

No. 773,602.

PATENTED NOV. 1, 1904.

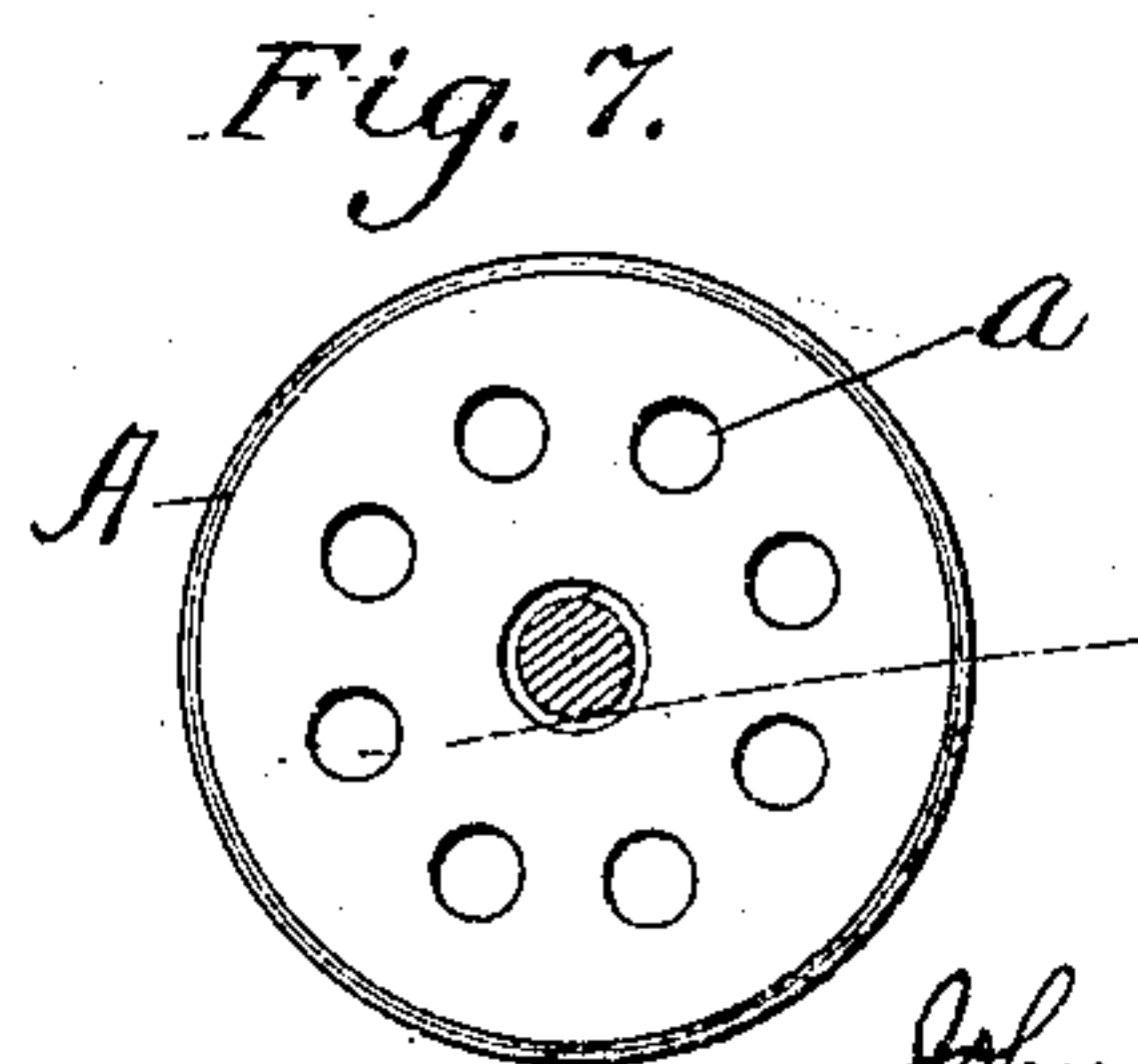
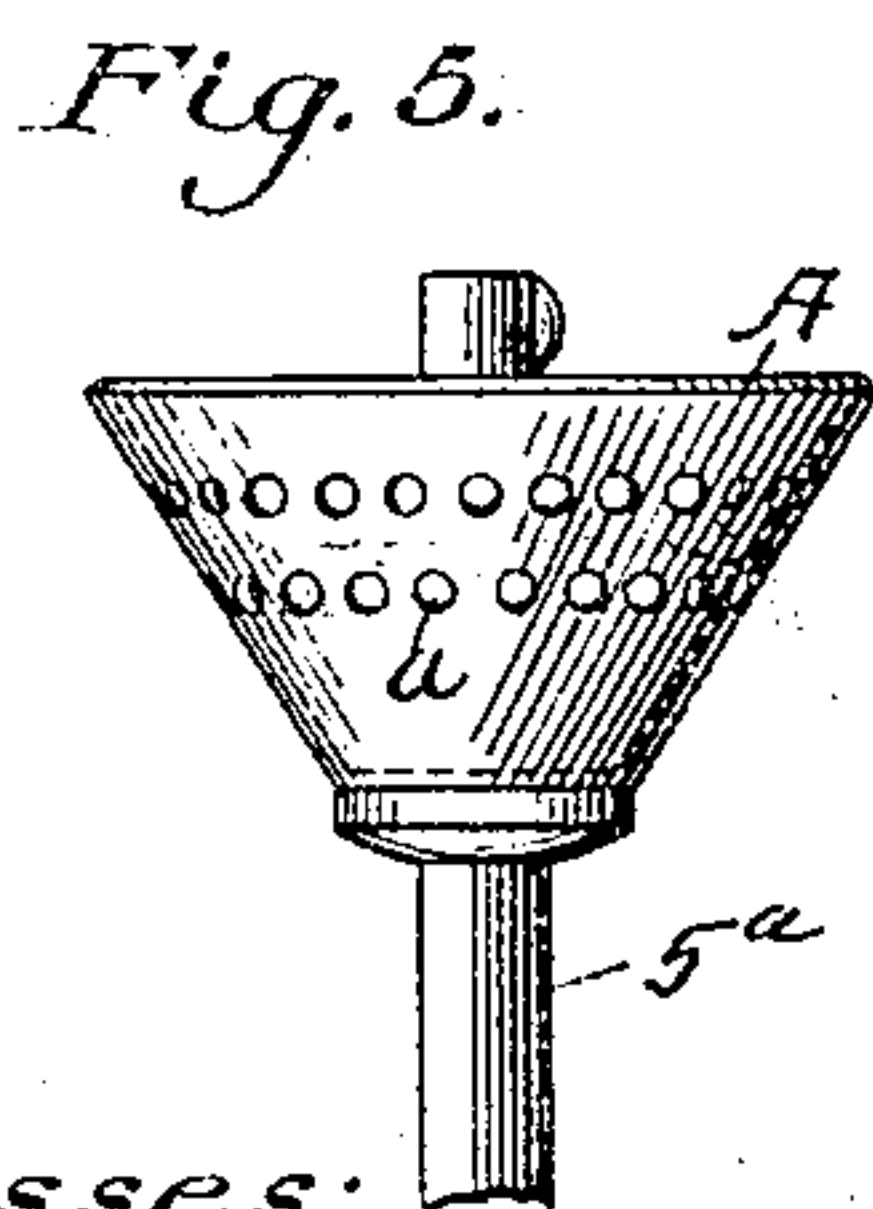
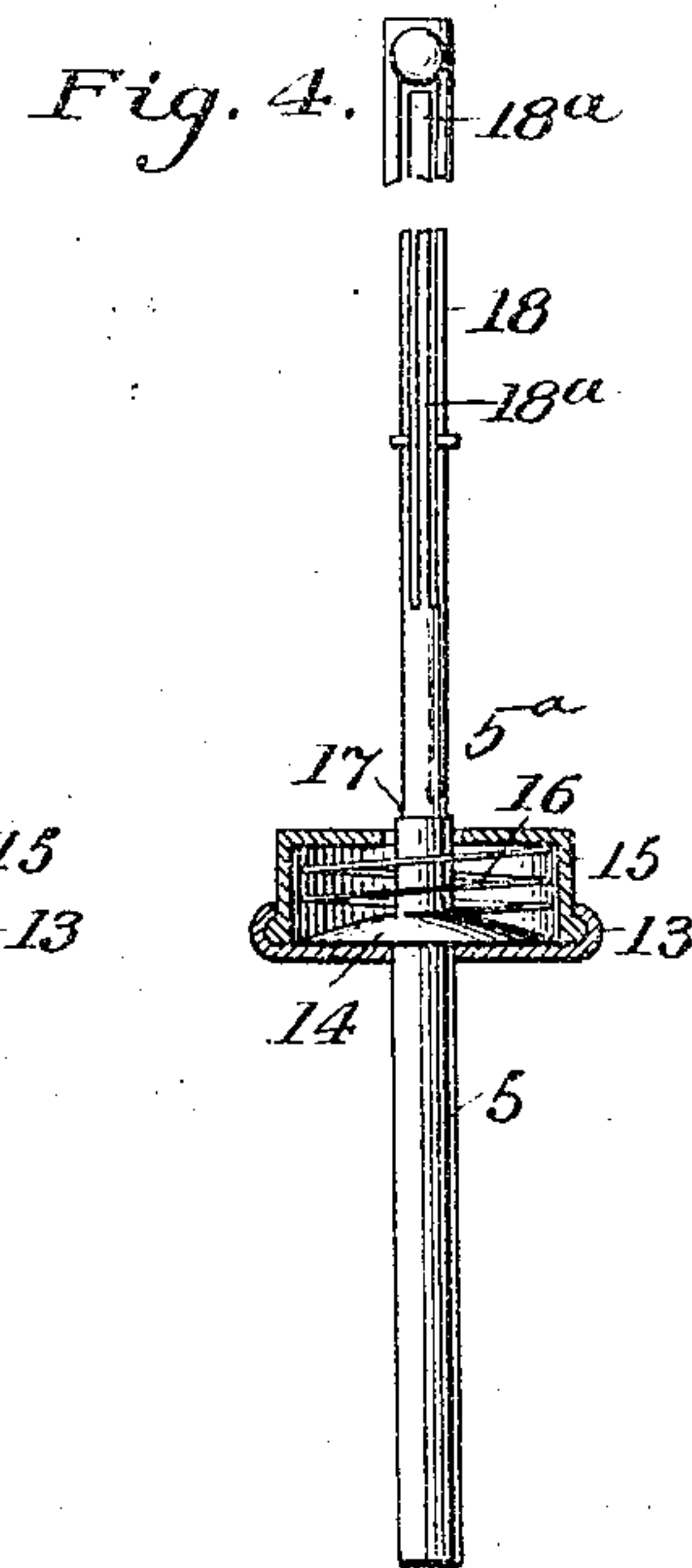
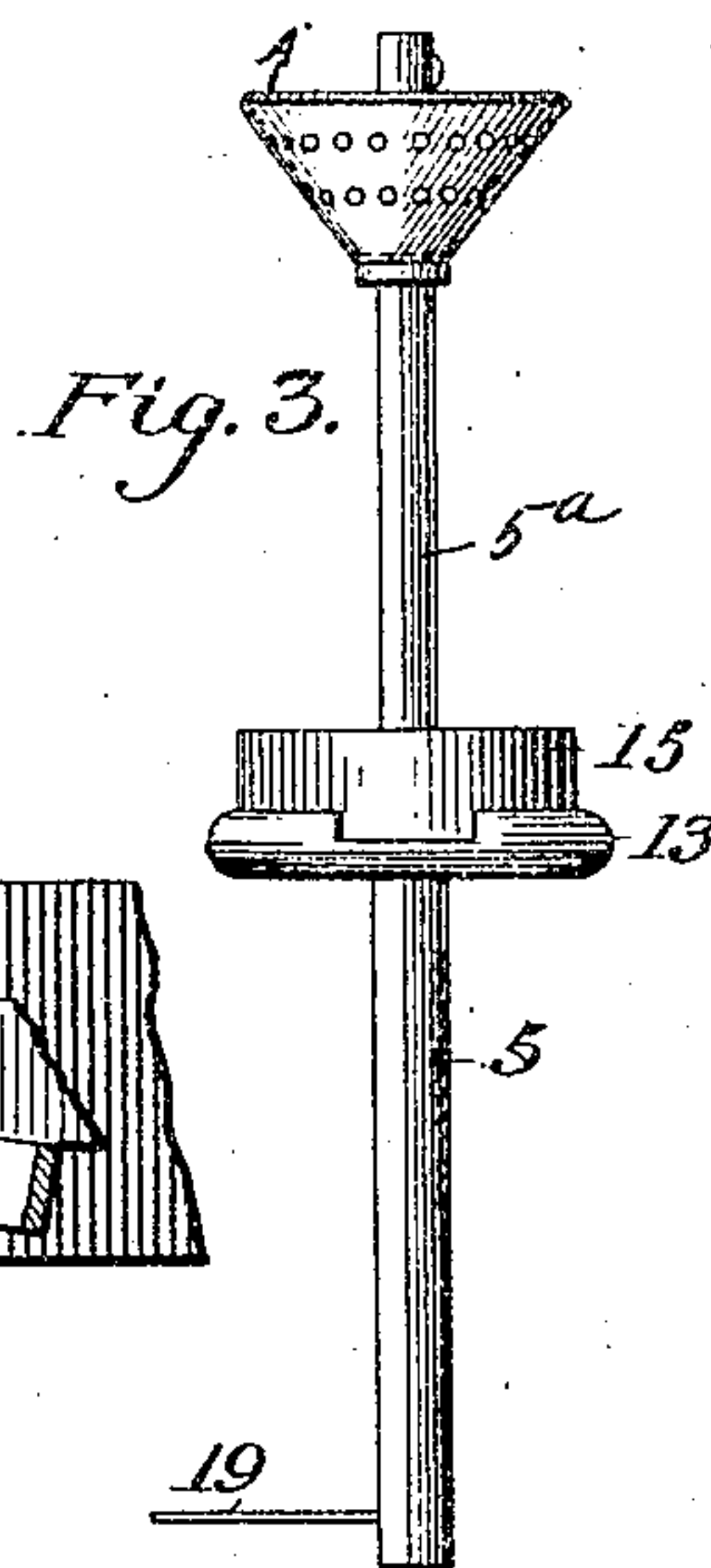
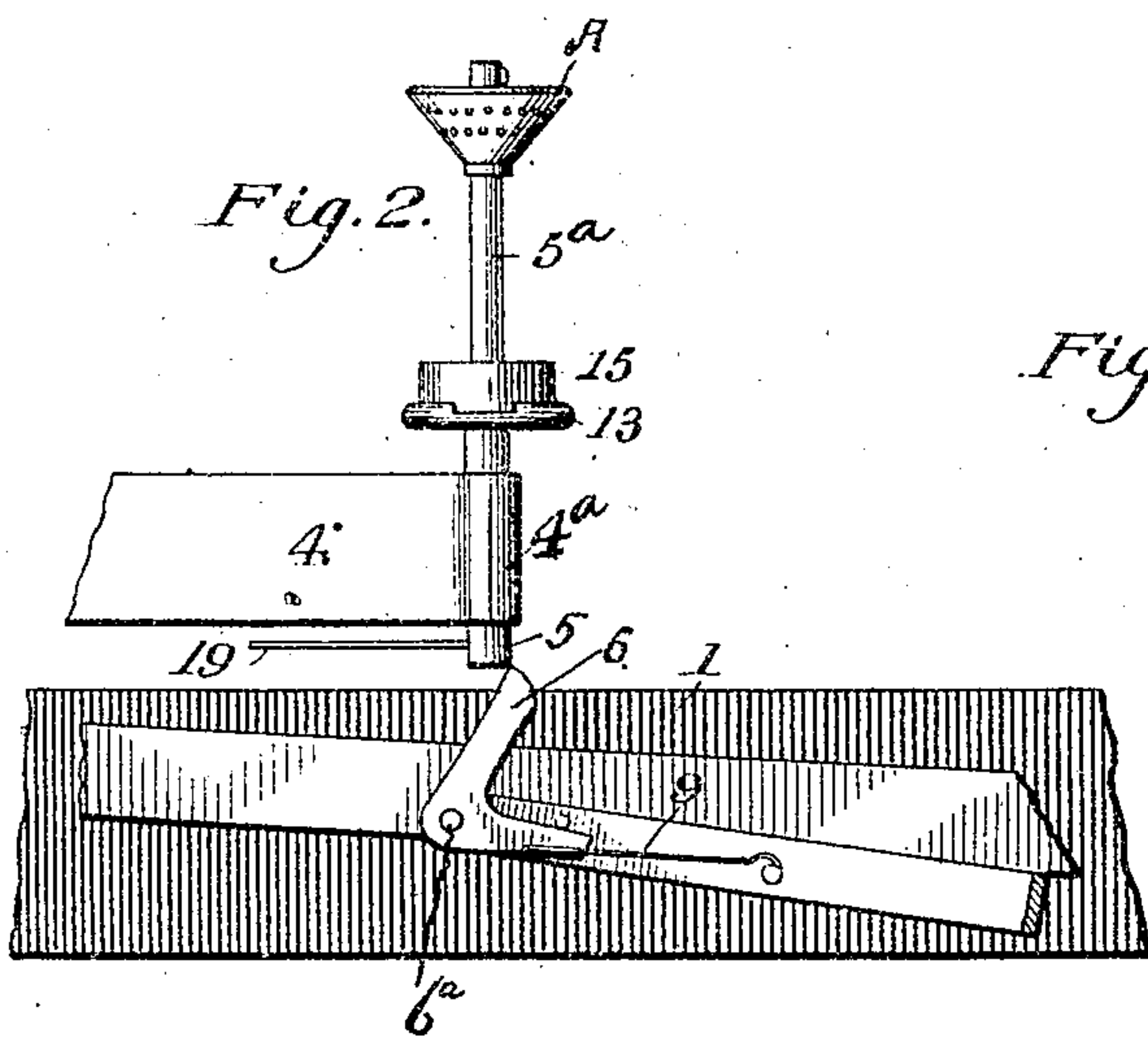
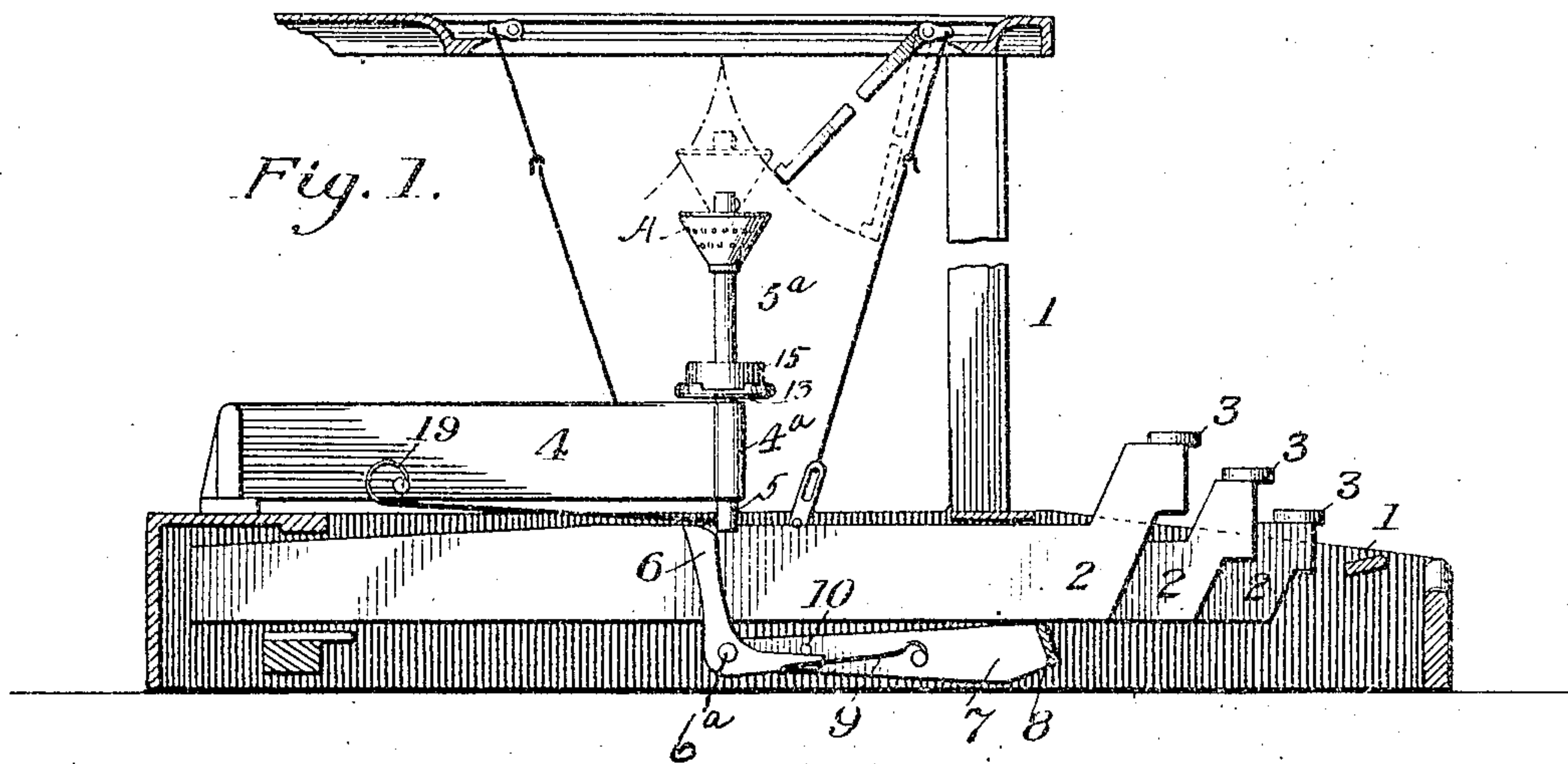
J. S. SOUTHERDEN.

TYPE INKING APPARATUS FOR TYPE WRITING MACHINES.

APPLICATION FILED JULY 22, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
James M. Tully.
Peter J. Becker.

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John Stephen Southerden.
By George Haseltine
Attorney.

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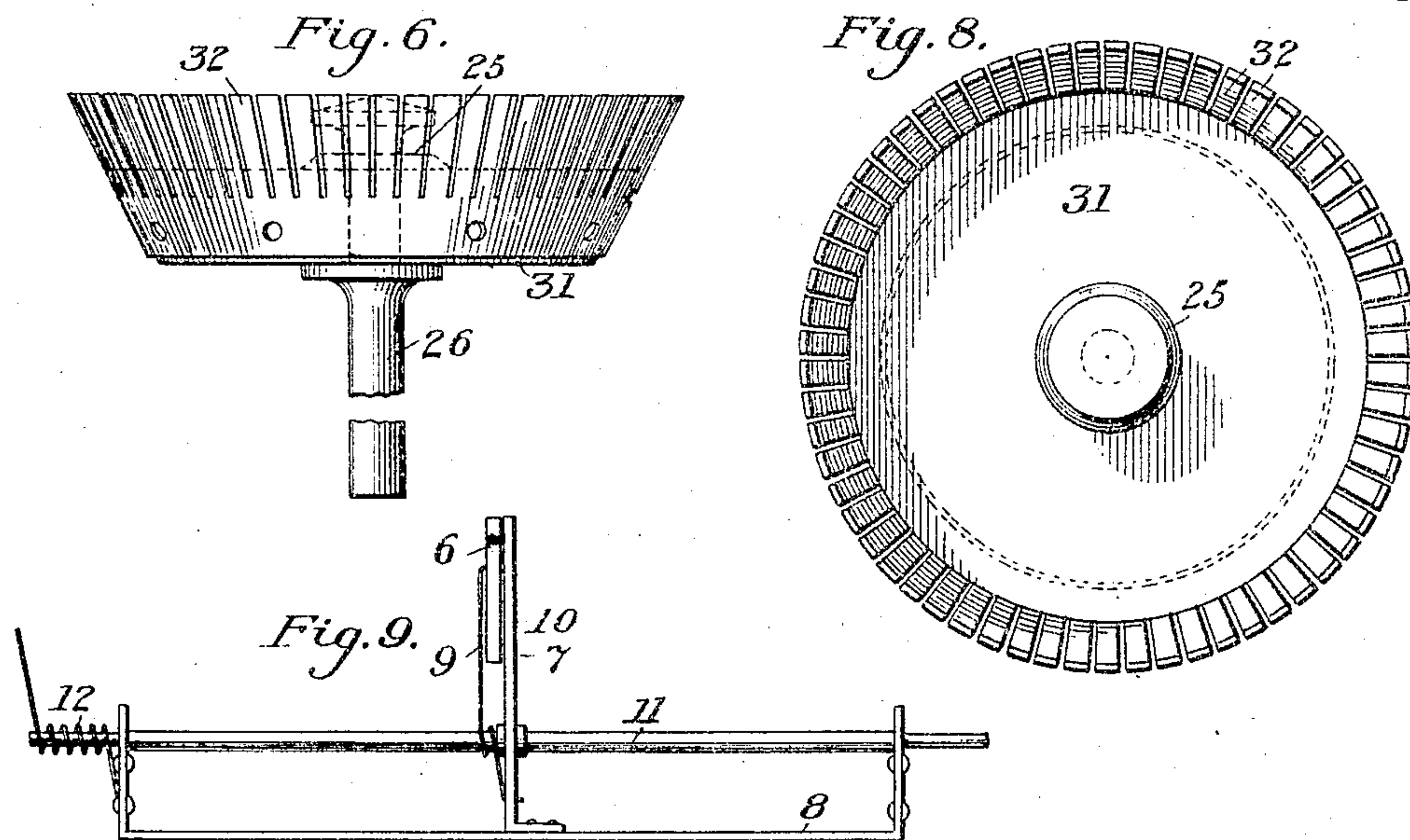
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN STEPHEN SOUTHERDEN, OF BRISBANE, QUEENSLAND, AUSTRALIA.

TYPE-INKING APPARATUS FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 773,602, dated November 1, 1904.

Application filed July 22, 1903. Serial No. 166,638. (No model.)

To all whom it may concern:

Be it known that I, JOHN STEPHEN SOUTHERDEN, a subject of the King of Great Britain and Ireland, and a resident of 159 Queenstreet, Brisbane, in the State of Queensland, Commonwealth of Australia, have invented a certain new and useful Type-Inking Apparatus for Type-Writing Machines, of which the following is a specification.

This invention relates to a device for inking the type of type-writing machines, its object being to dispense with inking-ribbons and the necessary mechanism for operating same, also to insure better definition; and it consists in a vertical spindle provided with an inking-pad at the top end and supported in a socket at the end of a suitable arm or bracket attached to the frame of the machine or forming an integral part thereof, the socket end adjusted vertically in the line of the common striking-point of the type-bars, the spindle having free vertical movement in the socket and actuated by a spring-pawl pivoted to an arm fixed to a rocking bar or frame underneath the type-levers, said rocking bar supported by bearings to the frame of the machine on either side or by a pivoted lever engaging with a stud fixed to the vertical spindle, according to the construction of the machine to which the inking apparatus is applied.

Referring to the drawings which form a part of this specification, Figure 1 is a sectional view of a basket type-writing machine, showing an inking device applied thereto. Fig. 2 illustrates a portion of the frame with the inking device elevated for the purpose of bringing it into the path of travel of the type. Fig. 3 is a view in elevation showing the inking device and its carrier detached. Fig. 4 is a similar view with parts in section and the inking-pad removed. Fig. 5 is an enlarged detail view of the inking-pad. Fig. 6 is a view in elevation of a modified form of inking device. Figs. 7 and 8 are plan views of the inking devices illustrated in Figs. 5 and 6, respectively. Fig. 9 is a plan view of the rocking bar.

In the drawings, 1 indicates the frame of a type-writer; 2, the key-levers; 3, the keys. An arm 4 extends within the basket of the type-

writer and is secured to the frame in any suitable manner. The arm is provided with a socket 4^a, which is positioned in a vertical line with the common striking-point of the type of the type-bars.

A spindle 5 is mounted in the socket 4^a and is reciprocated therein through the medium of a pawl 6 and a spring 19. The pawl is secured to the arm 7 by a pivot 6^a. The arm rocks on the bar 11, thus moving the pawl 6 under the spindle and causing the spindle to move longitudinally in the socket 4^a. The spring 9 has one end anchored to the arm 7 and has its opposite end bearing against the heel end of the pawl to retain said pawl in the position illustrated in Fig. 1.

The spindle 5 is tubular and has a plate 13 on its upper end, forming a support for the base-plate 14 of the upper portion 5^a. A cap 15 is attached to the plate 13 by an ordinary bayonet-joint, and the said cap has a hole through which the section 5^a of the spindle extends. The base-plate 14, being inclosed by the cap 15, has bearing against it one end of the spring 16, thereby holding the plate 14 normally on the base-plate, yet permitting a certain tilting movement of the plate and the upper portion 5^a of the spindle. It is noted that the hole in the cap is sufficiently large to permit movement of said spindle, according to the direction in which the inking-pad is struck by the type.

The inking-pad A consists of a truncated cone with a metal tube through the center secured with a washer at each end and may be made of solid felt or other absorbent material; but I prefer to employ a hollow cone of thin sheet-rubber packed with any suitable absorbent material, the sides of the cone perforated with small holes *a* and the top of the cone with somewhat larger holes *a'*. (See Figs. 5 and 7.) The cone is covered with suitable material for absorbing the ink, and when struck by the type will partially collapse, the successive blows distributing the ink on the cone-surface, or a pad, Figs. 6 and 8, consisting of a circular or other suitable shaped frame 31, of any suitable material, having tapering sides, the dotted line in Fig. 6 showing the relative thickness of the frame, around which

is fastened a rubber or other suitable band 32, slit into numerous sections and covered with suitable material for absorbing the ink. Each separate section moves inward and outward on being struck by the type, as if hinged, dispensing with the necessity of the vertical spindle being jointed. The frame 31 is secured on the spindle 26 by the thumb-nut 25, as shown in Figs. 6 and 8.

For securing the inking-pads to the spindle the top half may have one slit to form a spring tendency or may have two slits to form a tongue 18^a (see Fig. 4) and a collar 17, formed thereon as a seat for the pad, and at the top end a small bulb 18, which secures the pad to the spindle and prevents same from being knocked off by the type. It can, however, be easily removed when necessary by gently pulling same over the bulb, the slot in the spindle affording sufficient elasticity to allow of its removal.

A spring 19 is fixed to the arm 4, (see Fig. 1,) the opposite end inserted in a hole near the bottom end of the vertical spindle 5, bringing the spindle down with accelerated speed.

In operating the above-described mechanism on depressing any one key the type-lever presses down the rocking bar and the arm on rocking bar in connection with spring-pawl raises the inking-pad on end of vertical spindle to the traveling plane of the type. The type then strikes the inking-pad, which is knocked over, and the spindle falls into its normal position. Sufficient clearance is allowed for the return stroke of the type before the full return of the vertical spindle.

Having now described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a type-inking apparatus for type-writing machines, a vertical jointed spindle consisting of upper and lower lengths provided respectively with base-plate and top plate and fastened together by a cap, the upper length held in vertical position by a spiral spring and inking means carried by one of the lengths.

2. In a device of the character described, a spindle consisting of a plurality of lengths, said lengths being telescopically related, and inking means carried by one of the lengths.

3. In a device of the character described, an arm, a spindle loosely mounted in the arm, an inking means carried by the spindle, and means for imparting a vertical movement to the spindle.

4. In a device of the character described, an arm, a spindle mounted in the arm, a spring attached to the arm and exerting a downward pressure of the spindle, means for imparting an upward movement to the spindle, and inking means carried by the spindle.

5. In combination with a basket type-writing machine, an arm secured to the frame extending within the basket, said arm having a socket at its free end, a spindle vertically movable in the socket, means for imparting the vertical movement to the spindle and an inking means on the upper end of the spindle.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN STEPHEN SOUTHERDEN.

Witnesses:

ADOLPH FEEZ,

E. GARLAN ABELL.