

**No. 648,062.**

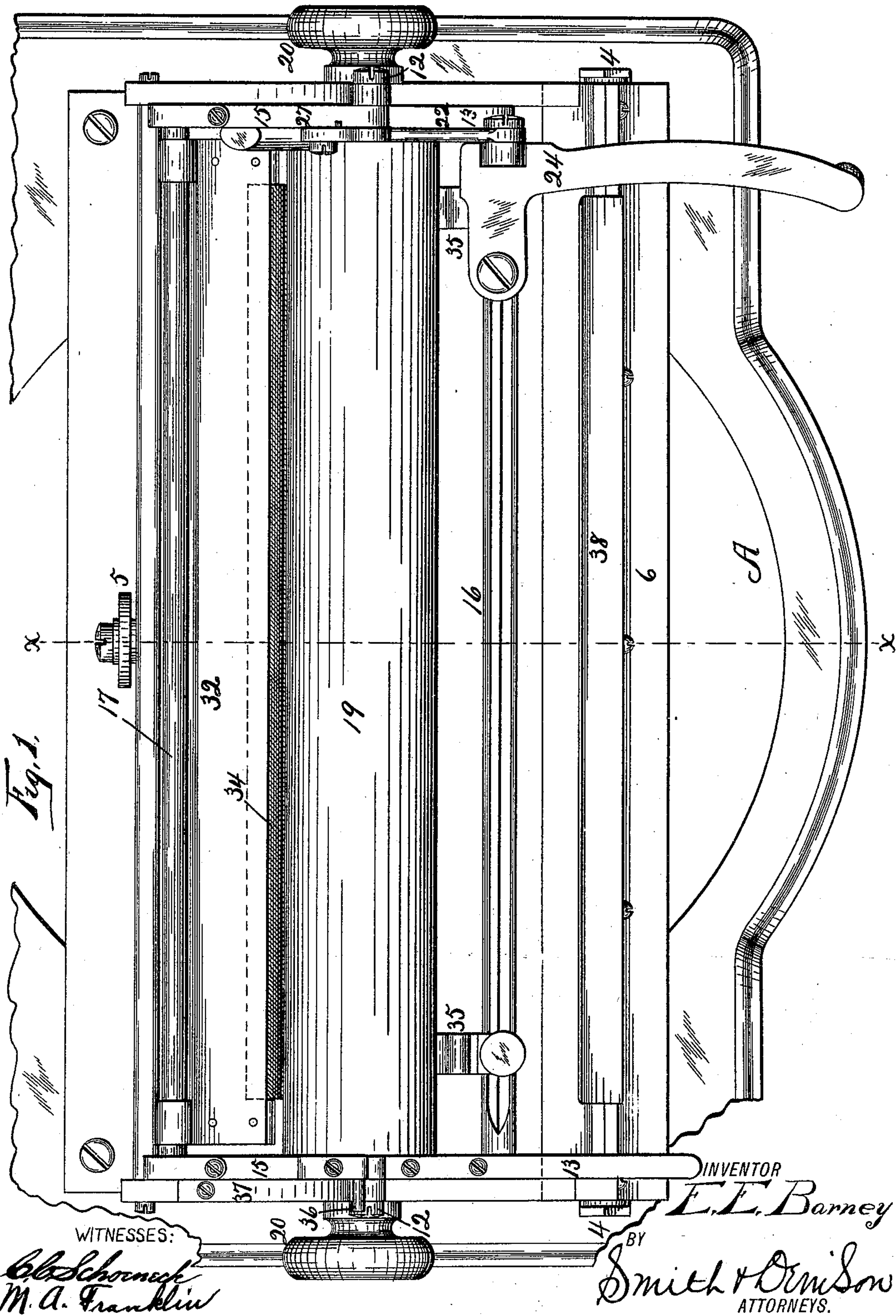
**Patented Apr. 24, 1900.**

**E. E. BARNEY.**  
**TYPE WRITING MACHINE.**

(Application filed Dec. 16, 1898.)

(No Model.)

4 Sheets—Sheet 1.



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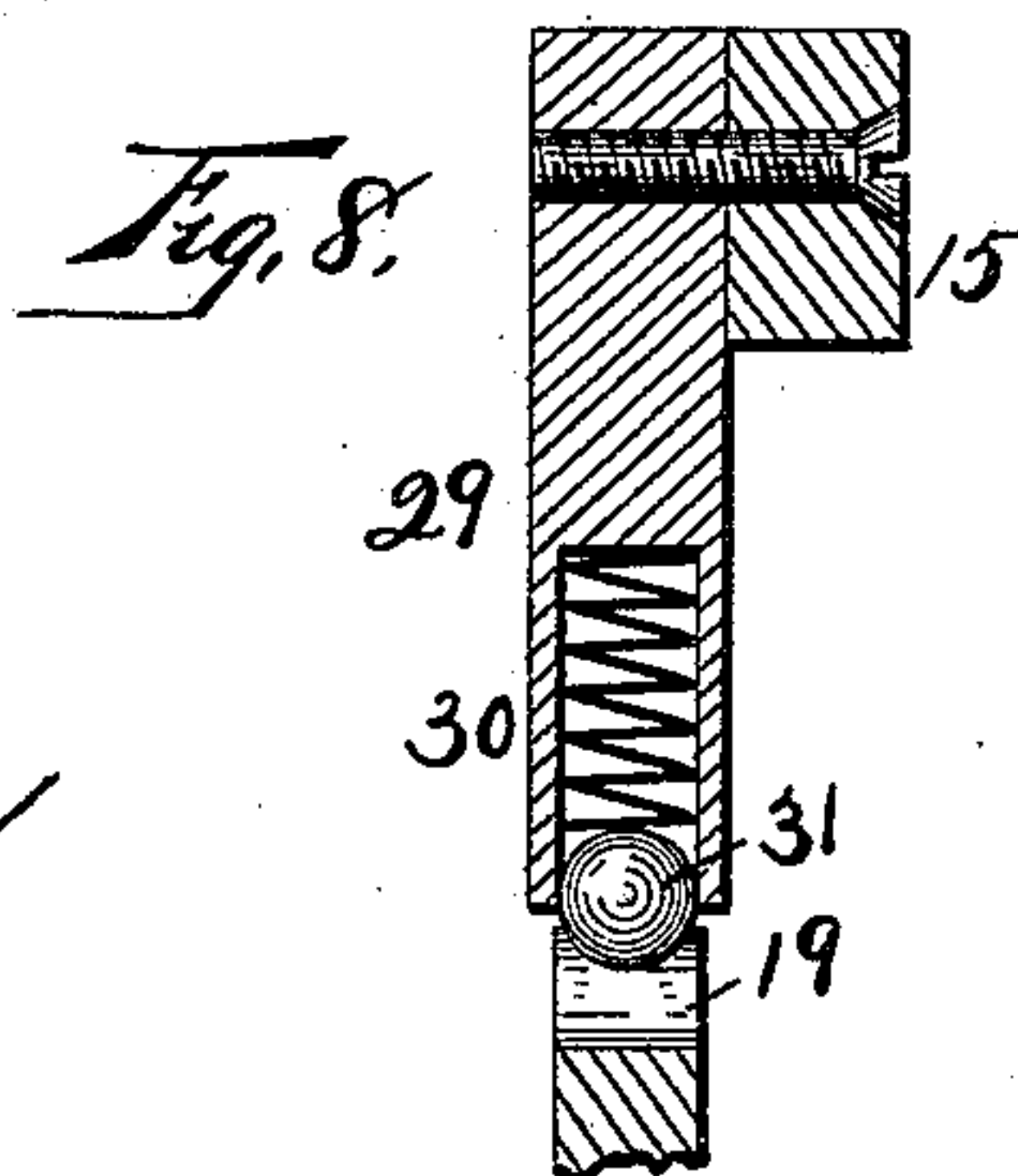
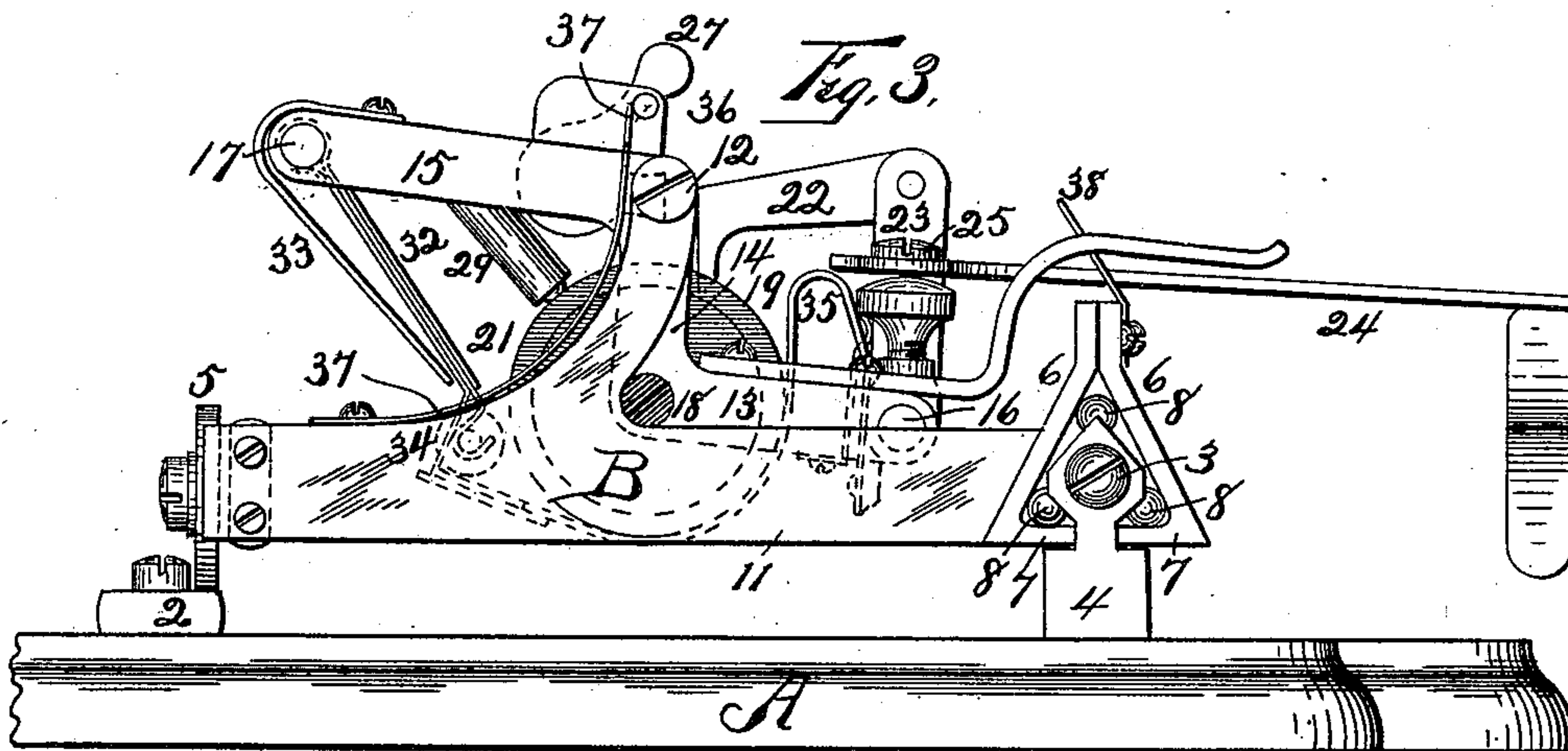
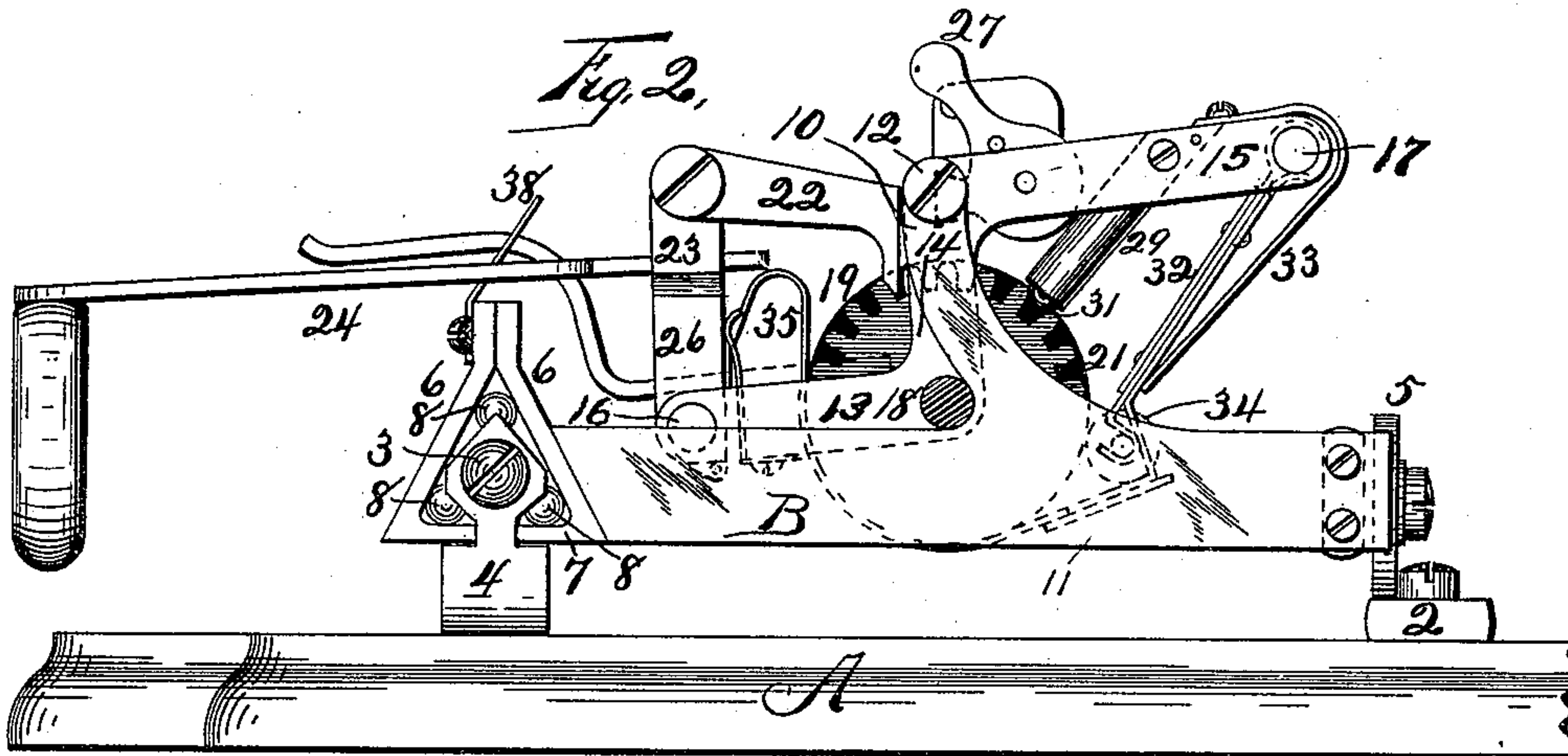
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4 Sheets—Sheet 2.



WITNESSES:

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*M. A. Franklin*

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*Smith & Denison*  
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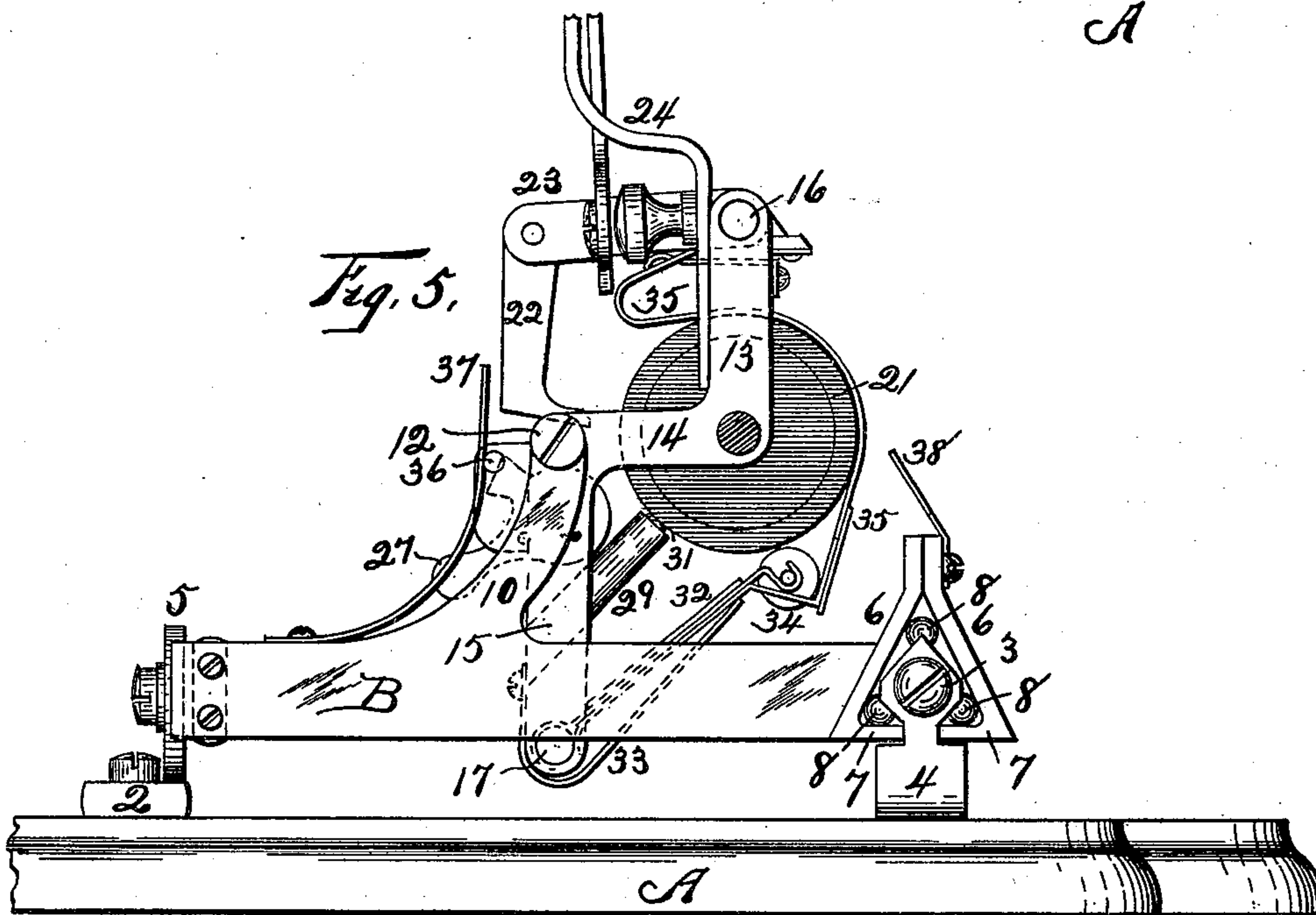
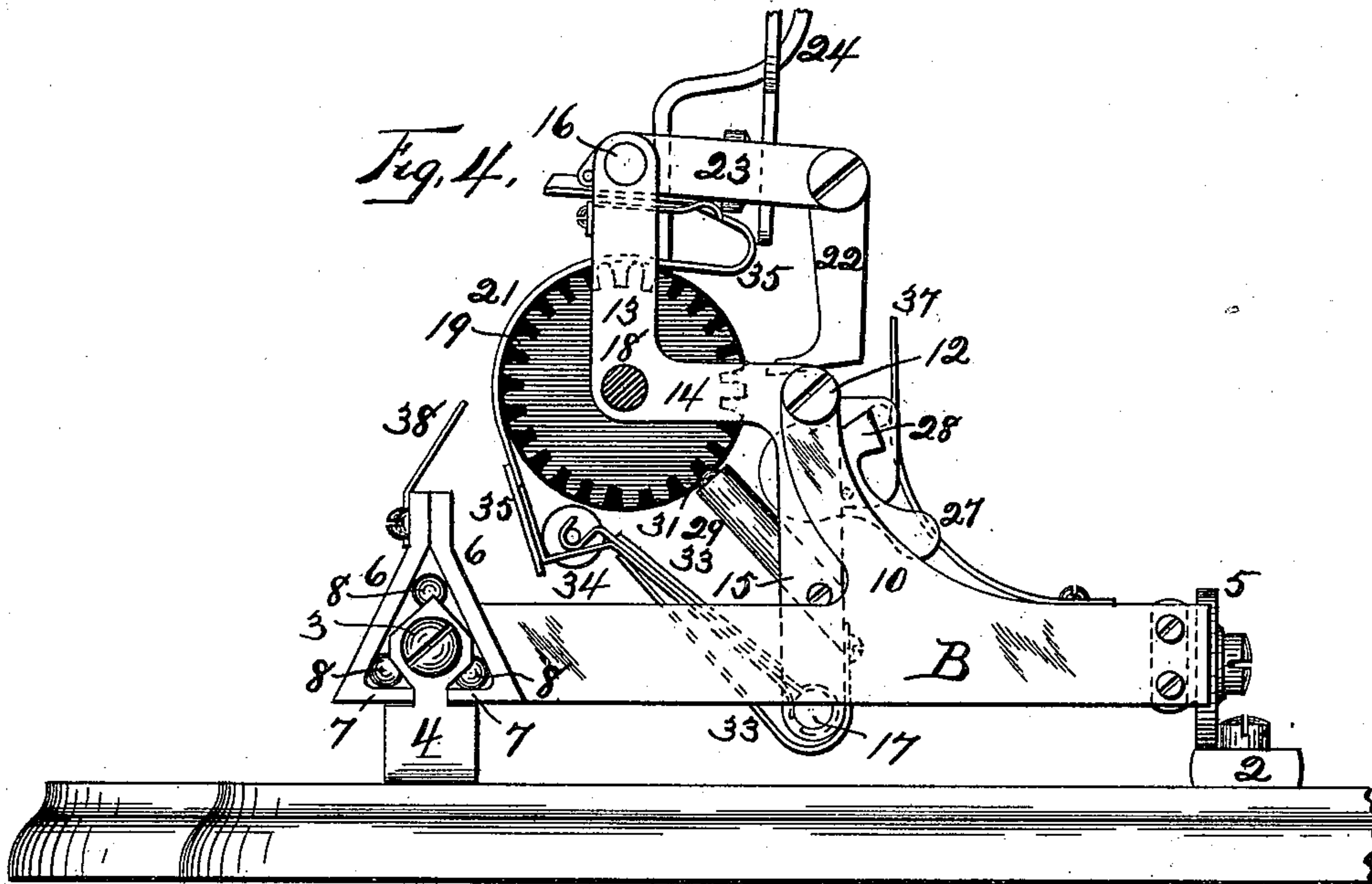
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(No Model.)

**4 Sheets—Sheet 3.**



**WITNESSES:**

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No. 648,062.

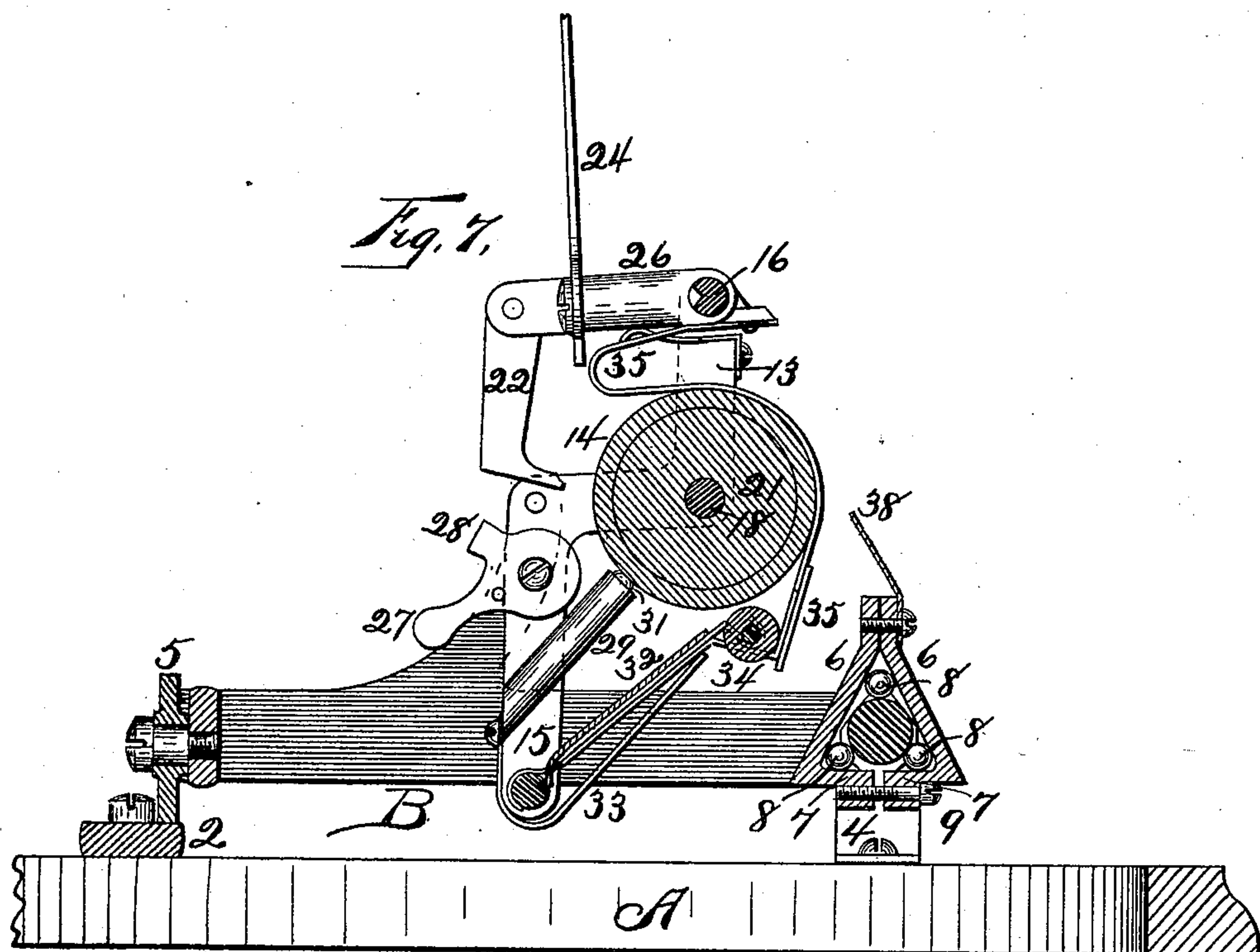
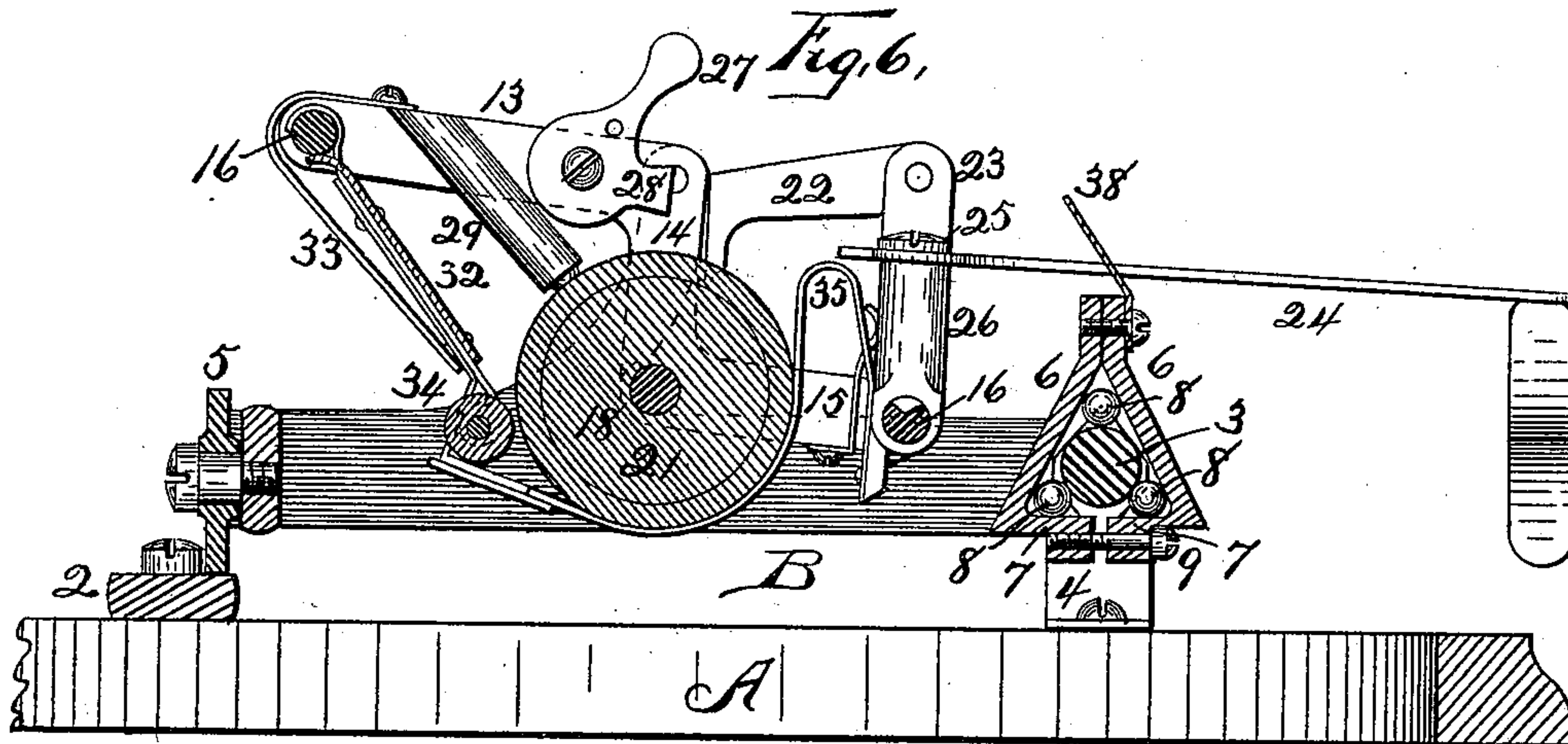
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(No Model.)

(Application filed Dec. 16, 1898.)

4 Sheets—Sheet 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWIN EARL BARNEY, OF GROTON, NEW YORK.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 648,062, dated April 24, 1900.

Application filed December 16, 1898. Serial No. 699,416. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN EARL BARNEY, of Groton, in the county of Tompkins, in the State of New York, have invented new and useful Improvements in Type-Writing Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to type-writing machines, and particularly to the carriage, its mounting, and the mounting of the impression-platen thereon.

My object is to produce an improved carriage and carriage-mount for type-writing machines, to produce a novel impression-platen mount, whereby the platen is mounted in a suspended and swinging frame, whereby the platen is swung upward and forward to expose the line of print to view, means being also provided for maintaining the relations of the paper-apron, paper-guide fingers, and paper-feed roller to the platen whatever position it may be, and means being also provided to prevent any accidental rotation of the platen in whatever position it may be, and in which the front rail of the carriage is mounted upon the front track by means of balls bearing upon three sides of said front rail, constituting a triangular or polygonal ball-bearing, the ball casing or holder being adjustable.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan of the top plate of a type-writing machine with the carriage and impression-platen thereon. Fig. 2 is an end elevation of one end thereof with the platen in its normal position. Fig. 3 is a like view of the other end thereof. Fig. 4 is a like view of Fig. 2, showing the platen swung forward and upward. Fig. 5 is a like view of Fig. 3, also showing the platen shifted. Fig. 6 is a cross-section of the carriage and platen, showing the latter in its normal position. Fig. 7 is a like view showing the platen shifted. Fig. 8 is a detail in section of the stop-pawl and part of the platen-ratchet.

A is the top plate of a type-writing machine, which can be of any suitable construction, provided with a rear track 2 and a front track 3, elevated above said plate by means of suitable supports 4.

B is the carriage, comprising a suitable frame having a roller or rollers 5 traversing the rear track. Across the front of the carriage a ball-carrier is mounted, comprising two pieces of metal 6, interiorly angular, substantially as shown, secured together at the top with a space between the adjacent edges of their inward flanges 7, whereby the balls 8 have bearings upon the walls of the interior angles and upon said front track, which passes through this ball-retainer, which is also the front rail of the carriage. This sectional front rail is sufficiently flexible to permit of its adjustment with relation to the balls and track to regulate the ball-bearing by means of one or more adjusting-screws 9, transverse to the opening between the flanges 7, whereby all undesirable looseness of the balls can be eliminated and the entire carriage steadied against vibration and rattling.

Uprights 10 are erected upon the end bars 11 of the carriage, substantially as shown, in which the platen-frame is journaled to swing upon arbors 12. This frame comprises two end pieces, each composed of a front arm 13, a vertical arm 14, and a rear arm 15, a front rod 16 connecting the arms 13 and a rear rod 17 connecting the arms 15, the whole constituting a swinging platen-support. A shaft 18 is suitably and rotatably mounted or journaled in said end pieces, and 19 is the impression-platen, secured upon said shaft. Knobs 20 aid in the manual rotation of the platen.

Upon the end of the platen is a ratchet 21, and 22 is a push-pawl engaging therewith, it being suitably pivoted upon a lug 23 upon the laterally-swinging line-spacing lever 24, pivoted at 25 upon a boss 26, erected upon the front rod 16.

A spacing button or stop 27 is pivoted upon the arm 15, having a lug 28, which for single spacing forms an abutment for the pawl 22, (see Fig. 6,) and when swung back, as in Fig. 7, said lug is removed from the path of said pawl, which will then shift the platen for double spacing.

To prevent accidental rotation of the platen, a barrel 29 is secured to the arm 15, containing a spring 30 and a ball 31, which engages with the platen-ratchet yieldingly.

A suitable paper-apron 32 is suitably mounted upon the rear rod 17, extending forward



under the platen and yieldingly supported through the spring 33 and supporting the paper-roll 34. Upon the front rod 16 paper-guiding fingers 35 are suitably mounted, extending rearward under the platen.

A pin 36, projecting from an upward extension of one end piece of the platen-frame, is engaged by a spring 37, secured upon the end piece of the carriage, (see Figs. 3 and 5,) operating in Fig. 3 to hold the platen-frame in a fixed place when in the printing position and in Fig. 5 to exert its leverage force to support said frame and platen when shifted.

A suitable scale 38 is mounted upon the front rail of the carriage, and the platen swings up to it when shifted, as in Figs. 3 and 5.

The line-spacing lever 24, being angular and pivoted at one side, operates when swung to the right in Fig. 1 to throw or push the pawl 22 rearward and rotate the platen for single or double spacing, according to the position of the spacing-button 27, which is shown in Fig. 6 in position for single spacing, and when swung so as to shift the shoulder 28 thereon out of the path of said pawl double spacing will result.

The ends of the platen-frame each comprise arms 13 15 in substantially-parallel planes, connected by an upright standing at substantially a right angle to said arms. The front ends of these arms are connected by the paper-finger rod 16 and their rear ends by the apron-rod 17. The frame arbors or pivots 12 are mounted in fixed standards 10, creating stationary pivots therefor. The platen-shaft 18 is secured in said frame at the intersection of 13 and 14. The paper-apron and line-spacing mechanism are all carried by this platen-frame.

To inspect the writing, the entire frame and its accessories are swung upon the arbors 12 as a fixed axis of movement until the arms 13 and 15 are perpendicular or substantially so, and the platen-shaft is thereby swung forward and upward upon an arc, becoming entirely disconnected from the carriage, as in Fig. 5, which brings or swings the line of print forward and upward to the scale 38. The frame is then wholly supported by the fixed axis 12, being steadied and held up by said spring 37 engaging with the pin 36, and the line of print is in position for inspection and correction. It will be seen that the arbors 12 are stationary, and the frame swings upon a fixed axis, which does not shift, oscillate, or change in position at any time.

For line-spacing the lever 24 is swung to the right and the pawl 22 is pushed rearward and the platen is rotated the distance represented by one or two of the teeth of the ratchet 21, according to whether the spacing-button is set for single or double space. This lever, pawl, and spacer are all mounted upon the swing-frame, and as said pawl is a gravity-pawl it swings out of engagement with its ratchet when the platen-frame is swung, as seen in Fig. 4, and falls back into proper re-

engagement when the frame is swung back to bring the platen into its printing position.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a type-writing machine, the combination with a top plate, and a cylindrical track erected thereon, of a movable carriage, a rail thereon composed of angular sections adjustably secured together and creating a triangular chamber around said track, and balls located in the interior angles of said rail and bearing upon three sides of said track and against the walls of said respective angles.

2. In a type-writing machine, the combination with a frame in which the platen is mounted, standards upon the carriage and pivots upon said frame journaled in said standards and constituting a fixed axis upon which the platen-frame rocks to swing the platen forward and upward and wholly support it while exposing the line of print.

3. In a type-writing machine, the combination with the movable carriage and standards erected thereon, of a frame suspended between and having a fixed axis of rotation upon said standards, and an impression-platen mounted in said frame and swung upon an arc of which said axis is the fixed center and platen-frame support to expose the line of print.

4. In a type-writing machine, the combination with a carriage, of a platen-frame having a fixed axial bearing thereon, a platen-shaft engaging with said carriage only while the platen is in position for printing, a platen upon said shaft, whereby when said frame is rocked upon its axis, said shaft is disconnected from the carriage and the platen swung upon an arc and wholly supported by it while exposing the line of print.

5. In a type-writing machine, the combination with a movable carriage of a platen mounted to be rotated upon a central shaft, and to swing in the arc of a circle to expose the line of print upon a stationary axis normally directly above said shaft and be wholly supported by said axis and always separated therefrom a distance greater than the radius of said platen.

6. In a type-writing machine, the combination with a carriage, a platen-frame suspended therein upon a fixed axis, a platen journaled in said frame and provided with a ratchet, a horizontally-movable line-spacing lever mounted upon said frame, a pawl mounted upon said lever and normally engaging said ratchet and automatically disengaging therefrom by gravity when said frame is swung upon its fixed axis to bring the platen into position to expose a line of print.

In witness whereof I have hereunto set my hand this 5th day of December, 1898.

EDWIN EARL BARNEY.

Witnesses:

J. BENJ. LOSEY,

ELIZABETH ASHLEY.