

(No Model.)

J. H. SOARS.
WOODWORKING MACHINE.

No. 516,776.

Patented Mar. 20, 1894.

Fig. 1.

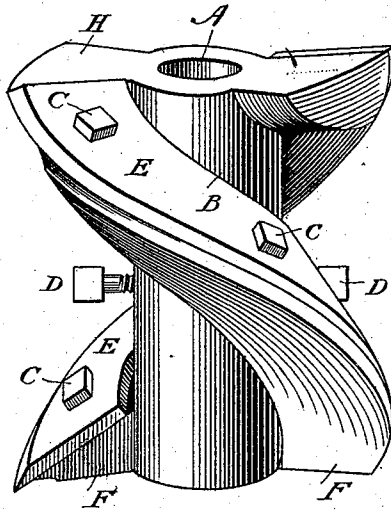


Fig. 3.

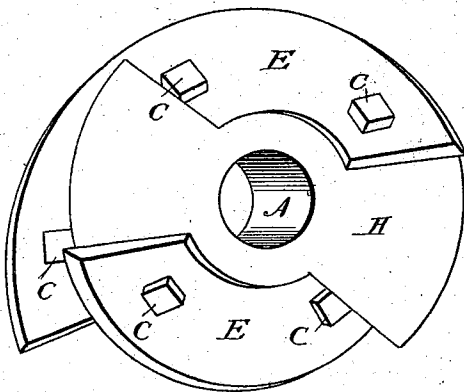
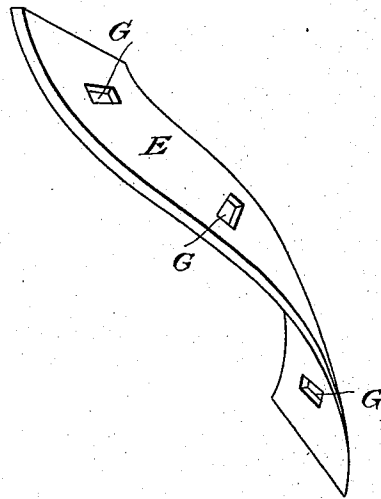


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN H. SOARS, OF MUNCY, PENNSYLVANIA.

WOODWORKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 516,776, dated March 20, 1894.

Application filed July 1, 1893. Serial No. 479,348. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SOARS, a citizen of the United States, residing at Muncy, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Woodworking-Machine, of which the following is a specification.

My invention relates to improvements in wood working machines in which revolving heads are used for any kind of planing purposes, and the objects of my improvement are; first to obtain smoothness of surface planed; second, a continuous cut; and third a lessening of power required to operate the machine. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical view of a cutter head; Fig. 2, the knife used thereon, and Fig. 3 a perspective view of the face.

Similar letters refer to similar parts throughout the several views.

B. is the body of the head; A. the opening through the body of the head for the reception of the shaft; D. two set screws, by which the head is fastened on the shaft and H. the top of the head.

F. is a solid lip, of which there are two on the body of the head, opposite each other, having on its top or upper side, placed at a suitable angle from the body of the head, a plain or flat surface from the body of the head to its outer edge and being spiral lengthwise and radial in any plane of cross section. On this plain or flat spiral surface the adjustable knife E. is fastened by the knife bolts C. The bottom or under side of the lip F. is milled out in a spoon shape forming a chip breaker.

E. is an adjustable knife, of which there are two, one being placed on each lip, F. and having a plain or flat surface transversely, and spirally twisted longitudinally, its cutting side being much longer than the opposite one, and is beveled backwardly on its top or upper side. There are slots G. therein by which they are adjusted to the lips F. and fastened by the knife bolts C. The chips or shavings made by this knife are discharged from the bottom of the head instead of being thrown out as in most heads, and by extending the adjustable knife E. past the center, I secure a continuous cut as one knife will always reach the surface to be planed just before the other has left it; and I will also largely

secure the head against getting out of balance. By using the adjustable knives E. I also secure a draw cut which I believe to be smoother and to require less power than any other kind of cut.

The cutter head, Fig. 1, is intended for panel raising, and upon the top of its head H. may be placed any of the required devices. These cutter heads may be made of any required size and length to fit the several wood working machines and do the necessary work.

I am aware that prior to my invention cutter heads for wood working machines have been made, I therefore do not claim such a machine broadly, but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a cutter head for wood working machines a solid lip, F. having on its top or upper side, placed at a suitable angle, a plain or flat surface from the body of the head, to its outer edge and spiral lengthwise and radial to the head in any plane of cross section. All substantially as set forth.

2. In a cutter head for wood working machines an adjustable flat curved blade E. spiral longitudinally and radial to the head viewed in any particular plane of cross section, beveled backwardly on its top or upper side and having slots G. therein for adjusting the knife. All substantially as described.

3. In a cutter head for wood working machines the combination of a solid lip F. having on its top or upper side placed at a suitable angle a plane or flat surface from the body of the head to its outer edge, being spiral lengthwise and radial in any plane of cross section, and milled out on the bottom or under-side in a spoon shape forming a chip breaker; with an adjustable flat curved knife E. spiral longitudinally and running radially to the head viewed in any particular plane of cross section and made to conform to and fit closely on the top of the lip F., beveled backwardly on its top or upper side, having slots G. therein for adjusting the knife on the lip F. and fastened thereon by the use of knife bolts C. passing through the slots G. into the lip F. All substantially as described.

JOHN H. SOARS.

Witnesses:

S. L. KOONS,
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