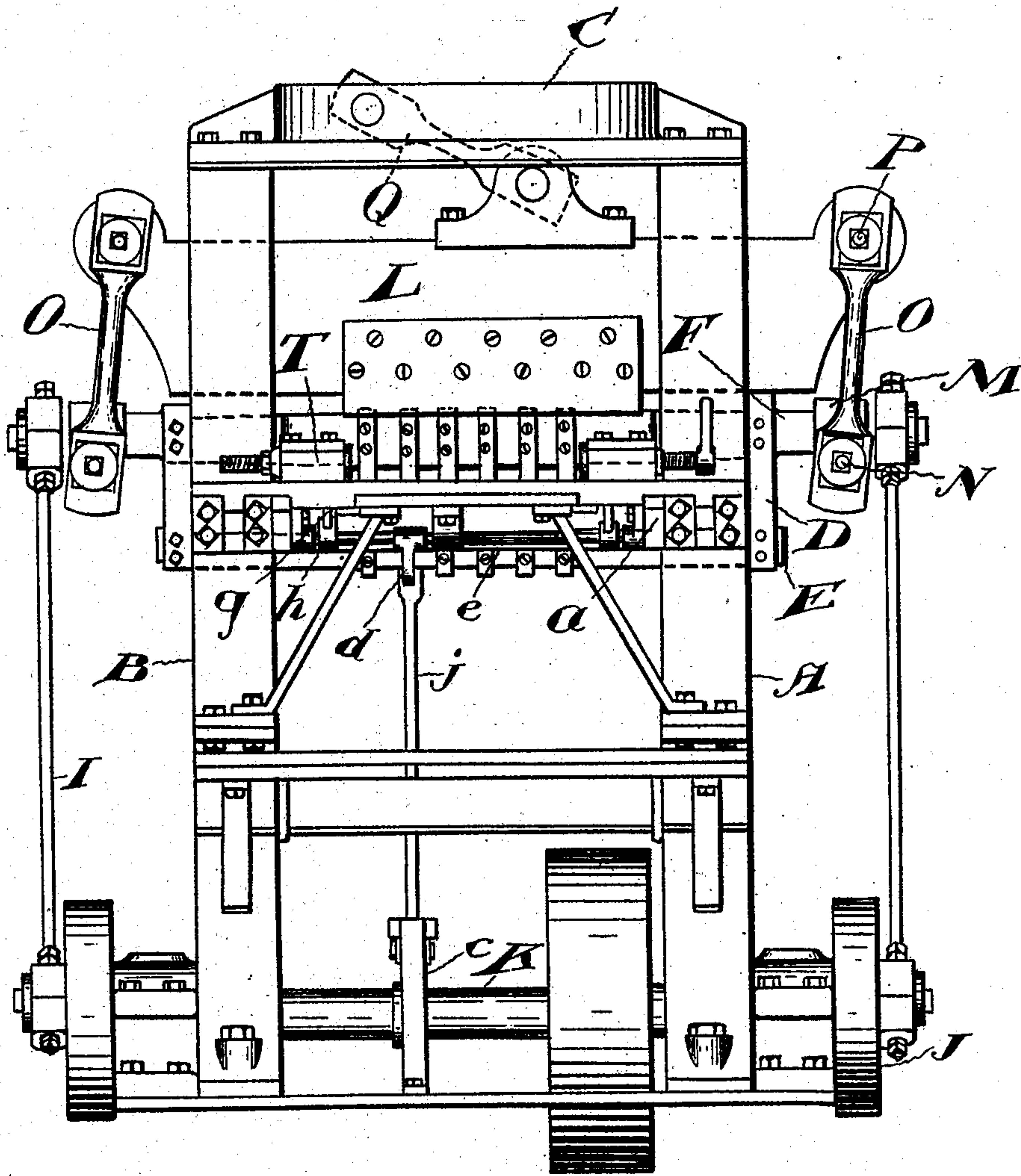


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APPLICATION FILED JULY 15, 1907.

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Patented Oct. 13, 1908.

2 SHEETS—SHEET 1.



*Fig. 1.*

WITNESSES:  
*J. M. Kendrick*  
*A. B. Sheffield*

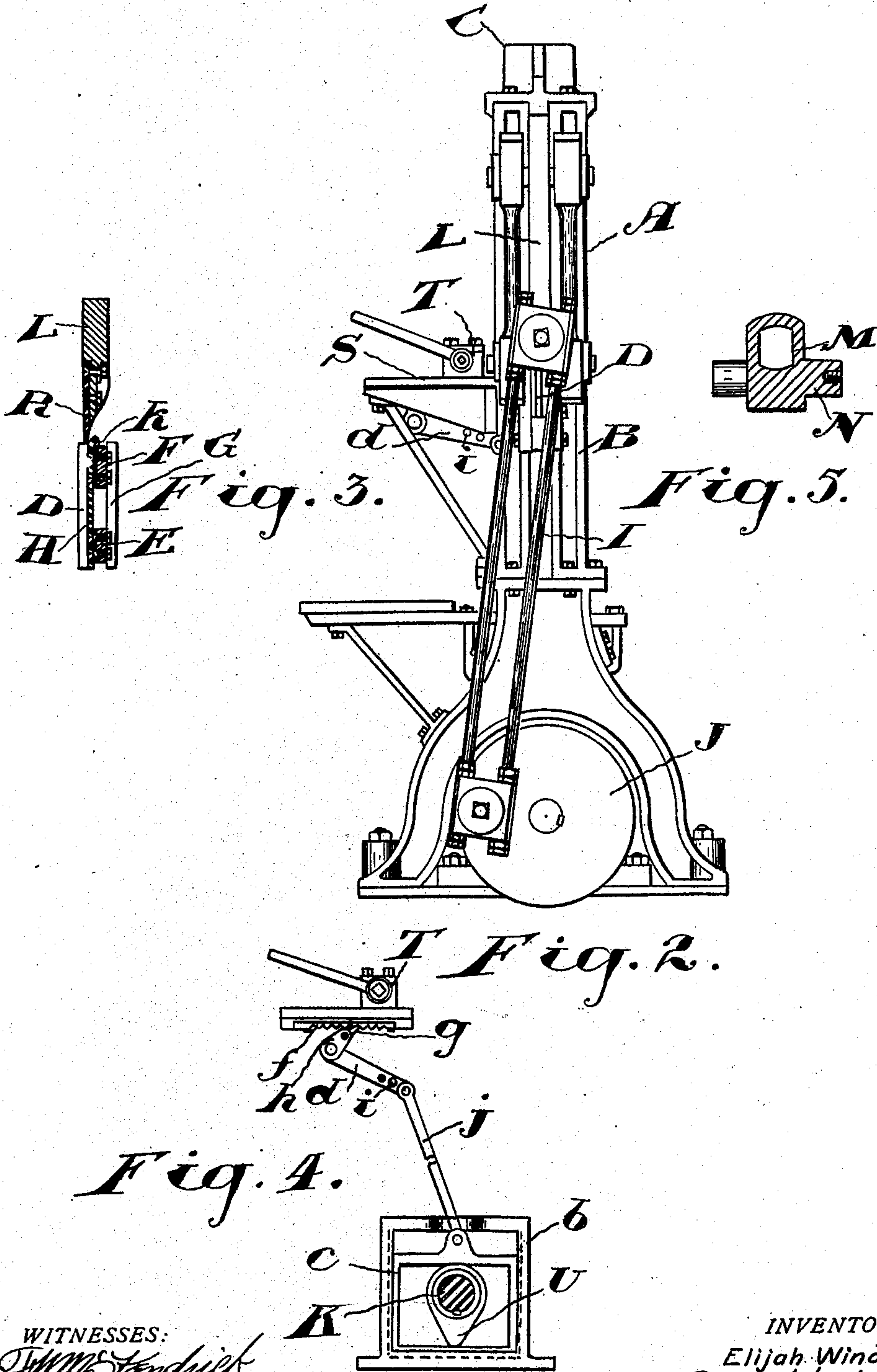
INVENTOR.  
Elijah Windsor  
BY *Ridout & Maybee*  
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INVENTOR.  
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# UNITED STATES PATENT OFFICE.

ELIJAH WINDSOR, OF LONDON, ONTARIO, CANADA.

MACHINE FOR CUTTING BARREL-HEADINGS.

No. 900,972.

Specification of Letters Patent.

Patented Oct. 13, 1908.

Application filed July 15, 1907. Serial No. 383,931.

*To all whom it may concern:*

Be it known that I, ELIJAH WINDSOR, of the city of London, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Machines for Cutting Barrel-Headings and the Like, of which the following is a specification.

My object is to devise means for cutting stuff for barrel heading and the like without sawing.

The machine by which I attain my object comprises a frame in which a cross head slides, carrying adjustable gage bars, in front of a feed table. A slicing beam carrying a knife is guided in the frame so as to be capable of both vertical and lateral movement, and is connected by pivoted links to the cross head. A third link connects the beam to the cap of the frame. A driving shaft carries crank disks connected by pitmen with the cross head. Thus a vertical movement is given to the cross head and a slicing movement to the knife beam. The feeding table is provided with means for gripping the block of wood from which the heading is to be cut and with automatic adjustable feed.

Figure 1 is a front view of my improved machine. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional detail of a slicer beam and cross head or abutment. Fig. 4 is a detail in side elevation showing the means for effecting the feed. Fig. 5 is a sectional detail of one of the yokes on the cross head.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is the frame of the machine, preferably formed of pairs of standards B connected by the cap C. The standards are suitably spaced to form guide ways for the cross head or abutment D. This cross head comprises the two cross beams E and F. These cross beams are connected at each end by the slide blocks G, and intermediate the ends by a series of gage bars H, which will be hereinafter more particularly referred to.

The ends of the cross beam F are suitably shaped to form pivots for the pitmen I. The lower ends of these pitmen are journaled on wrist pins on the crank disks J, secured to the shaft K, journaled at the base of the machine. Thus a vertical reciprocating movement may be given to the cross head D. Above the cross head is located the slicer beam L, suitably guided in the standard so as to be both vertically and laterally movable.

Yokes M carrying wrist pins N are secured in any suitable manner on the ends of the cross beam F. On these pins are pivoted the lower ends of the links O, the other ends of the links being pivoted on pins P secured to or forming part of the slicer beam L.

A link Q is pivotally connected with the top of the slicer beam, and is also pivoted on the cap C to one side of the center of the beam.

From this construction it follows that the slicer beam obtains a vertical movement due to its action with the cross head, and at the same time it is given a lateral movement due to the swinging of the link Q. Thus from the rotation of the shaft K a vertical movement is given to the cross head and a vertical slicing movement to the slicer beam.

The slicer beam carries the knife R (see particularly Fig. 3). The edge of this knife is set rearward of the face of the gage bars a distance equal to the thickness of the heading to be cut. The block of wood from which the heading is to be cut is placed on the feed table S, slidable to and from the gage bars on the guides a. Suitable screw clamps T are provided on this table for holding the wood. The table itself is fed forward as hereinafter described. By this table the wood is held against the gage bars while the knife descends and slices off the heading, which passes out forwardly through the gap between the gage bars and the slicer beam.

The feed mechanism is seen best on reference to Figs. 1 and 4. On the shaft K is secured a cam U which is adapted to operate a sash c, working within the guide frame b. A connecting rod j is pivotally connected with the top of the sash and also with an arm d secured to the shaft e journaled on the guides a. On the under side of the table are detachably secured two racks f. With each rack there engages a spring actuated pawl g, each secured to an arm h secured to the shaft e. Thus as the cam revolves the arms d are rocked and an intermittent forward movement given to the feed table by the action of the pawls g and the racks f. The cam is preferably timed so that the backward movement of the pawls commences at the time the slicer beam commences its upward movement.

I adjust the feed to suit the various thicknesses of heading to be cut by using racks with a different pitch. The throw of the pawls g, to suit the pitch of the teeth of the



racks employed, is adjusted by pivoting the upper end of the connecting rod *j* closer to or further from the shaft *e*, several holes *i* being formed in the arm *d* for that purpose.

5 If the feed be changed it is necessary also to adjust the gage bars relative to the knife.

It will be seen on reference to Fig. 3 that the gage bars are secured by bolts to the beams E and F, and hence are readily de-  
10 tachable.

Liners *k* of various thicknesses are employed whereby the gage bars may be set out from the beams at a greater or less distance, according to the feed, and consequently according to the thickness of head-  
15 ing sliced off.

While I describe my machine as being particularly adapted for cutting barrel headings yet it will be evident that it may be em-  
20 ployed for cutting light stuff for various purposes. In the cutting of barrel headings its economy, as compared with sawing and planing, is very marked as there is practically no waste of material.

25 It will be found that by the use of the vertically movable abutment, against which the wood to be cut is held by the feed table, the wood is very securely held and the cutting accomplished with ease and certainty.

30 The construction of my machine in its details will be found to be simple and strong, and perfectly adapted for the purposes intended.

What I claim as my invention is:

35 1. The combination in a veneer machine of a frame; a cross head vertically movable therein; a shaft parallel to the cross head; cranks on said shaft; pitmen connecting the cranks and the cross head; a slicing beam  
40 vertically and laterally movable in the frame; links pivotally connected with the cross head and the slicing beam, and a link

pivotally connected with the slicing beam and the frame to cause a lateral swing of the beam. 45

2. The combination in a veneer machine of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected by vertical gage bars; a knife suitably connected to said cross head; 50 a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams.

3. The combination in a veneer machine 55 of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected at their ends by vertical slide blocks and intermediate their ends by vertical gage bars; a knife suitably connect- 60 ed to said cross head; a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams. 65

4. The combination in a veneer machine of vertical guides; a cross head vertically movable in said guides comprising two cross beams connected at their ends by vertical slide blocks and intermediate their ends by 70 vertical gage bars bolted to the beams; liners between the gage bars and the beams; a knife suitably connected to said cross head; a horizontal shaft parallel to the cross head; cranks on said shaft; and pitmen 75 journaled on the cranks, and having a pivoted connection with the ends of one of the cross beams.

London, Ont., 5th July, 1907.

ELIJAH WINDSOR.

Signed in the presence of—

LILIAN M. EMERY,

DELBERT L. CONSTABLE.