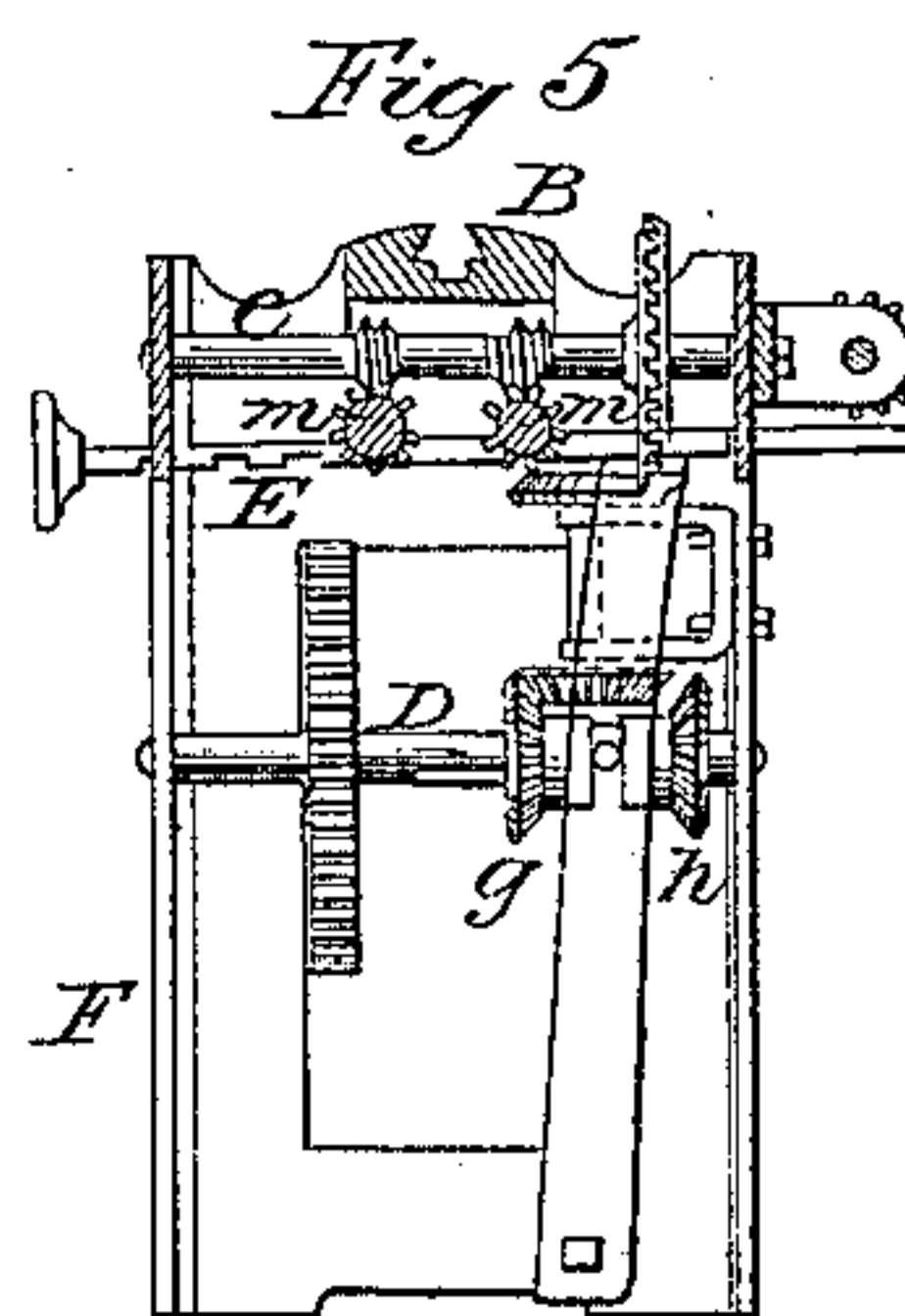
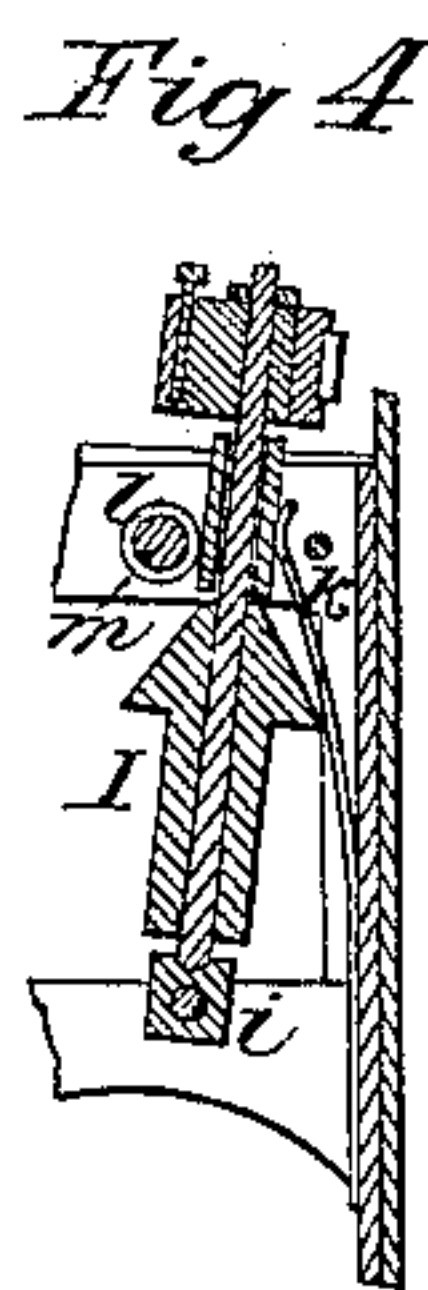
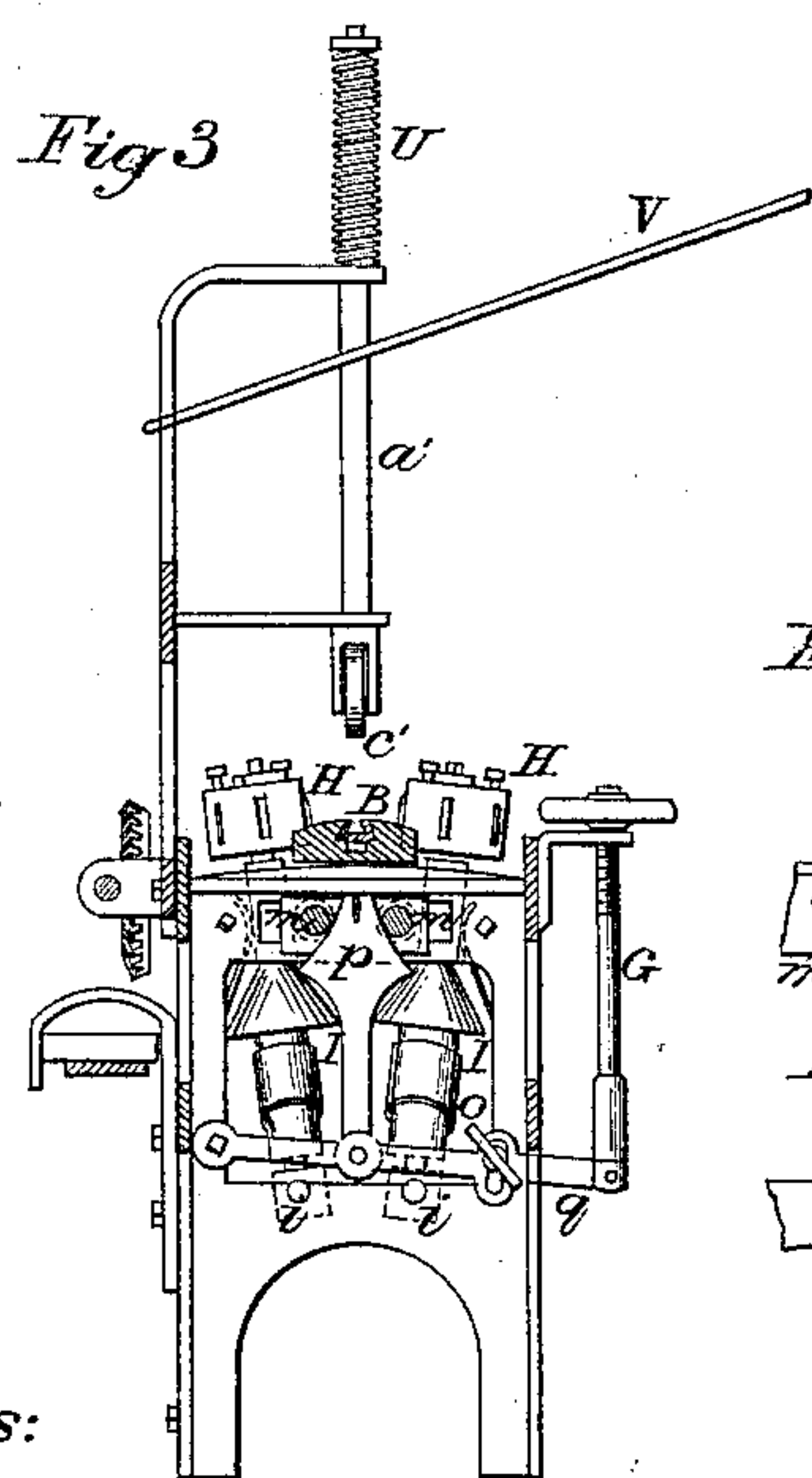
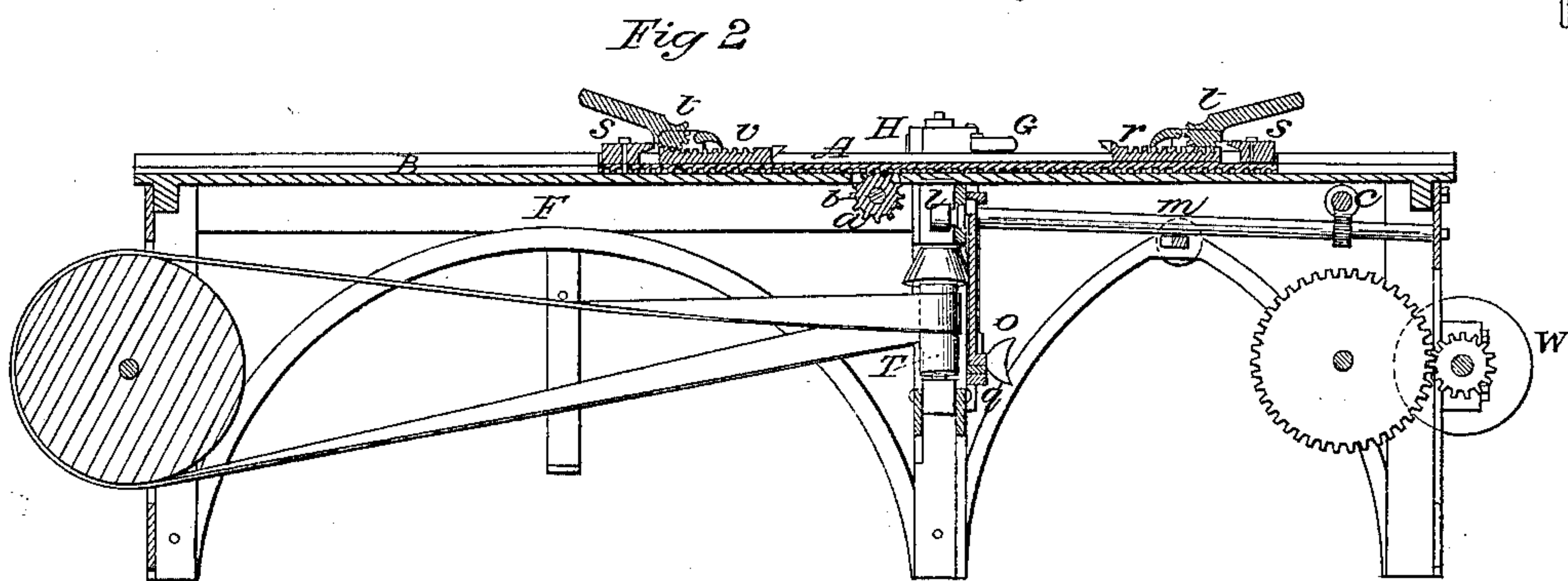
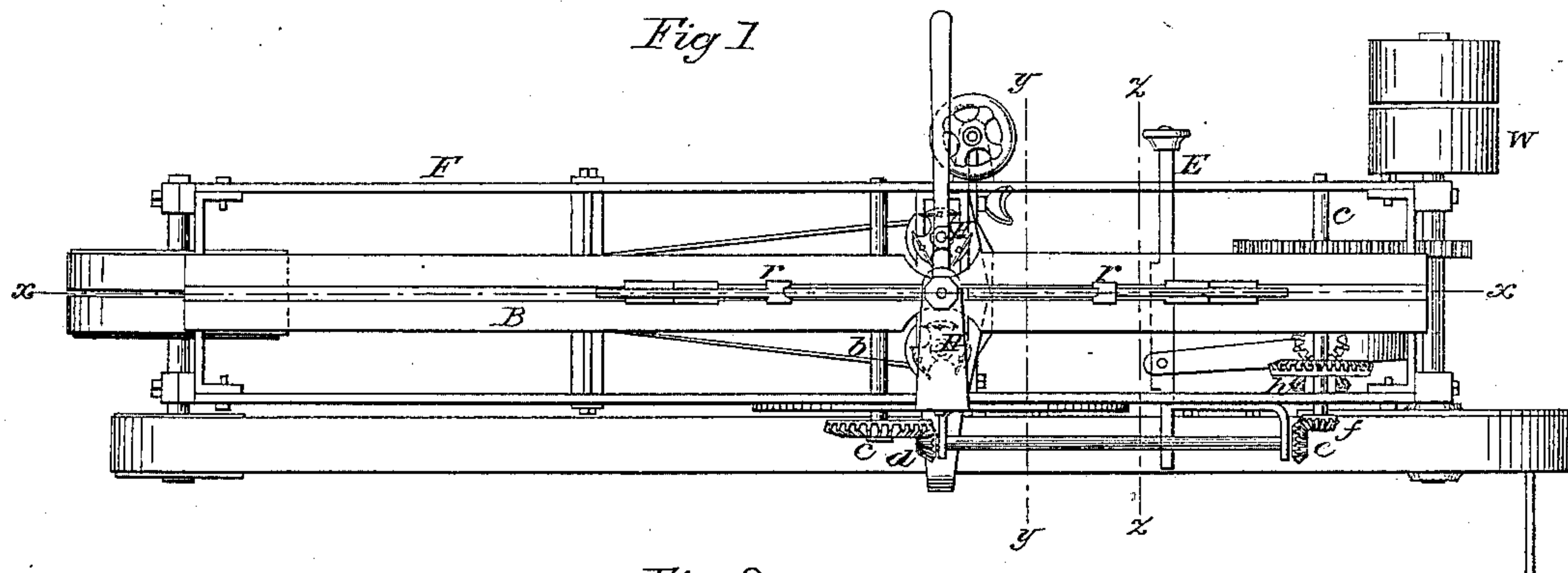


*W. Robinson,  
Jointing Staves.*

*N<sup>o</sup> 29,996.*

*Patented Sep. 11, 1860.*



*Witnesses:*

*affirms  
J D La*

*Inventor:*

*Wm Robinson  
Per his Patent  
att*

# UNITED STATES PATENT OFFICE.

WILLIAM ROBINSON, OF AUGUSTA, GEORGIA.

## MACHINE FOR JOINTING STAVES.

Specification of Letters Patent No. 29,996, dated September 11, 1860.

*To all whom it may concern:*

Be it known that I, WM. ROBINSON, of Augusta, in the county of Richmond and State of Georgia, have invented a new and useful Improvement in Stave-Jointing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, forming part of this specification, in the several figures of which similar characters of reference denote the same part.

Figure 1 is a top view of the machine. Fig. 2 is a vertical section on *x x*. Fig. 3 is a vertical section on *y y*. Fig. 4 is a vertical section through axis of cutter shaft showing action of cam. Fig. 5 is a vertical section on *z z*.

The nature of my invention consists in a certain combination of devices hereinafter to be set forth for jointing staves; the details of construction and operation being as follows.

In the drawing F is the main frame, upon which is the fixed bed piece B, in which reciprocates the stave carriage by means of rack on its under side and pinion *a* on shaft *b* driven by gearing *c d* and *e f* from the rotation of transverse shaft C. This shaft is rotated by the gearing connection shown in Fig. 5, motion in opposite directions being produced by the sliding gear wheels *g* and *h* moved on shaft D by rod E, this opposite rotation of shaft C producing the reciprocation of the carriage A.

On opposite sides of the bed piece B are the inclined shafts I, I carrying the cutter heads H. These shafts are stepped in blocks *i*, capable of movement on horizontal trunnions, and are pressed by springs *k* against cams *l* on shafts *m*, which being rotated by shaft C (as seen at *n*) causes the cutter heads to recede from the middle line of the stave during one half of its longitudinal movement and approach this line during the other half, thus giving the proper form to the stave.

The spread of the shafts I I, to suit staves of different widths, is regulated by double wedge *p*, pressing against upper bearing

blocks of said shafts, this wedge being attached to lever *q* acted upon by screw G, and secured by clamp screw *o*.

The stave is secured to the carriage A by the dogs *r r*, moved by segment racks *t t* and secured by pawls, as shown in Fig. 2, these dogs being adjustable by screws *s* upon the carriage, to suit staves of different lengths.

Above the frame and over the bed is a vertical slide bar *a'* with a roller *c'* in its lower end. It is held up by spring U, and drawn down upon the stave by power applied to lever V. The object of this pressure roller is to keep the stave flat upon the bed, and also to prevent the too rapid motion of the carriage when the cut is in the direction of motion of the stave, which is the case on the return motion of the carriage, the machine being designed to operate both when moving forward and reverse.

The operation of the machine is as follows: The stave being secured upon the bed and power applied to the band wheel W, the cutters impart the desired form to the edges of the stave, the several parts operating as before set forth. At the termination of the forward movement of the carriage it is thrown out of gear by moving rod E. The stave is removed and another inserted to be jointed by the reverse of the carriage. In this case the pressure on lever V by the operator prevents the cutters from drawing the carriage more rapidly than the gear will admit of.

I claim—

1. The combination of the bed B with the carriage A and cutter shafts I I, the whole constructed, arranged and operating substantially as and for the purposes set forth.

2. In combination with the foregoing the pressure roller *c'* arranged and operating as and for the purpose specified.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

WM. ROBINSON.

Witnesses:

GEO. PATTEN,  
W. S. CLARY.