provided on its lower portion with a rib extending laterally therefrom in line with the bottom of said clamping plate and adapted to interlock with said rib of the head, a cutter between said bar and one wall of the channel, and screws in the bar with their heads engaging the outer wall of the channel.

3. A cutter head comprising longitudinal retaining members and longitudinal channels intermediate thereof, clamping bars laterally adjustable in said channels, interlocking means between said bars and the bottoms of the channels, cutters between the bars and one wall of the channels, and screws in the bars with their heads engaging the opposite walls of the channels.

4. The combination of a cutter head having a longitudinal channel, a clamping bar adjustable laterally in said channel and provided with an outwardly extending flange interlocking means between the bar and the bottom of the channel, a cutter between the bar and one wall of the channel, and screws in the bar with their heads engaging the other wall of the channel.

5. A cutter head having a longitudinal channel, provided with oppositely disposed walls and a projecting rib formed in the cutter head and spaced from the bottom of said channel, a clamping bar provided on its lower portion with a projecting rib, and a recess above said rib corresponding with said rib of the cutter head, a cutter between the bar and one wall of said channel, and screws in the bar with their heads engaging the other wall of the channel.

6. A cutter head provided with longitudinal channels having oppositely disposed side walls, and a longitudinally extending rib forming a recess at the bottom of said

channel, a clamping bar adjustable laterally in the channel and provided on its lower portion with a rib and a recess corresponding with said recess and rib respectively of the cutter head, a cutter between the bar and one wall of the channel, and screws in the bar with their heads engaging the other wall of the channel.

7. A cutter head having a longitudinal channel, a clamping bar adjustable laterally in the channel, means for holding the lower portion of said bar in locking engagement with said cutter head, a cutter between the bar and one wall of the channel, and screws in the bar with their heads engaging the other wall of the channel.

8. The combination of a cutter head cylinder having a longitudinal channel for receiving a cutter, a clamping bar adjustable in the channel for engaging the cutter, interlocking means between the bar and the channel, and a set-screw screwing in the clamping bar and bearing with its head against the opposite wall of the channel.

9. The combination of a cutter head having a longitudinal channel for receiving a cutter, a clamping bar adjustable in the channel for engaging the cutter, interlocking means between the bar and the bottom of the channel, a screw or screws in the bar with the head or heads thereof engaging the outer wall of the channel.

10. The combination of a cutter head having a longitudinal channel for receiving a cutter, a laterally projecting flange on one wall of said channel and spaced from the bottom thereof, a clamping bar laterally adjustable in said channel, a laterally extending flange on said clamping bar arranged to be inserted under and interlock with said flange of said wall, a screw or screws inserted in said clamping bar with the head or heads thereof engaging the outer wall of said channel.

11. The combination of a cutter head formed with a longitudinal channel for receiving a cutter, a clamping bar adjustable in such channel and adapted for engaging a cutter, a set screw threaded into the clamping bar, and bearing with its head against the outer wall of the channel, and means locking the clamping bar against centrifugal displacement so arranged as to permit ready access to said set screw.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

KARL SCHURZ FAUCETTE.

Witnesses:

W. H. BOYCE,
WALDEMAR SETON.