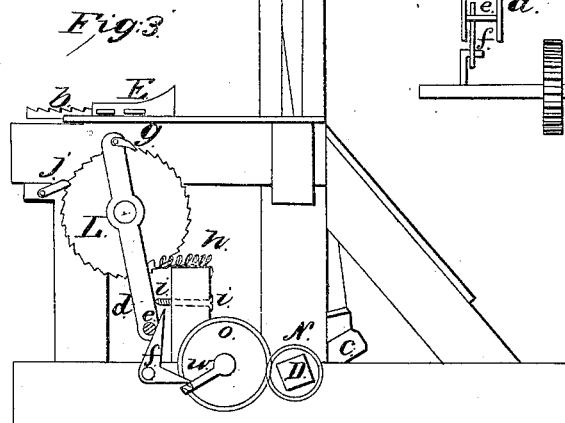
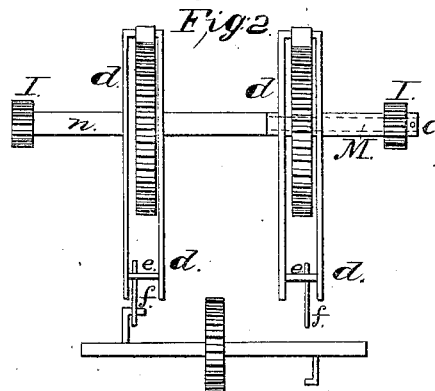
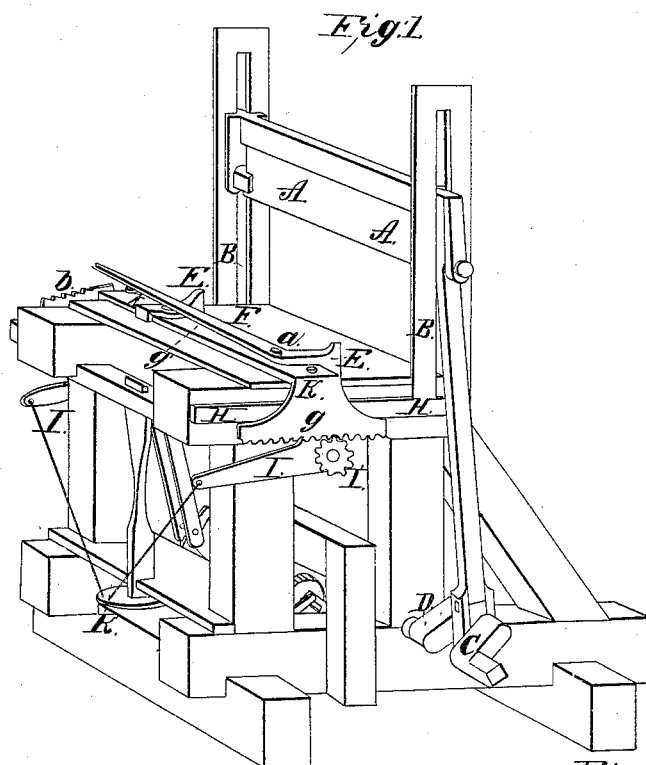


*Burt & Smith,*  
*Cutting Shingles.*  
*No. 1,225.      Patented July 9, 1839.*



# UNITED STATES PATENT OFFICE.

JONATHAN BURT, OF SULLIVAN, AND ERASMUS SMITH, OF NORWICH, NEW YORK.

## MACHINE FOR CUTTING SHINGLES AND HEADINGS FOR BARRELS FROM STEAMED OR BOILED TIMBER.

Specification of Letters Patent No. 1,225, dated July 9, 1839.

*To all whom it may concern:*

Be it known that we, JONATHAN BURT, of Sullivan, in the county of Madison, and ERASMUS SMITH, of Norwich, in the county of Chenango and State of New York, have invented new and useful Improvements in the Manner of Constructing the Feeding Apparatus Employed in Machines for Cutting Shingles and Headings from Steamed or Boiled Timber; and we do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing Figure 1 is a perspective view of the machine, A, A, being the cutting knife, working between the vertical slides B, B. This knife is operated upon by two cranks C, one at each end of the crank shaft D, to which shaft the power to drive the machinery is to be applied. The blocks, bolts, or pieces of stuff to be cut, are to be held between the jaws E, E, one of which is attached to the lever F, working on a joint pin at *a*, and held in place at its far end by a ratchet plate *b*, as in some other machines. G is a slide plate, making part of the feed slide G' to which the jaws are attached, there being a similar plate at the opposite end of the machine. These slide plates are guided by the guide pins N, N, as they traverse back and forth; upon their lower edges they are furnished with teeth, into which the pinion I', gears, there being a similar pinion on the same shaft which carries the pinion I, at the opposite end of the machine. This shaft carries also two ratchet wheels, which are operated on in a way to be presently described, for the purpose of moving the feeding slide. The ratchet wheel and pinion shaft is sustained at each end on levers J, J, working upon fulcra, allowing of their being thrown out of gear, by means of the treadle K, or in any other convenient mode.

Fig. 2, is a front view of a part of the machine, a portion of the frame being removed for the purpose of exhibiting the ratchet wheels, their shaft, pinions, and other appendages, the more clearly. L, L', are two ratchet wheels on the shaft M, M', and I, I', the two pinions on the same shaft, to work the feed slide. The wheel L, and the pinion I, are fastened on a tube as shown by the dotted lines, Fig. 2 which turns around freely on the shaft, but may be made fast to it by passing a pin through a hole *c*, in

the tube, and in the shaft. *d, d*, are feeding levers, consisting of straps of metal which embrace the ratchet wheels; the shaft M, passes through openings made in them for that purpose, so that they may vibrate upon it. To their upper ends are attached pawls which take into the ratchet wheels, and toward their lower ends there is a pin, or rod *e, e*, against which what we denominate an elbow piece, *f, f*, is to strike, so as to vibrate the feeding levers, and cause the feeding slide to advance.

Fig. 3, is an end view of the principal gearing of the feeding apparatus, part of the frame work being supposed to be removed for the purpose of exhibiting it; when the same parts are seen which are exhibited in the preceding figures they are designated by the same letters. N, is a cog wheel, on the crank shaft D, and this gears into a second cog wheel O, of just double its size, and the shaft of which runs in suitable bearings in the frame work of the machine. Upon this shaft there are two projecting rods, or wipers, one of which is shown at *w*; the other projects out in a direction diametrically opposite, and is to act on the second ratchet wheel. The wiper *w* comes in contact with the elbow piece *f*, which acts on the rod, *e*, of the feed lever *d*, and turns the ratchet wheel L, by means of the pawls *g*, at the upper end of it; *h*, is a spiral spring which draws the feed lever back, and *i*, a regulating check screw, to determine the distance to which it shall pass; *j*, is a pole to hold the feed on the ratchet wheel. The same arrangement for feeding as that described for the ratchet wheel shown in Fig. 3, is attached to the second ratchet wheel; it will be seen, therefore, that the two wipers, on the shaft of O, will operate alternately on these wheels, one of them operating at every revolution of the wheel N, or half revolution of O; but from the circumstance of the ratchet wheel L', Fig. 2, and the pinion I', being fixed on a tube as described, and not directly on the shaft M, the wheel L', will not be carried around by the action of the feed apparatus on the wheel L, and the feeding will take place at that end of the machine only, at every alternate cut of the knife, which will, consequently cant the block between the jaws, and produce the effect of giving the requisite slope to the shingles, by alternately cutting a

thick and thin end on the block. To accomplish this it is necessary to allow the slide upon which the block to be cut rests, to have a vibratory motion, and this is effected by  
5 attaching the plate, or bed, G', to which the jaws are affixed, to the end plates G, Fig. 1 by a pin, or bolt k, at each end, so that said pins or bolts may play around in the plate G'.  
10 When it is intended to cut heading, or other stuff which is required to be of equal thickness at each end, the wheel L', and pinion I', are made fast upon the shaft M, which will effect this object.  
15 Having thus fully described the construction, and the operation, of our said machine, and in so doing having represented various parts thereof to which we do not make any claim as constituting any part of our in-  
20 vention, we do hereby declare that all to

which we do make claim, and which we desire to have secured to ourselves by Letters Patent, is—

The manner in which we have constructed and combined the parts thereof by which 25 the stuff to be cut is fed up to the knife, and canted so as to produce shingles of the proper slope; that is to say, we claim the placing of one of the ratchet wheels and pinions upon a tube so as to allow them to turn 30 upon the shaft, and to coöperate with the feed levers, the feed slide, and their appendages, substantially in the manner, and for the purpose, herein fully set forth.

JONATHAN BURT.  
ERASMUS SMITH.

Witnesses:

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BENJ. E. RANDALL.