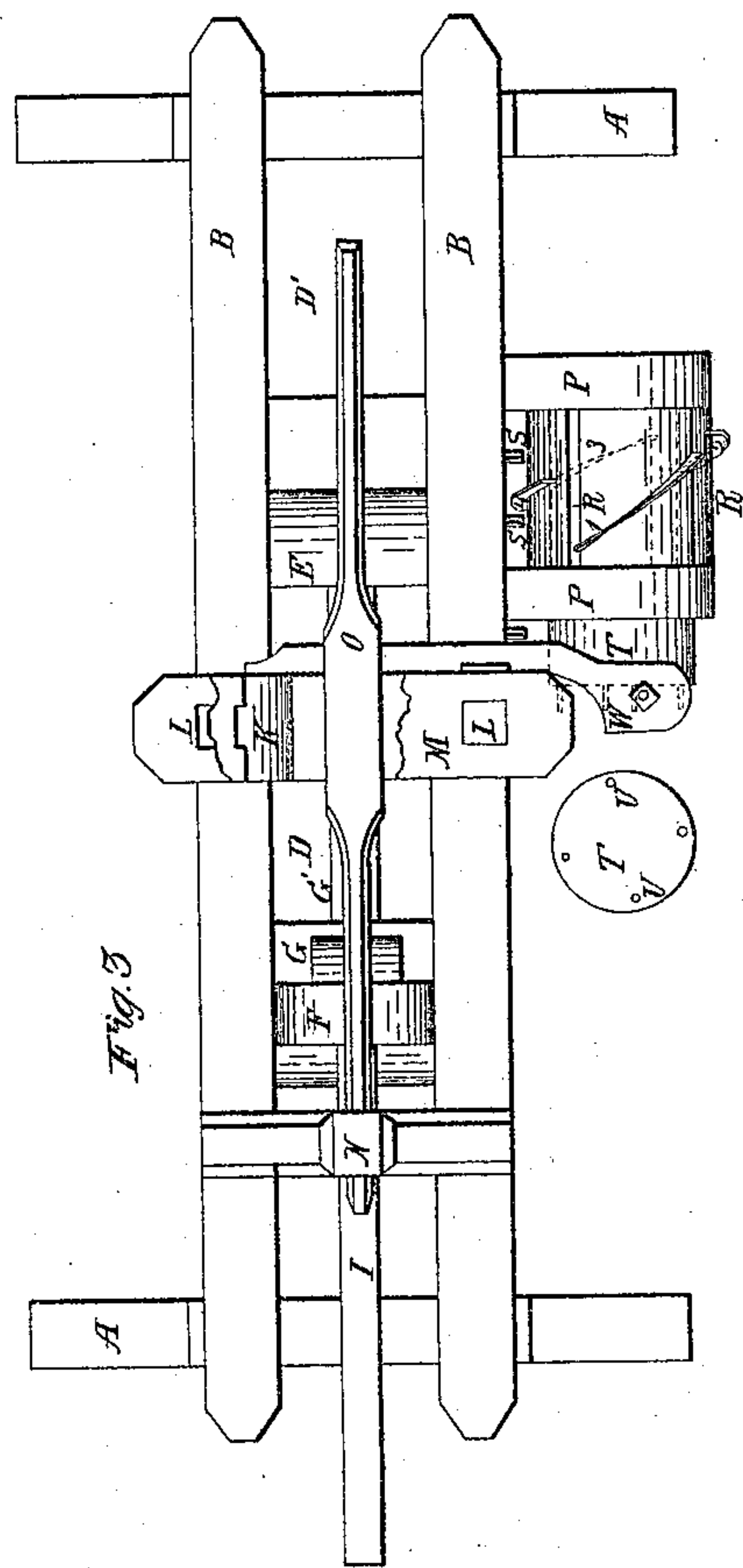
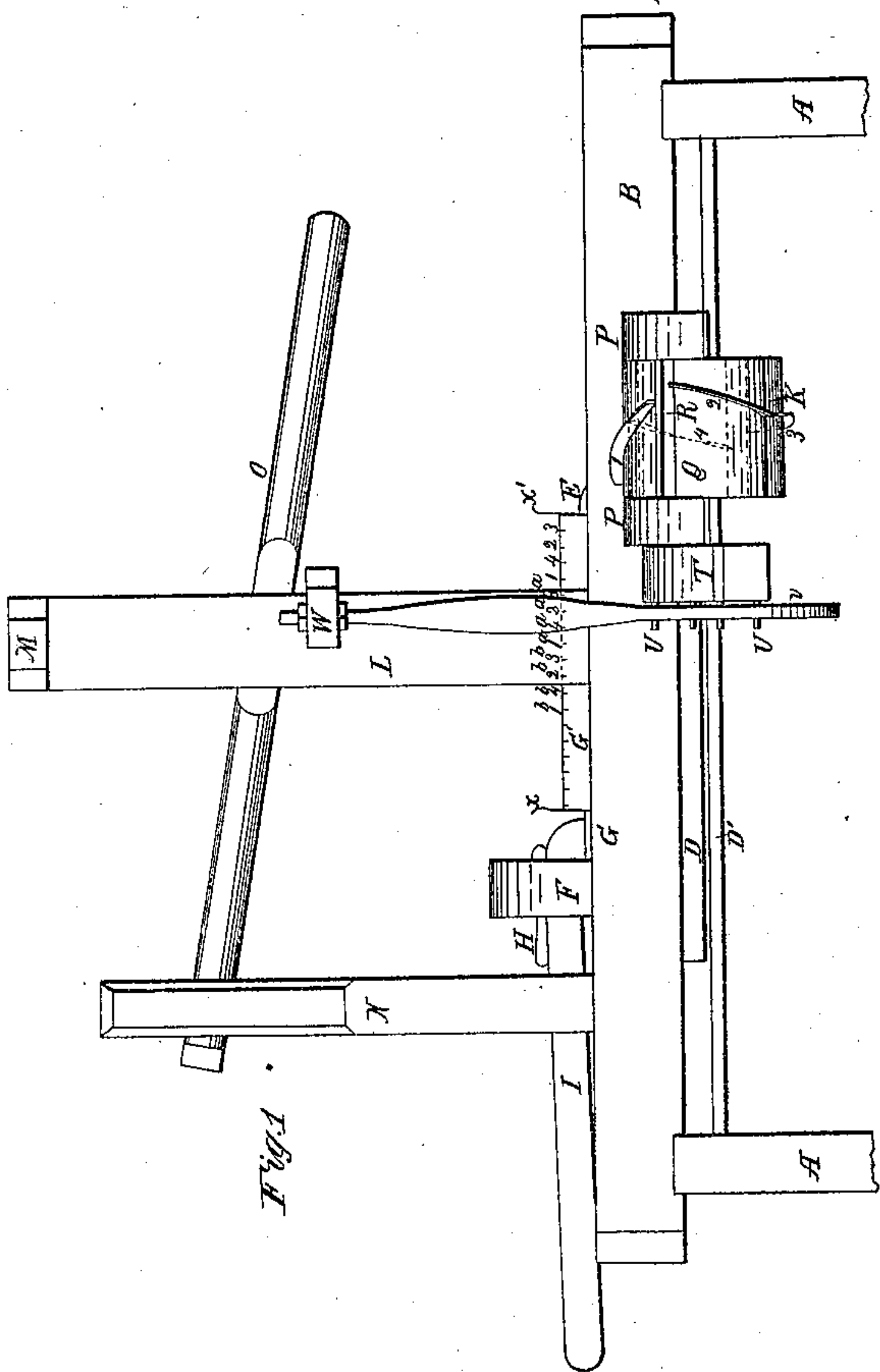
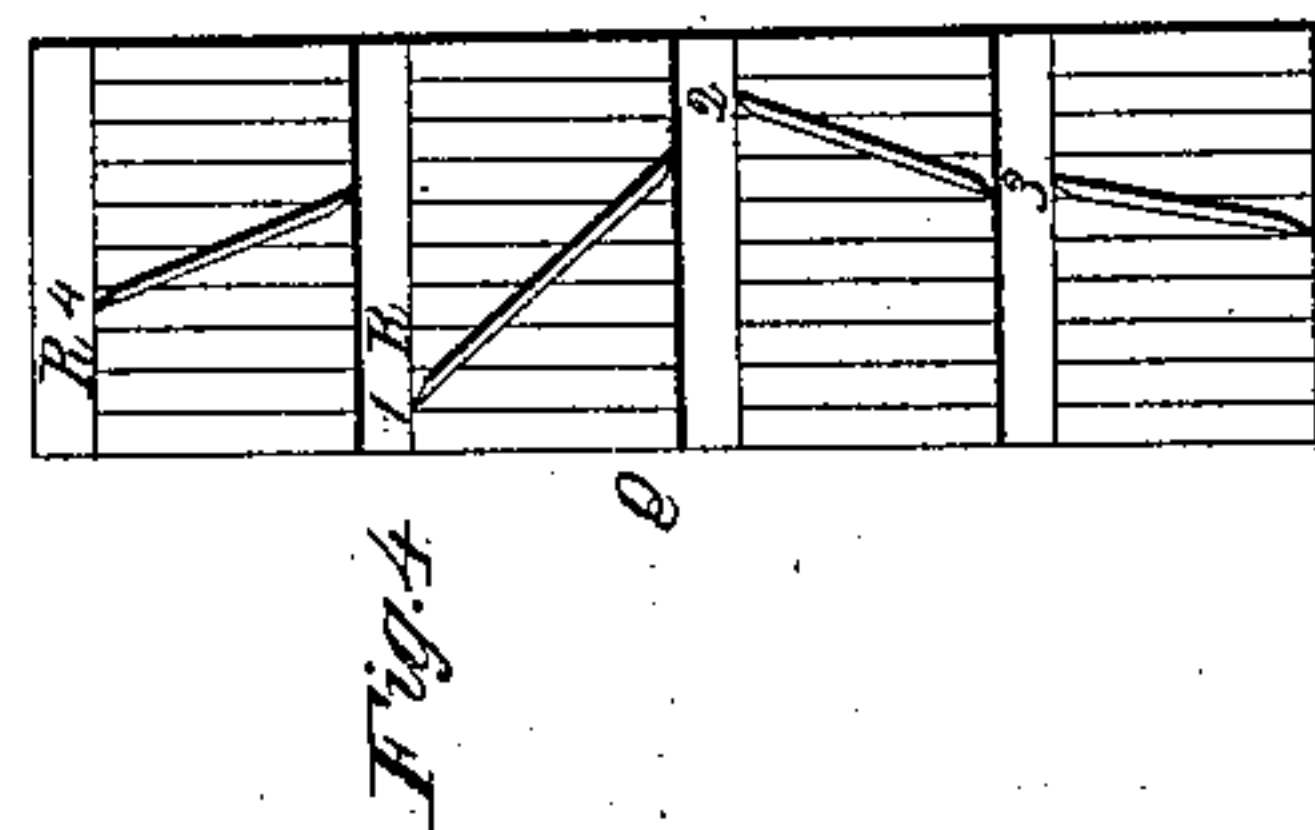
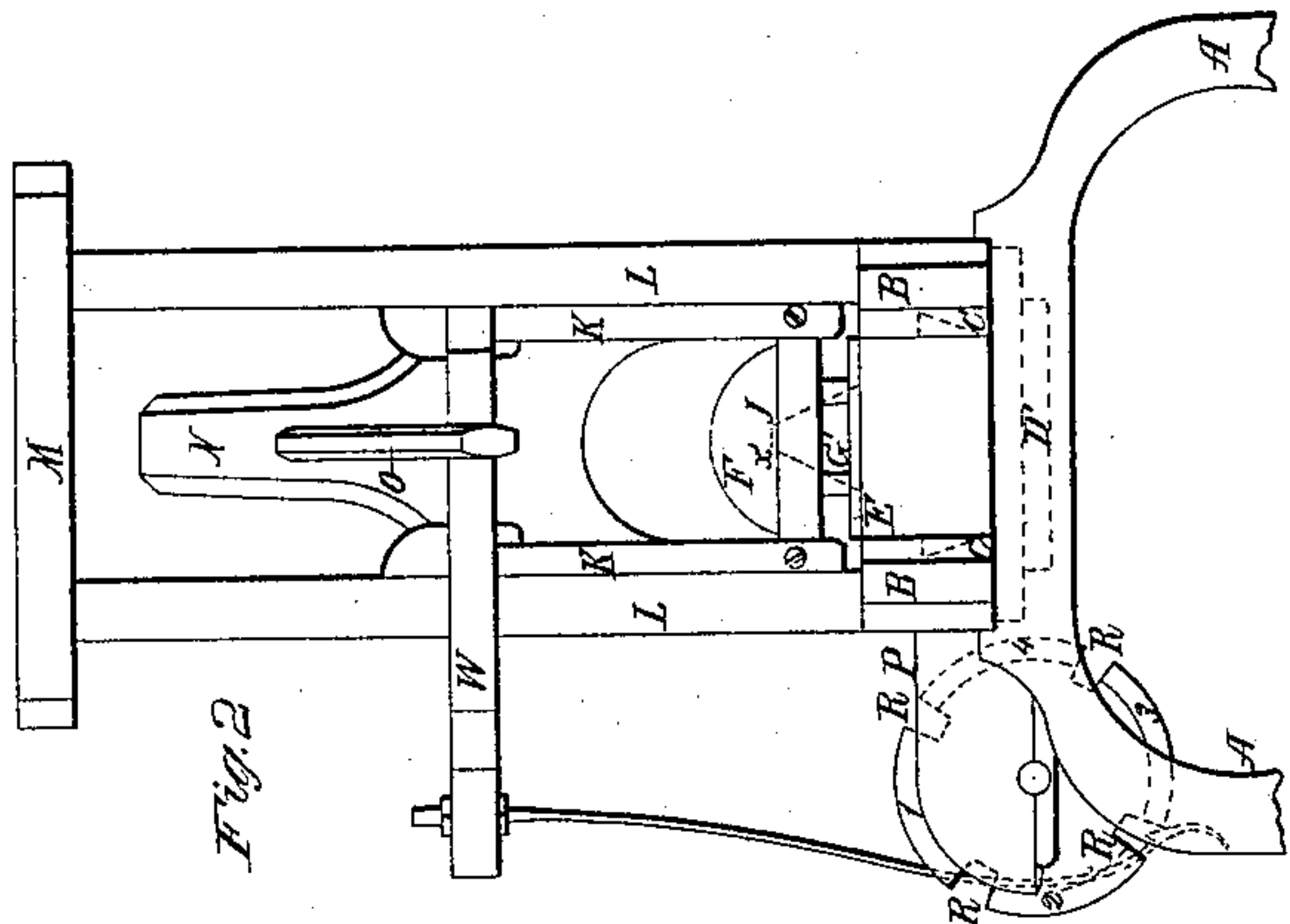


H. White,
Cutting Shingles,
No 15,398, *Patented July 22, 1856.*



UNITED STATES PATENT OFFICE.

HARRY WHITE, OF ONEIDA CASTLE, NEW YORK.

METHOD OF RIVING EQUAL PIECES FROM A BLOCK.

Specification of Letters Patent No. 15,398, dated July 22, 1856.

To all whom it may concern:

Be it known that I, HARRY WHITE, of Oneida Castle, in the county of Oneida and State of New York, have invented a new and useful Machine for Riving Shingles, Staves, etc.; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation referring to the drawings in which the same letters indicate like parts in each of the figures.

Figure 1, is an elevation of one side. Fig. 2, is an elevation of the right hand end. Fig. 3, is a plan, and Fig. 4, a plan of the working surface of the rotary cam.

The nature of my invention consists in so constructing and operating a cam as to make it traverse the carriage and block under the frow, so that the frow will first split off a portion of the block sufficient for a number of shingles, and then split it in the center and each of the pieces formed in the center successively, until the whole block is split into the proper number of pieces of the desired thickness to form shingles, staves, etc. Also in applying some springs so as to yield when the frow enters the block, and react to close the split when the frow is withdrawn, so as to restore the block to a proper position for the frow to strike again.

In the accompanying drawings A, A, are legs supporting the rectangular frame B, B, made in the form shown to which frame most of the other parts are fastened or connected. The sides B, B, are grooved as shown by dotted lines at C, C, Fig. 2, for the edges of the upper part of the carriage D, which is fitted to traverse in them, the lower part of said carriage being made to extend under the frame B, as shown by dotted lines in Fig. 2. This carriage has a permanent block E, at one end and a standard F, at the other with a movable block G, fitted to traverse between them, so arranged that the bolt or block G' to be rived or split may be placed on the carriage against E, and G, being pressed against the opposite side or edge; and the wedge H, driven in the standard F, over the bar I which is connected to the block G, so as to retain the block G, in contact with the bolt G', while it is riven or split by the traversing frow J, fastened to the frame

K, K, which is fitted to, and arranged to traverse between the standards L, L, fastened into the frame B, as shown and connected at the top by the bar M, as represented in the drawing. The pronged standard N, is fastened to the frame B, to form the fulcrum of the lever O, which is connected to the frame K, so that the operator can seize the lever O, and vibrate it to traverse the frame and operate the frow J to split the block G' on the carriage; or a pitman from a crank operated by steam, water, or other power may be connected to the lever O, or frame K, so as to traverse it and operate the frow for the purpose above mentioned. In order to traverse the carriage D, so that the frow will split the blocks and parts of blocks in the center successively; I fasten two brackets P, P, to the frame B, to support the journals of the cam roller Q, which are fitted to turn in the brackets.

The cam Q is constructed in the form represented; Fig. 4, being a plan of its surface unrolled; that is, its periphery is divided into four parts by four grooves or spaces R, which parts may be numbered 1, 2, 3, and 4. Each of these parts is provided with a metal segment firmly fastened there to and arranged in proper inclinations or angles to act on the pins S, S, in the side of the carriage and traverse the carriage as desired, so as to split off a piece of a block and then split it in the center, and also each of the two parts in the center successively. The cam Q, is turned by the disk, T, fastened to one of its journals and provided with four pins U, U, which are caught in succession by the spring hook V, in the arm W which arm is fastened to the frame K, so that when the frame and frow are raised, the hook catches one of the pins U, so as to turn the cam and traverse the carriage a proper distance and in a proper direction, for the frow to split the block in a proper place; that is the carriage should be run to the extreme left when the block is put in and secured as above mentioned; then if the machine is set in motion the segment 1, will act on the first pin S, and traverse the carriage so that the frow will strike 1, on the block, and split off a proper thickness to make four shingles or staves, and when the frow and frame are raised the segment 2, will act on the same pin and traverse the carriage, so that the

frow will strike the block in the center or at 2, and split it, and as the machine is operated the segments 3, and 4, will move the carriage, so that the frow will strike the blocks at the lines 3, and 4, or in the center. 5 Then the segment 1, will act on the second pin S, and traverse the carriage, so that the frow will split off another piece of a proper thickness for four shingles or staves as before, by striking the block at the line 1^a, and the block so split off will be struck by the frow at 2^a, 3^a, and 4^a in succession when the segment 1, will act on the 3d pin V, and the frow will strike successively at 1^b, 2^b, 3^b 15 and 4^b, and if the machine is kept in motion each of the pins V, will be acted upon by all of the segments in succession, until the entire block is split into shingles which may be removed and another block placed on the carriage and split as above described. 20

The bar D' is fastened to the legs A, A, to aid in supporting the carriage D. The springs α , and α' , are fastened to the blocks G, and E, so as to act against the block being split and yield when the frow is forced into the block G', and react when the frow is withdrawn, so as to close the split made by the frow and bring the block or the several parts of it into its proper position for the frow to strike again. 30

If a frow is driven into a block so as to split off a piece of a proper thickness for one shingle or stave it is apt to run so as to make the piece split off thin at the lower end. If several pieces are split off two 35 three or more are apt to run thin at the lower end and then one will come off very thick at the lower end as much too thick as the others were too thin. But with my machine the frow splits off a piece of suffi-

cient thickness for a number of shingles or staves and then splits it in the center and each piece in the center successively, until all the pieces are of the thickness desired for the purpose intended. 45

There is a great advantage in splitting each piece in the center as each part has the same opportunity to spring and is far more certain to split straight, so as to make each piece of a uniform thickness from end 50 to end thereby saving the lumber from being wasted and also saving time and labor in shaving the shingles or staves split. Besides six thousand shingles is considered a large day's work for a laborer to split by 55 hand, but my machine is intended to split two hundred thousand in a day with one man to attend it.

I believe I have described the construction and operation of my invention so as to enable any person skilled in the art to make and use it and I will now state what I desire to secure by Letters Patent to wit: 60

I claim—

1. Traversing the block to be split by means of devices substantially such as are herein described or their equivalents so that the frow will strike the pieces to be split in the center successively to split them substantially as set forth in the foregoing 70 specification.

2. I also claim the springs α , and α' , so applied as to yield when the frow enters the block and react to close the split when the frow is withdrawn substantially as described. 75

HARRY WHITE.

Witnesses:

JNO. B. LOOMIS,

WILLIAM F. GREEN.