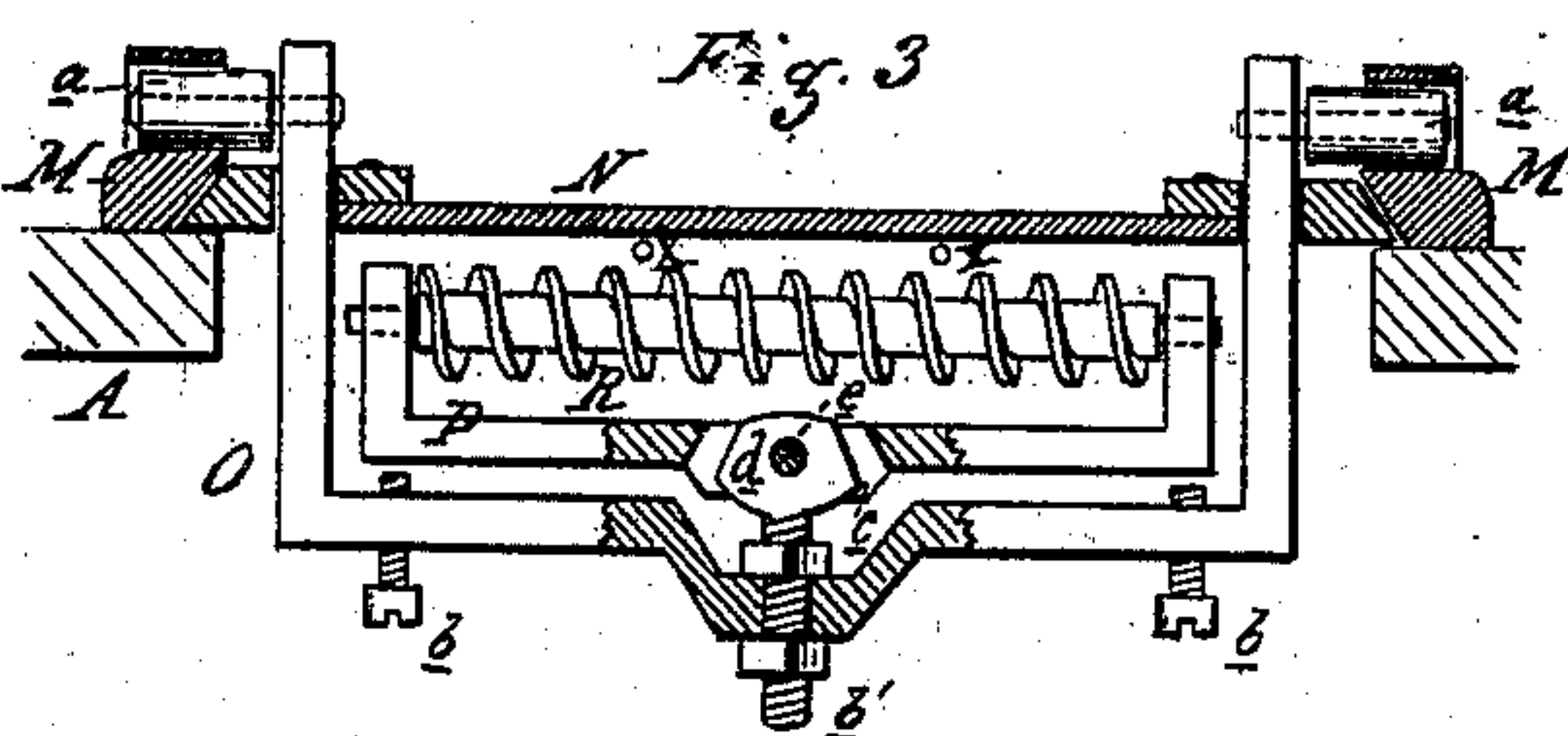
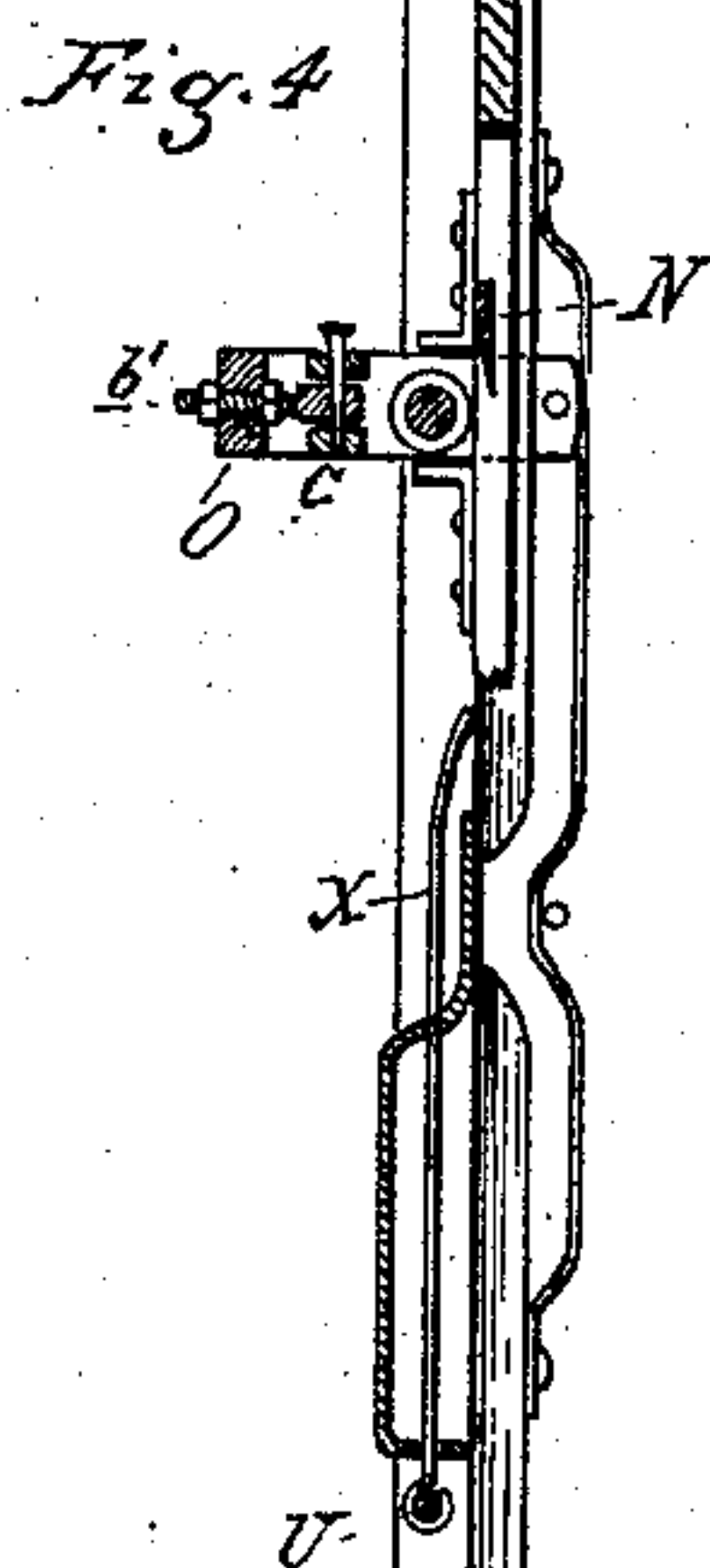
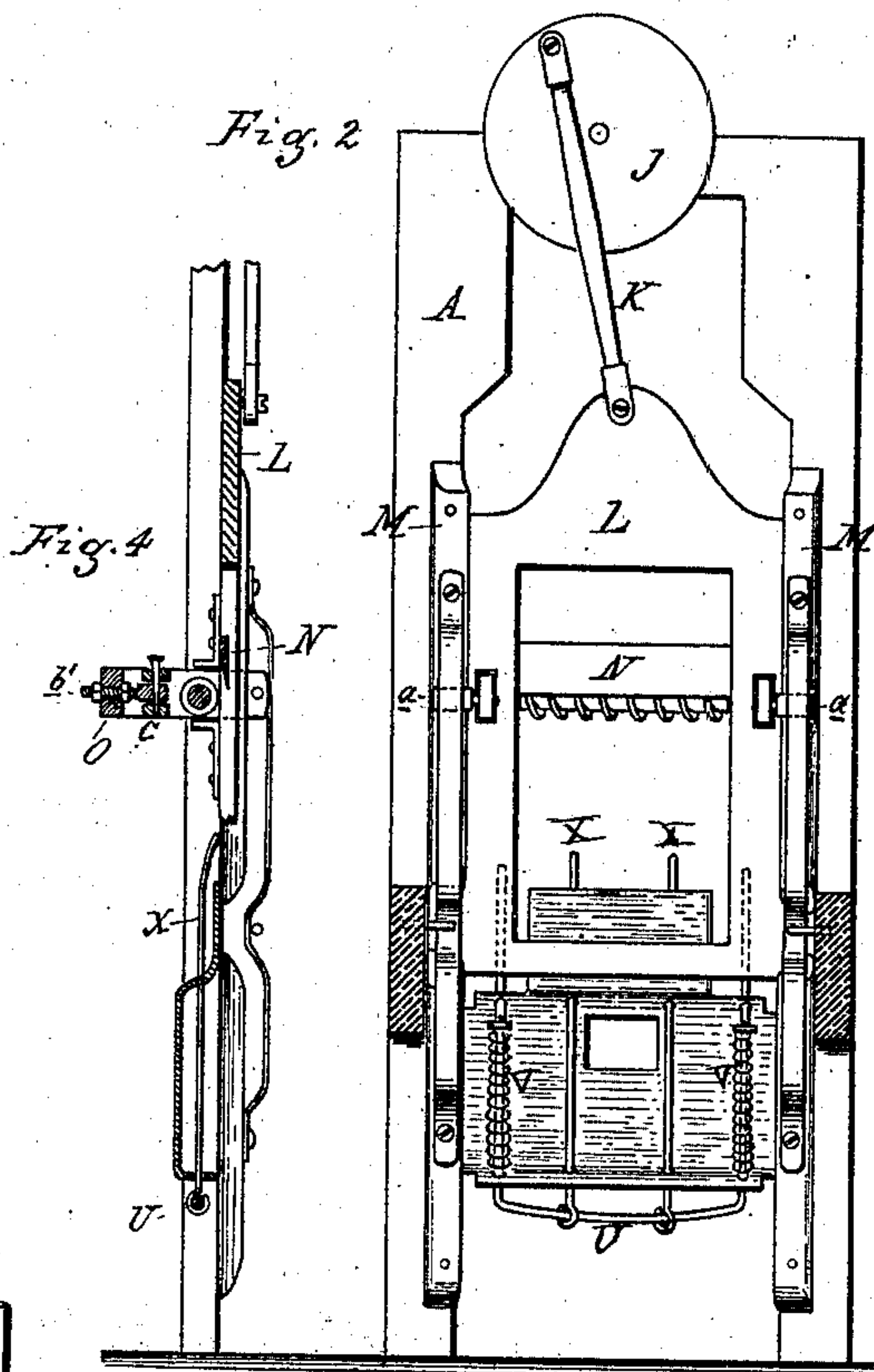
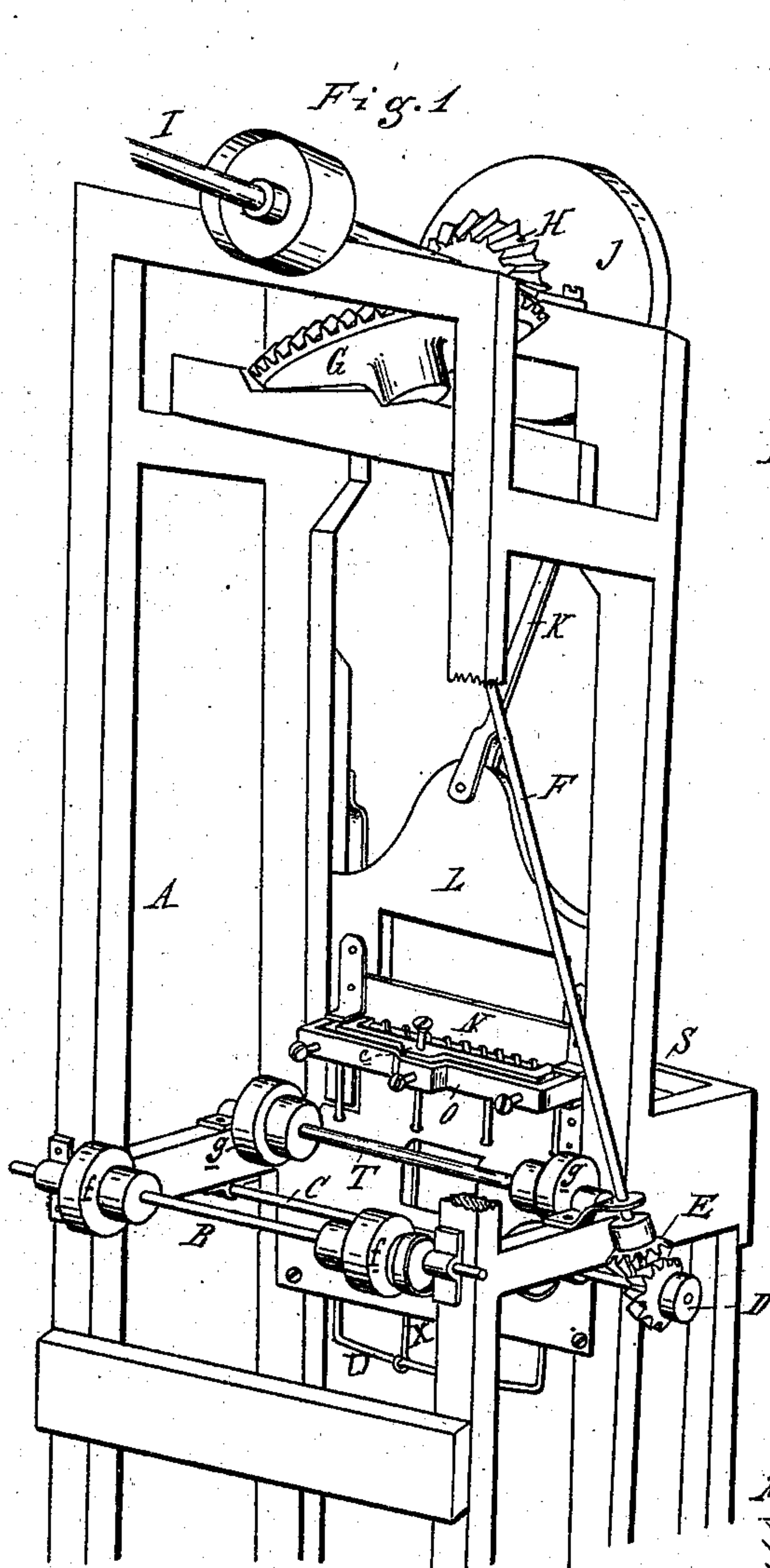


J. H. PHIPPS.  
Wood-Cutting Machine.

No. 224,556.

Patented Feb. 17, 1880.



Attest:

A. Barthel  
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Inventor:

Joseph H. Phipps  
by Atty  
Thos. C. Sprague



# UNITED STATES PATENT OFFICE.

JOSEPH H. PHIPPS, OF FENTON, MICHIGAN.

## WOOD-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 224,556, dated February 17, 1880.

Application filed November 11, 1879.

*To all whom it may concern:*

Be it known that I, JOSEPH H. PHIPPS, of Fenton, in the county of Genesee and State of Michigan, have invented an Improvement in Wood-Cutting Machines, of which the following is a specification.

The nature of my invention relates to certain new and useful improvements in the construction of that class of machines which are designed for cutting shingles, veneers, and barrel-heading from bolts of wood prepared for the purpose.

The invention consists in the novel construction and combination of the several parts to enable the machine to be readily adapted to perform the various kinds of work for which it is designed, as more fully hereinafter described.

Figure 1 is a perspective from the rear, showing the completion of the downward stroke of the knife. Fig. 2 is a front elevation with the knife in position to commence its downward stroke. Fig. 3 is a bottom plan of the compression-roller frame. Fig. 4 is a vertical section.

In the accompanying drawings, which form a part of this specification, A represents the frame which sustains the operating parts. B is a shaft, receiving motion from a counter-shaft, C. D is a bevel-pinion on said shaft C. E is a bevel-pinion on the shaft F, upon the other end of which is a bevel-wheel, G, receiving motion from the bevel-pinion H on the main shaft I, to which is secured the crank-wheel J, to which, by a suitable wrist-pin, the pitman K is attached, the other end of said pitman being attached to the knife frame or gate L, which has a vertically-reciprocating motion in the slides M, attached to the upright portion of the main frame. The cutting-knife N is secured transversely to the gate, as shown.

O is a frame, of three sides, the free ends of which pass through slots (one on each side) in the vertical cheeks of the gate, and to these ends are secured the friction-rollers a, which bear against the outer faces of the slides M. Through the rear side of this frame pass the set-screws b, to secure the proper adjustment of the compression-roller frame P, which is centrally pivoted to the frame O, so that the

former will be susceptible of a horizontally vibrating or oscillating motion within the latter. In order to secure this adjustability, the pivotal lug c is bifurcated to embrace an inwardly-projecting lug, d, on the set-screw b', through which the pivoting-bolt e passes through a slot in said lug, which allows the entire frame P to be advanced toward the knife, as may be desired, by means of the center one of the set-screws, b'.

R is a spirally-grooved compression-roller, journaled at each end, as shown, in the ends of the frame O at such point that the largest horizontal diameter will be presented immediately below the cutting-edge of the knife N. The bolt to be operated upon is placed upon the table S, where it may be dogged and fed to the knife by any suitable intermittent feed-works such as are now in use for such purposes.

The shaft B is provided with suitable pulleys f to carry an endless belt, (not shown,) which also passes over the corresponding pulleys g on the shaft T, to receive the shingles from the knife. This shaft B receives motion by means of a belt from the shaft C, which, in turn, receives motion, through the means hereinbefore described, from the main driving-shaft I.

In operation, when employed in cutting shingles where it is desired to cut butts and tips alternately, the two outer set-screws are withdrawn and the center one is used to regulate the thickness of the shingle at its longitudinal center. Then the roller will oscillate "butt and tip" with each presentation of the bolt.

When it is desired to use the machine in cutting veneers or other stuff with parallel sides the thickness is obtained by means of the center set-screw. The outer screws are then employed to set and hold the compression-roller parallel to the knife.

At the completion of the downward cut of the knife the friction-rollers on the roller-carrying frame fall away from their bearing against the front of the slides by reason of the taper of the lower ends of the latter, which allows the compression-roller to release its bearing against the shingle, when the same will be discharged upon the endless belt or other device for carrying them from the machine.

To assist in throwing out the shingles after



they are cut, the yoke U, with its springs V and pushing-rods X, is so secured that the upper ends of the rods project in rear of the knife. After the shingle is cut the springs  
5 force the rods against the lower edge of the shingle and throw it up.

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

10 1. In a wood-cutting machine, the horizontally vibrating or oscillating roller journaled in a centrally-pivoted frame, in combination with a vertically-operating knife, the several parts arranged to operate substantially as described and shown.

15 2. In a wood-cutting machine, a spirally-grooved roller journaled within an oscillating frame, P, in combination with a cutting-knife having a vertically-reciprocating motion, substantially as and for the purposes set forth.

20 3. In a wood-cutting machine, a spirally-

grooved roller journaled within a horizontally oscillating or vibrating frame, P, and a knife having a vertically-reciprocating motion, in combination with a frame secured to the knife-supporting gate and means for adjusting the  
25 roller to or from the knife, substantially as and for the purposes specified.

4. A wood-cutting machine wherein are combined a vertically-reciprocating knife, an oscillating spirally-grooved roller journaled  
30 in a frame which is centrally pivoted within another frame, with set-screws passing through the last-named frame, for adjustment of the vibrating frame, substantially as described and shown.

JOSEPH H. PHIPPS.

Witnesses:

H. S. SPRAGUE,

A. BARTHEL.