(No Model.)

W. H. MORS & J. C. CROSS.

WOOD SPLITTING MACHINE.

No. 280,657. Patented July 3, 1883.

Fig. 1.

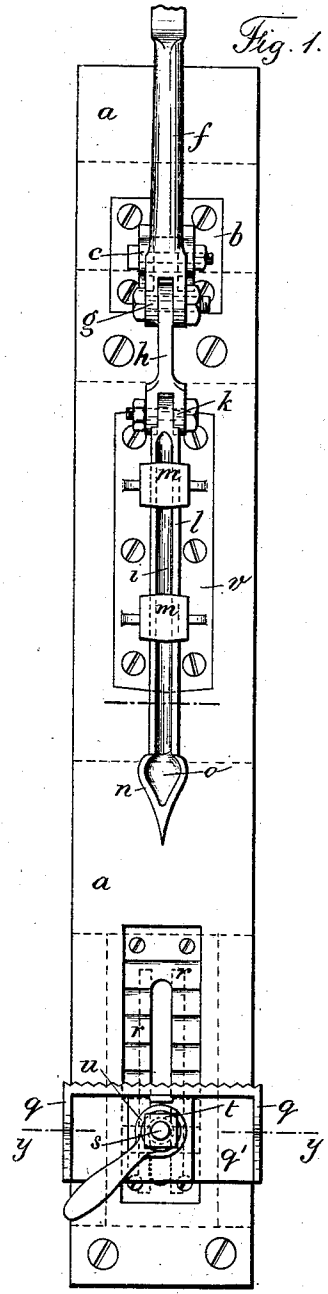


Fig. 2.

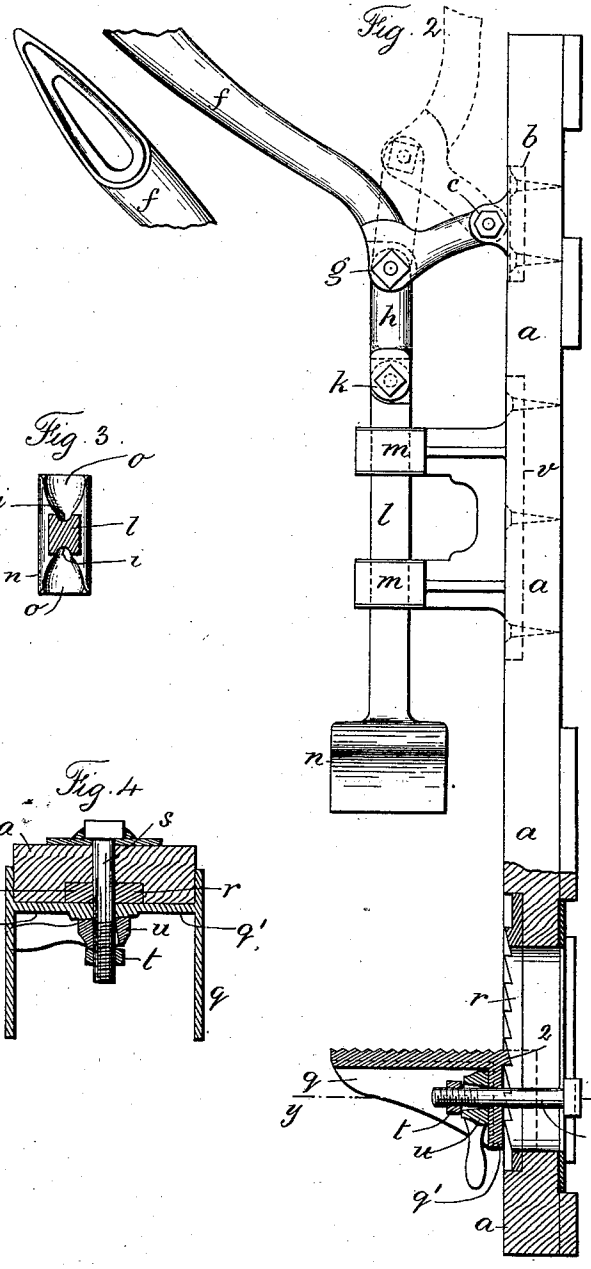


Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM H. MORS AND JOHN C. CROSS, OF BROOKLYN, NEW YORK.

WOOD-SPLITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 280,657, dated July 3, 1883.

Application filed October 17, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. MORS and JOHN C. CROSS, of Brooklyn, E. D., in the county of Kings and State of New York, have invented an Improvement in Kindling-Wood-Splitting Machines, of which the following is a specification.

This machine is a portable appliance adapted to be stood at the side of a fire-place or screwed to the wall, and employed for splitting up pieces of wood into fine sticks or splints adapted to lighting fires. This machine obviates the use of a hatchet for splitting kindlings, and hence prevents the risk of personal injury, especially among children, from the use of a hatchet, and avoids the noise and injury to buildings resulting from the concussion upon the floors or hearths in splitting wood.

Our invention relates to the combination of devices, as hereinafter set forth, whereby a strong, compact, efficient, and cheap machine is obtained.

In the drawings, Figure 1 is an elevation of the machine. Fig. 2 is a side view partially in section. Fig. 3 is a sectional plan of the cutter and its stem, and Fig. 4 is a section at the line *y y* through the bracket-support and standard.

We make use of a back piece or standard, *a*, preferably of wood, and upon this is fastened by bolts or screws the fulcrum-plate *b*, with a hinge-joint or knuckle, *c*, forming the fulcrum for the lever *f*. This lever is made with a crook in it, so that when turned up vertically and swung over to the position shown by dotted lines there will be little or no tendency to fall. At the crook in this lever there is a joint, *g*, for the upper end of the link *h*, and at the lower end the link is united by the joint *k* to the upper end of the stem *l*. This stem *l* is supported by and slides through the bearings *m m*, that extend out from the plate *v*, which is screwed to the standard *a*. This stem *l* is grooved on its edges, as seen at *i*, Fig. 3, for lessening the weight, and at the lower end the stem *l* is formed with a splitting-knife, *n*. This knife is made with a thin body, with concave sides above its cutting-edge, and the upper part is flared out, as shown. This allows for the knife to enter the wood and commence splitting easily, and then the kerf is opened wide enough to finish the splitting operation. At the same time the extent of movement of the knife is but small. The upper parts of the knife *n* are recessed at the angles, to lessen the weight of the same, as seen at *o*. The knife is moved up and down with precision and great force, and will split wood with which it is brought into contact when that wood is properly supported. We make a bracket-support, *g*, for the wood to rest upon, such bracket having at the back a downward flange, *q'*, and a horizontal ratchet-tooth, 2, and upon the standard *a* there is a plate, *r*, with rack-teeth in it, adapted to receive the tooth 2. This plate *r* is slotted, and through it passes the bolt *s*, the head of which is guided between ribs, or in a wider portion of the slot, so as not to turn, and there is a nut, *t*, upon this bolt. The surface of the flange *q'* around the bolt is slightly inclined, and there is a cam-lever, *u*, with its eye around the bolt *s*, between the flange *q'* and the nut *t*, and the eye of this cam-lever is thicker on one side than the other, as seen in the section, Fig. 4; hence, if the nut is screwed up, and then the lever is turned in the same direction as the nut, it tends by friction to screw the nut tighter, and at the same time the thicker part of the cam is turned around upon the higher part of the inclined surface, and the flange of the bracket is clamped in the most powerful manner against the standard, so as to support the same and the wood placed thereon. It is to be understood that the bracket for supporting the wood can be raised or lowered to adapt the splitter to the length of the wood by first loosening the nut by moving the lever *u*, and then unscrewing the nut sufficiently to allow for raising or lowering the bracket-support. The teeth on the bracket and on the rack may be of any desired shape.

We are aware that brackets in wood-splitting machines have been raised and lowered upon a rack and secured by a clamping-screw; also, that levers have been used for actuating a knife.

We claim as our invention—

1. In a wood-splitting machine, the combination, with a standard and an adjustable support for the wood, of a grooved stem, a

knife at the end of the stem, bearings for the stem, a crooked lever, a pivot for the lever, and a link between the crook of the lever and the upper end of the stem, substantially as set forth.

2. The combination, with the standard, the splitting-knife, and lever, of a bracket-support for the wood, a tooth upon that support, a slotted rack upon the standard, a screw-bolt and nut, and a lever with a cam-shaped eye between the nut and the inclined surface of the flange of the support, substantially as set forth.

Signed by us this 13th day of October, A. D. 1882.

W. H. MORS.
J. C. CROSS.

Witnesses:
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