

(No Model.)

E. G. PAKE.
WOOD CUTTING MACHINE.

No. 348,768.

Patented Sept. 7, 1886.

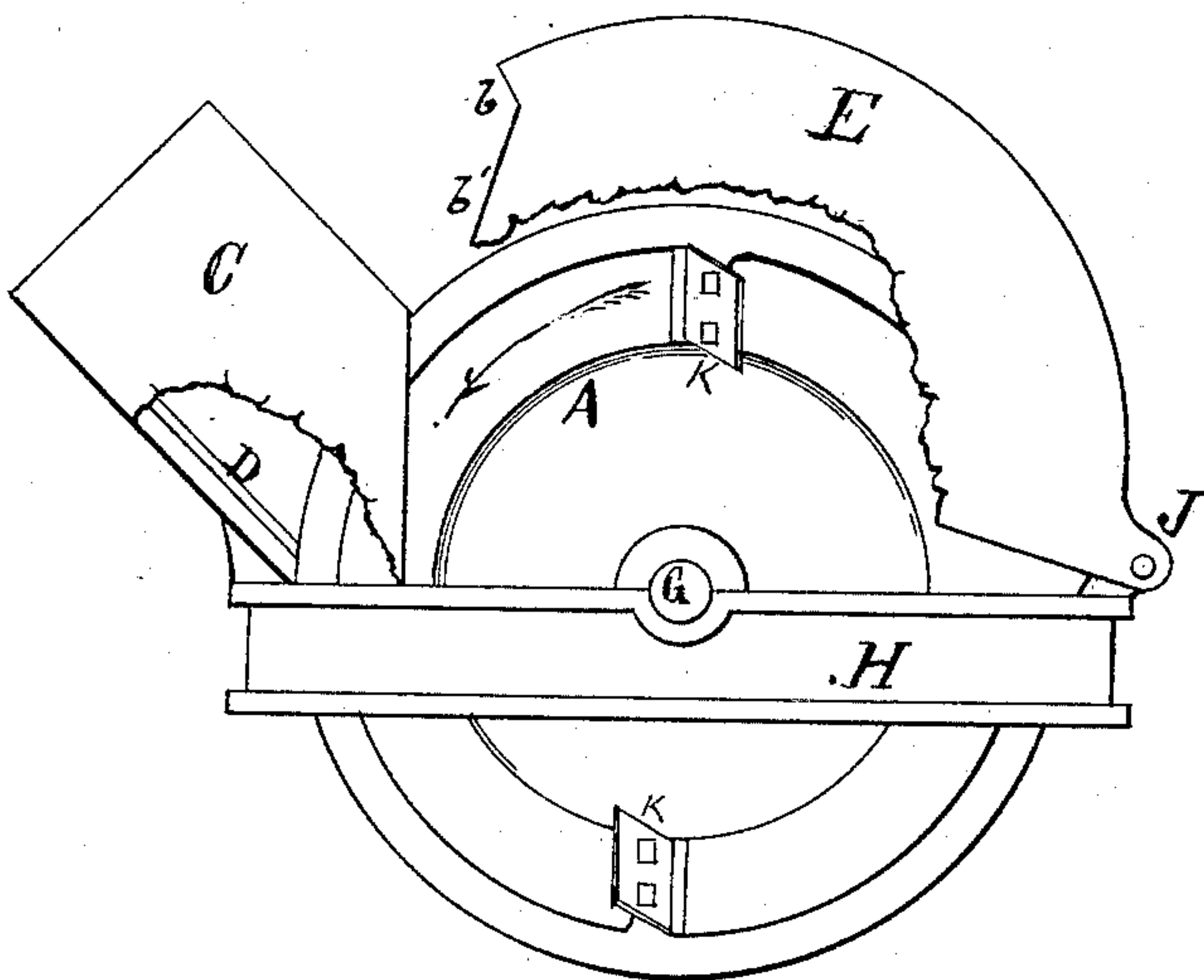


Fig 1

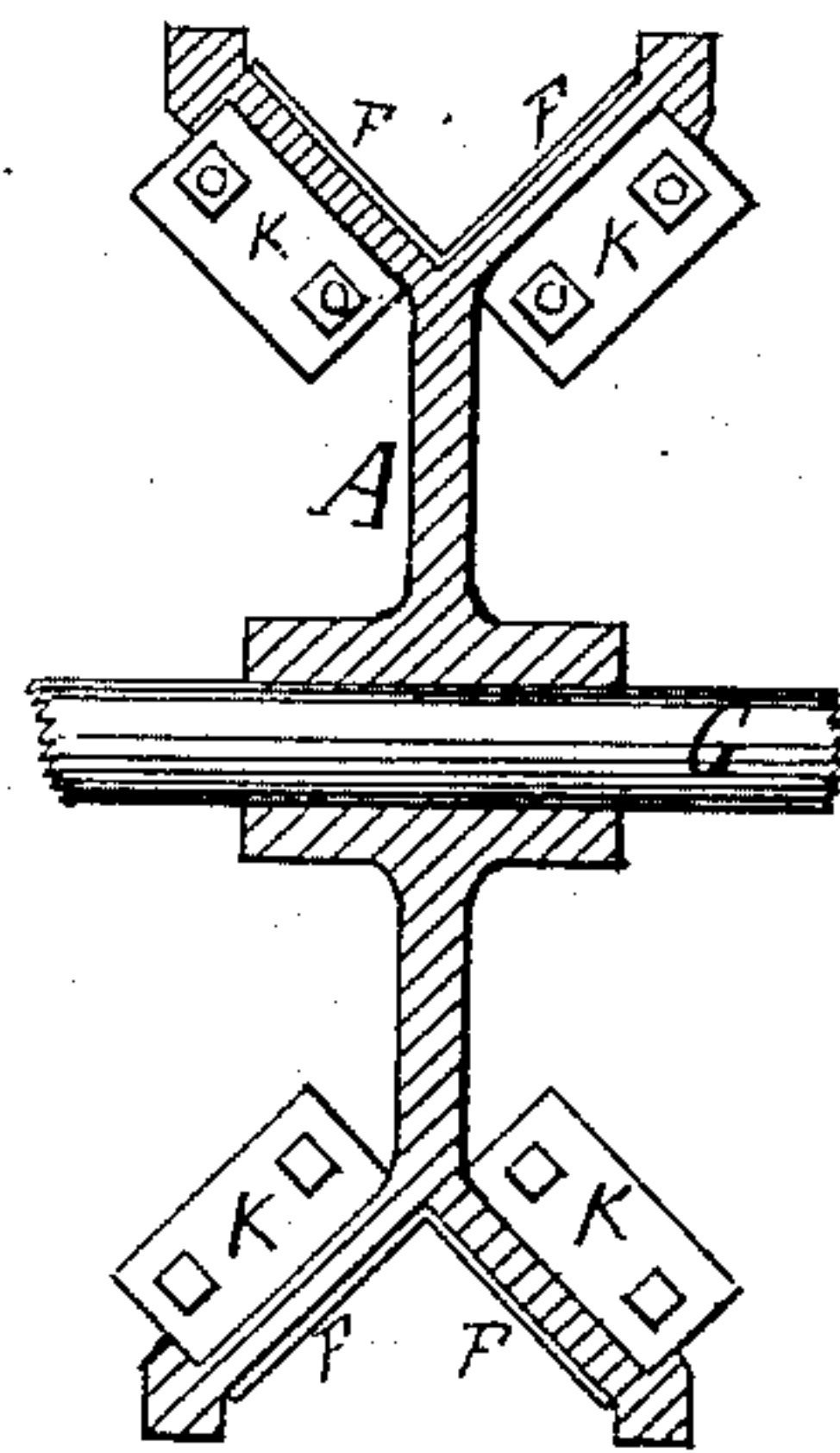


Fig 2

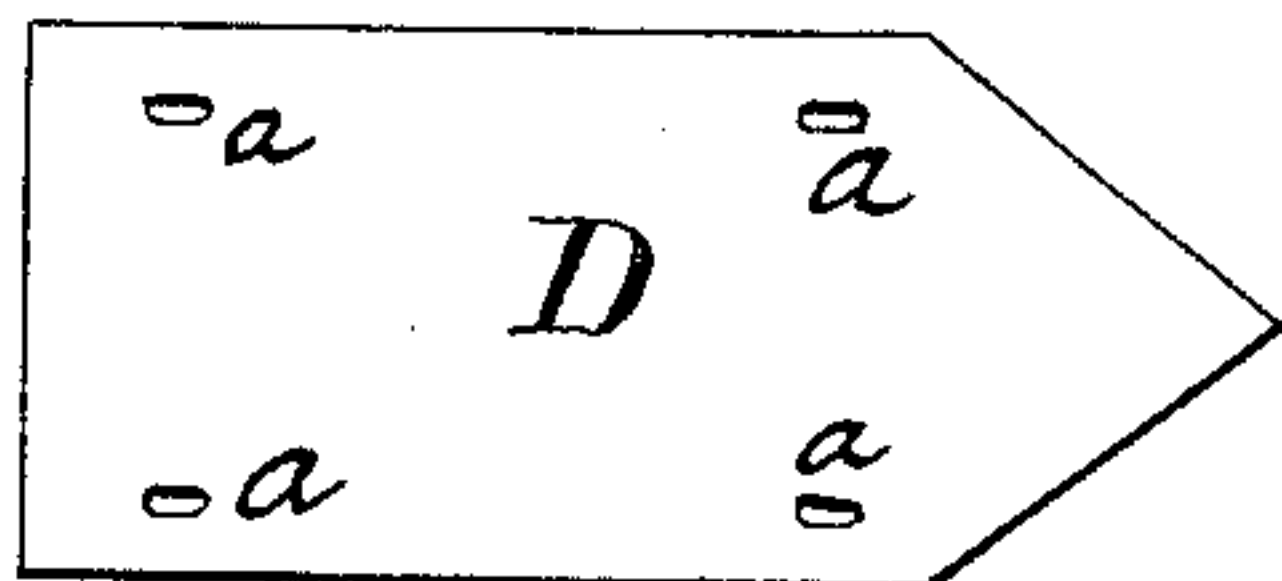


Fig 3

Witnesses.

Geo W. Menill
Louis Hall

Inventor.

Edward G. Pake,
Frank Sheehy
Atty.

UNITED STATES PATENT OFFICE.

EDWARD G. PAKE, OF ZILWAUKEE, ASSIGNOR TO SYLVANIS S. MITTS AND
WILLIAM MERRILL, BOTH OF EAST SAGINAW, MICHIGAN.

WOOD-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 348,768, dated September 7, 1886.

Application filed April 22, 1886. Serial No. 199,763. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. PAKE, a subject of the Queen of Great Britain, residing at Zilwaukee, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Machines for Cutting up Refuse Wood, of which the following is a specification.

My invention relates to improvements in machines for cutting up refuse wood into fine shavings or sawdust, so that it may be carried in ordinary sawdust-conveyers, and thus save the expense and labor of handling. These machines are made with a heavy revolving wheel carrying knives, in conjunction with a supporting-frame, and an angularly-placed adjustable throat-plate, and a hinged inclosing-case, all arranged so as to do the work more easily and better, and to be more easily adjusted to compensate for wear, and more accessible for sharpening and changing knives. I attain these objects by the arrangements described in the following specifications and accompanying drawings, in which—

Figure 1 is an elevation showing the revolving wheel A, the supporting-frame H, the feeding-spout C, and hinged case E, partly open, with sides broken away to show the wheel and knives K and adjustable steel throat-plate D.

Fig. 2 is a vertical section through center of wheel A and shaft G, showing the edges of the knives K projecting through the wheel A at the points F, the knives on one side being set back of or alternate with those on the other side, and they so overlap each other at the inner angle of the wheel that they, when in motion, cut everything clean.

Fig. 3 is a plan of the endwise adjustable throat-plate D, which is fastened on the bottom of the feed-spout C by bolts in slotted holes *a*, so as to be readily adjusted to the knives.

In operation, the refuse is put into the spout C, and, owing to its inclination, and to the fact that the bottom throat-plate, D, is on a plane which, if extended downward, would pass beneath the center of the wheel A, the action of the knives in cutting serves to draw the wood downward with greater velocity as the wheel A revolves at a high speed. The wheel

L having two faces shaped like two frusta of cones with the smallest ends together, and the throat-plate D having the angular or inclined position, the knives operate with a peculiar drawing cut on the wood, doing better work with less expenditure of power than they would if the wheel were cylindrical, or the throat-plate set horizontal, or in a radial plane, as was done before my invention.

Previous to my invention somewhat similar machines have been made, which had no adjustable removable throat-plate, and the feed-spout nearest the knives would be rapidly worn away until they were so far from the knives that sticks would pass through without being cut. My improvement consists in inserting the hard steel plate D, which can be set close to the knives K, and can be taken out, sharpened, and readjusted, so as to be very close to the knives, and thus do much better work, and with less consumption of power.

Previous to my invention similar machines have been made which had a case surrounding the wheel, but it was so securely bolted and fastened to the supporting-frame that it could only be removed at the expense of much time and labor whenever it was necessary to examine the knives. My improvement consists in so fastening the case E to the supporting-frame H with a hinged joint, J, that it can be readily opened, and the knives can thus be readily examined, sharpened, or changed. The free end of this case or hood L is beveled at *b b'* in such manner that it will when closed fit snugly the lower end of the feed-spout C, and prevent the escape upward of chips.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for the purpose described, the combination of the knife-bearing wheel having a V-shaped periphery, an inclined feed-spout, and an endwise-adjustable throat-plate adapted to the periphery and knives of the said wheel, substantially as described.

2. In a machine for the purpose described, the combination of the hinged hood E, the inclined feed-spout provided with an adjustable throat-plate and arranged to receive the free

end *b b'* of said hood, and the cutter-bearing wheel, substantially as described.

3. In a machine for the purpose described, the combination of a revolving wheel having
5 knives projecting through its rims at an angle to each other and tangent to the axis of the said wheel, a frame having rigidly secured to it a feed-spout provided with an adjustable throat-plate and partly embracing the sides

of the wheel, and a hood adapted to cover this wheel and to abut when down against the end of the said spout, substantially as described.

EDWARD G. PAKE.

Witnesses:

GEO. W. MERRILL,

LOUIS MOLL.