

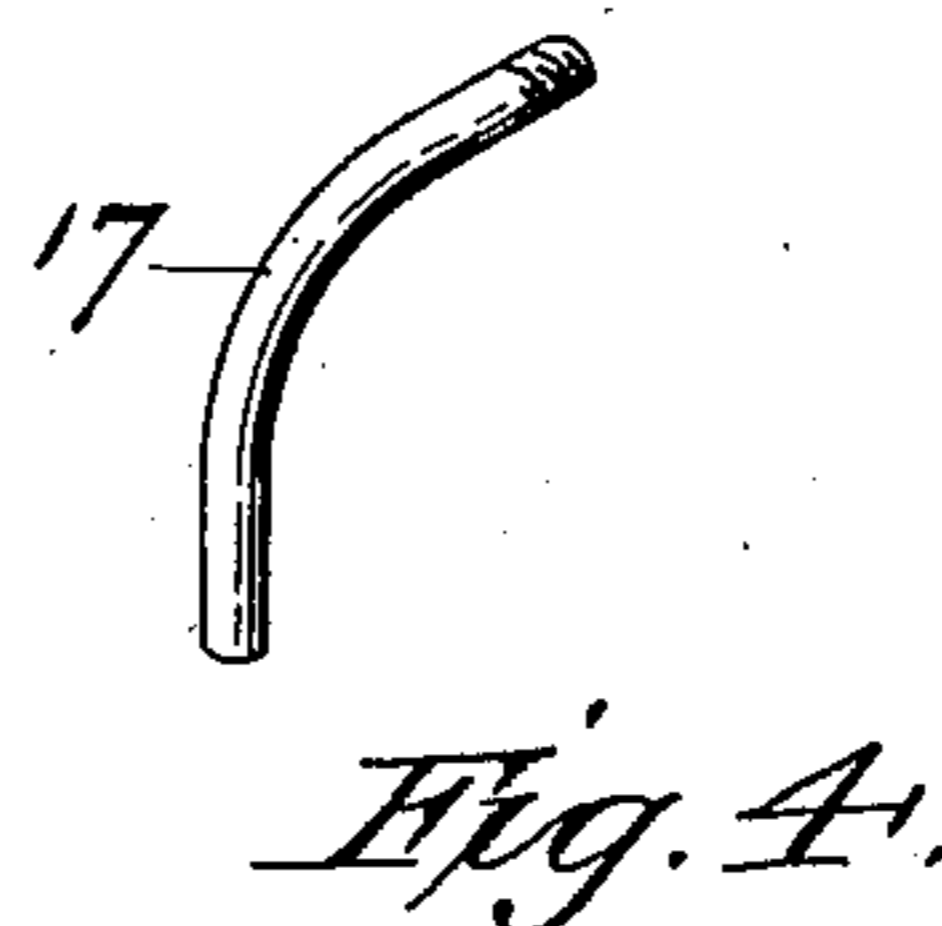
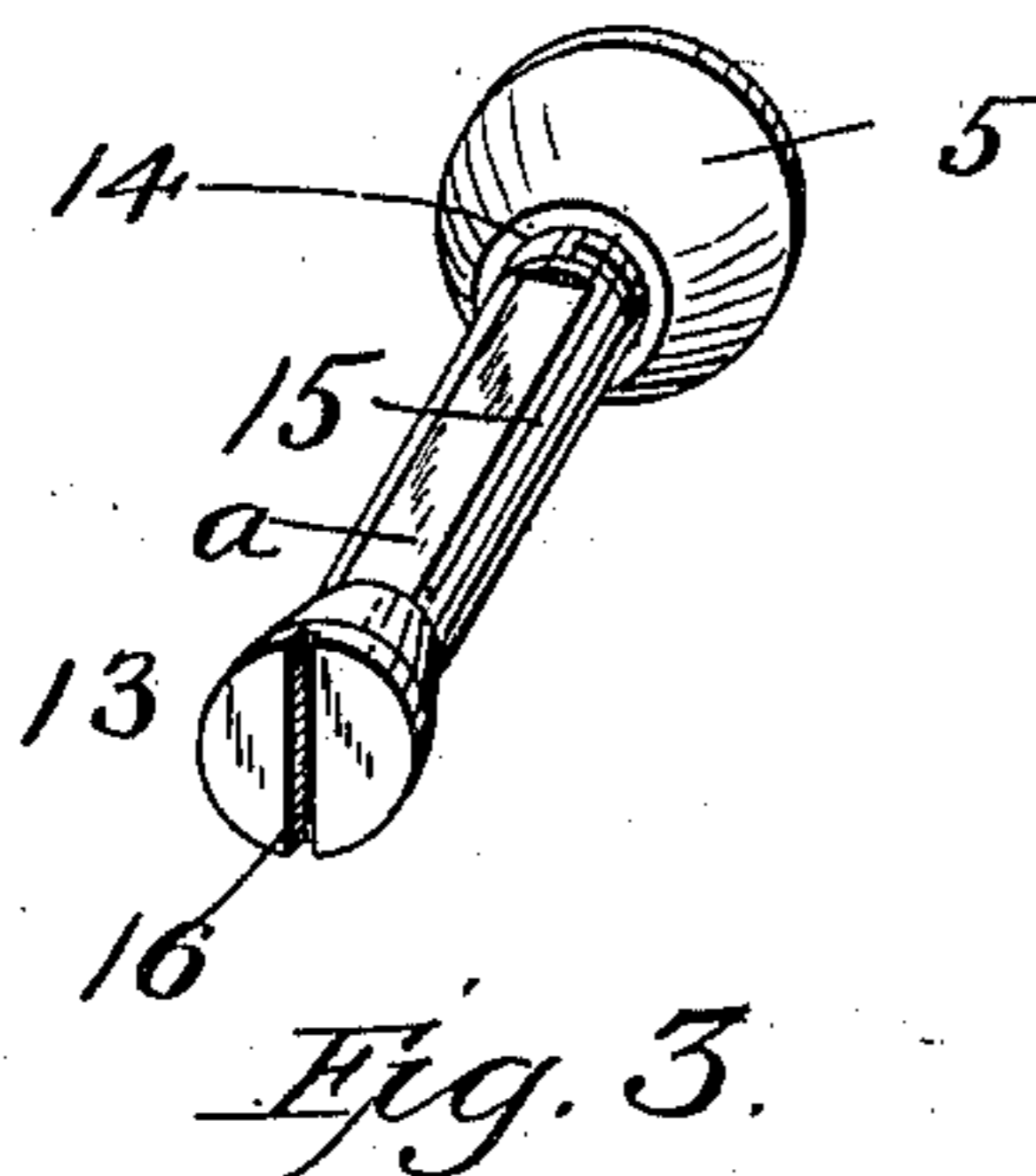
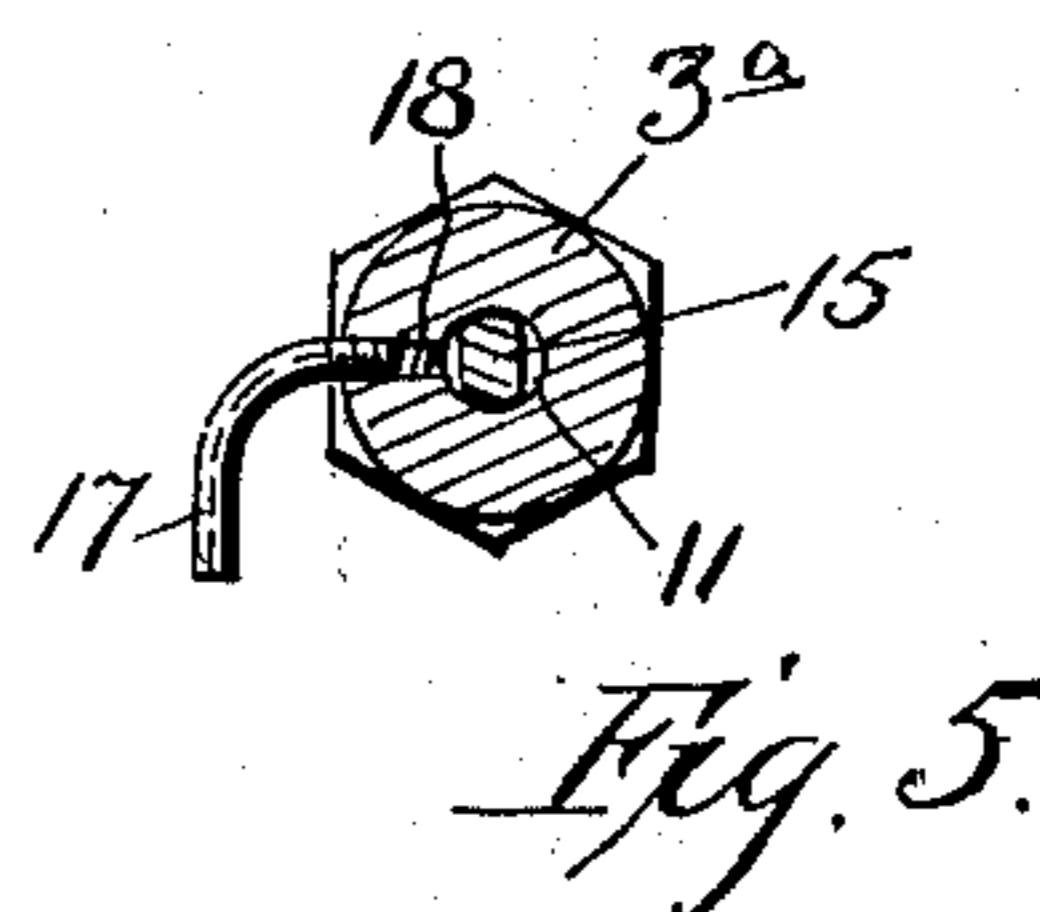
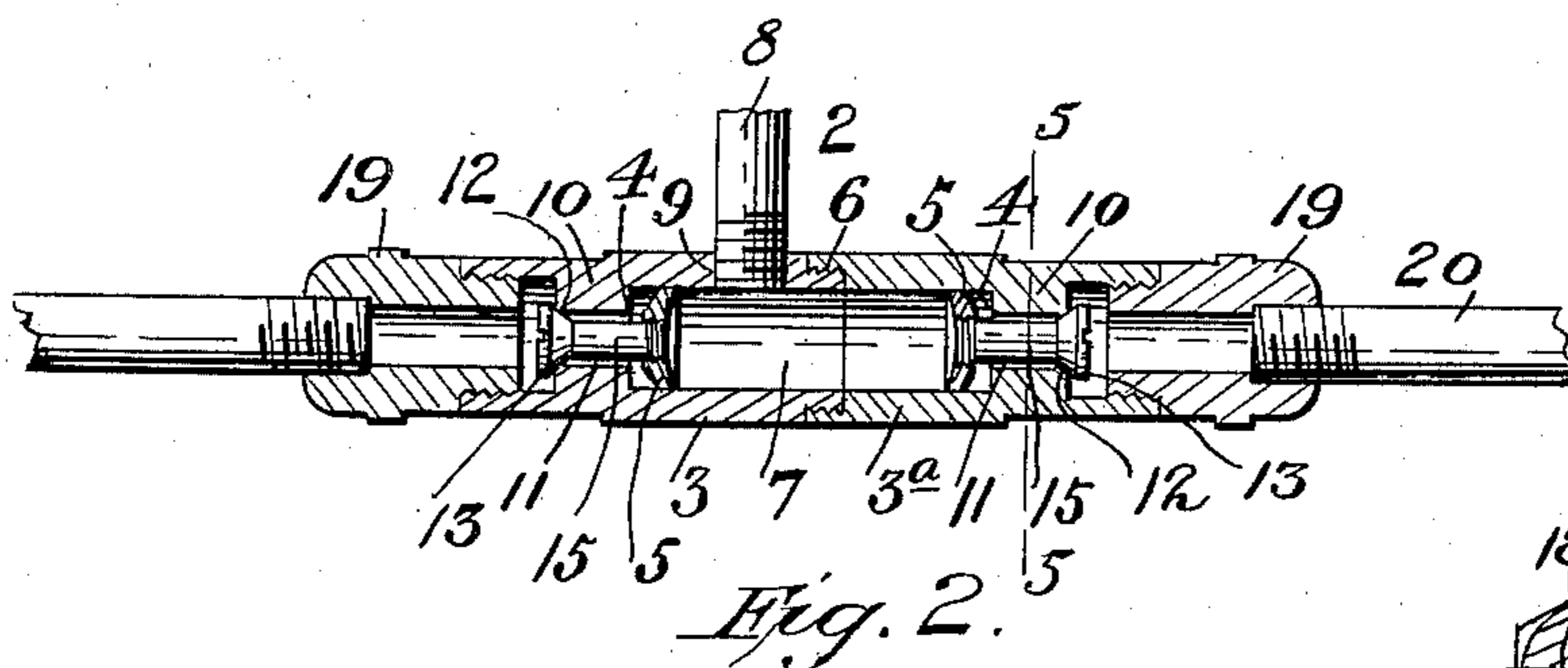
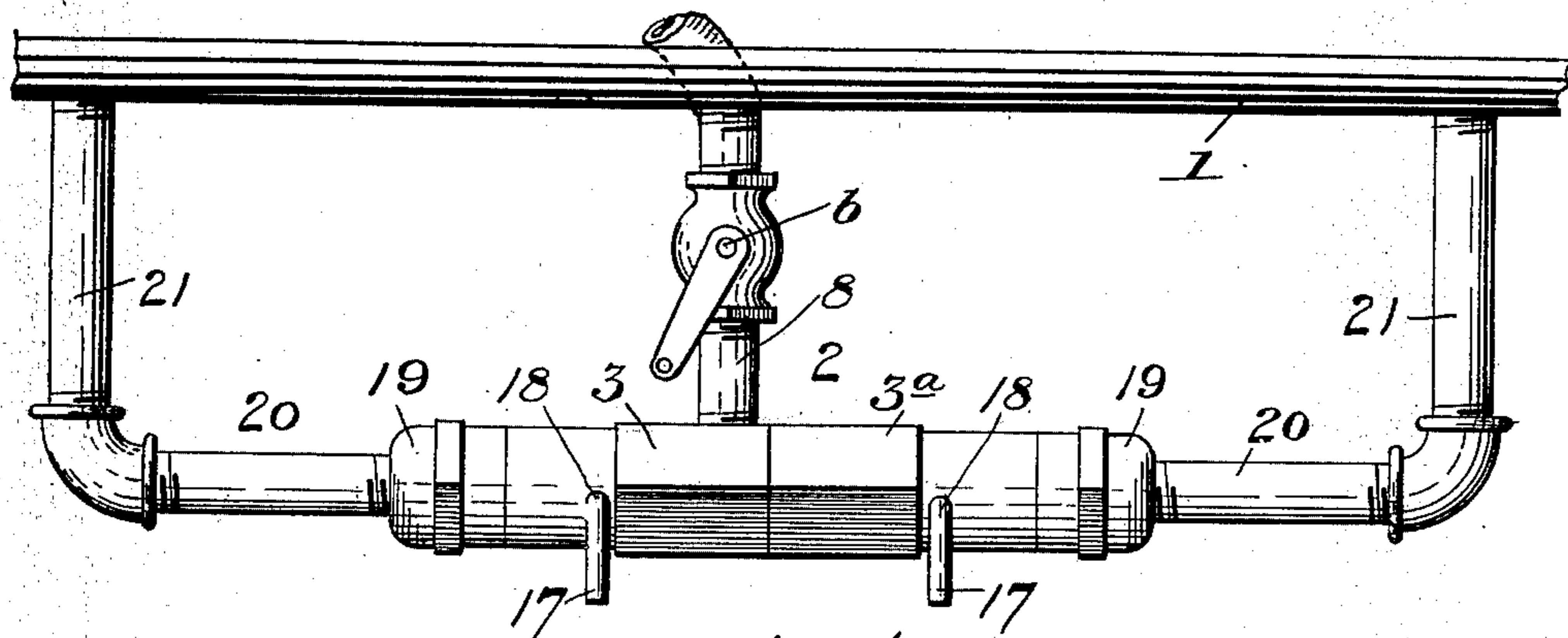
No. 653,147.

Patented July 3, 1900.

W. F. MOSES.
CYLINDER DRAIN COCK.

(Application filed Mar. 29, 1900.)

(No Model.)



Witnesses
F. L. Orvand.
E. B. Bunge.

Inventor
Wm. F. Moses.
By Louis Ragger & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM F. MOSES, OF HUNTINGTON, INDIANA.

CYLINDER DRAIN-COCK.

SPECIFICATION forming part of Letters Patent No. 653,147, dated July 3, 1900.

Application filed March 29, 1900. Serial No. 10,669. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. MOSES, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented new and useful Improvements in Cylinder Drain-Cocks, of which the following is a specification.

My invention relates to drain-cocks for steam-pressure cylinders; and the objects of the same are to provide a device for this purpose which shall be simple in construction, reliable and efficient in use, of few parts, which can be readily detached for repairs and which may be applied to any steam-cylinder, and which shall be capable of ready operation for relieving and draining said cylinder. I attain these objects by means of the construction shown in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of a relief-valve made in accordance with my invention. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a detail perspective of one of the valves. Fig. 4 is a similar view of one of the detachable exit-nipples. Fig. 5 is a vertical section on line 5 5, Fig. 2.

Like numerals and letters of reference designate like parts wherever they occur in the different views.

In said drawings the numeral 1 designates a steam-cylinder of any well-known or preferred form, and 2 is a drain-cock made in accordance with my invention applied to said cylinder. The valve-coupling comprises the two sections 3 3^a, each having a valve-seat 4, of like construction, and each provided with a valve 5, of substantially-identical structure. The two sections 3 3^a are connected centrally by a threaded joint 6, and between the two valve-seats 4 a valve-chamber 7 is provided. Connected to the section 3 is a pipe 8, which leads to the boiler of the engine and is provided with a steam-cock *b* at a convenient point for operation by the engineer. The pipe 8 passes through a threaded aperture 9 in section 3 of the valve-coupling and is connected with the valve-chamber 7.

The valve-seats 4 are formed upon partitions 10, which are centrally apertured at 11 and provided with valve-seats 12 upon their outer surfaces to accommodate the valves 13.

The valves 5 and 13 are of different areas, those designated 5 being of greater area than those indicated by the numeral 13. The valve 5 is formed of a disk having a central threaded aperture 14, and the valve 13 consists of the threaded stem 15, having flattened sides *a*, fitting the aperture 14, and the valve-head 13 having a slot 16 in its outer surface for application of a screw-driver for separating the two valves for cleaning purposes or renewal. The stem 15 passes through the aperture 11 and slides therein to open or close the valves, as will be presently described. The curved nipples 17 are provided each with a threaded end, which fits an opening 18, communicating with the aperture 11. Connected to the outer ends of the sections 3 3^a are the threaded caps 19, having threaded nipples 20, to which the inlet-pipes 21 are connected, the opposite ends of said inlet-pipes communicating with the steam-cylinder.

The operation of my drain-cock is as follows: Under normal conditions steam is admitted from the cylinder 1 through the inlet-pipes 21, and the pressure is exerted against the valves 13 to hold them tightly to their seats. When the cock *b* is open, the pressure against valves 5 is sufficient to overcome the pressure upon valves 13, owing to the greater area of said valves 5, and as a result the valves 13 are opened and the valves 5 closed. The opening of valves 13 permits steam to escape through the nipples 17 until the cock *b* is closed. The nipples may be turned in any direction desired in the threaded aperture in which they are seated.

It will be obvious from the foregoing that my device is simple in construction, reliable and efficient in use, and that the valves or other parts of the structure may be readily removed for cleaning, repairing, or renewal.

Having thus fully described my invention, what I claim is—

1. In a drain-cock, a coupling consisting of two sections, a valve-chamber therein, partitions at the ends of said chamber, an aperture extending through each partition, and a valve-seat in each end of each aperture, duplex valves connected by a stem passing through the apertures in the partitions, said valves being of different areas, connections at the ends of said sections to the steam-cyl-

inder, and a connection provided with a cock for reversing the valves, substantially as described.

2. In a drain-cock, a central coupling comprising two sections, a valve-chamber therein having apertured end partitions, duplex valves seated in said apertures, said valves each consisting of a headed bolt having a flattened stem and a valve-head connected to
10 said stem by screw-threads, and connections

to the steam-cylinder, one of said connections having a stop-cock for reversing the valves, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 15

WILLIAM F. MOSES.

Witnesses:

JAMES B. DUNCAN,
ROBERT JOHNSON.