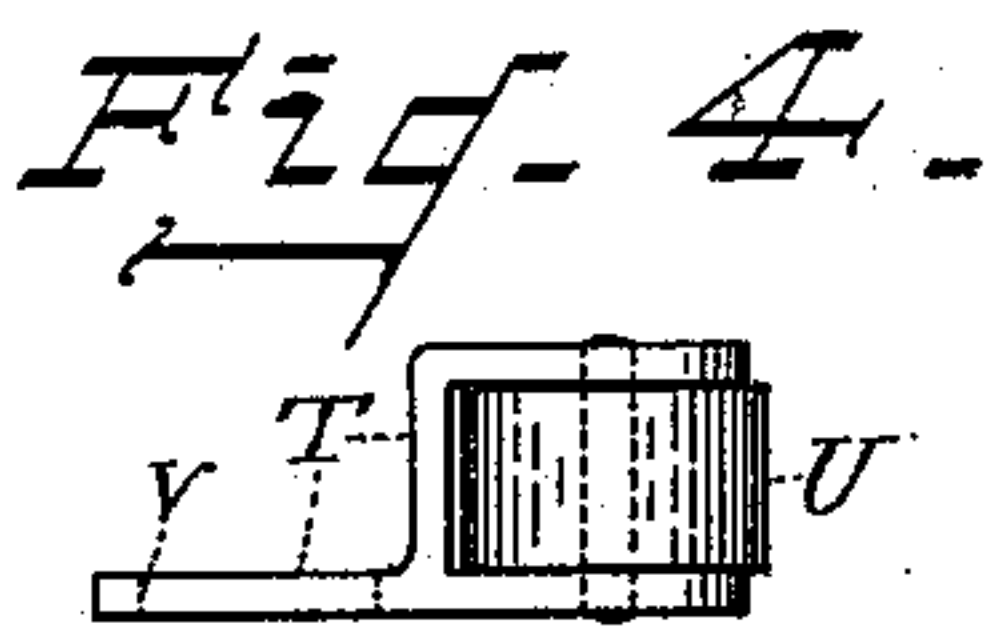
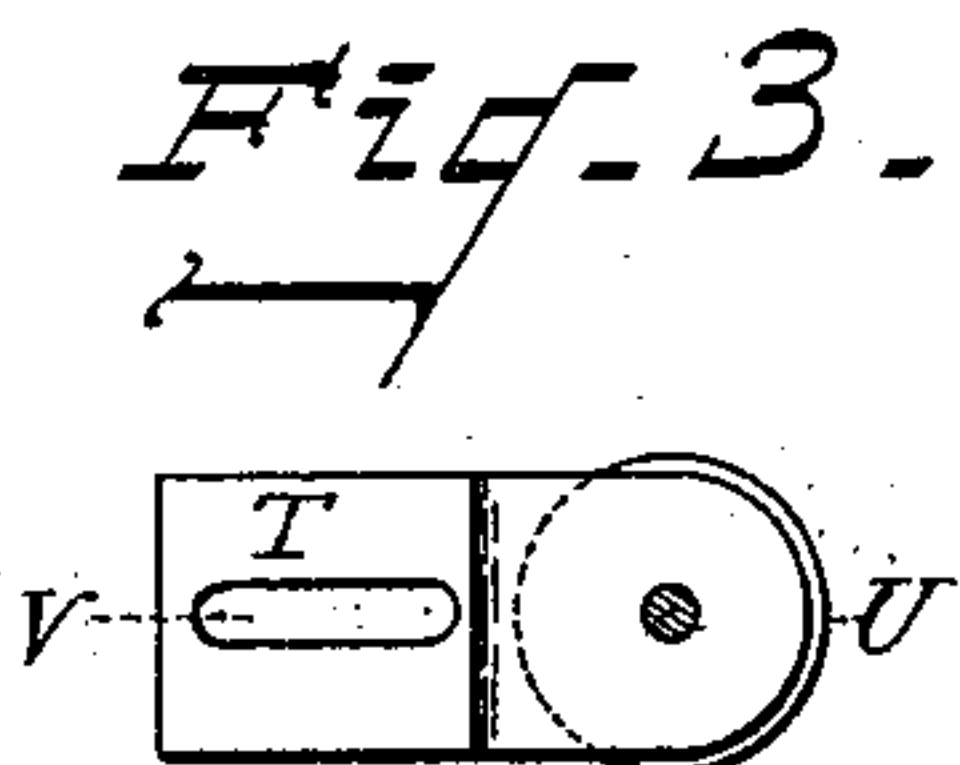
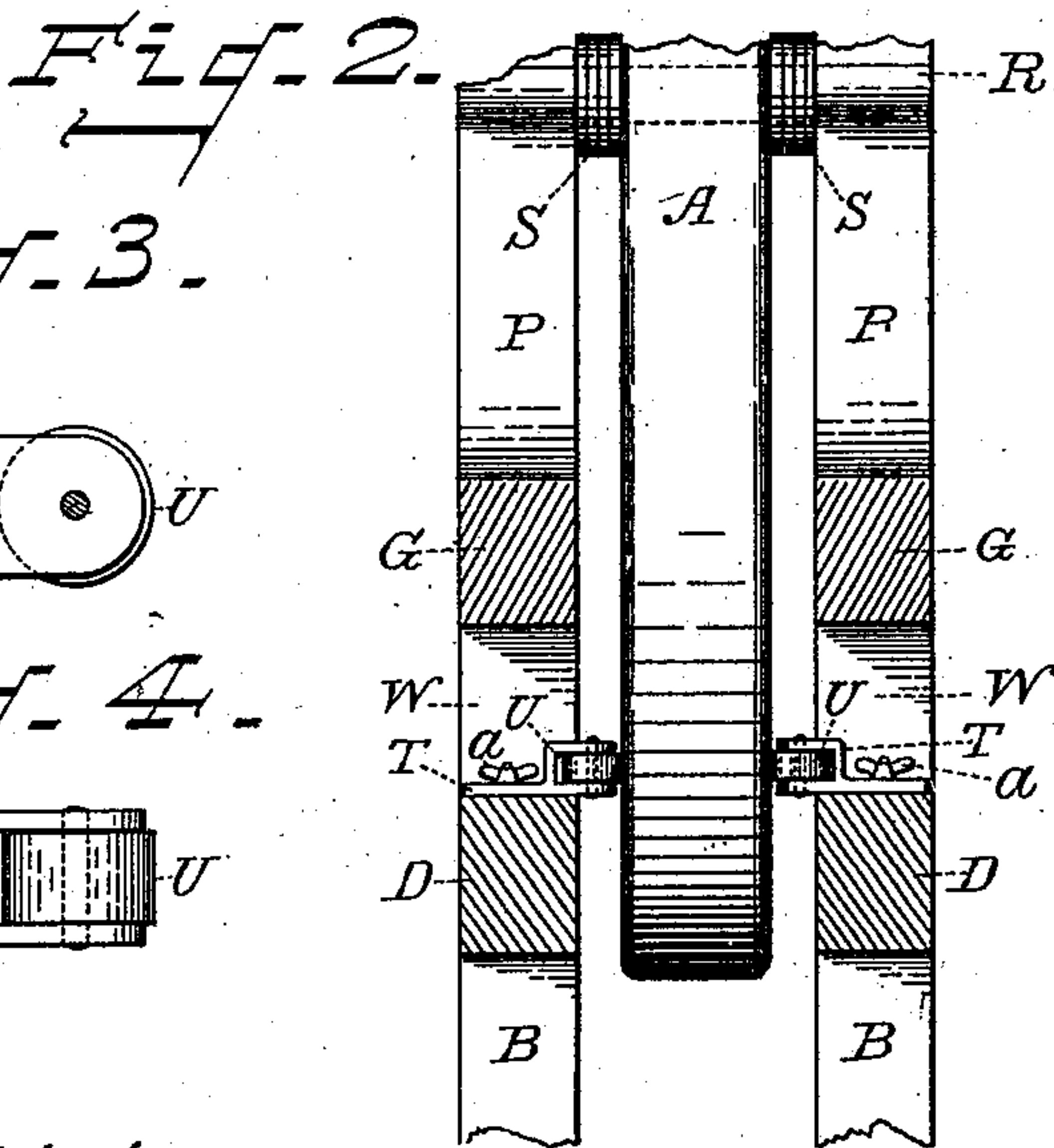
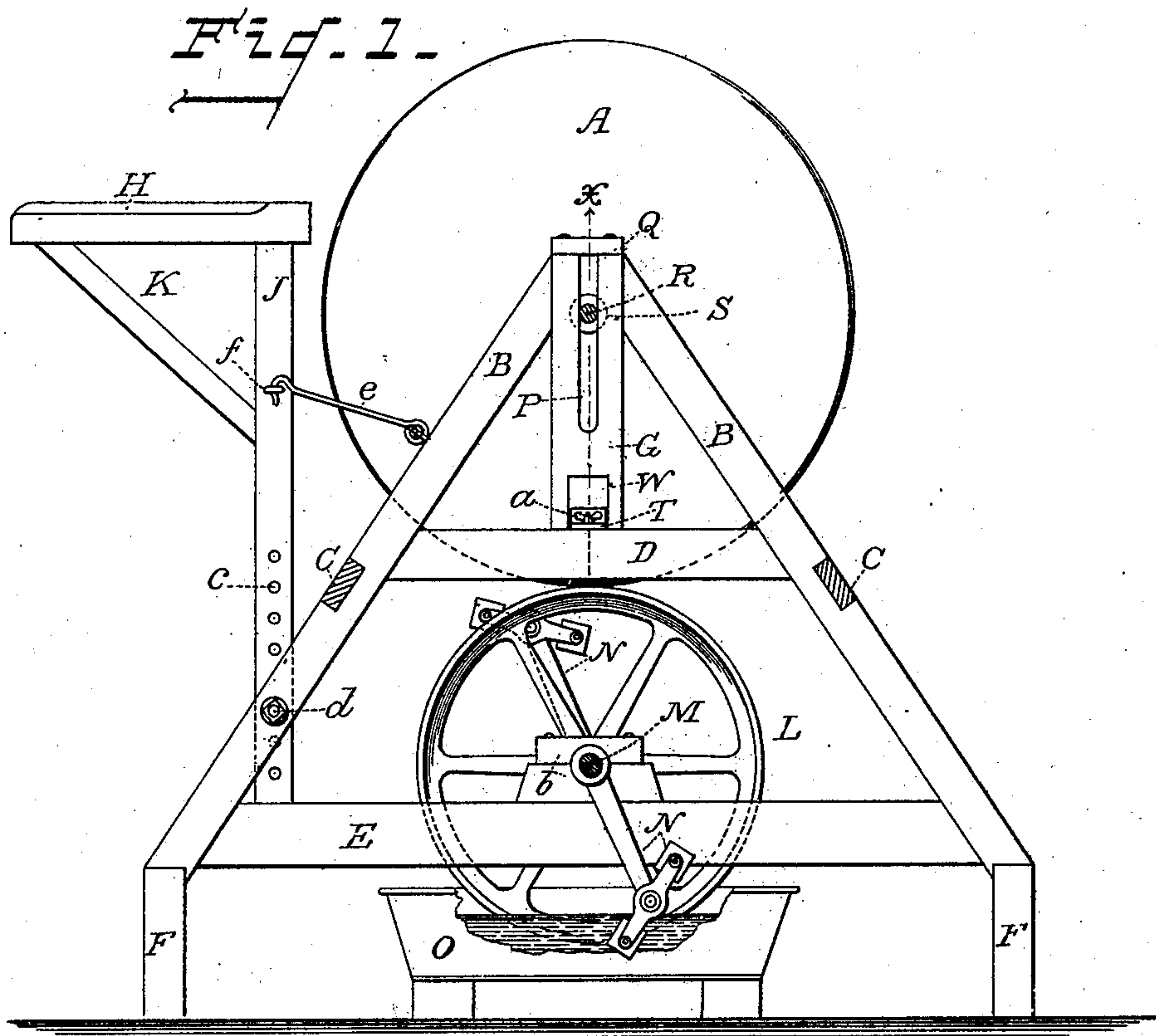


(No Model.)

W. H. CLAPP.
GRINDSTONE.

No. 504,329.

Patented Sept. 5, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM H. CLAPP, OF AUBURN, NEW YORK.

GRINDSTONE.

SPECIFICATION forming part of Letters Patent No. 504,329, dated September 5, 1893.

Application filed April 8, 1893. Serial No. 469,617. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CLAPP, a citizen of the United States, residing in the city of Auburn, county of Cayuga, State of New York, have invented a new and useful Improvement in Grindstones, of which the following is a specification, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in grind-stones in which the same are rotated by the person grinding tools thereon; and the objects of my improvements are first, to afford a convenient and easy support for the operator in grinding his implements, and rotating the grind-stone; and second, to provide means whereby the proper amount of water may be fed or carried on to the face of the grind-stone, while the same is being rotated by the operator. I attain these objects by the mechanism illustrated in the accompanying drawings in which—

Figure 1, is a side elevation of the grind-stone with my improvements thereon. Fig. 2, is a partial vertical section, on an enlarged scale, of the same taken through the top central portion thereof, on the dotted line *x*. Fig. 3, is a plan view of one of the friction rollers and stand comprising a part of my invention, and Fig. 4, is a side elevation of Fig. 3.

Similar letters refer to similar parts throughout the several views.

In Fig. 1, A, is the grind-stone, supported in a frame-work consisting of the legs B, B, the tie-pieces C, C, the upper cross-pieces D, D, the lower cross-pieces E, E, the feet F, F, and the vertical pieces G, G, severally arranged and placed with relation to the grind-stone A, and the other parts, as will presently be described.

H, is an adjustable seat for the operator, provided with legs J, and braces K.

L, is a driving wheel which is carried on a shaft M, which latter is provided at either end with the treadles N, N, and O, is a water receptacle.

The legs B, B, are carried on the feet F, F, at their bottom ends and at each side of the grind-stone A, while their tops converge also at either side of the grind stone and are properly secured by pairs to the tops of the verti-

cal pieces G, G, the bottom ends of which latter rest on and are secured in place to the upper cross pieces D, D, on either side of the grind-stone A.

The vertical pieces G, G, are provided with slots P, P, which are closed at the top by the small piece Q. The grind-stone shaft R, is carried in the slots P, P, of the vertical pieces G, G, and has provided on it washers S, S, (see Fig. 2,) which serve to take up the space between the sides of the grind-stone A, and the vertical pieces G, G, thus assuring steadiness and a central position of the grind-stone A, in the frame work and accommodate for varying thicknesses of the same.

The bottom ends of the vertical pieces G, G, are provided with openings W, W, for the admission of the stands T, T, which carry friction rollers U, U, that being brought to bear against the sides of the grind-stone A, near its lower periphery, serve to assure the steadiness of the same in its rotary movements.

The stands T, T, are provided with slots V, V, through which they are fastened in desired place upon the cross-pieces D, D, and in the openings W, W, of the vertical pieces G, G, by means of the thumb-nuts *a, a*.

The lower cross-pieces E, E, are provided with box-bearings *b*, which are located centrally thereon at either side of the frame work, and in which is carried the shaft M, of the driving-wheel L. The ends of the shaft M, are furnished with the pedals N, by means of which the driving-wheel L, is rotated by the feet of the operator seated in the adjustable seat H.

The water receptacle O, is so placed on the ground that the face of the driving wheel L, shall be submerged in the water it contains; and thus, when it is rotated by the operator be caused to convey a sufficient portion of the water to the lower face of the grind-stone A, resting thereon.

The legs J, of the seat H, are provided with a series of holes *c*, through which is passed the bolt *d*, provided on the forward legs B, of the frame work, by means of which the seat H, may be adjusted and secured at any desired height to accommodate the operator.

The seat H, is secured from any lateral displacement, by means of the hooks *e*, which

are provided on the forward legs B, of the frame-work, which said hooks *e*, hook into the staples *f*, suitably arranged on the legs J, of the seat H, as shown.

5 Having thus described the several parts of my invention, I will now set forth their practical operation. The grind-stone A, is placed in position in the frame-work with its shaft R, carried in the slots P, P, of the vertical pieces
10 G, G; a sufficient number of washers S, having been placed on the shaft R, to fill the space between the sides of the stone and the frame work in order to assure the central steadiness of the grind-stone A. The lower face of the
15 grind-stone A, rests on the upper face of the driving wheel L, and its periphery is assured steadiness by adjusting the stands T, T, carrying the friction rollers U, U, so that the latter shall be brought to bear lightly against
20 the sides of the grind-stone A, near that point, the said friction rollers U, U, being secured in desired place in the openings W, W, of the vertical pieces G, G, and on the cross-pieces D, D, by means of screwing down the thumb
25 nuts *a*, *a*, on a suitable bolt provided for that purpose and passing through the slots V, V, of the stands T, T, which carry the friction-rollers as already described. The seat being properly adjusted and the water receptacle
30 placed in position as shown, the operator takes his place and by operating the treadles with his feet after the usual manner, causes the driving wheel L, to rotate and convey water from the water receptacle to the grind
35 stone. At the same time the grind stone is caused to revolve in an opposite direction through the friction of the upper face of the driving wheel against the lower face of the grind stone caused by the weight of the lat-
40 ter fully resting on the former, thus assuring the easy and effective rotating and wetting of the grind-stone by the operator in his seat, while at the same time he conveniently performs the operation of grinding his tools with-
45 out secondary assistance.

I am aware that the grind-stone may be driven by means of a sprocket-wheel attached to one end of its shaft and connected by a sprocket-chain to a sprocket-wheel provided
50 on the corresponding end of the shaft M, but for reasons unnecessary to explain, I prefer the manner of driving the grind-stone as I have shown and described.

Having thus described and explained my
55 improvements and their mode of operation, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a grind-stone, the frame-work com-
60 posed of the legs B, B, at either side thereof resting on the feet F, and converging at the

top; the vertical pieces G, G, at either side thereof having slots P, P, and spaces W, W;; the upper cross-pieces D, D, and the lower cross-pieces E, E, at either side thereof, in combination with the adjustable seat H, held
65 in place by the bolts *d*, and the hooks and staples *e*, and *f*, substantially constructed in the manner and for the purposes herein described and set forth.

2. In a grind-stone, the frame-work com-
70 posed of the legs B, B, at either side thereof resting on the feet F, and converging at the top; the vertical pieces G, G, at either side thereof having slots P, P, in which is carried the shaft R, and the spaces W, W, in which
75 are placed the adjustable friction roller stands T, T; the upper cross-pieces D, D, at either side thereof on which are fastened the said adjustable friction roller stands T, T; the lower cross pieces E, E, at either side thereof
80 provided with the box-bearings *b*; in combination with the driving wheel shaft M, the treadles N, the driving wheel L, the grind-stone A, and the water-receptacle O, substantially as and for the purposes herein shown
85 and described.

3. In a grind-stone, the combination there-
with of the legs B, B, at either side thereof resting on the feet F, and converging at the
90 top; the vertical pieces G, G, at either side thereof having slots P, P, in which is carried the shaft R, and spaces W, W, in which are placed the adjustable friction roller stands T, T; the upper cross-pieces D, D, at either side
95 thereof on which are fastened the said adjustable friction roller stands T, T, by means of the thumb nuts *a*, *a*; the lower cross-pieces E, E, at either side thereof provided with box bearings *b*, carrying the driving wheel shaft
100 M; the driving wheel shaft M, provided at either end with the treadles N, N, and carrying the driving wheel L, on the upper face of which rests the lower face of the grind-stone A; the water receptacle O, placed underneath the driving wheel L; and the adjustable seat
105 H, having the legs J, provided with a series of holes *c*, and the braces K, said seat being held in place by the bolts *d*, passing through the forward legs B, and the hooks and staples
110 *e*, and *f*; the whole substantially constructed and combined for joint operation in the manner and for the purposes herein described and set forth.

In testimony whereof I have hereunto set my hand this 5th day of April, A. D. 1893.

WILLIAM H. CLAPP.

Witnesses:

FRED W. BATTIS,
BEITON E. TAYLOR.