W. Wood,

Cutting Shingles.

No. 17,907. Patented July 28, 1857.

Fig. 2

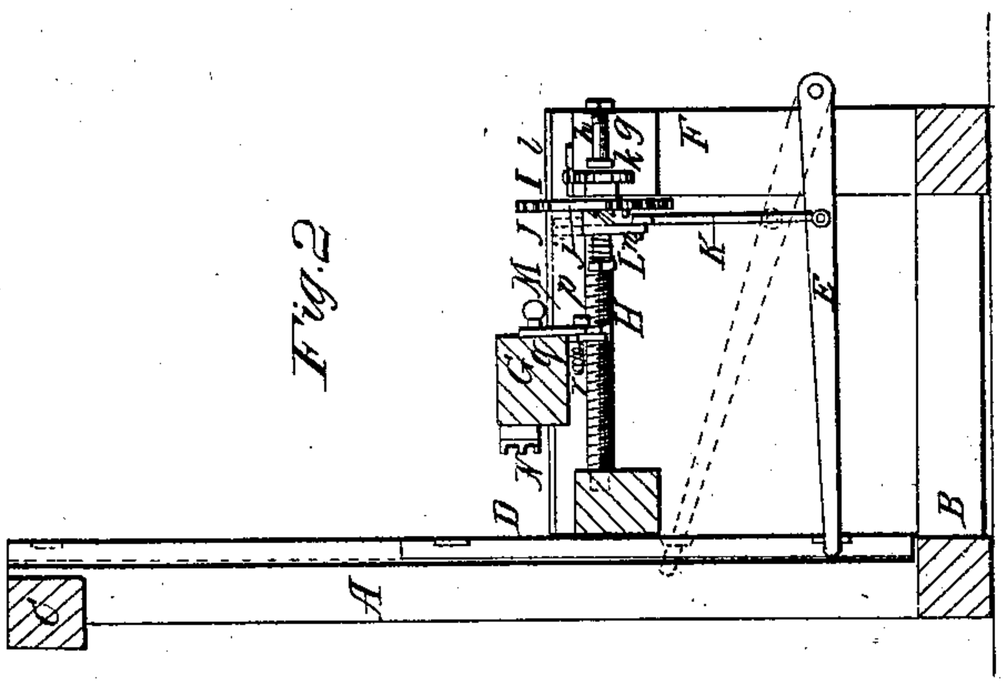


Fig. 3

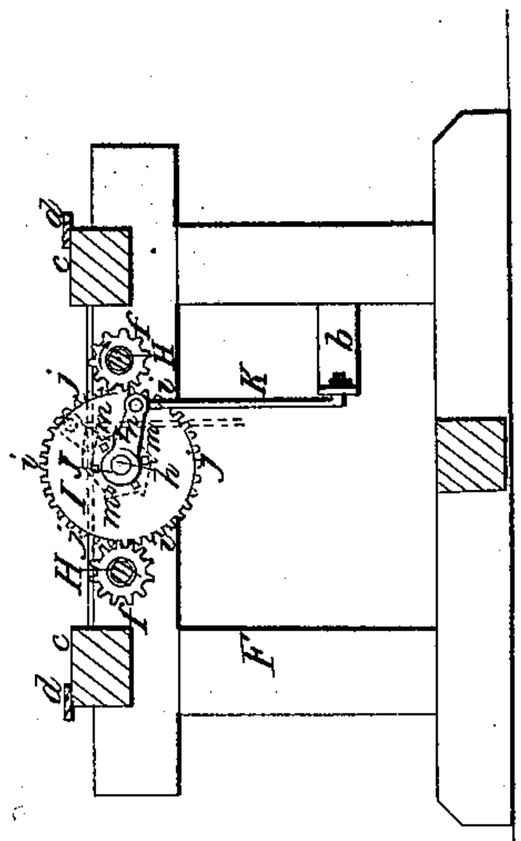


Fig. 1

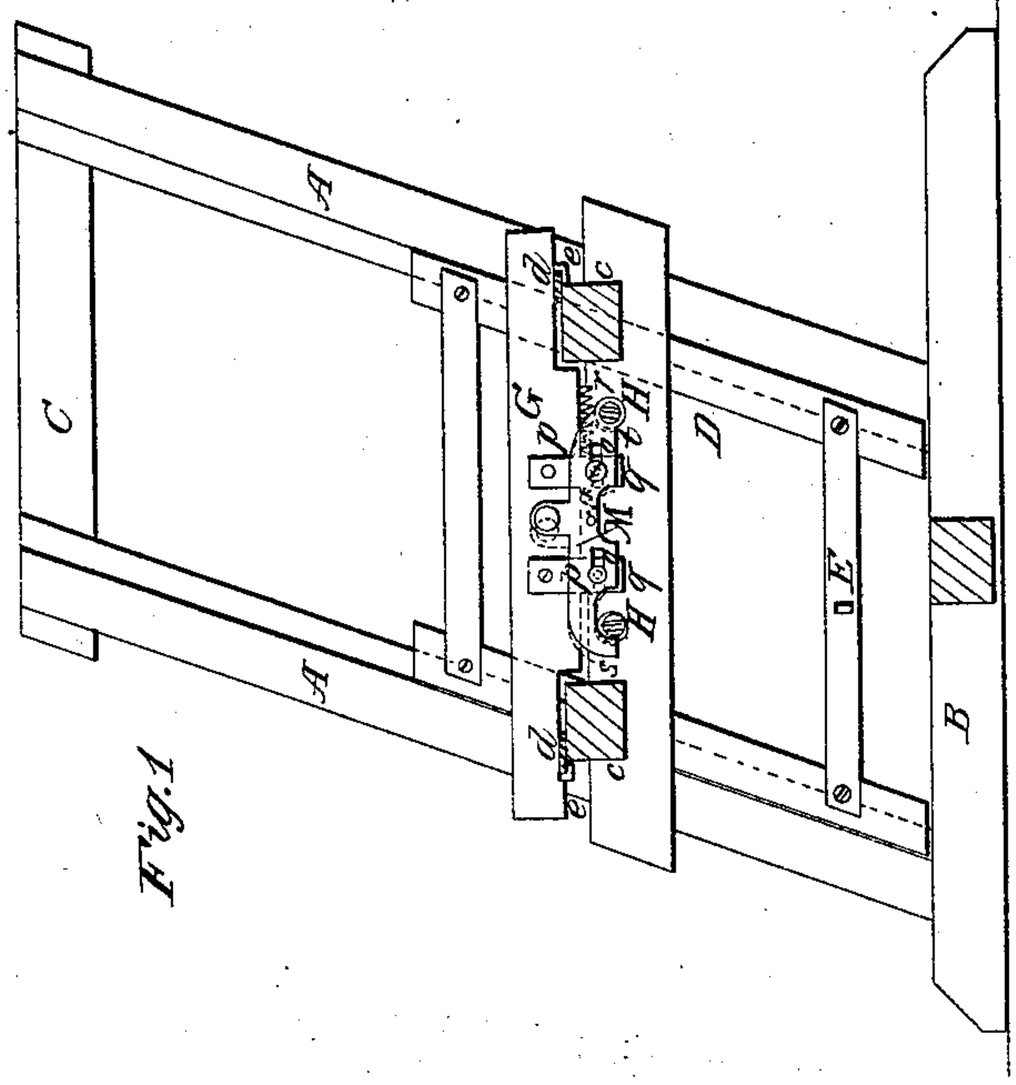
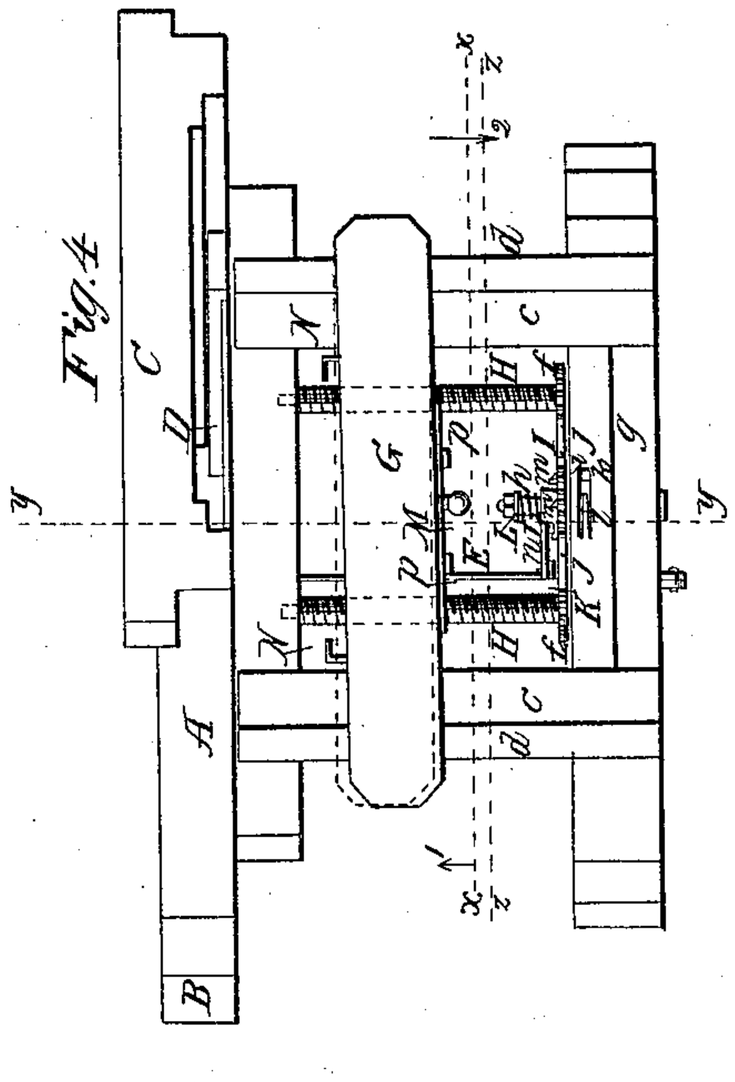


Fig. 4



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

WILLIAM WOOD, OF WESTPORT, CONNECTICUT.

METHOD OF FEEDING THE BOLT IN SHINGLE-MACHINES.

Specification of Letters Patent No. 17,907, dated July 28, 1857.

To all whom it may concern:

Be it known that I, WILLIAM WOOD, of Westport, in the county of Fairfield and State of Connecticut, have invented a new and Improved Machine for Cutting or Riving Shingles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a vertical section of my improvement taken in the line (*x*) (*x*) Fig. 4, and looking in the direction indicated by arrow 1. Fig. 2, is also a vertical section of ditto, taken in the line (*y*) (*y*). Fig. 3 is a vertical section of ditto taken in the line (*z*) (*z*) and looking in the direction indicated by arrow 2. Fig. 4 is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved feed movement to be applied to that class of machines in which a reciprocating knife is employed to cut or rive the shingles from the bolt.

The object of the invention is to feed the bolt, by a simple mechanism, obliquely to the knife, the ends of the bolt being moved alternately forward so that the shingles will be cut or rived direct from the bolt in proper taper form.

The invention consists in the peculiar means employed for effecting the above object.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, A, represent two oblique posts, the lower ends of which are secured to a proper base B, and the upper ends connected by a cross tie C.

Between the two posts a rhomboidal knife frame D, is placed and allowed to work freely up and down, through the lower cross rail (*a*) of the knife frame D, the end of a lever E, passes. This lever is pivoted to a bar (*b*) which is screwed to one of the uprights of a frame F, to one side of which the oblique posts A, A, are attached.

On the frame F the parallel guide bars (*c*) (*c*) are attached. These bars (*c*) have each a metal plate (*d*) attached, said plates projecting beyond the outer edges of the bars. On the bars (*c*) (*c*) a transverse bar G is placed the ends of said bar having each a hook (*e*) attached, which hooks work under the plates (*d*) as shown plainly in Fig. 1. The hooks and plates serve as guides to the bar G.

H, H, represent two screws which are fitted in the upper part of the frame F at a suitable distance apart. The outer end of each screw has a pinion (*f*) placed on it. Through the outer and upper cross rail (*g*) of the frame F a cylindrical rod (*h*) passes, and a circular disk I is placed loosely on this rod. The periphery of this disk is divided into six equal parts, and every alternate part is provided with teeth or cogs (*i*) the intermediate parts being smooth as shown at (*j*).

The head of the disk I has a ratchet (*k*) attached to it, said ratchet being fitted in the cross rail (*g*) and having a pawl (*l*) catching into or between its teeth.

To the inner surface of the disk I there are six ratchet shaped projections (*m*) placed in annular form and connected with the disk, and on the rod (*h*) a sleeve or collar J is placed loosely, said sleeve or collar having an arm (*n*) attached to it, which arm is connected by a rod K with the lever E. A spiral spring L is placed on the rod (*h*) said spring keeping the sleeve or collar J pressed against the inner side of the disk I.

To the outer side of the bar G a plate M is attached. This plate has two slots (*o*) (*o*) made through it, and screws or pins (*p*) (*p*) which are attached to pendant plates (*q*) (*q*) on the bar, are fitted in the slots (*o*) (*o*). One end of a spring (*r*) is attached to the plate M, the opposite end of the spring being attached to the bar G. One end of the plate M is of curved or hooked form as shown at (*s*) and fits between the threads of its screw H at the outer side, and the opposite end (*t*) of the plate fits between the threads of its screw at the inner side as shown clearly in Fig. 1.

The spring (*r*) has a tendency to keep the ends of the plate M between the threads of their respective screws.

To the inner side of the bar G two dogs N, N, are attached between which dogs the bolt from which the shingles are cut is secured.

The operation is as follows: As the knife frame D is drawn upward the lever E and rod (*k*) actuate the arm (*n*) of the sleeve or collar J and a projection (*l*) on the sleeve

or collar J catches against the projections (*m*) and turns the disk I one sixth of a revolution at each upward movement of the knife frame and consequently the toothed portion of the disk I will gear alternately into the pinions (*f*) of the screws H, H, and the screws H will be actuated alternately and the bar G, and the bolt which is attached to it, will be moved or fed obliquely forward, the ends of the bolt being moved alternately toward the knife frame.

Motion is given the bar G from the screws H, through the medium of the plate M, and the bar may be moved back at any time by disengaging said plate from the screws which is done by simply pressing it one side by hand.

I am aware that in shingle machines of this description the bolt has been previously fed obliquely forward, the ends of the bolt being actuated or moved alternately, and I therefore do not claim in the abstract or, irrespective of the means employed for effecting the purpose, such movement of the bolt, but,

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

1. The employment or use of the two screws H H actuated alternately from the knife frame D, through the medium of the lever E, rod K, arm (*n*) of the sleeve or collar J disk I provided with ratchet shaped projection (*m*) and teeth or cogs (*i*) and the plate M, the whole being arranged substantially as and for the purpose set forth.

2. I further claim the plate M when arranged and applied to the bar G substantially as shown so that it may be readily disengaged from the screws when desired for the purpose specified.

WILLIAM WOOD.

Witnesses:

LYMAN BANKS,

SANFORD SHOLES.