

(No Model.)

F. BATT.
SHINGLE TRIMMING MACHINE.

No. 387,389.

Patented Aug. 7, 1888.

Fig. 1.

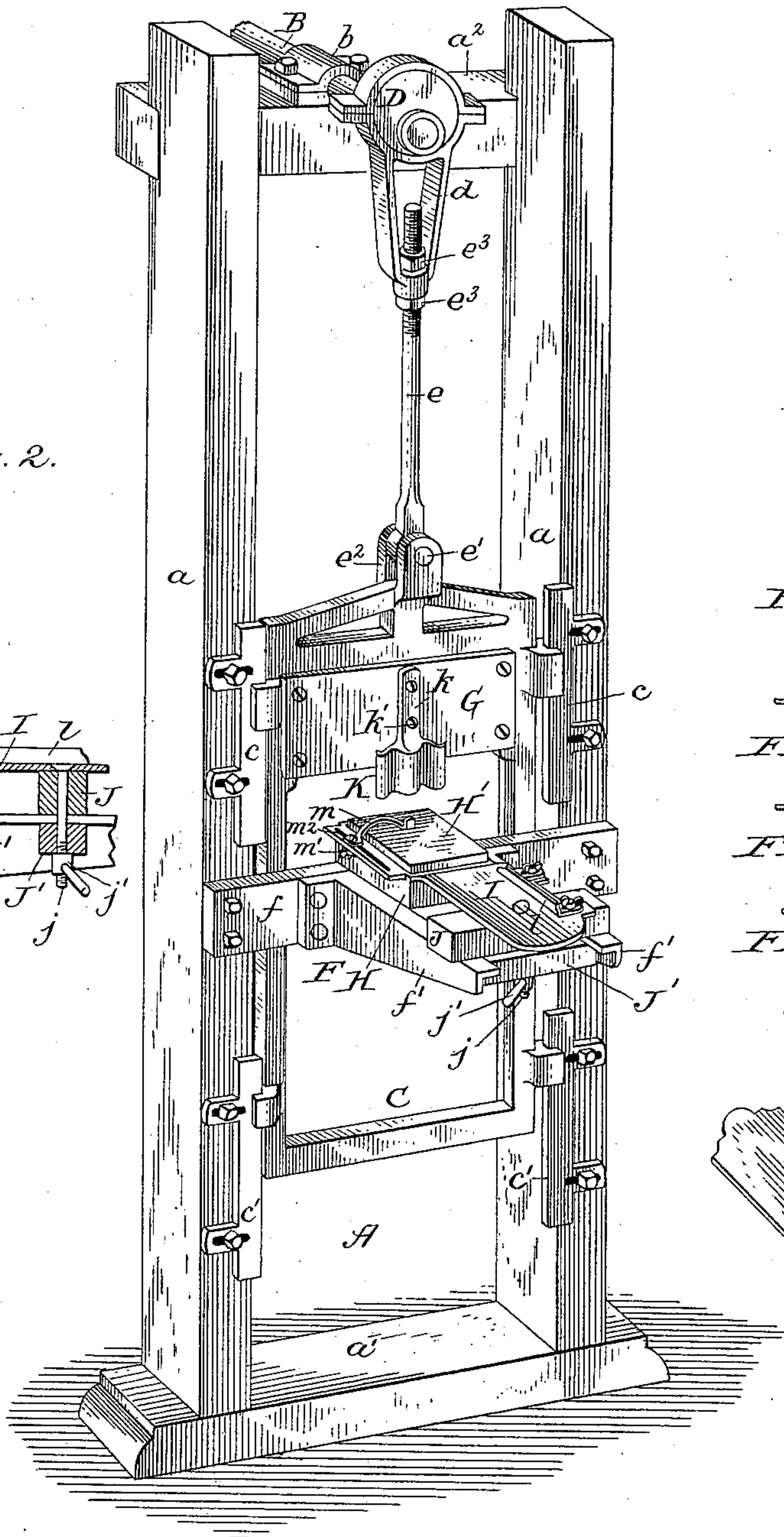


Fig. 2.

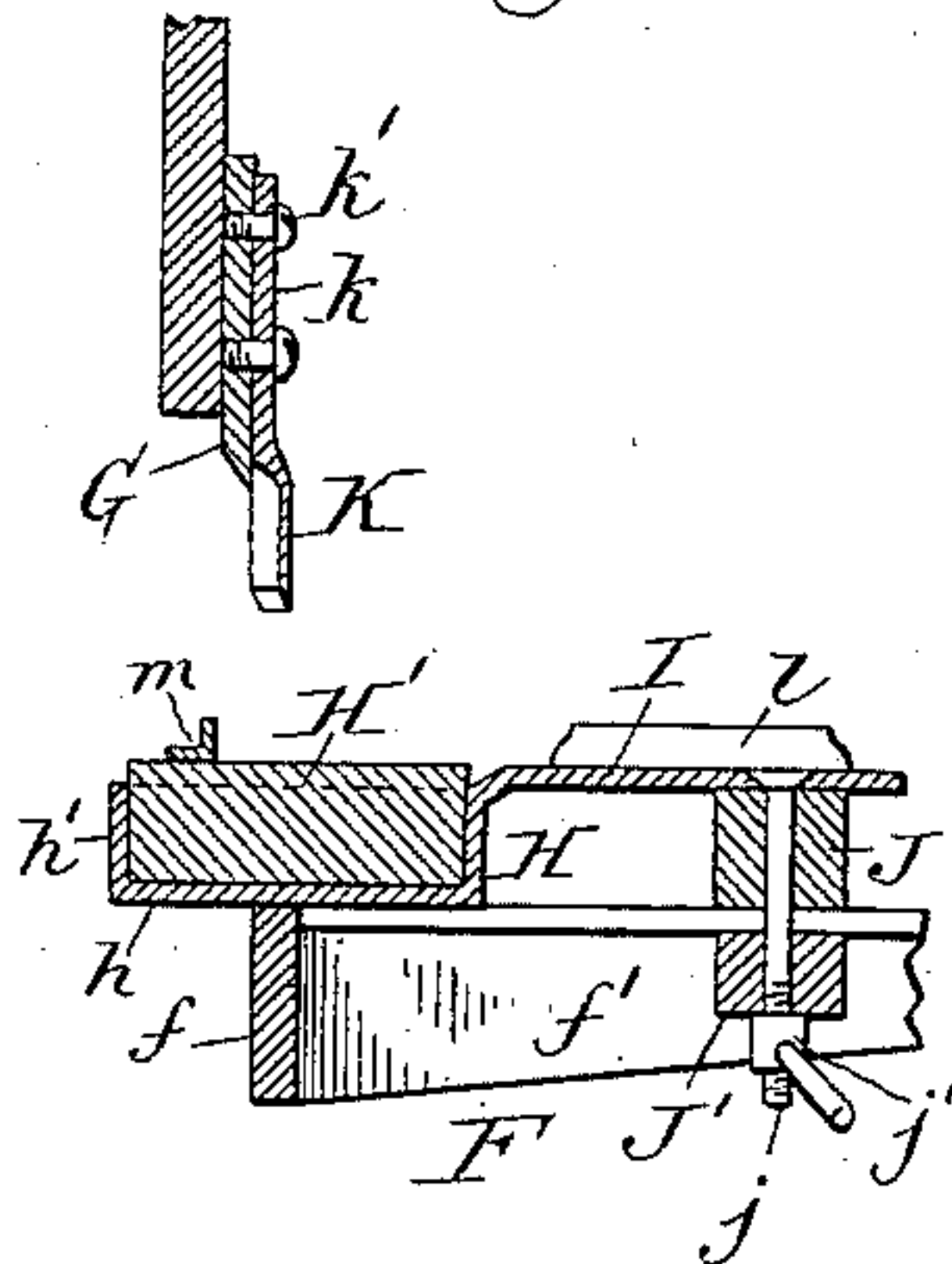


Fig. 3.

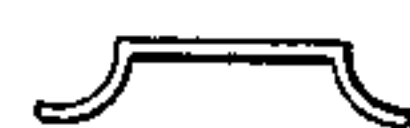


Fig. 4.



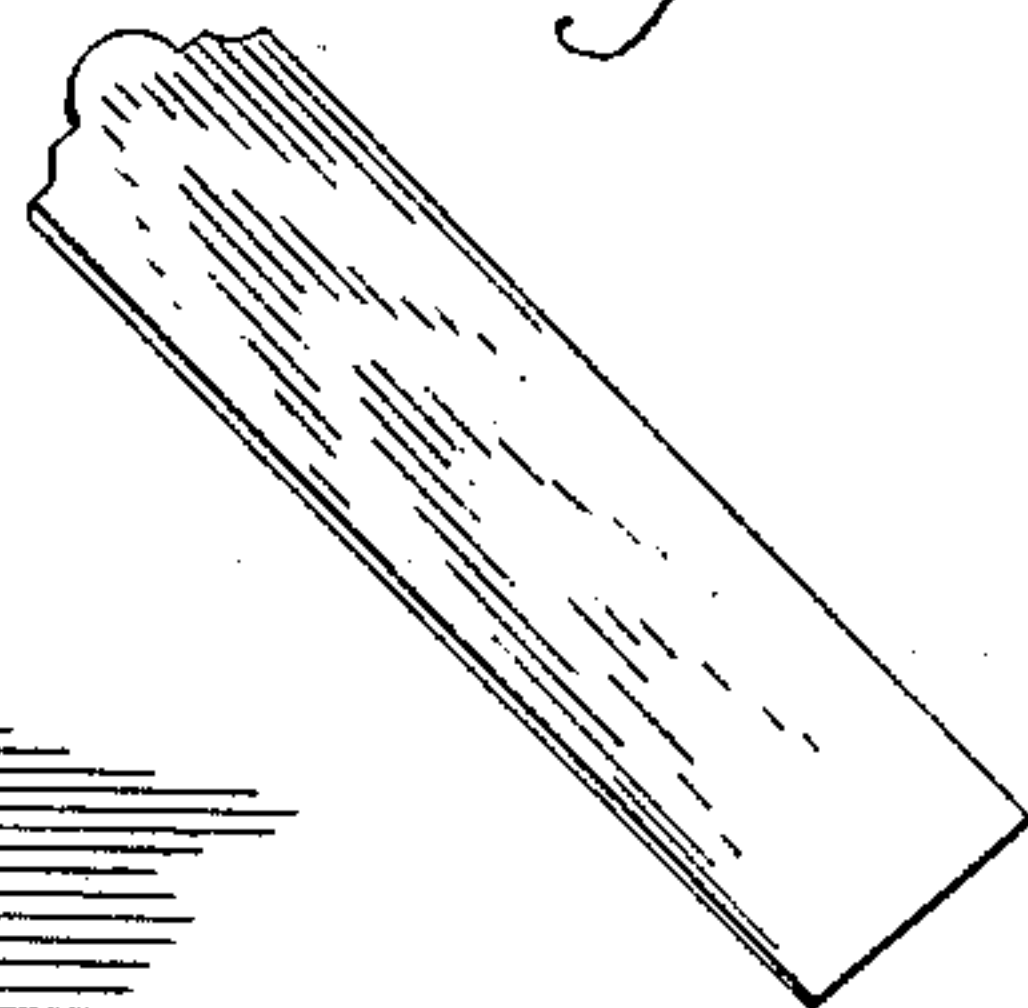
Fig. 5.



Fig. 6.



Fig. 7.



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UNITED STATES PATENT OFFICE.

FRANK BATT, OF TONAWANDA, NEW YORK.

SHINGLE-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 387,389, dated August 7, 1888.

Application filed April 17, 1888. Serial No. 270,999. (No model.)

To all whom it may concern:

Be it known that I, FRANK BATT, of Tonawanda, in the county of Niagara and State of New York, have invented new and useful Improvements in Shingle-Trimming Machines, of which the following is a specification.

This invention relates more particularly to that class of shingle-trimming machines which are provided with a vertically-reciprocating knife for trimming or cutting the longitudinal edges of the shingles.

The object of my invention is to provide the machine with means for cutting the ends of the shingles to a curved or other ornamental form; and it consists of the improvements, which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a shingle-trimming machine provided with my improvements. Fig. 2 is a fragmentary vertical section through the cutter mechanism. Figs. 3, 4, 5, and 6 are bottom plan views of some of the knives employed for ornamenting the ends of the shingles. Fig. 7 is a perspective view of one of the ornamented shingles.

Like letters of reference refer to like parts in the several figures.

A represents the frame of the machine, which is composed of two vertical posts, a , a base-piece, a' , and a top cross-piece, a'' .

B represents the driving-shaft, which is arranged above the top cross-piece, a'' , centrally between the posts a , and is journaled in a bearing, b , secured to the cross-piece a'' .

C represents the vertically-reciprocating knife-frame, which is arranged between the posts a and guided on vertical ways c , secured to the posts a .

D represents an eccentric secured to the shaft B above the frame C, and d represents a yoke attached to the eccentric D by straps.

e represents a connecting-rod attached at its lower end to the knife-frame C by a pivot-bolt, e' , and a jaw, e'' , formed centrally on the upper end of the frame and connected at its upper end to the yoke d by nuts e^3 , applied to the screw-threaded upper end of the rod.

F represents the shingle-supporting frame, which is composed of a horizontal cross-bar, f , secured at its ends to the posts a , and two forwardly-projecting arms, f' , which are L-

shaped in cross-section and which are secured at their rear ends to the cross-bar f .

G represents the knife, which is arranged above the cross-bar f , and is secured in the upper portion of the knife-frame C, and which is arranged to move downwardly in close proximity to the rear surface of the cross-bar f when the machine is used for trimming the straight sides or longitudinal edges of the shingles. The frame F serves as a table or support for the shingles when the knife G is used for this purpose.

H represents a rectangular box or receptacle supported with its rear end upon the cross-bar f and provided, preferably, with a closed bottom, h , and vertical walls h' .

H' represents a rectangular block of wood or other suitable material, which is snugly seated in the box H, and which projects with its upper flat surface slightly above the vertical walls h' of the box H.

I represents a forwardly-projecting flat table or shelf formed on the front end of the box H, and which has its upper surface arranged, preferably, in line with the block H', so as to form with the latter a practically continuous support or table for the shingles, as clearly shown in Fig. 2.

J represents a supporting-bar, which supports the plate I and rests upon the arms f' , and J' represents a clamping-bar arranged below the bar J and underneath the inwardly-projecting horizontal top portions of the arms f' .

j represents a vertical bolt having its head arranged in a countersunk opening formed in the plate I, and which passes through the supporting-bar J and clamping-bar J', and is provided below the clamping-bar J' with a screw-nut, j' , which bears against the bar J', and whereby the parts are securely held in place.

K represents the ornamenting-knife, having its cutting-edge formed in any desired pattern, and which is provided with an upwardly-projecting shank, k , which is removably secured to the main knife G above the block H' by screws k' . The edge of the knife K is preferably arranged below the edge of the knife G, so as to leave the back and sides of the ornamenting-knife free for the removal of the clippings, &c.

l represents a side gage secured adjustably

to one side of the table I, and against which the side of the shingle is placed.

m represents an end gage or stop, against which the end of the shingle is placed. This end gage is arranged in rear of the ornamenting-knife, and is adjustably secured at its outer end by a set-screw, *m'*, in a slot, *m*², of a laterally-projecting flange formed on the upper side of the box H. The shank of the end gage is preferably curved rearwardly, when necessary, to clear the ornamenting-knife.

The throw of the eccentric is such that it will cause the ornamenting-knife to move downwardly a sufficient distance to cut through the shingle to the block H'. This produces a much sharper and smoother edge on the shingle than when the same are cut in the usual manner by a saw, and expedites the operation of ornamenting the ends of the shingles and reduces the cost of production.

When it is desired to present a new surface of the block H' to the ornamenting-knife, it is only necessary to loosen the nut *j'* and move the box H, with the block H' and connecting parts, inwardly or outwardly, and then again secure the parts in place by tightening the nut *j'*. When the top of the block has become worn, it is removed from the box H and reversed, or a new block is inserted, as may be necessary.

When it is desired to use the machine for trimming the longitudinal edges of the shingles in the usual manner, it is only necessary to remove the ornamenting-knife K and the box H and connecting parts and then adjust the knife-frame C and its knife G downwardly by adjusting the upper end of the connecting-rod *e* in the yoke *d*, so that the main knife G is carried past the bar *f* on its downward stroke. By making the knife-frame C adjustable in this manner any inequalities which may exist in the lengths of the different ornamenting-knives can be readily compensated for by simply raising or lowering the frame C.

I claim as my invention—

1. In a shingle-trimming machine, the combination, with the main frame, of a reciprocating frame, C, provided with a knife, K, a supporting-frame, F, secured to the main frame, a box, H, supported on the frame F and made adjustable thereon at right angles to the path of the knife, and the block H', seated in the box H, substantially as set forth.

2. The combination, with the main frame, of a reciprocating frame, C, provided with a knife, K, a supporting-frame, F, secured to the main frame and provided with forwardly-projecting arms *f' f'*, a box, H, provided with a forwardly-extending table, I, a block, H', seated in the box H, a supporting-bar, J, and a clamping-bar, J', applied to the upper and lower sides of the arms *f' f'* underneath the table I, and a bolt, *j*, passing through the table I and the bars J J', substantially as set forth.

3. In a shingle-trimming machine, the combination, with the reciprocating knife-frame C, of a main knife, G, secured to the knife-frame, and an ornamenting-knife, K, removably secured to the main knife and projecting beyond the edge thereof, substantially as set forth.

4. In a shingle-trimming machine, the combination, with the main frame and the shingle-supporting frame secured thereto, of a reciprocating knife-frame provided with a main knife, an ornamenting-knife removably secured to the main knife and projecting beyond the edge thereof, a driving-shaft and eccentric, and a lengthwise-adjustable rod connecting the eccentric with the knife-frame, substantially as set forth.

Witness my hand this 12th day of April, 1888.

FRANK BATT.

Witnesses:

CHESTER D. HOWE,
FRED. C. GEYER.