

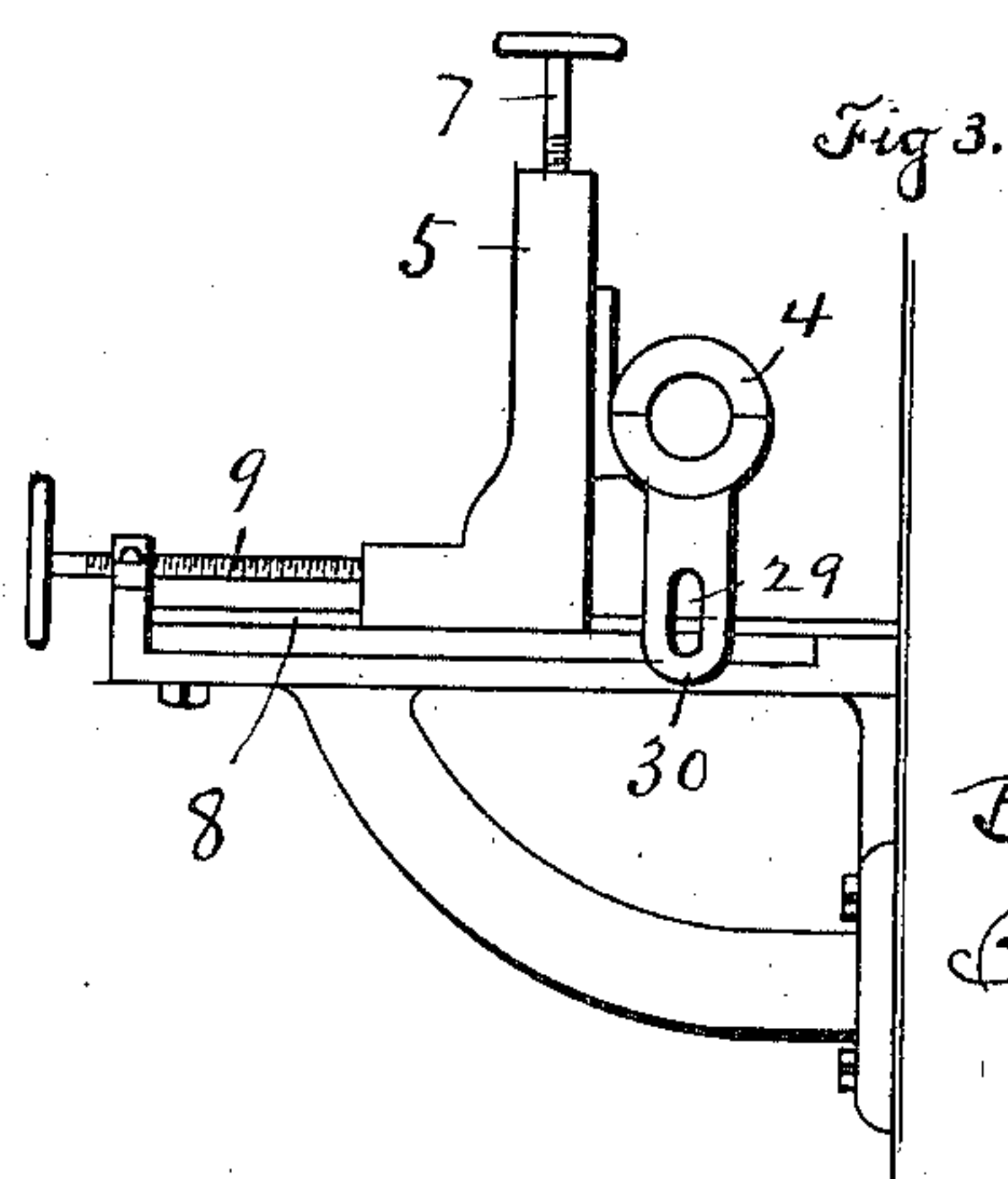
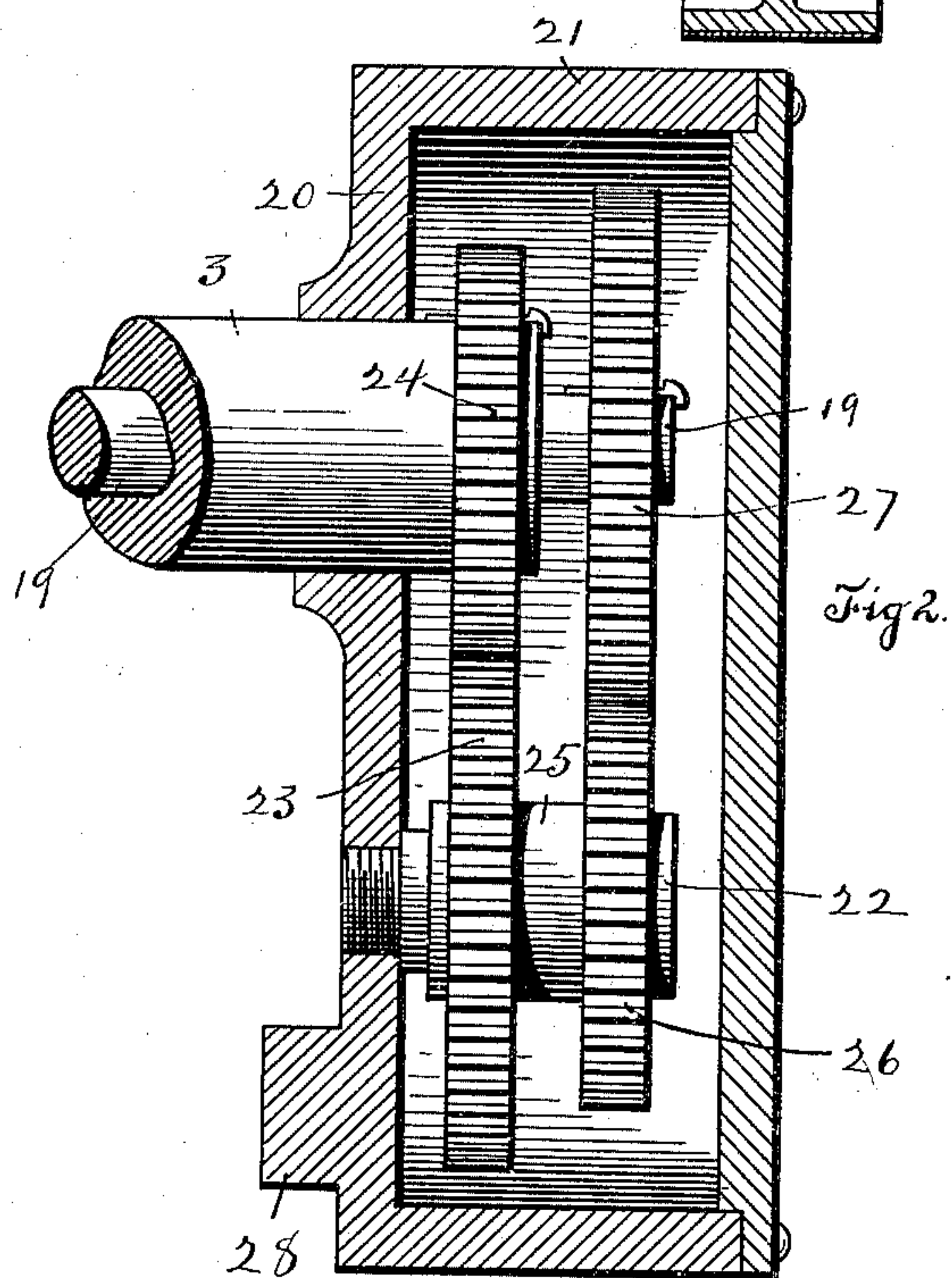
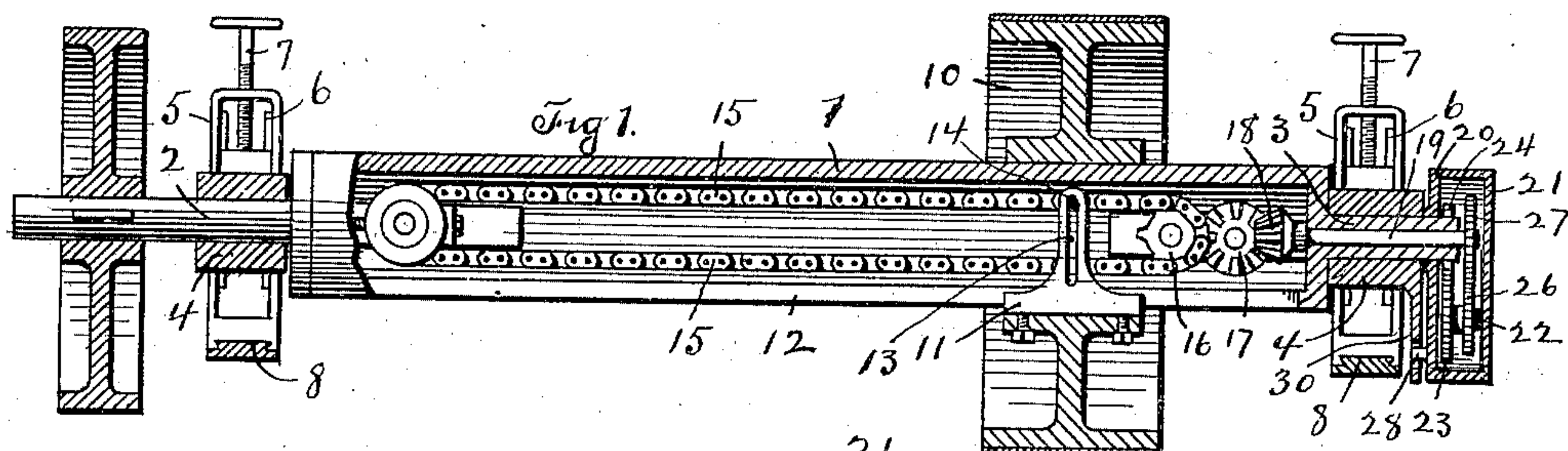
No. 662,742.

Patented Nov. 27, 1900.

B. S. ROY.
MACHINE FOR GRINDING CARDS.

(Application filed Feb. 5, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

BOZIL S. ROY, OF WORCESTER, MASSACHUSETTS.

MACHINE FOR GRINDING CARDS.

SPECIFICATION forming part of Letters Patent No. 662,742, dated November 27, 1900.

Application filed February 5, 1900. Serial No. 3,927. (No model.)

To all whom it may concern:

Be it known that I, BOZIL S. ROY, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Machines for Grinding Cards, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

10 Figure 1 represents that portion of a card-grinding machine necessary to illustrate the nature and scope of my present invention and consisting of a hollow rotating shaft, with a traversing grinding-wheel carried thereon and shown in central sectional view in order to disclose the mechanism by which the grinding-wheel is traversed along the hollow shaft. Fig. 2 represents, on an enlarged scale, the intermediate differential gearing by which the traversing mechanism within the hollow shaft is operatively connected with the rotating shaft which carries the grinding-wheel; and Fig. 3 is a side elevation of one of the journal-boxes by which the hollow rotating shaft 15 shown in Fig. 1 is supported.

Similar reference-figures refer to similar parts in the different views.

My invention relates to that class of machines for grinding the teeth of card-clothing which comprises a hollow rotating shaft, with a grinding-wheel carried thereon and having a traversing motion lengthwise the shaft by means of a traversing mechanism contained within the hollow shaft; and it relates particularly to the mechanism by which the traversing mechanism is operatively connected with the hollow shaft which carries the grinding-wheel; and it consists in the novel features of construction, as hereinafter described, and 40 pointed out in the annexed claims.

Referring to the drawings, 1 denotes a hollow shaft provided at each end with gudgeons 2 and 3, journaled in boxes 4 4, which are supported in frames 5 5, having vertical ways 6, upon which the boxes are adjustable by means of screws 7 7. The frames 5 5 are horizontally adjustable along ways 8 by means of a screw 9, Fig. 3, thereby allowing each end of the hollow shaft 1 to be adjusted both 50 vertically and horizontally in order to bring

its axis into proper position relatively to the surface of the card-clothing to be ground.

The hollow shaft 1 carries a grinding-wheel 10, having a traversing motion along the shaft 1 by means of a slotted key 11, attached to the hub of the grinding-wheel and entering a slot 12 in the shaft 2, with the slot 13 of the key engaged by a stud 14, which is carried upon an endless chain 15, driven by a sprocket 16 through intermediate beveled gearing 17 and 18 by a spindle 19, which is journaled concentrically in the gudgeon 3. The end of the gudgeon 3 rotates in a plate 20, which forms one side of a case 21. The plate 20 carries a stud 22, on which is journaled a gear 23, engaged by a pinion 24, attached to the end of the gudgeon 3. Attached to the hub 25 of a gear 23 is a pinion 26, which engages a gear 27, attached to the end of the spindle 19 and constituting a system of differential gearing, so that the rotation of the gudgeon 3 will be communicated to the spindle 19 with a decrease in speed. The plate 20 is provided with a projecting spur 28, which enters a slot 29 in an arm 30, depending from the lower half of the journal-box 4 of the gudgeon 3, in order to hold the case 21 from rotating on the gudgeon. As the arm 30 is carried by the journal-box the slot 29 is raised and lowered or moved horizontally with the adjustment of the shaft 1, thereby keeping the slotted arm 30 in the same relative position to the case 21 and maintaining the differential gearing in operative position, notwithstanding the vertical and horizontal adjustment of the journal-boxes, in order to vary the position of the hollow shaft for the purpose of properly presenting the teeth of the card-clothing to the action of the grinding-wheel.

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

1. In a machine for grinding card-clothing the combination of a hollow shaft journaled in boxes, means for the vertical and horizontal adjustment of said boxes, a spindle journaled in one of the gudgeons of said hollow shaft, differential gearing operatively connecting said spindle and said gudgeon, a plate supporting said differential gearing and 100

an arm projecting from the journal-box of
said gudgeon and engaging said plate, where-
by said differential gearing is held in opera-
tive position as the journal-boxes are adjust-
5 ed, substantially as described.

2. In a machine for grinding cards the com-
bination of a hollow shaft, a grinding-wheel
carried by said shaft and a traversing mech-
anism contained in said hollow shaft and op-
10 eratively connected with said grinding-wheel,
a spindle journaled in one of the gudgeons of
said hollow shaft, intermediate gearing be-

tween said spindle and said gudgeon, a case
hung upon said gudgeon and inclosing said
gearing, a spur projecting from said case, a 15
slotted arm attached to the journal-box of
said gudgeon and engaging said spur and
means for the adjustment of said journal-box,
substantially as described.

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