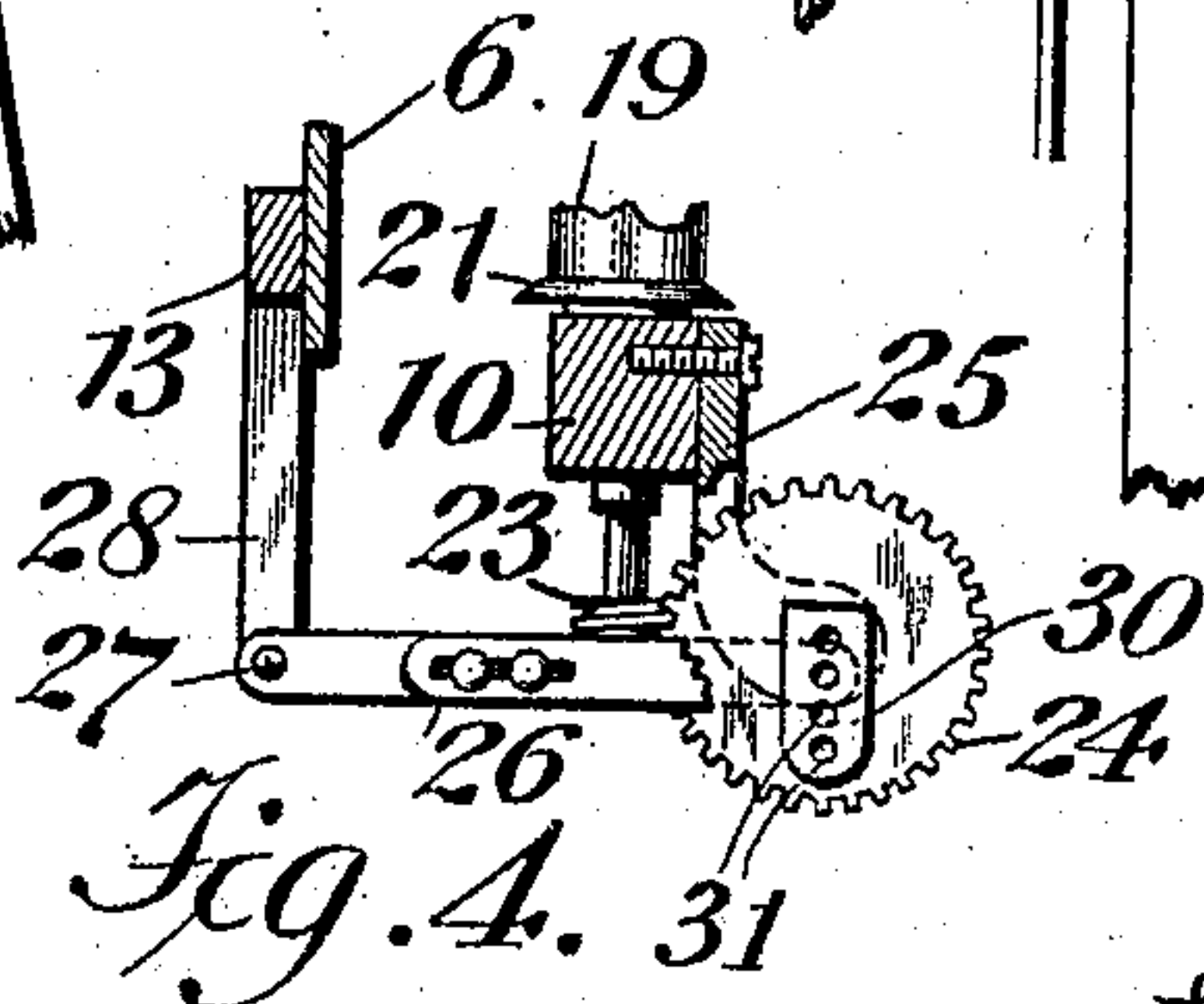
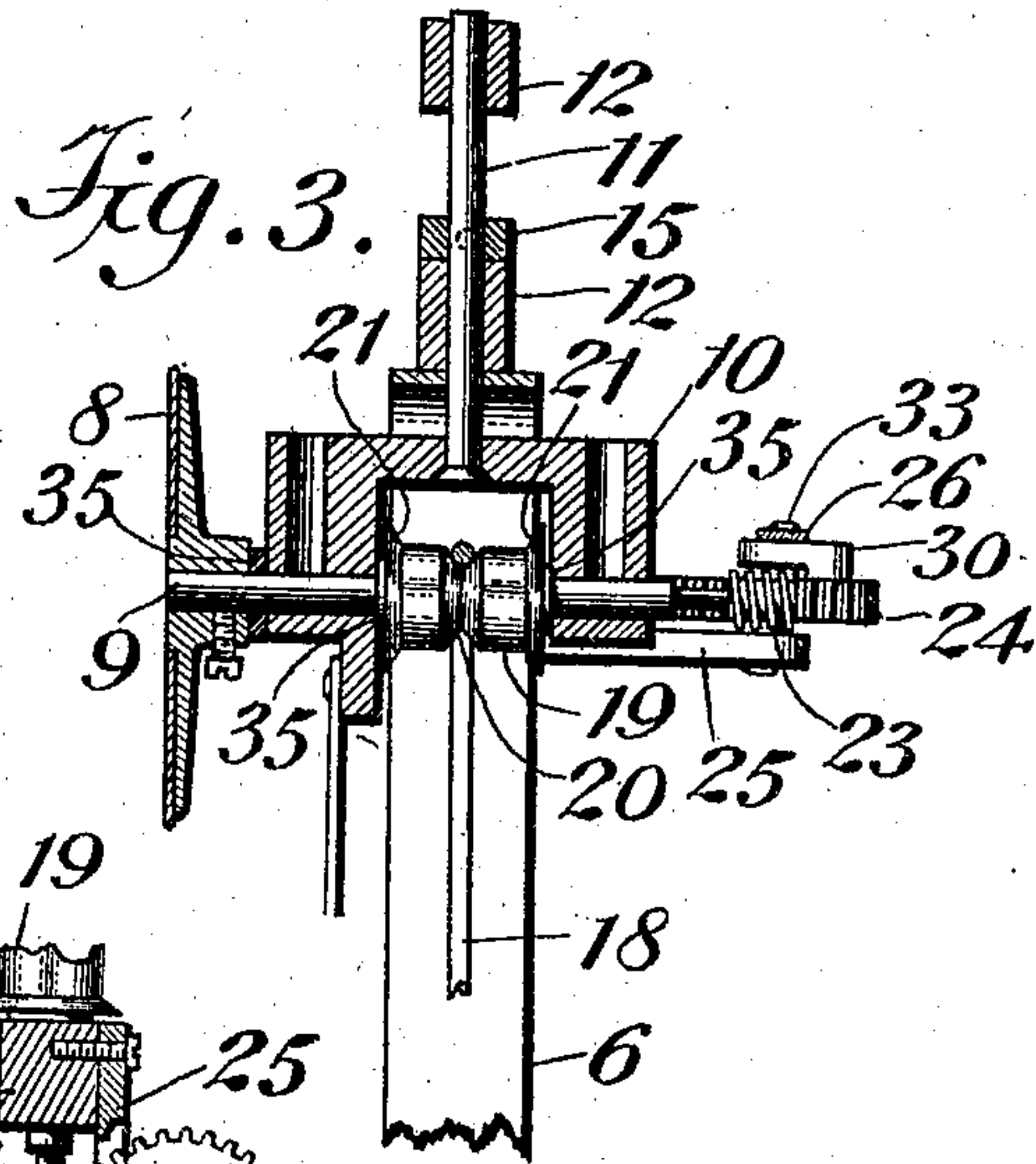
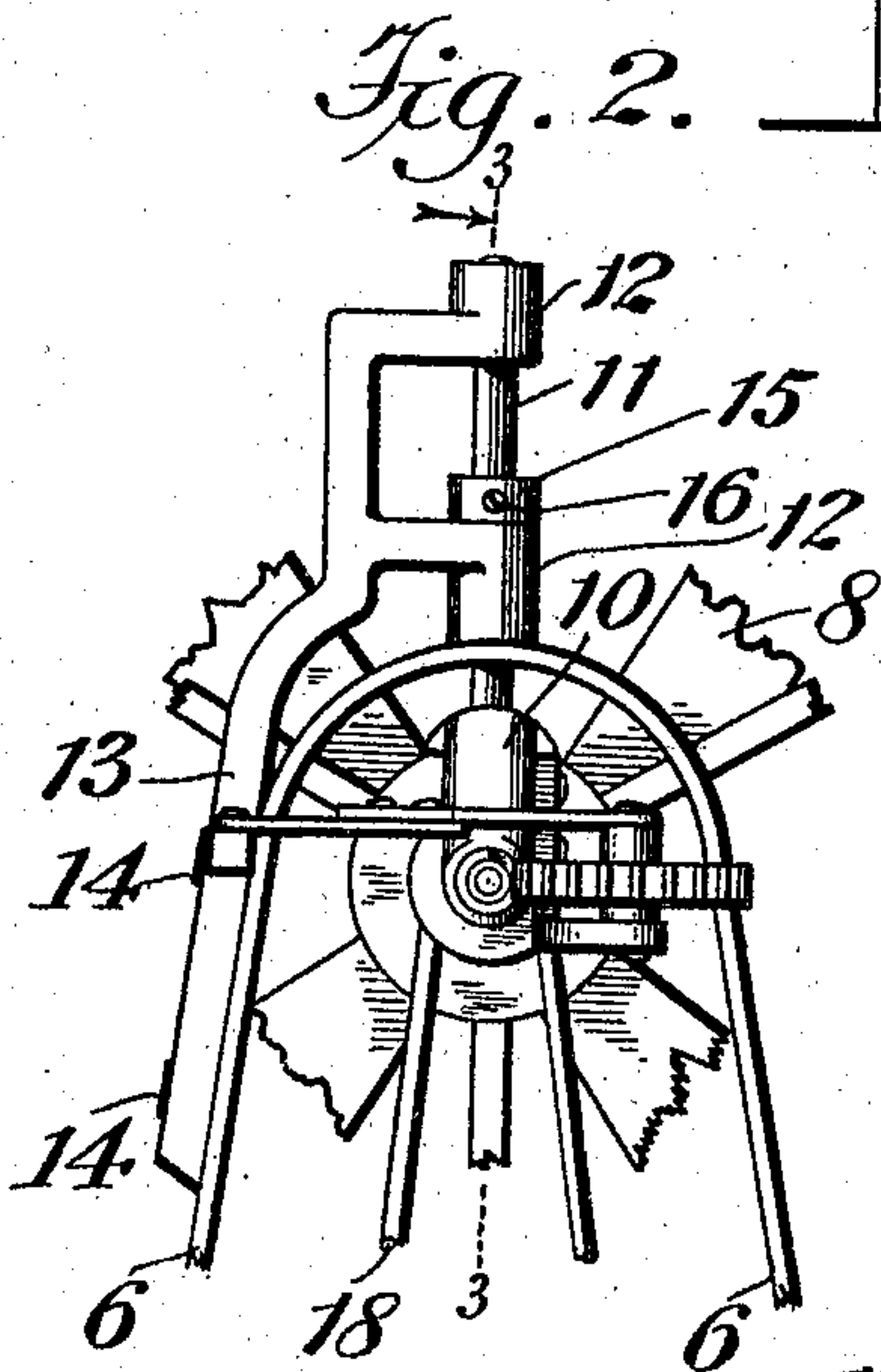
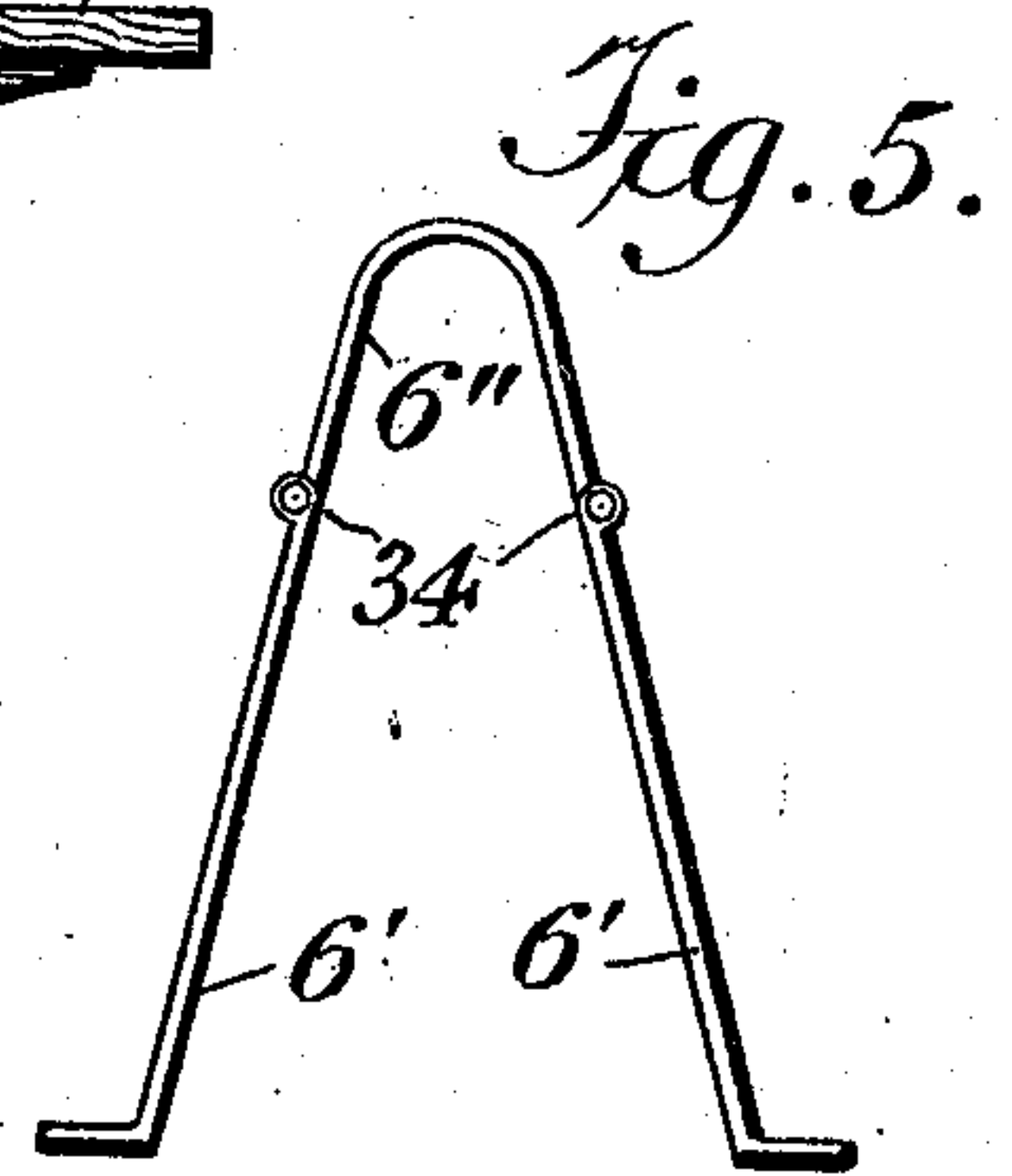
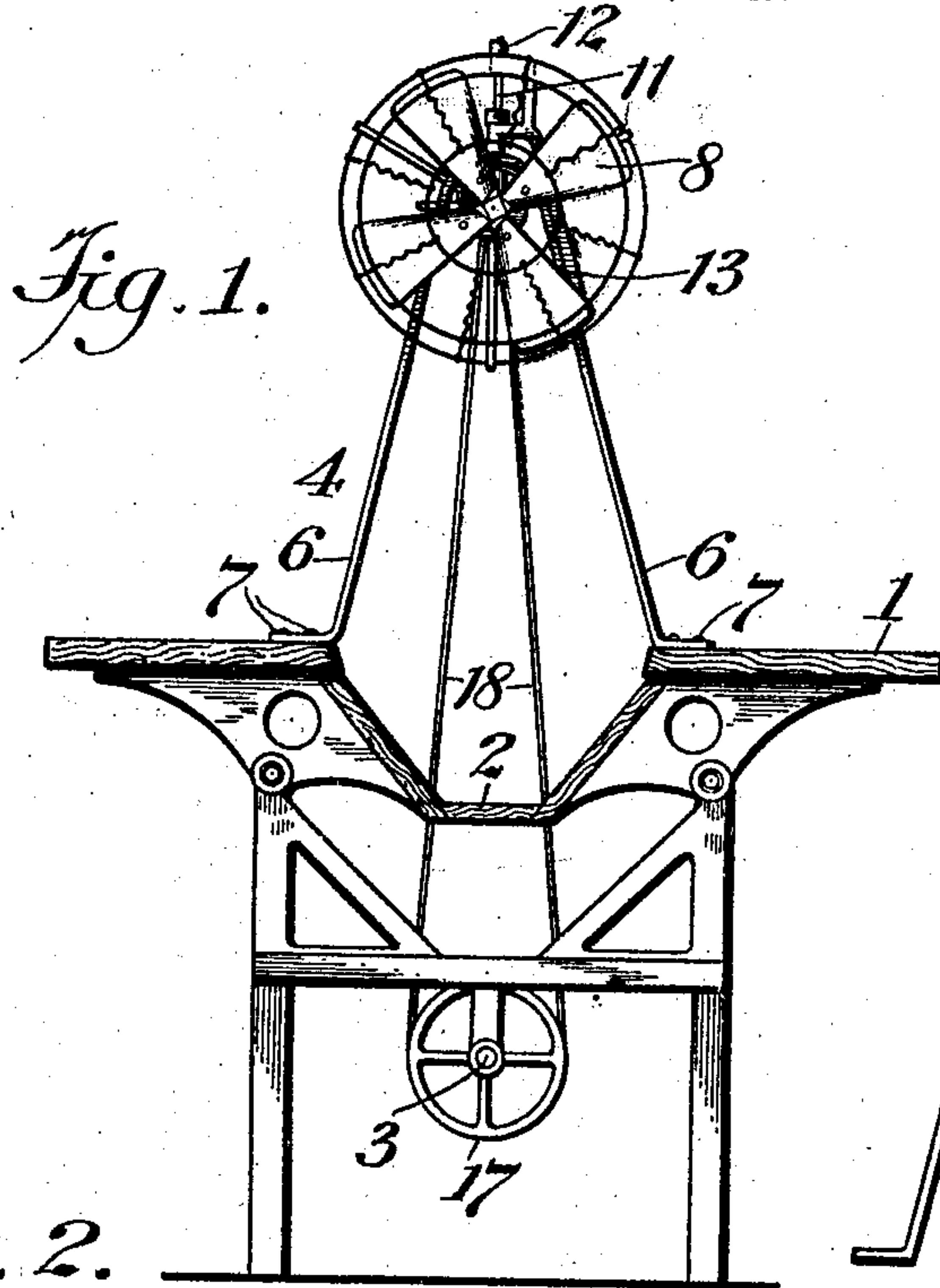


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G. W. WEISS.
POWER FAN.

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GEORGE W. WEISS, OF NEW YORK, N. Y.

POWER-FAN.

No. 814,998.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed December 8, 1904. Serial No. 235,917.

To all whom it may concern:

Be it known that I, GEORGE W. WEISS, a citizen of the United States, and a resident of the city of New York, in the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Power-Fans, of which the following is a specification.

This invention relates to power-fans; and it consists in the novel features of construction and combinations of parts, as hereinafter set forth in detail, and pointed out in the claims.

Referring to the accompanying drawings, forming part of this specification, Figure 1 is a front end elevation of a power-fan embodying my invention in operative position upon a sewing-machine power-table and in operative connection with the driving-shaft journaled beneath said table. Fig. 2 is an enlarged rear end elevation of the fan, partly broken away. Fig. 3 is a section through the line 3 3 of Fig. 2 looking in the direction indicated by the arrow. Fig. 4 is a detail plan of the means for imparting an oscillating movement to the fan proper, and Fig. 5 is a modified form of the supporting-standard for the fan.

A fan embodying my invention may be attached to any desired or suitable support; but the same is herein shown as attached to a sewing-machine power-table, (indicated at 1.) This power-table, which is of usual construction, is formed with a central trough 2, beneath which in suitable bearings is journaled a driving-shaft 3, from which the machines (not shown) on the table at opposite sides of the trough are driven. As it is desirable that the fan should be supported centrally above the table-trough 2 in a position to be conveniently operated from the driving-shaft 3 and also in a position for creating a circulation of air that will be uniformly effective at opposite sides of the table, I have provided a fan-supporting standard, (indicated generally by 4,) which is made in a substantially inverted-V-shaped form, so that the lower ends of its oppositely-located legs 6 6 may be attached to the table at opposite sides of the trough 2 by suitable fastening means, such as the screws 7, and its upper central portion located above the said trough be utilized as a support for the fan and its operating mechanism.

The fan proper (indicated at 8) is attached to one end of a shaft 9, which is journaled in an oscillatory frame or block 10, having a

pivotal connection with the standard 4. This frame or block 10 may be supported in connection with the standard in any desired position; but I prefer to support the same in a position between the standard-legs adjacent to the upper end thereof, the connection between the block and the standard being effected in the present case by means of a pivot-pin 11, connecting with said block and extending upwardly through an opening in the standard into pivotal connection with the arms 12 12 of a bracket 13, which is fixedly attached to the standard by suitable fastening means, such as the screws or rivets 14. In the present case the pivot-pin 11 is removably and adjustably supported in vertical connection with the bracket-arms 12 12 by means of an adjustable set-collar 15 thereon resting upon one of the said bracket-arms, the said set-collar being secured in adjustable connection with the pivot-pin by means of a set-screw 16.

The fan-actuating shaft 9 is adapted to be driven from a pulley 17 on the lower driving-shaft 3 through the medium of a belt 18, and for this reason the said shaft 9 is provided with a pulley 19 for the engagement of said belt, which pulley in accordance with my invention is located on the shaft 9 in a position directly between the oppositely-located legs 6 6 of the standard, whereby said legs will serve as guards to a driving-belt operating over said pulley. This feature of my invention—that is, the arrangement and combination of the standard-legs and pulley 19 being such that a driving-belt operating over said pulley will be guarded from opposite sides of the table by the standard-legs—is a most important one.

The pulley 19, as herein shown, is formed with a centrally-located belt-groove 20 and with two guard-flanges 21 21 at its opposite ends, the said guard-flanges being preferably arranged with a space therebetween of less width than the width of the standard-legs, as clearly shown in Fig. 3, and being adapted to retain the belt on the pulley and within the lateral limits of the space between the standard-legs in the event of its accidental removal from the central belt-groove of the pulley.

In view of the central location of the fan between the opposite sides of the table it is desirable that it should have a laterally-oscillating movement in order to create a circulation of air at the opposite sides of the table al-

ternately. To effect such movement of the fan, I have provided a means for imparting an oscillating movement to the pivoted frame or block 10, which carries the said fan and its
 5 actuating-shaft. This means comprises a worm 23 on the shaft 9, meshing with a centrally-pivoted gear 24 on a fixed arm 25 of the block 10, and a link 26, connected at one
 10 end with a stationary pivot 27 on an arm 28 of the standard 4 and at its opposite end eccentrically connected with the said gear 24. With this arrangement and combination of parts when the gear 24 is rotated by the shaft 9 and worm 23 it will also be operated by the
 15 eccentrically-connected link 20 to have a vibratory movement and so oscillate the connected pivotally-supported frame or block 10. To regulate the extent of oscillation of the block 10, I have provided the gear 24
 20 with a radially-arranged block 30, having a series of openings 31 therein to receive a pin 33, which connects the link 26 with said block. By connecting the link 26 with the block 30 at the center of the gear 24 no vi-
 25 bratory movement will be imparted to the latter; but by shifting the point of connection radially outward from the center the extent of vibration of the gear, and consequently the extent of oscillation of the block 10, will
 30 be increased accordingly.

In order that the standard 4 may be adapted to tables of different widths, the oppositely-located legs thereof will preferably be adjustable at their lower ends toward and
 35 from each other. To provide for this, the standard will preferably be made of metal sufficiently yielding to permit the legs thereof being readily bent or sprung toward and from each other to a considerable extent, al-
 40 though, if desired, the two legs of the standard may be made separate from the top and hinged thereto, as at 34 in Fig. 5, in which figure the two legs of the standard are indicated at 6' 6' and the top at 6''.

45 As it is desirable that the fan should operate with as little noise as possible, I have interposed washers 35, of leather or other sound-deadening material, between the ends of the pulley 19 and the adjacent walls of the
 50 block 10 and also between the hub of the fan and the adjacent wall of the said block 10, as most clearly shown in Fig. 3.

What I claim is—

1. In a power-fan the combination with a
 55 support, of a standard comprising oppositely-arranged legs, a bearing located between said legs and supported thereby, a fan-shaft journaled in said bearing, said shaft being arranged with its longitudinal axis extending
 60 through the space between said legs, a belt-pulley on said shaft arranged to rotate in a plane common to the legs of the standard, a driving-pulley on the support and in the plane of the first-named pulley and a belt
 65 connecting said pulleys, the arrangement be-

ing such that the runs of the belt move in the space bounded by said legs and in a plane common to the latter whereby each leg serves as a guard for the adjacent run of the belt.

2. In a power-fan the combination with a 70 support, of a standard thereon comprising oppositely-arranged legs, a pivoted bearing located between said legs and supported thereby, a fan-shaft journaled in said bearing, said shaft being arranged with its longi- 75 tudinal axis extending through the space between said legs, a belt-pulley on said shaft located in a plane common to the legs of the standard, a driving-pulley on the support arranged to rotate in the plane of the first- 80 named pulley, a belt connecting said pulleys, each of said legs serving as a guard for the adjacent run of the belt, and means to oscillate the bearing on its pivot.

3. In a power-fan, the combination with a 85 support, of a standard thereon comprising oppositely-arranged legs, a bearing pivotally suspended between said legs for oscillation in a horizontal plane, a fan-shaft journaled in said bearing, said shaft being arranged with 90 its longitudinal axis extending through the space between said legs, a belt-pulley on said shaft located in the plane common to the legs of the standard, a driving-pulley on the sup- 95 port arranged to rotate in the same plane as the first-named pulley, a belt connecting said pulleys, and means actuated by said fan-shaft to oscillate said bearing on its pivot.

4. In a power-fan, the combination of a 100 standard comprising oppositely-disposed legs, a bearing-block pivotally suspended between said legs for oscillation in a horizontal plane, said block having depending projections, a fan-shaft journaled in said projections, said shaft being arranged with its longitudinal 105 axis extending through the space between said legs, a belt-pulley on said shaft between said projections, and means to oscillate the bearing-block on its pivot.

5. In a power-fan, a standard comprising 110 oppositely-arranged legs, a bearing-block pivotally suspended between said legs, means for adjusting said block vertically, a fan-shaft journaled in said block with its longi- 115 tudinal axis extending through the space between the legs, a belt-pulley on said shaft, and means to oscillate the block on its pivot.

6. In a power-fan, a standard comprising 120 oppositely-disposed legs, a pivoted bearing-block suspended from said standard between the legs thereof, a fan-shaft journaled in said block, a fan carried at one end of said shaft and a worm carried on or adjacent the oppo- 125 site end of said shaft, a belt-pulley on the shaft arranged to rotate in a plane common to the standard-legs, a gear pivoted on the bearing-block in mesh with said worm, and a link connected at one end with a stationary pivot, the opposite end of said link being ec- 130 centrically connected to said gear.

7. In a power-fan, a standard comprising
oppositely-disposed legs, a pivoted bearing-
block suspended from said standard between
the legs thereof; a fan-shaft journaled in said
5 block, a fan carried at one end of said shaft
and a worm carried at or adjacent the oppo-
site end of said shaft, a belt-pulley on the
shaft arranged to rotate in a plane common
to the standard-legs, a gear pivoted on the
10 bearing-block in mesh with said worm, a link
connected at one end with a stationary pivot,
the opposite end of said link being eccentric-

ally connected to said gear and means for ad-
justing the connection between the link and
gear toward and away from the center of the 15
latter.

Signed at New York, in the county of New
York and State of New York, this 2d day of
December, A. D. 1904.

GEORGE W. WEISS.

Witnesses:

CHAS. F. DANE,
E. M. FAITH.