

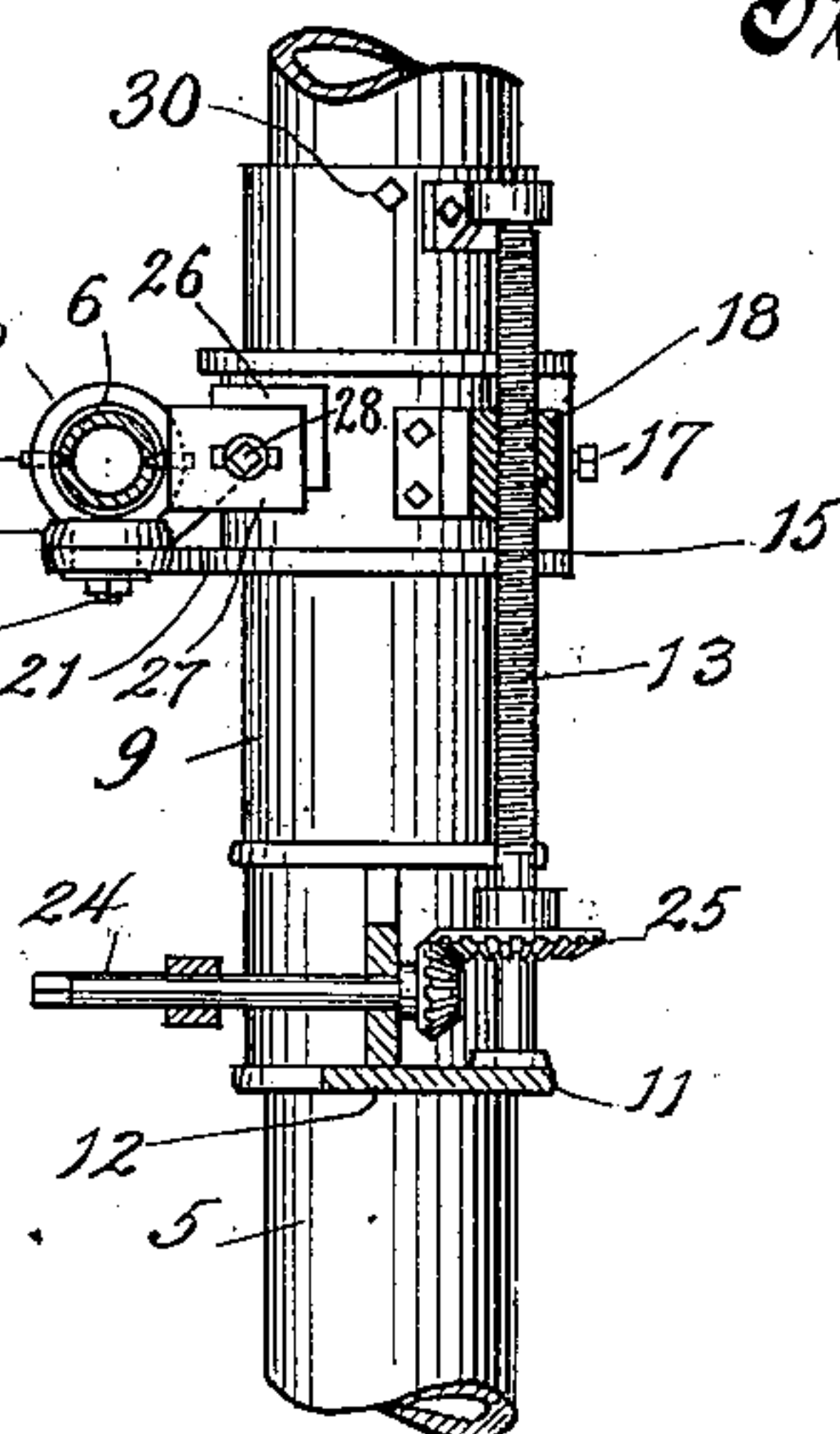
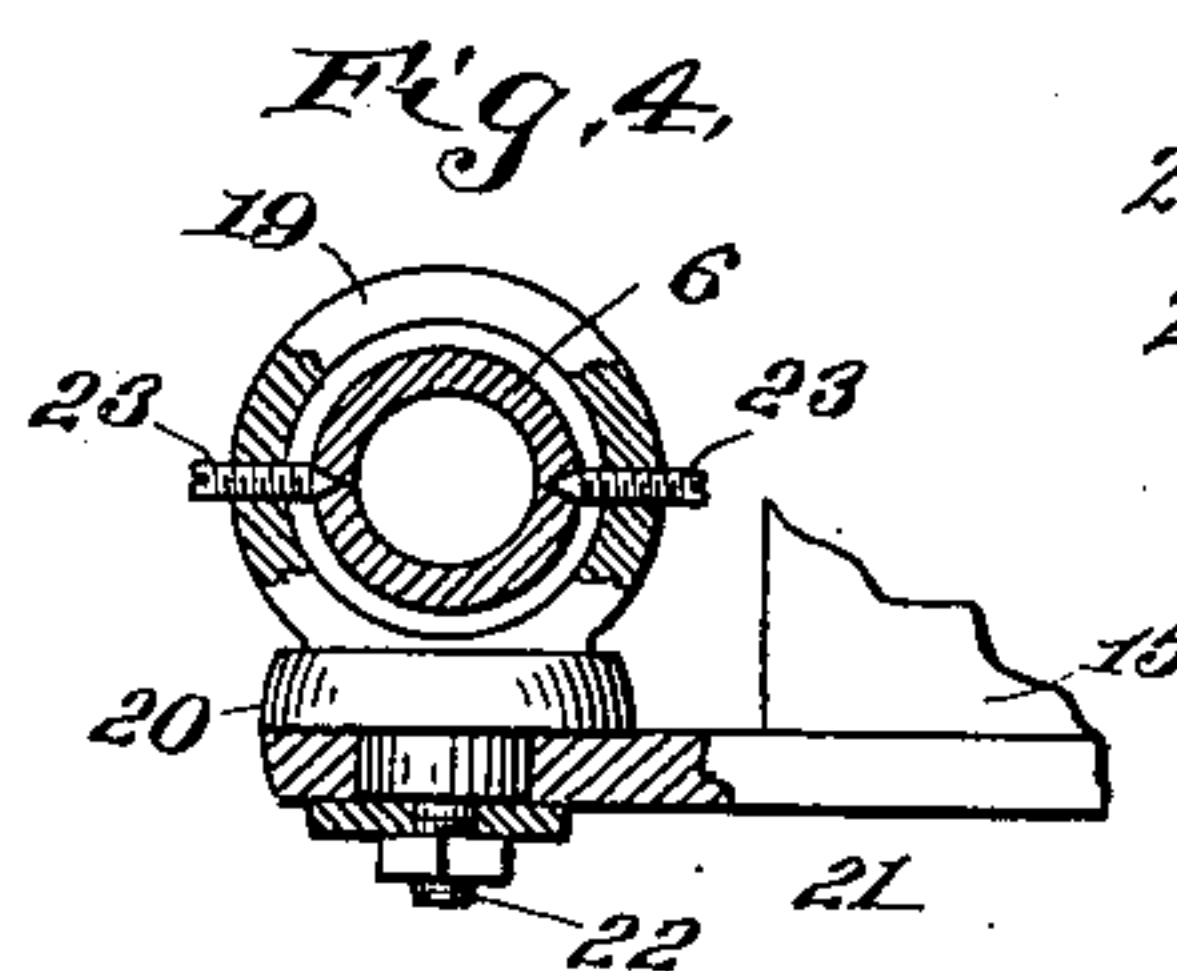
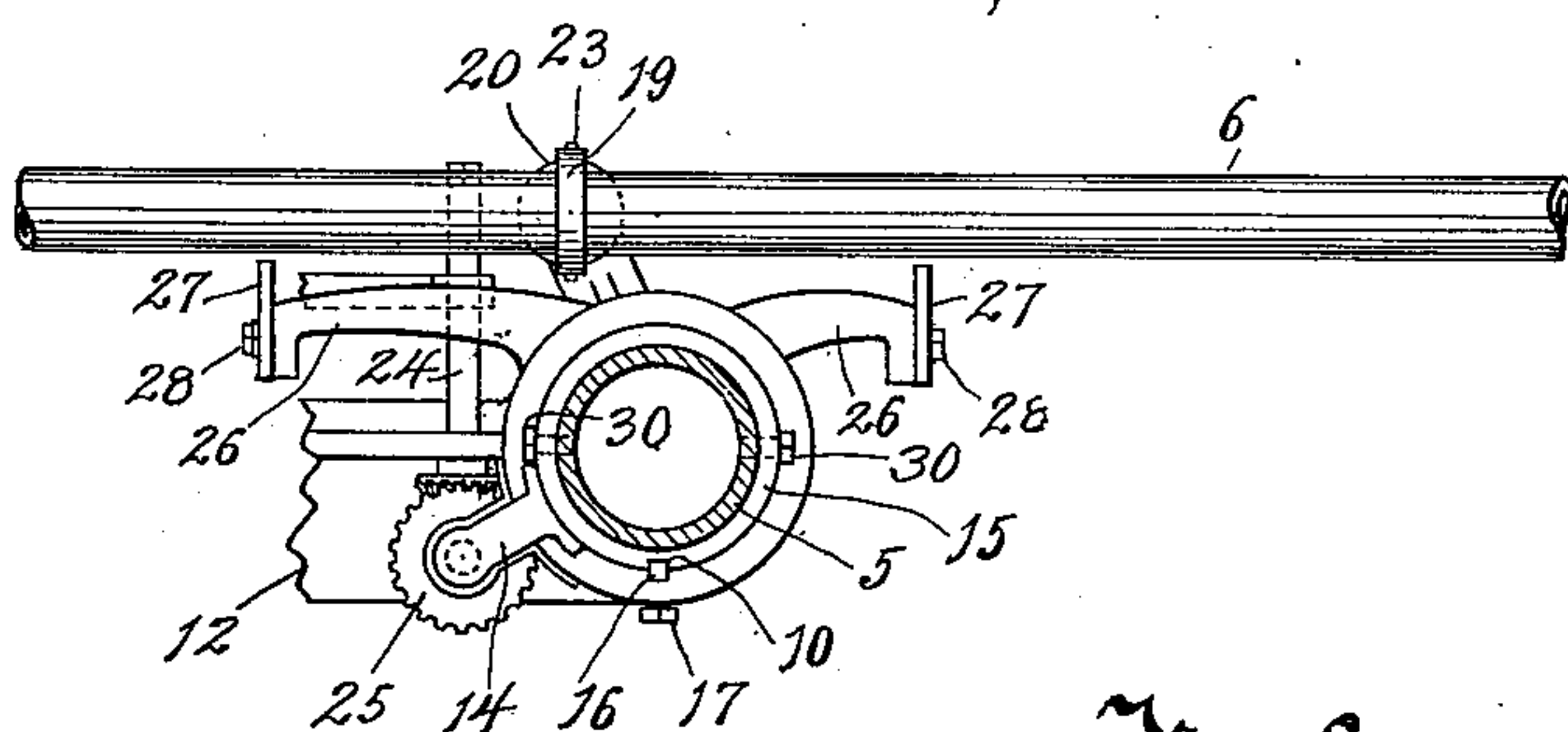
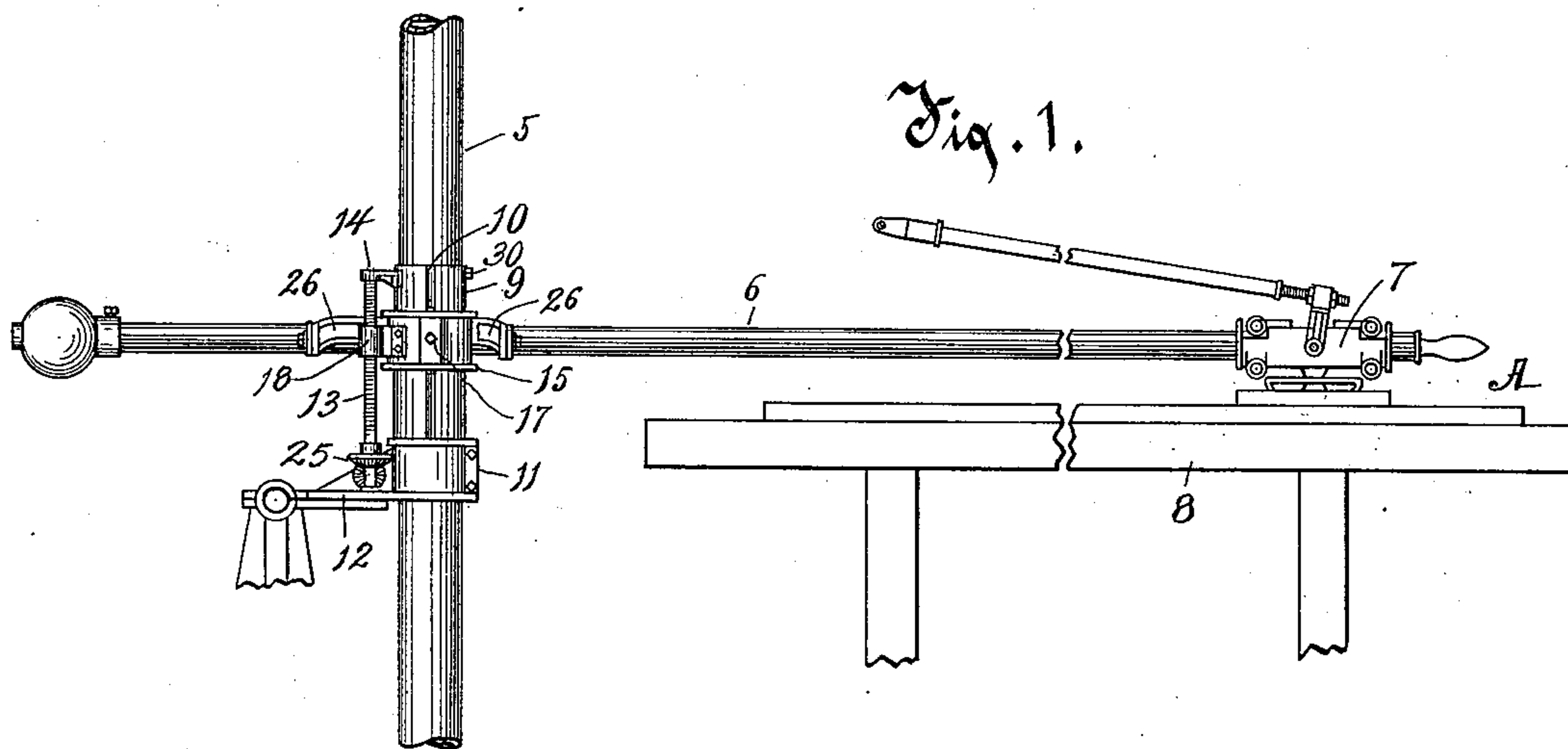
No. 652,874.

Patented July 3, 1900.

C. S. YARNELL.
ABRADING OR POLISHING MACHINE.

(Application filed Feb. 3, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES S. YARNELL, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO THE
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ABRADING OR POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,874, dated July 3, 1900.

Application filed February 3, 1900. Serial No. 3,781. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. YARNELL, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Abrading or Polishing Machines, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

10 This invention relates to improvements in an abrading or polishing machine of the general character of the machine shown in Patent No. 507,251, issued to me October 24, 1893, and more specifically in application Serial No. 15 731,402, filed by me September 22, 1899. The machine includes a carriage on which the abrading or polishing device is mounted, conveniently designated the "polisher-carriage," which carriage is reciprocable on a guide-bar 20 disposed horizontally, which guide-bar is pivoted and swiveled on a standard or suitable support, so as to be capable of being tilted vertically and of being swung laterally limitedly. The matter is supported on a flat-topped table, and the abrading or polishing 25 device, traveling on the guide-bar, is moved forward and backward over the surface of the material.

My present invention has for its object the 30 providing of means for conveniently raising and lowering the pivoted support of the guide-bar, on which bar the abrading or polishing carriage reciprocates, thereby providing for raising or lowering the guide-bar itself to 35 adapt it for use with material of different thicknesses on a table having a fixed or permanent top, thus obviating the need for adjusting the material-holding table-top up or down and also providing means for adjust- 40 ably limiting the lateral swing of the same guide-bar.

In the drawings, Figure 1 is a view of the standard or post and the polisher-carriage 45 guide-bar of an abrading or polishing machine with my improved means for raising and lowering the guide-bar and limiting its lateral swing. Also a material-holding table-top is indicated to show the relation of the polisher-carriage thereto. Fig. 2 is a top 50 plan view of the fragment of the standard shown in Fig. 1 with my improved devices in

connection therewith and with a fragment of the guide-bar. Fig. 3 is an elevation of my invention in connection with a fragment of the standard and the guide-bar in section, 55 showing the relation of my improved devices thereto, parts of the construction being shown in section. Fig. 4 is an enlarged view of a detail of the construction shown in Fig. 3, parts being in section for convenience of illus- 60 tration.

In the drawings, 5 is a fragment of a standard or portion of the frame of an abrading or polishing machine. The standard is preferably in tubular form. 65

6 is the guide-bar on which the polisher-carriage 7 reciprocates.

8 is the top of a table on which the material A is placed for being abraded or polished.

A smooth cylindrical bearing on the standard 5 is conveniently formed by fixing a sleeve-bearing 9 thereon. The exterior surface of this sleeve-bearing is smooth and preferably cylindrical, the sleeve being provided with a longitudinal groove 10 therein. A split band 11 about the standard 5 and clamped thereto 75 by bolts provides a convenient means for holding the sleeve 9 securely against moving down on the standard 5, and also this band 11 being provided with a ledge or lateral extension 12, which may also be a part of the 80 general frame of the machine, forms a footing for a screw 13, which screw at its upper extremity has a bearing revolubly in a lug 14, fixed on the sleeve 9. A collar 15, fitted 85 and adjustable vertically on and about the sleeve 9, is provided with a loose key 16, that fits in a groove in the inner surface of the collar and in the groove 10 of the sleeve 9, and a set-screw 17, turning through the collar 90 against the key, is adapted to clamp the collar in position releasably on the sleeve 9. This construction prevents rotary movement of the collar 15 on the sleeve 9, but permits it to be adjusted vertically. The screw 13 95 passes through a nut 18, fixed on the collar 15, whereby by the rotation of the screw 13 the collar 15 is moved up or down.

The guide-bar 6 is swiveled and thereby supported tiltable vertically on the collar 15 100 conveniently by means of a ring 19, which is provided with a hub 20, that rests on a ledge

21, projecting laterally from the collar 15, the ring 19 being also provided with a pintle 22, that passes through the ledge 21 and is provided with a nut securing it movably and releasably to the ledge. The guide-bar 6 is pivoted tiltable vertically in the swiveled ring 19 by means of opposite horizontally-disposed pivot-pins at 23, turning through the sides of the ring into sockets therefor in the guide-bar. A short crank-shaft 24, provided with a terminal beveled wheel that gears with a beveled wheel 25 on the screw 13, provides a convenient means for rotating the screw by means of a crank-handle to be placed on the faced end of the shaft.

Arms 26 26, projecting laterally from the collar 15 in opposite directions, are provided with adjustable stops 27 27, located adjacent to the guide-bar 6, on opposite sides of its pivotal support and at one side thereof, and are adapted to prevent undue lateral swing of the guide-bar. These stops 27 are secured adjustable toward and from the guide-bar 6 on the arms 26 by means of set-screws 28 28, passing through longitudinal slots therefor in the stops 27 and turning into the arms 26. By this construction the extent of the swing of the guide-bar 6 laterally can be limited as desired. Holding-nuts 30 30, turning through the sleeve 9 into the shaft 5, may be employed to hold the sleeve against movement on the standard.

What I claim as my invention is—

1. In an abrading-machine, the combination with a horizontally-disposed carriage guide-bar, of a standard, a non-revoluble collar fitted movable vertically on the standard, and supporting the guide-bar, a nut fixed on the collar and projecting laterally therefrom and a screw alongside of and parallel with the standard turning through said nut, the screw being supported revolubly but against endwise movement and being adapted to raise

and lower said collar alongside on the standard.

2. The combination in an abrading-machine, of a standard, a collar movable on the standard, a screw turning through a nut on the collar and adapted to adjust the collar on the standard, a ledge on the collar, a ring swiveled on the ledge, and a carriage guide-bar pivoted in the ring.

3. The combination in an abrading-machine, of a standard, a bearing on the standard provided with a longitudinal slot, a collar fitted on the bearing and provided with a key fitted loosely in the slot in the bearing, a screw turning in the collar against the key, a carriage guide-bar supported on the collar, and means for moving the collar adjustably on the bearing.

4. The combination in an abrading-machine, of a guide-bar provided with a swiveling support permitting lateral swing of the guide-bar, and adjustable stops near the guide-bar one at each side of its swiveling support, the stops being adjustable toward and from the guide-bar and adapted to limit its lateral swing.

5. In an abrading-machine, the combination of a standard, a collar adjustable vertically on the standard, a carriage guide-bar swiveled on the collar so as to have lateral swing thereon, arms projecting from the collar substantially parallel with the guide-bar, and stops on the arms secured thereto adjustable toward and from the guide-bar, the stops being severally on different sides of the swiveling support of the bar.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES S. YARNELL.

Witnesses:

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