

*J. B. Dougherty,
Making Barrel Heads.*

N^o 37,885.

Patented Mar. 10, 1863.

Fig 1.

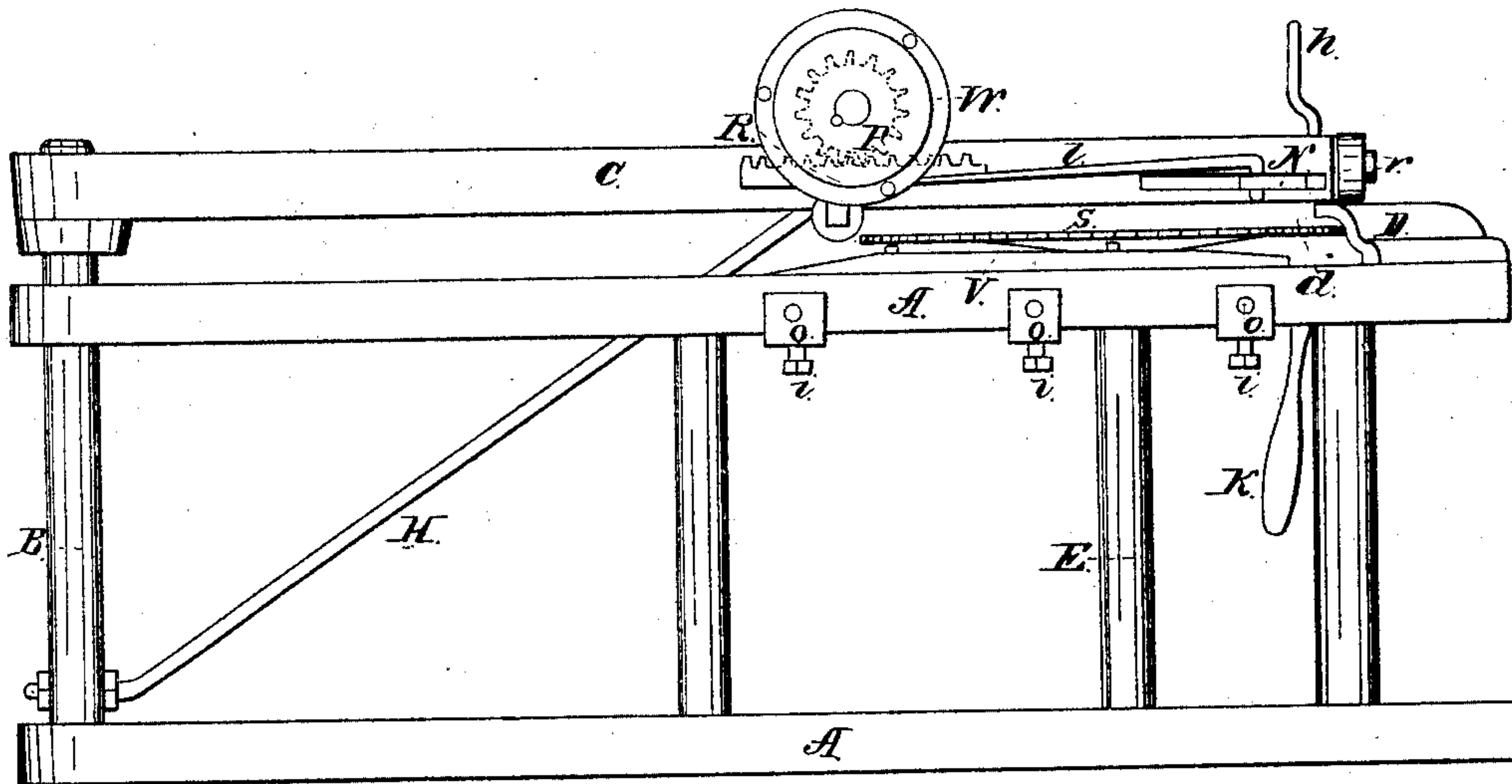
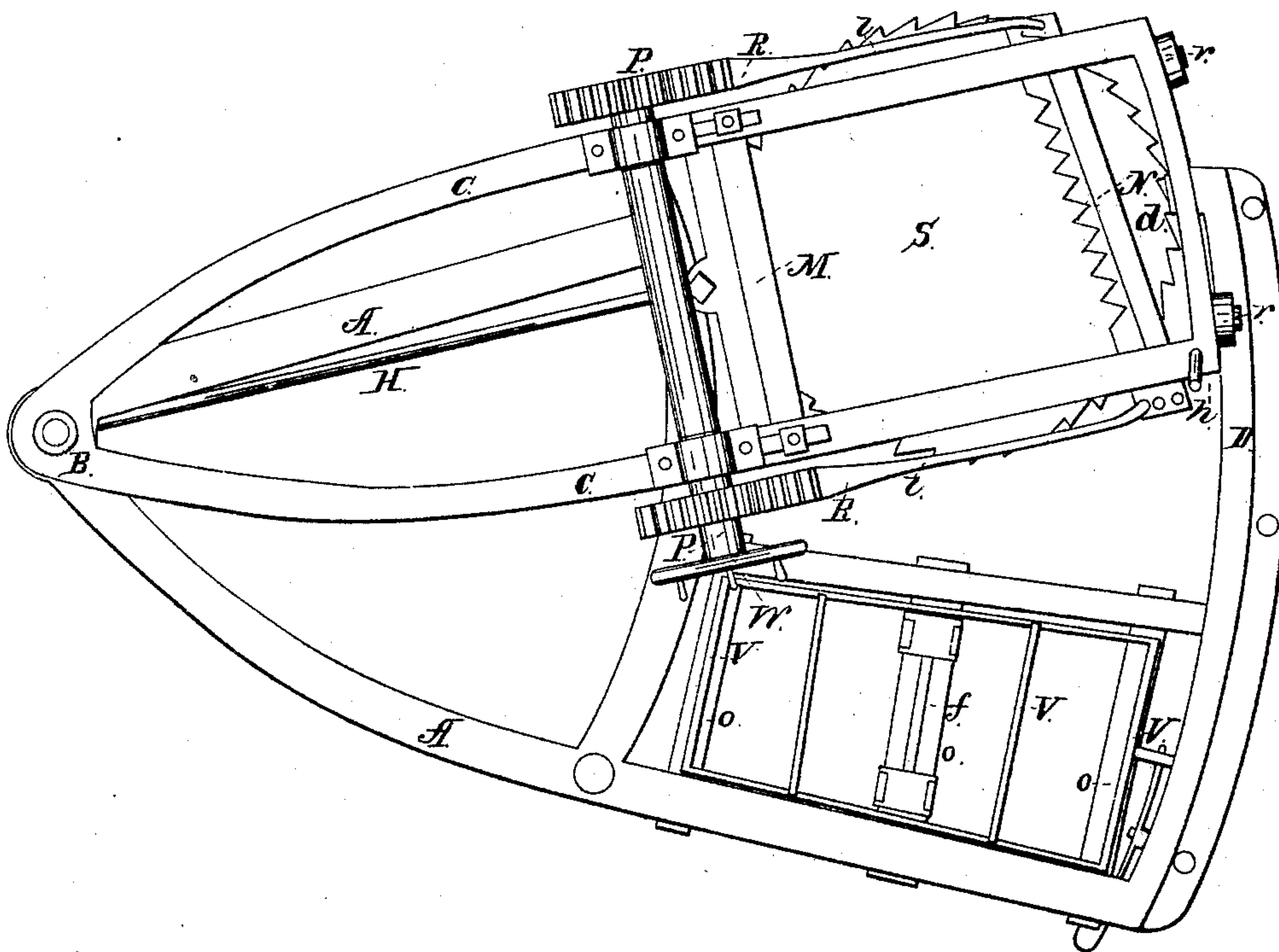


Fig 2.



*Witnesses
John Plim
Geo. Smith.*

*Inventor:
J. B. Dougherty.*

UNITED STATES PATENT OFFICE.

JOHN B. DOUGHERTY, OF ROCHESTER, NEW YORK, ASSIGNOR TO HIMSELF
AND MARY ANN LAWLER, OF SAME PLACE.

IMPROVED MACHINE FOR SAWING BARREL-HEADS, SHINGLES, &c.

Specification forming part of Letters Patent No. 37,885, dated March 10, 1863.

To all whom it may concern:

Be it known that I, JOHN B. DOUGHERTY, of the city of Rochester, county of Monroe, and State of New York, have made and invented a certain new and useful Machine for Sawing Lumber into Barrel-Heading, Shingles, and Similar Products; and I do hereby declare the following to be a full and accurate description of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, same letters referring to like parts in all the figures.

Of said drawings, Figure 1 is an elevation, and Fig. 2 is a plan, of my improved machine.

The nature of this invention will be best understood from a description of the construction and mode of operation of the machine.

In the drawings, A A is a stout frame, a ground plan of which presents somewhat the form of a segment of a circle. Through the center of this segment passes vertically the shaft B, to which is attached a second frame, C C, having the same general form as the ground plan of the frame A A, but consisting of a smaller segment of the same circle. The frame C C is supported partially by the shaft B and partially by rollers attached to the said frame C C, and running upon a ledge or railroad, D, attached to the frame A A. This gives the power of imparting a circular motion to the frame C C, which is done by the hand pressing on the handle h, so that any bolt or block of wood held firmly in the frame C C can be passed over the saw s with a proper motion and in a steady manner. The saw s is supported by the vertical shaft E, and, being in rapid motion, will of course remove from any block of wood passed over it in the manner indicated a slice whose thickness can be regulated by means hereinafter to be described. The exterior end of the frame C C is supported not only by the rollers r r, but also by means of the stay-rod H, which is so constructed and arranged that the weight hung upon the rollers can be regulated to any amount, and thus the frame C C is rendered as easily movable as is compatible with steadiness of motion. This steadiness is increased and the frame C C prevented from rising by means of the hook or tongue d, which projects

from the frame and passes beneath the lip of the ledge or railroad D.

The block of wood to be cut is held in the frame C C by the following means: Across the frame is placed the sharp-edged bar M, against which the block is placed and held firmly by means of the serrated bar N, which moves in slots cut in the side of the frame, and is tightened or relaxed by means of the pinions P P, operating the racks R R, which move the bar N back and forth by means of the rods l l. The pinions P P are operated by means of the hand-wheel W, so that while one hand of the operator grasps and holds the wheel the other may grasp the handle h and move the block to and from the saw. As the ends and sides of the blocks are not always parallel, I provide for such defects by virtually lengthening or shortening one of the rods l l, which is done by placing the end thereof in the proper one of the three holes in the end of the bar N next the operator. The relative distance of the other end of the bar N being fixed, the angle which said bar forms with the bar M is easily adjusted within any reasonable limits. The block of wood being thus easily grasped is as easily released by imparting a reversed motion to the hand-wheel W. This is done of course only when the block is over the light frame v v, upon which the block then descends by its own weight. The height of this frame is so adjusted that the block shall descend precisely the distance which it may be desired that the board to be cut shall be in thickness, and this adjustment is easily effected by means of the screws i passing through the plates o. The frame resting upon these screws, its height is easily varied and its parallelism or angularity adjusted as may be desired. In cutting shingles, for example, it is necessary that one end should be thicker than the other, and this is easily obtained for one shingle by means of the screws referred to; but as it is necessary that in cutting up an entire block the shingles should alternately be cut heads and points, we accomplish this by means of the bent lever K, which elevates one end of the frame at each alternate cut, and so causes one end of the block to be lower than the other, and consequently the corresponding end of the piece cut off to be thicker.

To allow of this motion on the part of the frame *v*, it is hung so as to rock upon the shaft *f*.

The lever *K* is designed to be operated by the knee of the workman, so that while both hands are left at liberty to grasp one the handle *h* and the other the hand-wheel *W*, his knee can operate the lever *K* in cutting shingles.

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

1. The combination of the rack and pinions *P P R R* and movable bar *N* with the frame carrying the bolt, the whole operating in the manner and for the purpose substantially as described.

2. The arrangement of the rods *l l* and bar *N*, as herein described, whereby the latter may be adjusted so as to grasp a bolt of any shape.

3. The combination of the bent lever *K* with the frame *v v*, said frame being made to rock on the shaft *f*, so as to allow a bolt to be entirely cut into shingles, in the manner set forth.

4. The combination of the rod *H* with the frame *C C* and shaft *B*, said rod being so arranged as to allow the weight resting upon the rollers *r r* to be accurately adjusted.

JOHN B. DOUGHERTY.

Witnesses:

JOHN PHIN,
GEO. SMITH.