

(No Model.)

W. MERRILL.

WOOD CUTTING AND CONVEYING MACHINE.

No. 426,946.

Patented Apr. 29, 1890.

Fig. 1.

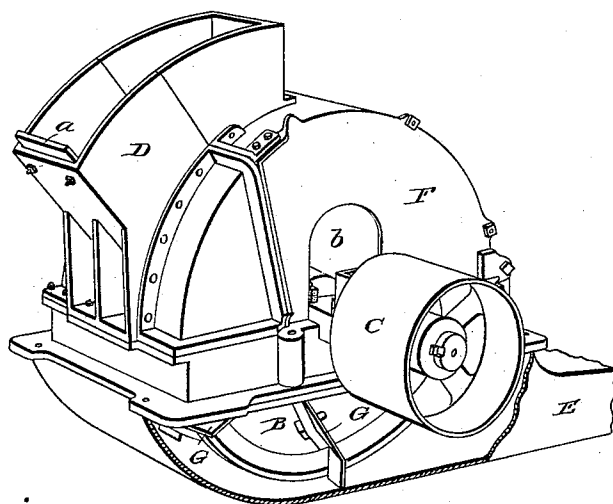
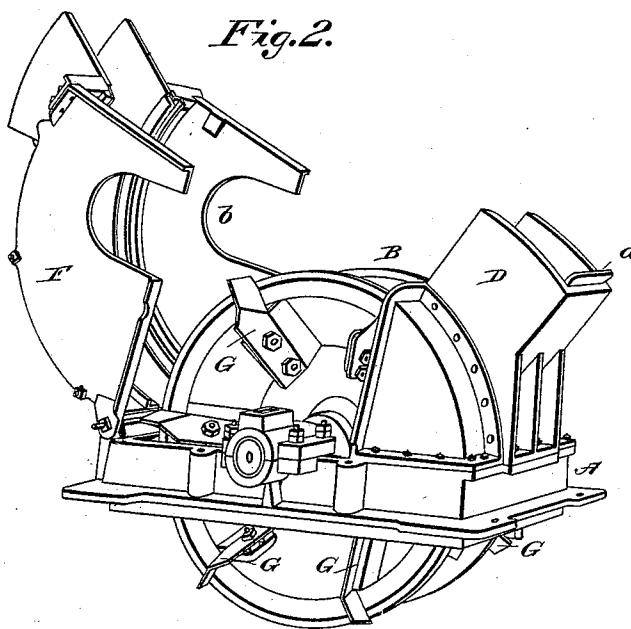


Fig. 2.



Witnesses

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By *his* Attorney *James J. Shulz*

UNITED STATES PATENT OFFICE.

WILLIAM MERRILL, OF EAST SAGINAW, MICHIGAN, ASSIGNOR OF ONE-HALF
TO SYLVANIS S. MITTS, OF SAME PLACE.

WOOD CUTTING AND CONVEYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 426,946, dated April 29, 1890.

Application filed June 5, 1889. Serial No. 313,132. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MERRILL, a citizen of the United States, residing at East Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Machines for Cutting and Conveying Wood; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in machines for cutting up refuse wood into fine shavings or sawdust; and it has for its object the more efficient removal of the same and the conveyance of the chips or sawdust to any required point, such as to the furnace or dumping-ground.

The novelty of my invention will be fully understood from the following description and claims, when taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of my improvements ready to be attached to a suitable support, with the pipe or conveyer in position and partly broken away. Fig. 2 is a perspective view of the knife-bearing wheel in its supporting-frame, showing the fan-blades in position and the hinged inclosing-case raised.

Referring by letter to the said drawings, A indicates the main frame, in which the knife-bearing wheel is journaled and upon which the hopper and inclosing-case are sustained.

B indicates the wheel-carrying cutters, which may be of any suitable construction—such, for instance, as the wheel and cutters illustrated in the patent granted to me June 19, 1888. The shaft of this wheel is provided with a suitable band-wheel C, to receive an endless belt or other driving means.

D indicates the hopper or feed-spout, which may be of any suitable construction, carrying a throat-plate *a* and suitably secured upon the frame A.

E indicates a spout or pipe, which carries off or conveys the dust or chips to a furnace or other point. This pipe is secured to the

under side of the frame A and incloses the lower portion of the knife-bearing wheel, the upper portion of the wheel above the frame A being inclosed by the hopper or feed-spout frame D and the hinged case F. This hinged case F, which carries one-half of the hopper, is provided in its side walls with openings *b*, which are sufficiently large after spanning the shaft of the knife-bearing wheel as to form draft-passages for the induction of air.

The knife-bearing wheel is provided with fan-blades G, and, as illustrated, I arrange one of these blades on the wheel at each side and at the point where the cutters are placed. These blades G are bent on the outer part to a shape conforming to the ordinary blade of a fan, and for the sake of cheapness I prefer to fasten these blades to the wheels by the same bolts that secure the cutters thereto.

In operation, the wheel, revolving at a high speed, cuts up the wood into chips, which by centrifugal force are thrown downwardly and outwardly through the pipe E. The wings or blades G, at the same time inducing a strong current of air through the side opening in the case, blow the chips onward through many feet of pipe to any required point.

The wings or blades being on each side of the wheel and the chips being thrown by the wheel so violently away, they do not come in contact with the fan-blades, and thus the latter are in no danger of being broken or injured.

Having described my invention, what I claim is—

1. A machine for cutting wood or similar substance having a knife-bearing wheel carrying a fan, substantially as specified.

2. A knife-bearing wheel inclosed in a case and carrying a fan, the said case having lateral openings for the inlet of air, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM MERRILL.

Witnesses:

F. A. WOODRUFF,
GEO. W. MERRILL.