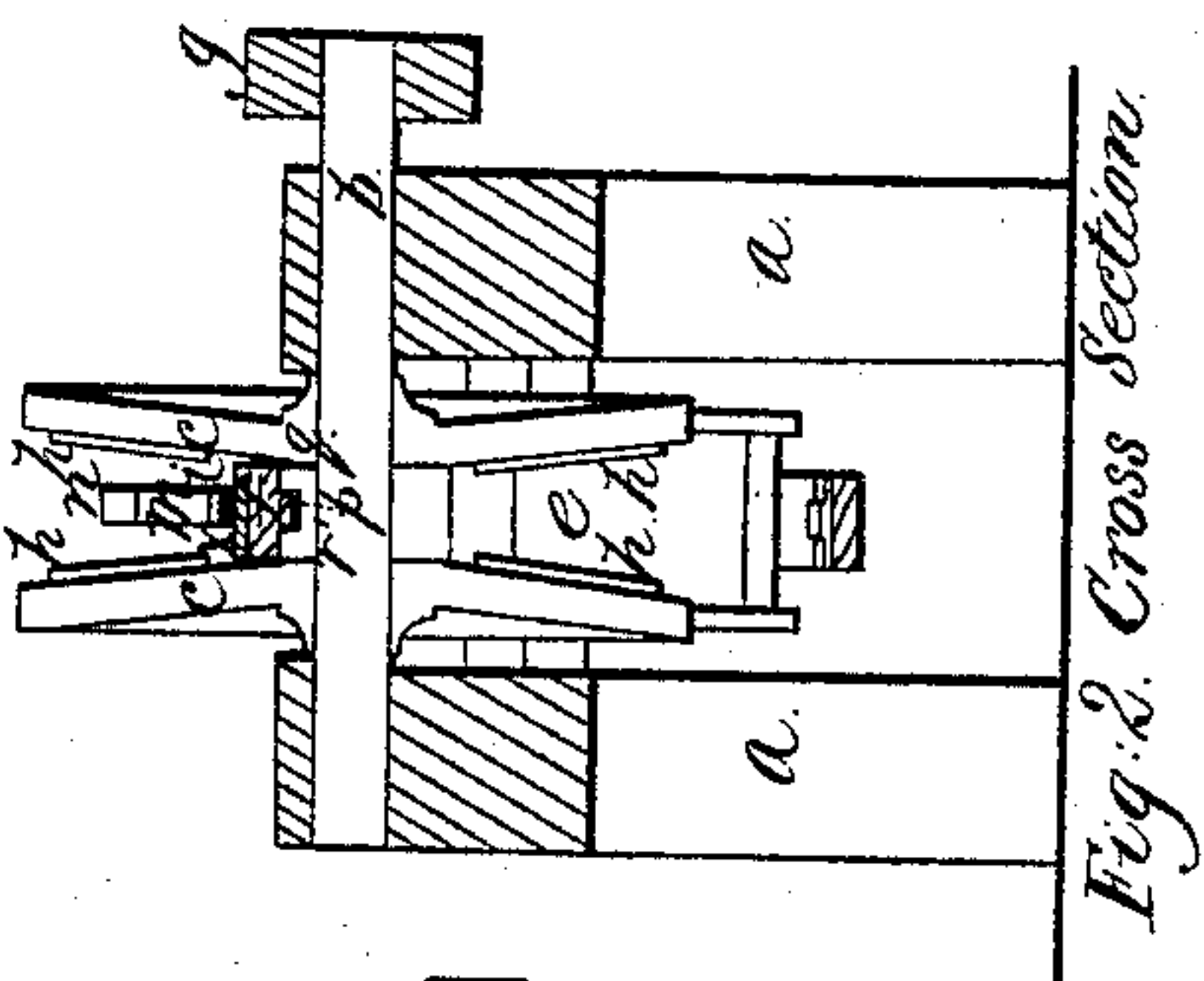


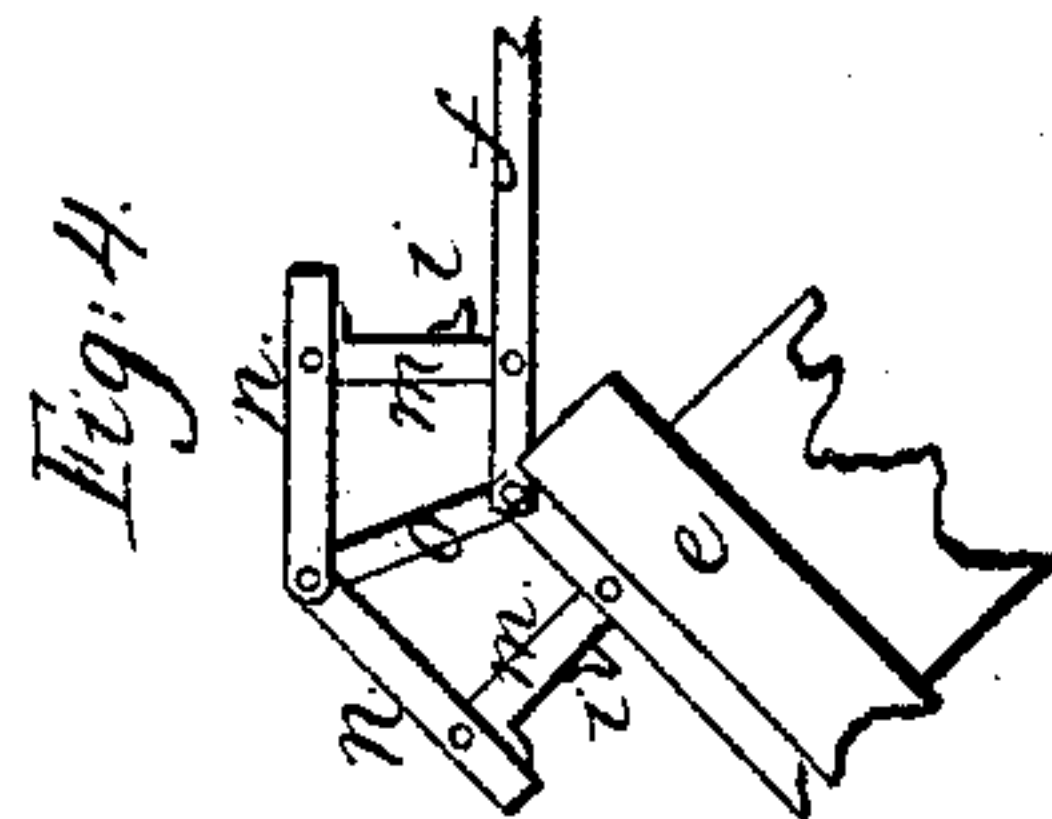
*L. S. Chichester,*  
*Jointing Staves.*

*No 8,288.*

*Patented Aug. 12, 1851.*

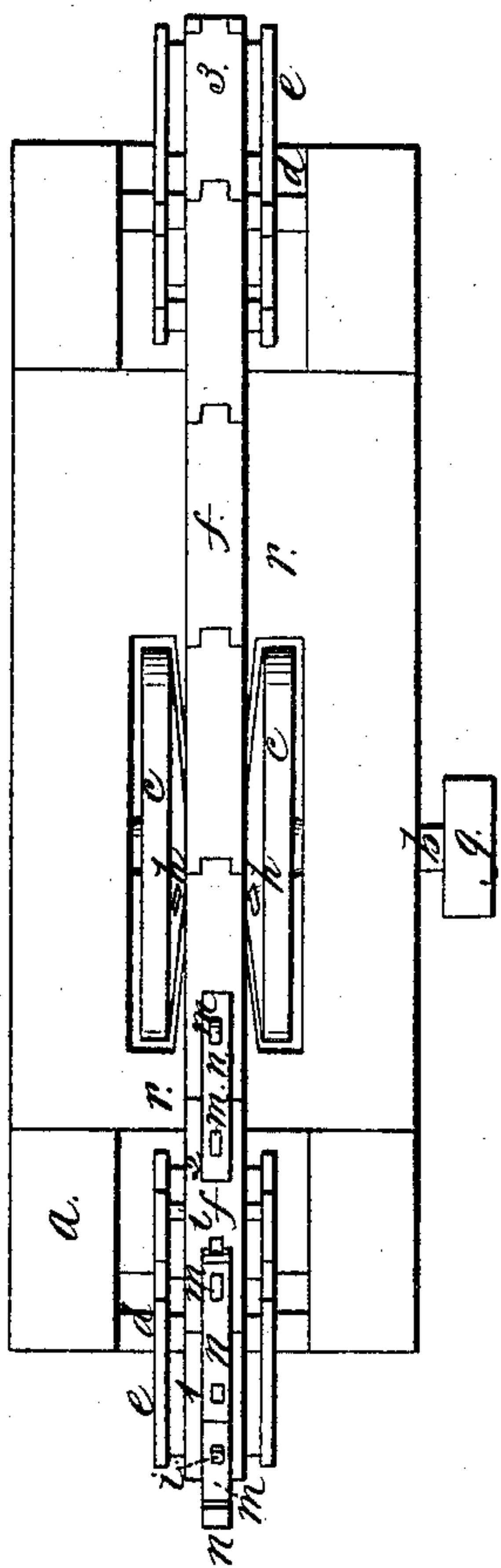


*Fig. 2. Cross Section.*

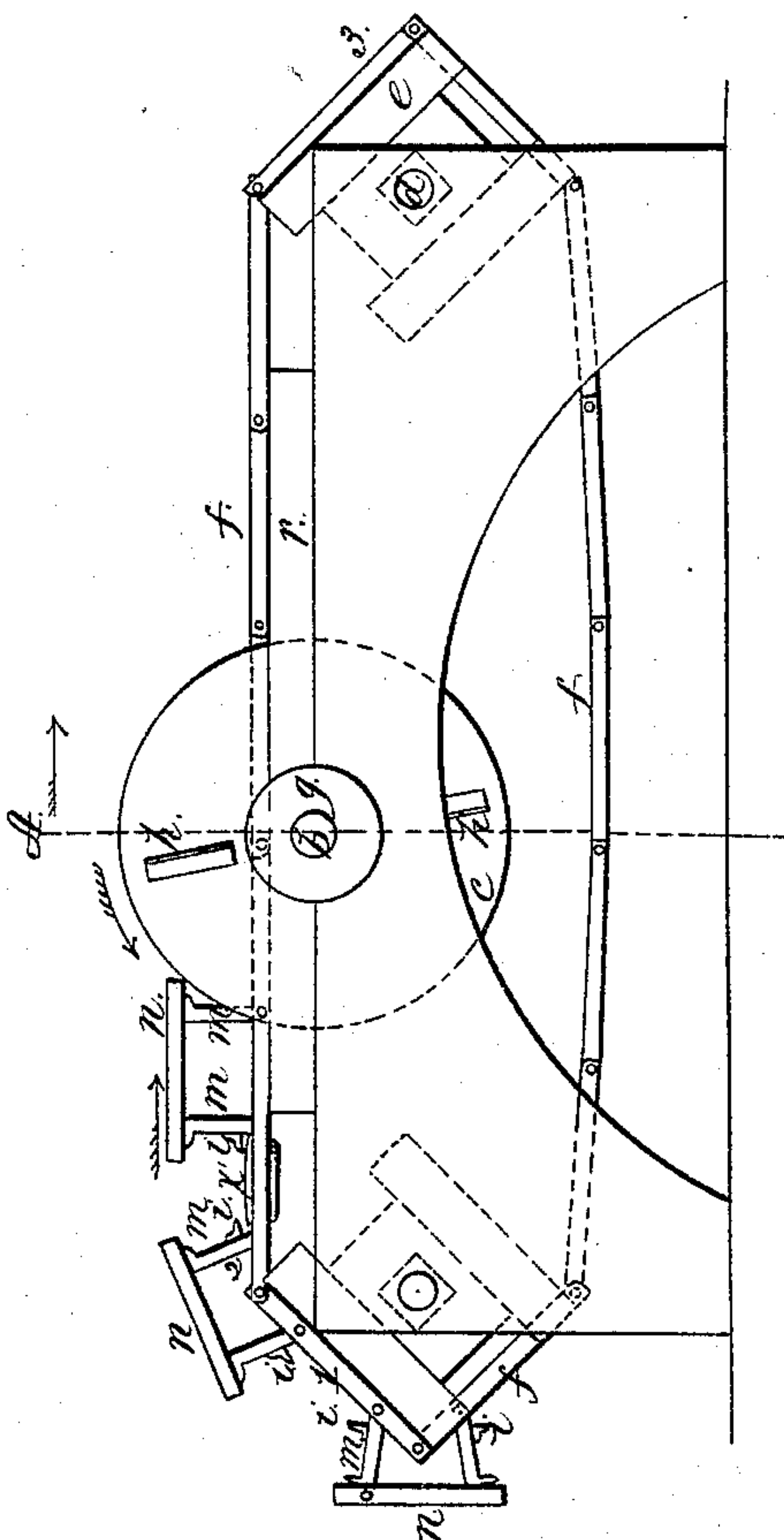


*Fig. 4.*

*Fig. 3. Plan.*



*Fig. 1. Side elevation.*





# UNITED STATES PATENT OFFICE.

L. S. CHICHESTER, OF WILLIAMSBURG, NEW YORK.

## MACHINE FOR JOINTING STAVES.

Specification of Letters Patent No. 8,288, dated August 12, 1851.

*To all whom it may concern:*

Be it known that I, LEWIS S. CHICHESTER, of Williamsburg, Kings county, and State of New York, have invented a new and useful Machine for Jointing Staves, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the machine; Fig. 2 a cross section at the line A *a* of Fig. 1; Fig. 3 a plan and Fig. 4 a modification of the clamping apparatus.

The same letters indicate like parts in all the figures.

The object of my invention is to joint staves of different widths to the same bevel in the same machine and for this purpose I use a chain of plates, working over square pulleys upon which the staves are secured, in combination with two converging face plates on the same rotating shaft upon which the knives are set to form a bevel, the staves being clamped or otherwise firmly fixed on the plates of the chain, and fed through between the knives of the face plates by which they are jointed.

My invention consists in a mode of fastening the staves to the plate while they are being jointed, and consists in combining with the adjacent ends of two of the plates of the chain, two hinge pieces which are provided with a cross piece at their upper ends, and at their lower ends near their connections with the plates, with self acting toes which clamp the staves on the plates when the two plates are moving in line, but which open and liberate the stave when the two adjacent plates form an angle with each other in passing around the angle of the square pulleys, the connection of the two upright pieces with their cross piece and with the plates of the chain being such as to admit of the plates of the chain passing around in contact with the square pulleys.

In the accompanying drawings *a* represents the frame of the machine which is properly adapted to the reception of the shaft *b*, upon which the circular face plates *c* are hung, and the two shafts *d*, *d*, carrying square pulleys *e*, *e*, over which passes the chain of plates *f*, *f*, *f*. Motion is communicated to the machine from any first mover by a belt on the pulley *g* on the shaft *b*, or in any other way that may be desired.

The chain of plates *f* and the face plates *c*

armed with knives *h* being supposed to be moving respectively in the directions indicated by the arrows marked thereon, the attendant at the forward end of the machine places on the plate 1 a stave to be jointed (the staves having previously been assorted as to length) being careful that its ends be under the toes *i* of the clamping apparatus. The toes may be of metal and are firmly fixed to the hinged pieces *m*, which are again connected at their outer ends by the cross piece *n*, the nature of all these connections being such as to admit of the requisite motions of the parts. As soon as the plate 1 reaches the position of the plate 2 of the chain, the stave is clamped tight by means of the toes *i*, and being carried between the knives *h*, *h*, of the face plates is there jointed, all the plates being provided on their under side (as is shown only on plate 2 (see Fig. 1) with a tongue or rebate *p*, which guides them between the face plates by moving in the groove *q* of the bed *r* of the machine (see Fig. 2). When the plate with the jointed stave reaches the position of the plate 3 the stave is loosened and delivered at that end of the machine.

It is obvious that many other devices may be adopted for clamping the stave on the plates, besides the one which I have described, all depending upon the angle formed by any two adjacent plates in moving over the pulleys for the insertion and discharge of the stave as for instance, by reference to Fig. 4 it will be seen that the cross piece *n* is provided with a joint in the middle and with a connecting link *o* to the hinge of the two adjacent plates.

By this arrangement it will be seen that a stronger bearing is obtained on the stave when clamped and the insertion and discharge thereof facilitated.

I do not desire to limit myself to the precise construction and arrangement of the machine as described, but to vary the same as I may see fit according to circumstances, but always retaining one or both of the principal features described above. The face plates *c*, *c*, may be so constructed as to admit of there being removed from their shaft, and others of greater or less bevel substituted, or the knives *h*, *h*, may be so inserted in the face plates as to admit of variation in the angle they form with each other; also the shaft of the face plates may be so arranged as to admit of raising or lowering the knives of

the face plates with respect to the chain of plates, in order that the same machine may joint wide or narrow staves. The curve to be given to the stave is determined by the  
5 form of the bed piece  $x$  which varies its proportion thereto.

What I claim as my invention and desire to secure by Letters Patent, is—

Combining with the adjacent ends of any

two plates of the chain, the hinged pieces 10 provided with self acting toes for clamping the stave while it is being jointed and then releasing it, substantially in the manner and for the purpose described.

LEWIS S. CHICHESTER.

Witnesses:

ALLEN PORTER BROWN,  
WM. BISHOP.