

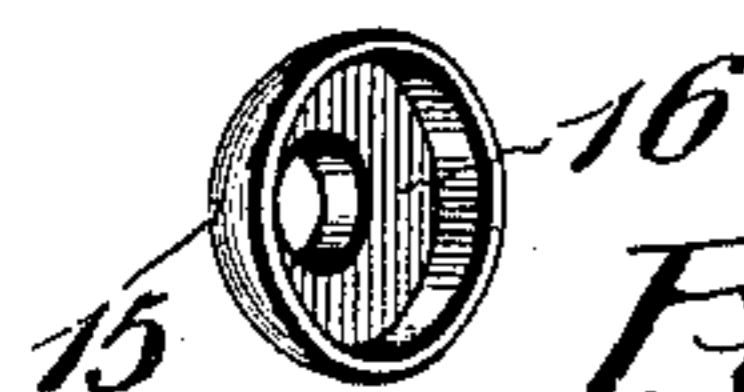
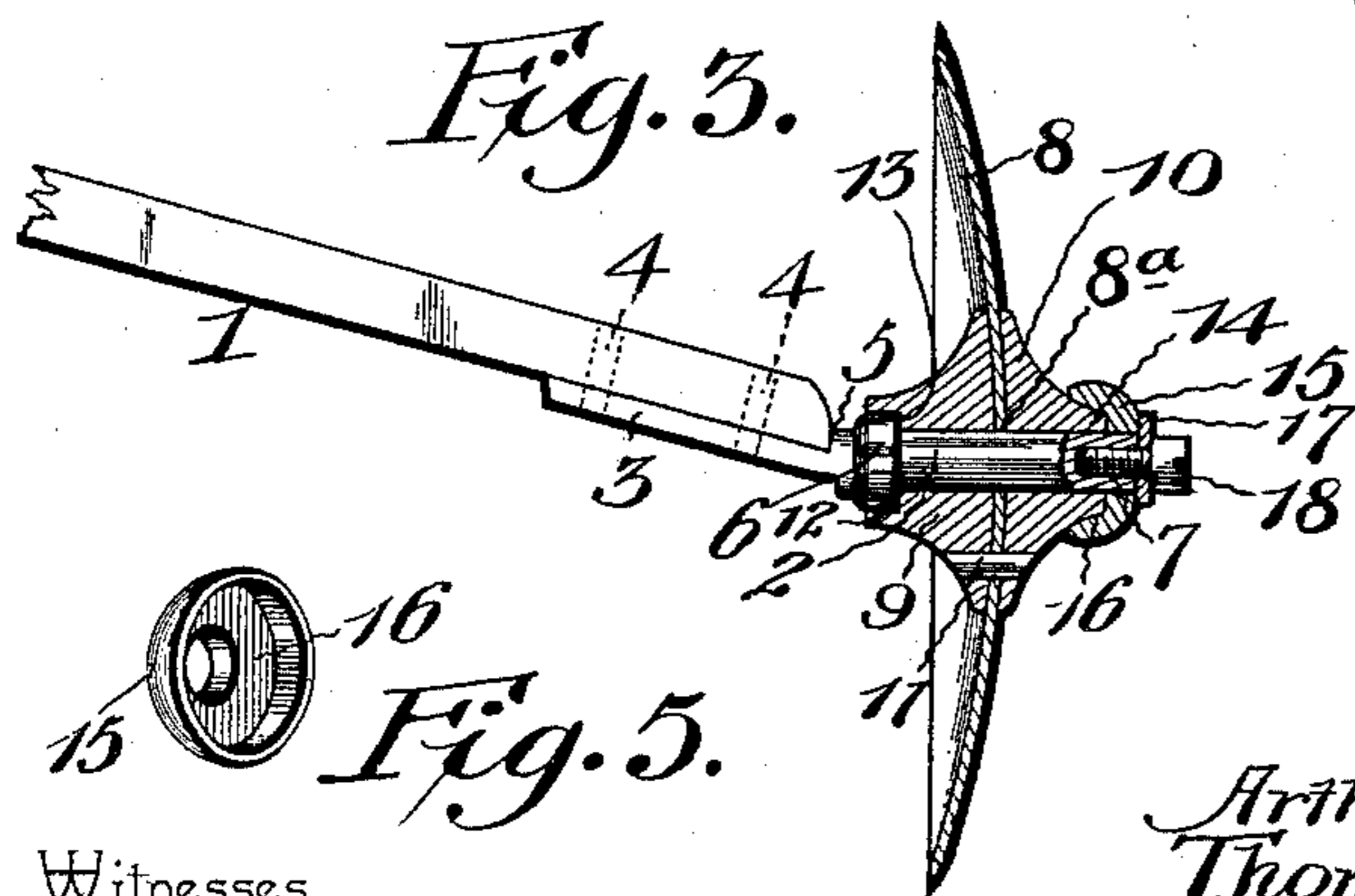
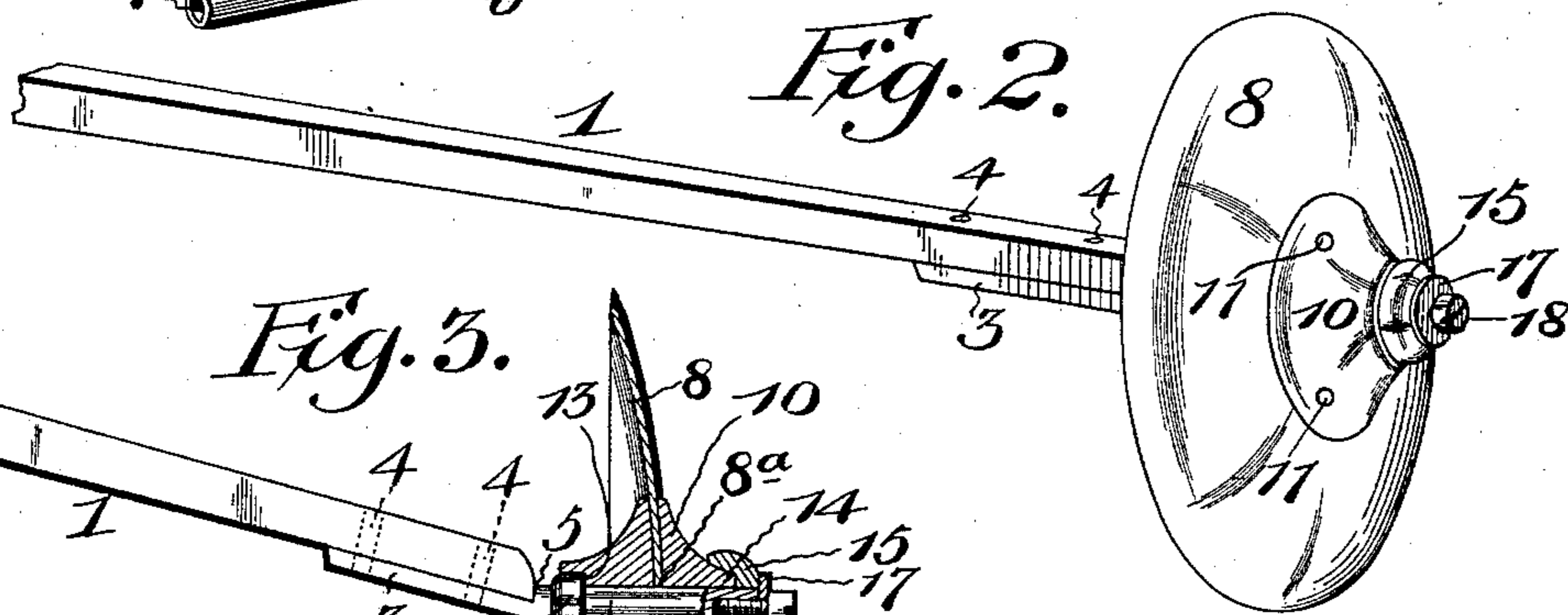
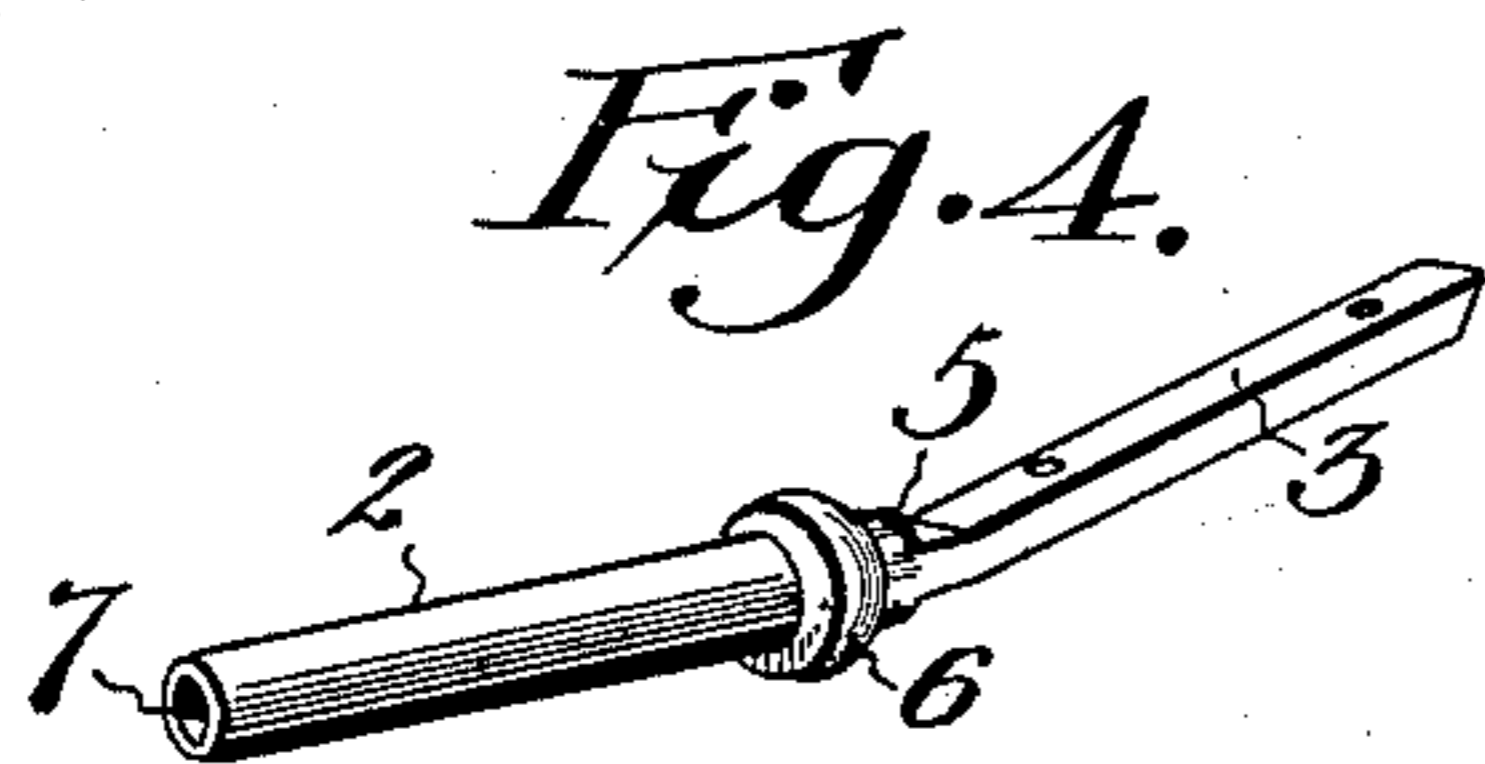
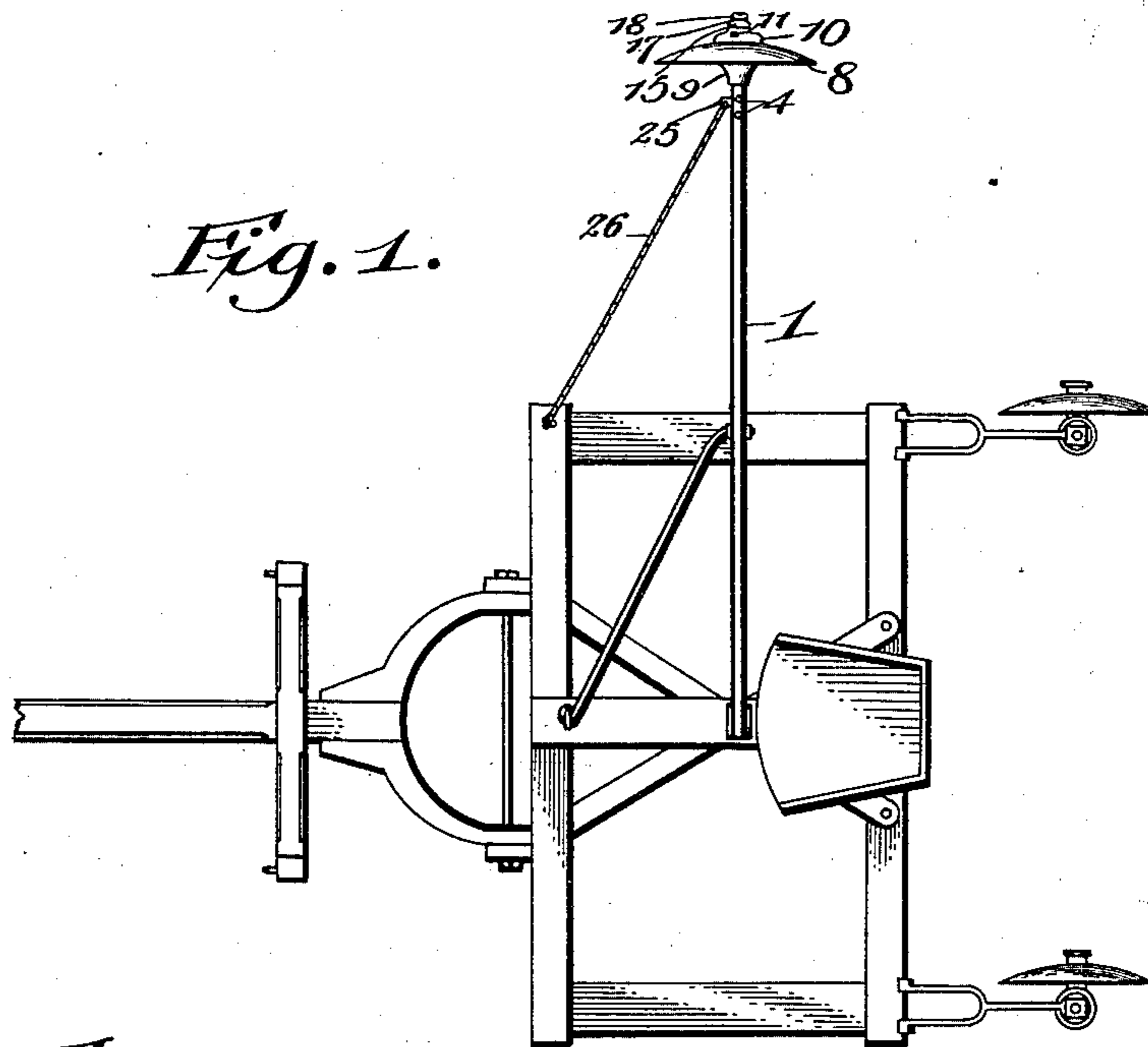
No. 609,775.

Patented Aug. 30, 1898.

A. N., A. K. & T. O. BURROUGHS.  
MARKER GAGE FOR CORN PLANTERS.

(Application filed May 26, 1898.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

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## MARKER-GAGE FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 609,775, dated August 30, 1898.

Application filed May 26, 1898. Serial No. 681,815. (No model.)

*To all whom it may concern:*

Be it known that we, ALONZO N. BURROUGHS, ARTHUR K. BURROUGHS, and THOMAS O. BURROUGHS, citizens of the United States, residing at Mechanicsville, in the county of Cedar and State of Iowa, have invented a new and useful Marker-Gage for Corn-Planters, of which the following is a specification.

Our invention relates to improvements in marker-gages for corn-planters; and the object of the invention is to provide an improved construction for readily indicating to the operator by a plainly-visible indented line in the ground the place where the operation of planting is to be commenced, thus insuring accuracy and uniformity in the width of the rows.

A further object of the invention is to provide an improved marker in which a rotary disk is mounted for rotation freely on a carrying-arm by devices which effectually exclude the entrance of dirt and grit to the hub or bearing, and these parts are readily separable for cleaning or repairs and are capable of being quickly assembled.

With these ends in view the invention consists in the novel construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand the invention, we have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of an ordinary corn-planter with our marker-gage applied thereto. Fig. 2 is a detail perspective view of the marker-gage on an enlarged scale. Fig. 3 is a longitudinal sectional elevation taken centrally through the gage-disk, the carrying-spindle, and the parts associated therewith. Fig. 4 is a detail perspective view of the spindle for the marker-gage. Fig. 5 is a detail view of the dirt-exclusion cap.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

In carrying our invention into practice we employ a carrying-bar 1, which is preferably made of wood and of a length proper to extend the marker-disk from one side of the corn-planter to which the attachment is applied.

The marker-gage disk is loosely mounted on a spindle 2, which is made in a single piece of metal, with a flattened attaching-plate 3. This plate 3 is applied or fitted against the lower face or side of the wood carrying-bar 1, and the parts are joined firmly together by the vertical rivets or bolts 4, which pass through the plate and carrying-bar. On the upper face of the flattened attaching-plate an abrupt shoulder or rib 5 is produced, and this shoulder is positioned on the plate at a point for the extremity of the carrying-bar 1 to abut against the same, thus holding the spindle from endwise movement in one direction on the carrying-bar. The spindle is furthermore provided at a point between its inner part and the attaching-plate with an annular collar 6, which is made integral with the spindle and is formed with a flattened face on one side, and in the outer extremity of said spindle is produced a socket 7, which is interiorly screw-threaded.

8 designates the marker-disk, which is in a single piece of sheet metal and of concavo-convex form in cross-section. In the center of this gage-disk is produced an opening 8<sup>a</sup>, which coincides with the axial opening in a two-part hub 9 10. The sections of this hub are fitted against the curved faces of the gage-disk, and they are united rigidly thereto by the transverse rivets 11, which pass through coincident openings provided in the disk 8 and the coincident hub-sections. Each hub-section is cast in a single piece of metal, and it is hollow, so as to produce therein an axial opening. The hub-section is tapered from one end to the other, so as to form a contracted outer extremity and a broad base at its other extremity. The broad bases of the two hub-sections are applied against the curved faces of the marker-disk to have the axial openings in the hub-sections coincident with the central opening of the gage-disk, and the parts having been properly assembled the rivets 11 are introduced to firmly unite or couple the hub-sections and the disk together.

The hub-section 10, which is applied to the outer convex face of the gage-disk, tapers to produce a rounded nose 14, and beyond this nose the socketed extremity 7 of the spindle

is adapted to project for the reception of the dust-exclusion cap 15. This exclusion-cap is made of a single piece of metal, with a cavity 16 on the inner face thereof, and this cavity is shaped to fit snugly upon the nose 14 of the hub-section 10. A washer 17 is fitted against the socketed end of the disk-spindle, and through this washer passes a headed clamping-screw 18, which is screwed into the threaded socket 7 of the spindle.

The hub-section 9, which is applied to the inner concave face of the gage-disk, is fashioned at its inner end to produce a cavity 12 therein, and this cavity is of larger diameter than the axial opening of the hub-section, thus forming an annular ledge or shoulder 13 between the cavity and said axial opening of the hub-section.

In the manufacture of our improved marker-gage the spindle, with its plate, is cast in a single piece, or it may be otherwise produced. The hub-sections are each likewise cast in a single piece, and they are solidly riveted to the opposite faces of the disk, the latter being stamped or struck up from sheet-steel or other appropriate material.

In assembling the parts of the gage the attaching-plate of the spindle is applied against the under face of the carrying-bar for the latter to abut against the shoulder, and the rivets or bolts are applied to unite the plate solidly to the bar. The disk, with its hub, is now fitted loosely on the spindle for the annular shoulder or collar 6 to fit within the cavity 12 of the hub-section 9, the exclusion-cap 15 is now slipped over the protruding end of the spindle, the washer 17 fitted in place against the cap and the spindle, and finally the screw 18 is adjusted and screwed into the socket 7 to have its head bear against the washer. The screw is firmly fixed to the spindle, and it serves to keep the disk and its hub from displacement on the spindle, while permitting the disk to rotate freely. The collar of the spindle fits snugly within the cavity of the inner hub-section 9 to exclude dirt from entering the hub of the disk, and the exclusion-cap 15 is fitted snugly over the nose of the outer hub-section 10, so that dirt and grit cannot enter the hub from the outer end thereof.

Our marker-gage may be used in connection with any style of corn-planter, and the carrying-bar may be attached to the rear part of the planter-frame in any suitable way. When this marker attachment is in operation, the carrying-bar assumes an inclined position between the ground-line and the planter-frame, and to enable the marker-disk to rotate in a vertical plane, and thus secure maximum efficiency of the device, we prefer to arrange the attaching-plate 3 at an angle to the longitudinal axis of the spindle 2. The attaching-plate is thus secured to the carrying-bar to partake of its inclination; but the spin-

dle 2 lies in a horizontal position for the gage-disk to rotate freely thereon. The carrying-bar may be attached to the frame of the planter by a clamp; but this is not essential, because the carrying-bar may be pivoted on the frame for adjustment in a vertical direction thereon, so that the entire marker device may be raised out of the way when turning at the end of the field or in traveling to or from the field.

The marker-bar 1 is provided near its outer end with an eye 25, to which a cord or chain 26 may be attached, the other end of said cord 26 being fastened to the front part of the planter to hold the marker in position.

Slight changes may be made in the form of some of the parts while their essential features are retained and the spirit of the invention embodied. Hence we do not desire to be limited to the precise form of all the parts as shown, as we reserve the right to make such changes in the form and proportion of parts and in the details of construction as fairly fall within the scope of our invention.

Having thus described the invention, what we claim is—

1. A marker-gage for corn-planters, comprising a carrying-arm, a plate fastened to said arm and having an extended shouldered spindle which lies at an angle to the carrying-arm, a marker-disk, the hub-sections secured to opposite sides of the disk and fitted loosely on the spindle for one hub-section to snugly embrace the shoulder thereof, a dust-exclusion cap fitted loosely to the outer end of the spindle to embrace the other hub-section, and a fastener or retainer secured to the spindle and engaging with said cap to hold the latter and the marker-disk in place on the spindle, substantially as described.

2. A marker-gage for corn-planters comprising a carrying-bar, a spindle made in a single piece with an inclined attaching-plate and provided with an annular collar and with a threaded socket, the concavo-convex gage-disk, the coincident hub-sections rigidly secured to the respective faces of said disk and with the inner hub-section formed with a cavity for the reception of the said collar, a dust-exclusion cap fitted to the protruding end of the spindle and the nose of the outer hub-section, and a screw secured in the socket of the spindle to confine the exclusion-cap in place against the gage-hub, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ALONZO N. BURROUGHS.  
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Witnesses:

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