

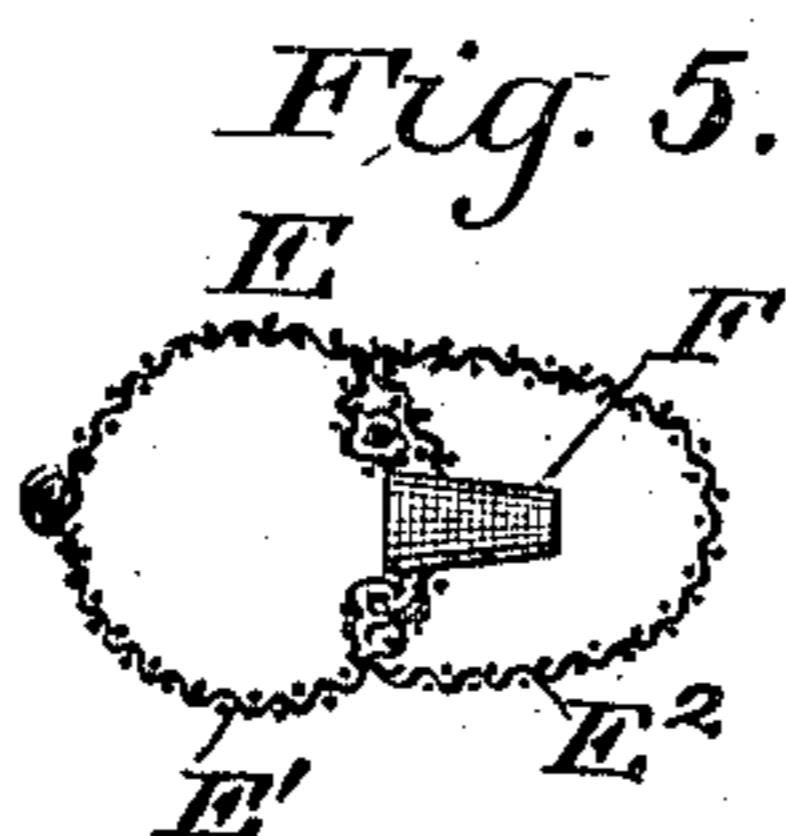
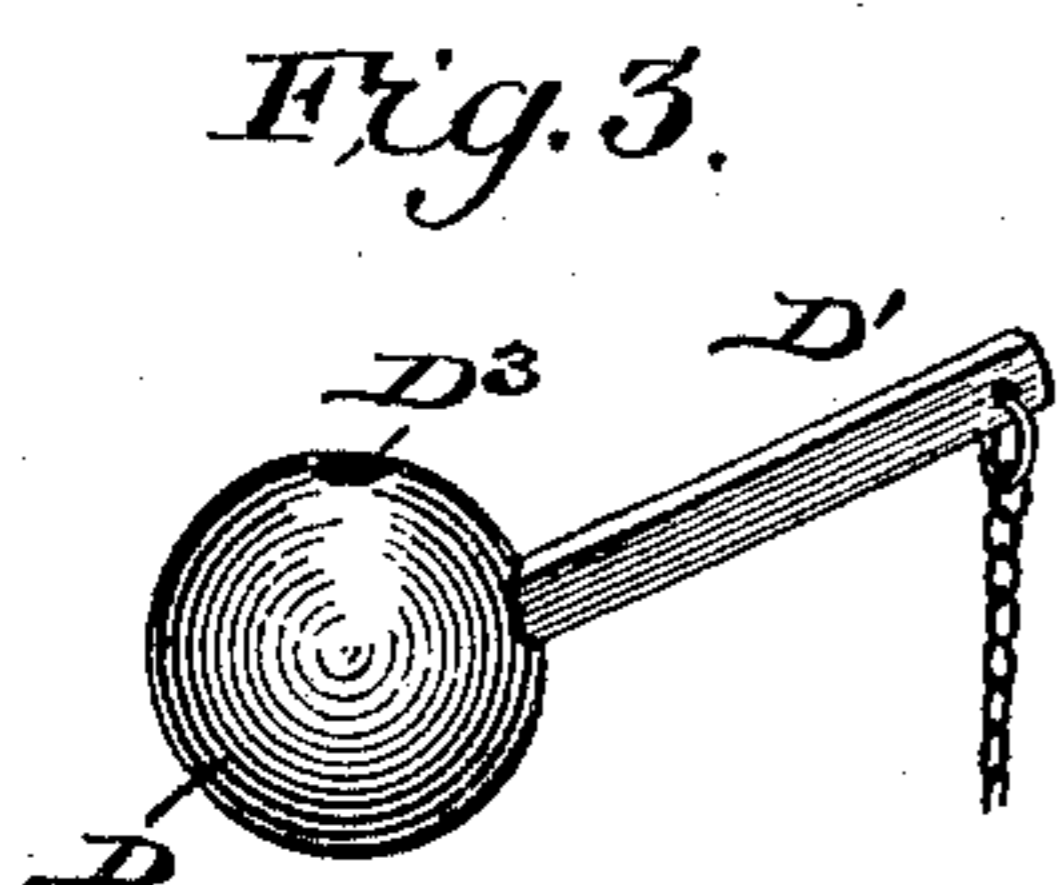
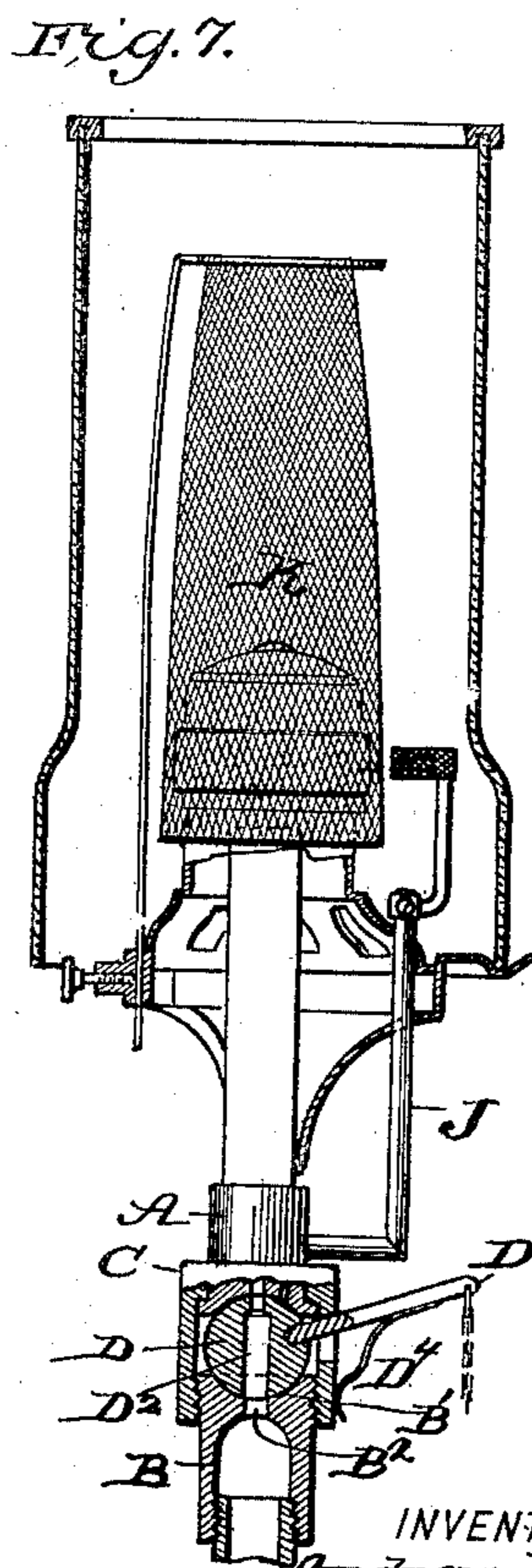
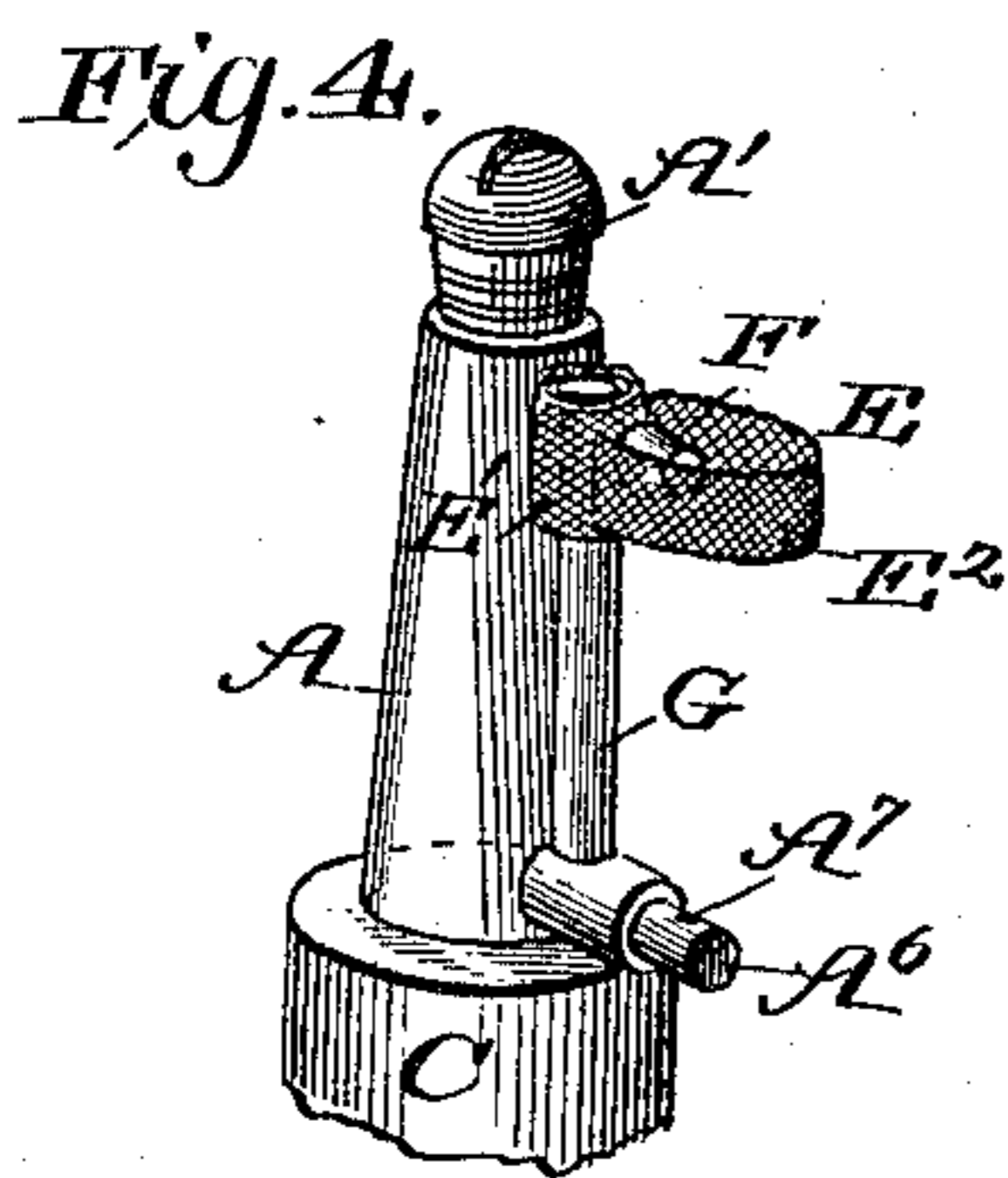
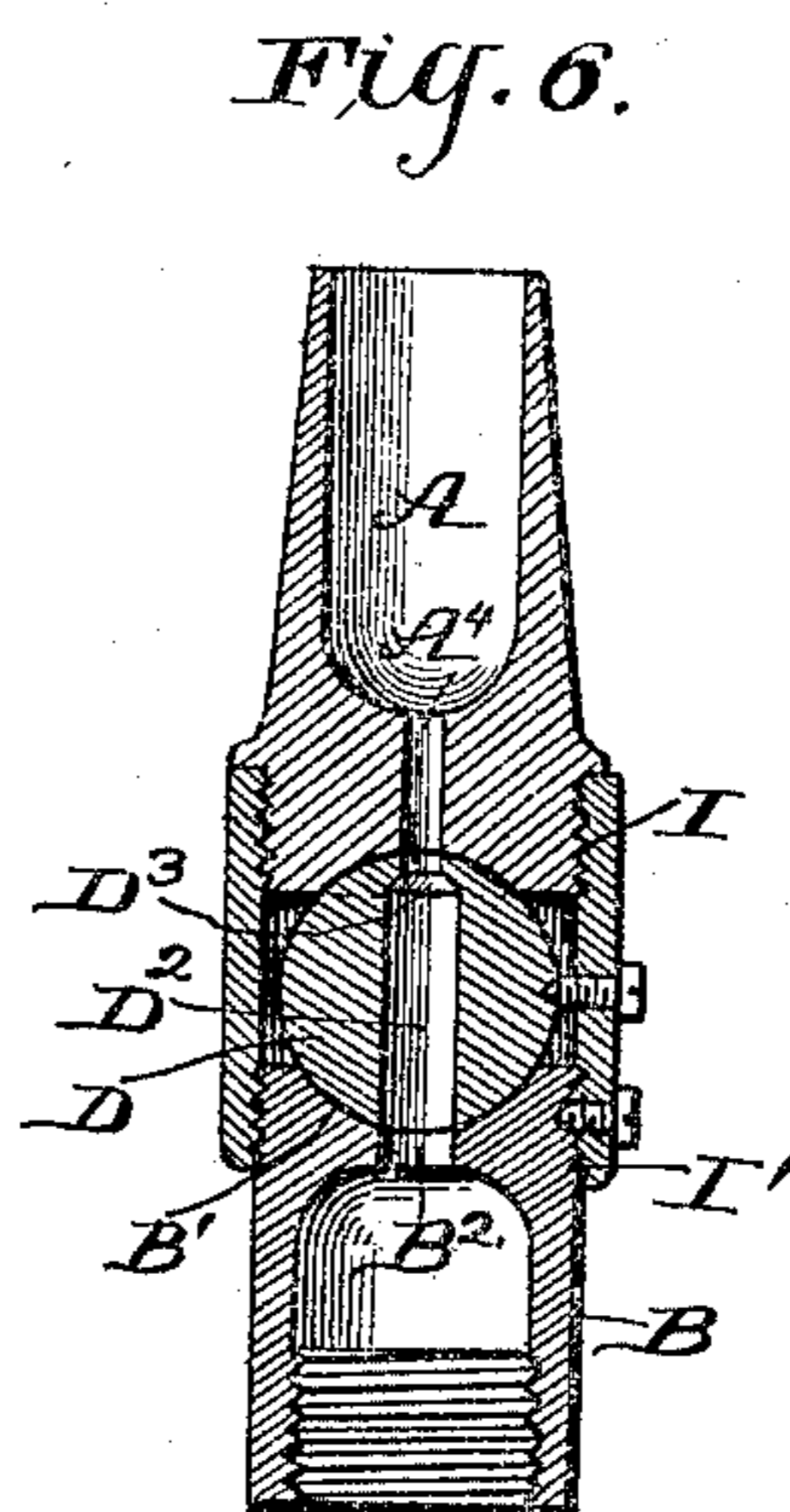
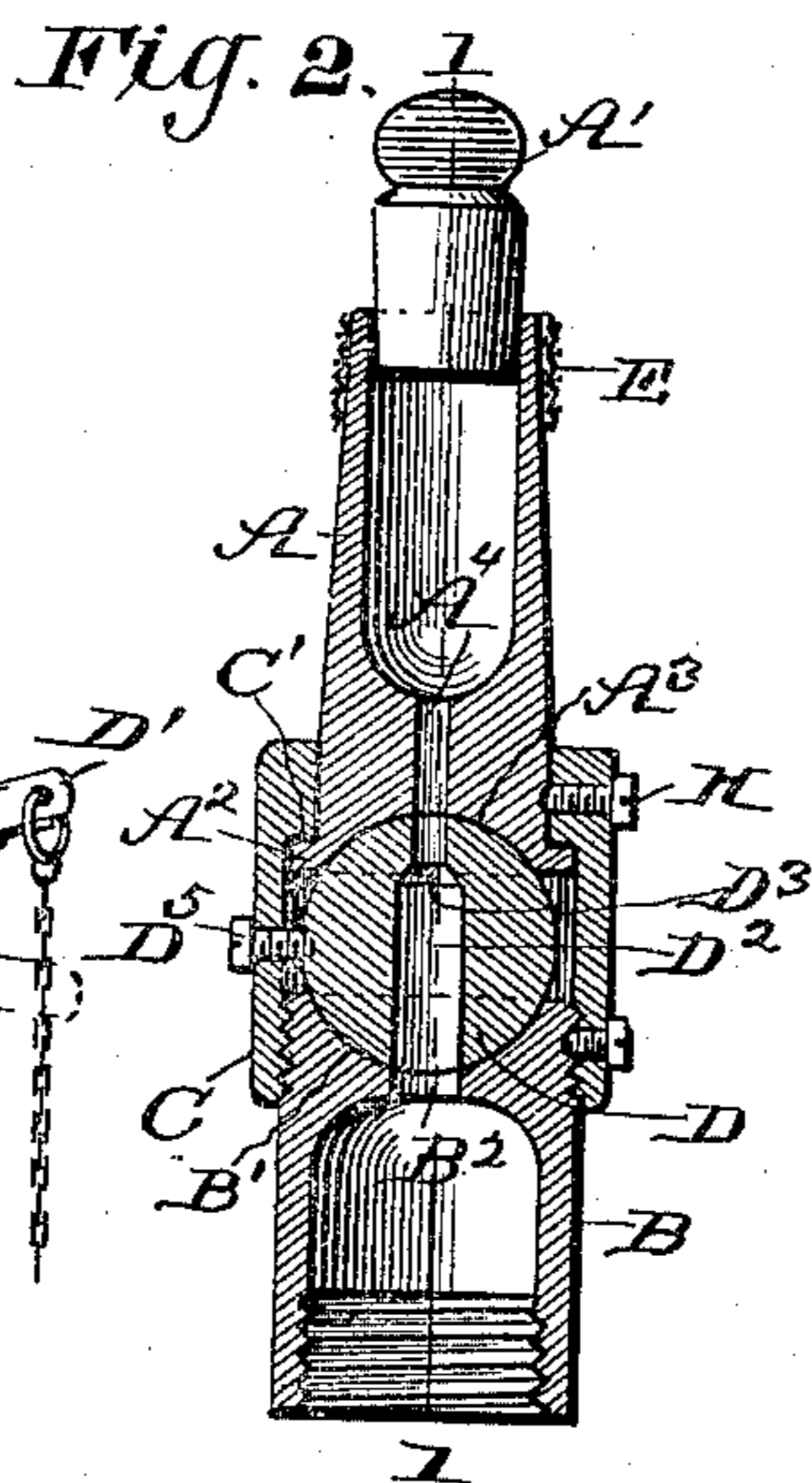
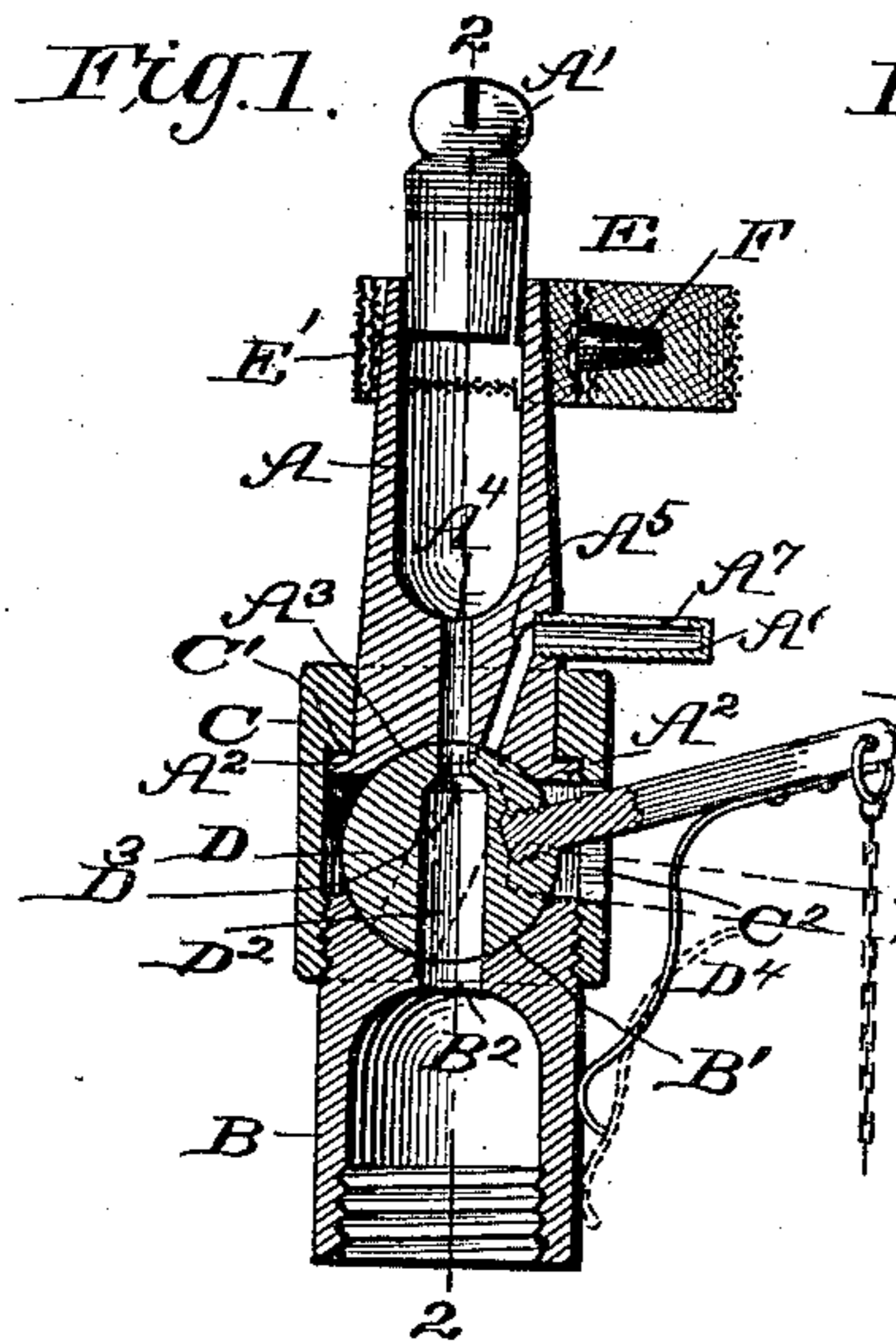
No. 654,559.

Patented July 24, 1900.

A. J. WIEGAND.
GAS COCK.

(Application filed Oct. 18, 1899.)

(No Model.)



WITNESSES:
Jas. A. Ryan
A. Kemmon

INVENTOR
Andrew J. Wiegand
BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ANDREW J. WIEGAND, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE
MATCHLESS GAS IGNITING COMPANY.

GAS-COCK.

SPECIFICATION forming part of Letters Patent No. 654,559, dated July 24, 1900.

Application filed October 16, 1899. Serial No. 733,804. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. WIEGAND, residing at Baltimore, in the State of Maryland, have made certain new and useful Improvements in Gas-Cocks, of which the following is a specification.

My invention is an improvement in gas-cocks, and particularly in that class of such devices known as "self-lighting" gas-cocks and in which the gas is ignited by the impinging of such gas upon an igniting substance—such, for instance, as platinum sponge.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a sectional elevation of my gas-cock on about line 1 1 of Fig. 2. Fig. 2 is a longitudinal section on about line 2 2 of Fig. 1. Fig. 3 is a detail view of the spherical valve and its handle. Fig. 4 shows a modification in the manner of supporting the holder for the igniting substance. Fig. 5 is a detail view of such holder. Fig. 6 is a longitudinal section of a burner, showing a somewhat-different construction for effecting the connecting engagement between the burner-section and the casing-sleeve from that shown in Fig. 1; and Fig. 7 illustrates the application of the invention to a burner having a mantle of the type illustrated in said figure.

In the construction shown in Figs. 1 and 2 the burner is composed of the burner-section A, the base-section B, the casing-sleeve C, the valve D, and the holder E for the igniting substance.

The burner-section A has a tip A' at its upper end, which may be of any desired construction, is provided at its lower end with the lateral flange A², and has in said lower end the seat A³ for the valve D, and the main port A⁴ and the igniting-port A⁵ lead from the seat A³, as shown. The port A⁴ leads to the tip A' and the port A⁵ leads, preferably, to a short tube A⁶, having a discharge at A⁷ below the igniting substance and in such position that the gas will attack the extreme end of the igniting substance F, which is carried by the holder E. The igniting substance F may be platinum sponge or any allied sub-

stance which will become incandescent and produce a flame when impinged by illuminating-gas in the presence of air.

The holder E is provided with a tubular portion E' to embrace its support, which may be the section A, as shown in Fig. 1, or a separate supporting-standard G, carried by the nozzle A⁶, as shown in Fig. 4. The holder E also has the tube-like guard portion E², which partially incloses the igniting substance, operates to protect the same, and is of gauze or other foraminated material to permit the ready passage of air to the igniting substance. As shown in Fig. 5, the igniting substance F is held in the partition between the portions E' and E², and this is preferably effected by forming such partition with an opening to receive the igniting substance F, which is preferably tapered slightly in order to hold it in place, as will be understood from Figs. 1 and 5.

The base-section B is threaded externally at its upper end and is provided in such upper end with a seat B' for the valve D and has at such end a port B², which registers with the port in the valve, as presently described.

The casing-sleeve C is fitted over the section A, has internally near its upper end the shoulder C' to fit upon the flange A² of the section A, has its lower end threaded internally to screw upon the base-section B, and is provided with a slot or opening C² for the passage of the handle D' of the valve D. As will be understood from what follows, the upper and lower walls of the opening C² operate to limit the movement of the valve in both directions, and thus effect the proper registration of the port D² of the said valve with either the main port A⁴ or the igniting-port A⁵ of the main section A, as will be readily understood from Fig. 1 of the drawings.

By the described construction of the burner-section A, base-section B, and sleeve C it is evident that the sleeve C is engaged with the section A and is threaded on the section B, so the sections A and B may be adjusted relatively in order to clamp the valve D by and between the said sections. When I use the construction shown in Figs. 1 and 2 for effecting the engagement of the sleeve C with

the section A, I find it desirable to employ a screw H by which to lock the section A from turning in the sleeve C, and so maintain the parts A and C in the desired relation. In this construction the lower section B may be locked by a screw, as shown, and the upper section may be locked by screwing it down so hard as to cause its shoulder to lock against the upper end of the casing-sleeve. It may be desirable, however, in some instances to employ the construction shown in Fig. 6, in which I represent the sleeve as threaded at I and I', respectively, to the base and burner sections. Manifestly in this construction, as in that shown in Fig. 1, the sleeve is engaged with the burner-section and is threaded into connection with the base-section, and this construction does not involve any departure from the spirit of my invention.

The valve D is spherical in form, so it will readily fit the seats of the main and base sections and will always find its seat without any trouble. This spherical construction also enables the assembling of the parts, as shown, one or both of the sections A and B turning into connection or into position to receive the valve. The valve D has a port D² in constant register with the port B² of the section B and contracted at its upper end at D³, so such end may be moved by depressing the handle D' out of register with the main port A⁴ and into register with the igniting-port A⁵ and back again after the igniting operation is effected. The port D² when moved at D³ into register with either of the ports A⁴ and A⁵ moves out of register with the other one of such ports, so gas is never supplied at the same time through both of the said ports. In other words, when the gas is feeding through igniting-port A⁵ the port A⁴ is closed, and vice versa.

The handle D' is usually held in the position shown in Fig. 1 by the spring D⁴, which, as shown, is a plate-spring secured at one end to the handle D' and bearing at its free end against the base-section B, so it will operate when the handle D' is moved to the dotted position, Fig. 1, and released to instantly return said handle to its normal position, (shown in full lines, Fig. 1,) in which position the port D² registers with the main port A⁴ of the burner-section A and feeds the gas to the tip A', as will be understood from Fig. 1. In the operation of the described construction if the valve be adjusted to the dotted-line position, Fig. 1, and held momentarily the gas will escape through the port A⁵, impinge the igniting substance F, and be ignited into a flame. Then if the handle D' be released the valve will be adjusted to the full-line position shown in Fig. 1 and the gas will feed through the main port A⁴ and be ignited by the flame from the substance F, which is held adjacent to the tip of the burner, as shown.

In Fig. 7 I show an extended tube J leading from the igniting-port to a position adja-

cent to the mantle K, so the invention may be employed for lighting burners of the mantle class.

I find it desirable to center the valve D by means of a screw D⁵, projected through the sleeve C and into the said valve, as shown in Fig. 2. This centering-screw may be omitted by fitting the handle D' so tightly in the slot C² as to properly guide the valve; but this tight fitting of the parts may impede the operation of the valve, and I prefer the construction as shown in Fig. 2.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A gas-cock having a seat for the valve and provided with a slot elongated in the direction of length of the cock, and the valve fitted to said seat and provided with a handle projected through and movable in said elongated slot in the casing.

2. A gas-cock composed of the burner-section, the base-section, the valve fitted between said sections, and a connecting-sleeve inclosing such valve by which the sections may be adjusted toward each other, whereby to effect a clamping fit upon the valve.

3. A gas-cock composed of the burner-section, the base-section, the valve fitted between said sections and the casing-sleeve inclosing the valve, said sleeve being engaged with one of the sections and threaded into connection with the other section substantially as set forth.

4. A gas-cock composed of the burner-section having a main port and igniting-port, the base-section, the spherical valve fitted between the burner and base sections, and the casing-sleeve connecting the burner and base sections.

5. A gas-cock comprising the burner-section having a main port and an igniting-port, the base-section, the sleeve connecting the base and burner sections, and the valve having a port movable into register with one or the other of the ports in the burner-section whereby the valve may be adjusted to feed gas through either of such ports and at the same time shut off the other port.

6. A gas-cock comprising the burner-section having a tip, the base-section, the valve clamped between said sections and having a projecting handle, the casing-sleeve connecting the burner and base sections and having an opening through which the valve-handle projects, said valve being provided with a port and movable whereby said port may be registered with the main or igniting ports of the burner-section, and an igniting substance supported on the burner-section adjacent to the tip of the burner-section and in position to be impinged upon by the gas discharged from the igniting-port.

7. The gas-burner herein described composed of the burner-section having main and igniting ports and provided at its lower end with a lateral flange, the holder for the ig-

5 niting substance by which the latter may be held above the discharge of the igniting-port, the base-section having external threads at its upper end, the valve fitted between the burner and base sections and having a projecting handle, the casing-sleeve having at its upper end an inwardly-projecting flange resting upon the flange at the lower end of the burner-section and having its lower end threaded upon the base-section, said sleeve being provided with an opening for the passage of the handle of the valve, and a centering-screw projecting through the casing and into the valve substantially as set forth.

15 8. The combination in a gas-cock of the spherical valve having a handle, the seats for said valve, the casing having an opening through which the valve-handle projects and whose walls limit the movement of the valve and the spring-plate secured at one end to the valve-handle and bearing at its other end against the gas-cock substantially as set forth.

25 9. In a self-lighting gas-cock, the holder provided with a portion fitted on the support and with a tubular guard portion and having a partition between said portions perforated forming an opening fitted to receive the igniting substance, and the igniting substance fitted and held in said opening.

30 10. A self-lighting gas-cock having burner and base sections provided in their opposing faces with seats for a spherical valve, the spherical valve fitted to said seats and a sleeve connecting the base and burner sections.

35 11. In a self-lighting gas-burner, a holder for the igniting substance provided with a portion adapted to fit on the support and

with a guard portion by which to protect the igniting substance and having the partition between said portions provided with an opening, and the igniting substance fitting and held in said opening. 40

12. In a self-lighting gas-burner, a holder for the igniting substance comprising a tubular portion adapted to fit on the support, and a tubular foraminous portion joined side by side to the first tube, the partition between said portions being provided with an opening, and the igniting substance fitting and held in said opening. 45 50

13. The combination of the cock, having main and igniting ports and provided with a valve-seat and with an opening elongated in the direction of length of the cock, the valve fitted to the valve-seat and having its port movable into register with either of the ports of the cock and provided with a handle projected through the said elongated slot, the igniting substance and a holder therefor by which it is secured in position to be attacked by the gas escaping from the igniting-port. 55 60

14. In a self-lighting gas-burner, the combination of the casing, the valve having a handle, the igniting substance and its support, and a spring-plate secured at one end to the valve-handle and bearing at its other end slidably against the casing whereby to automatically readjust the valve, substantially as set forth. 65

ANDREW J. WIEGAND.

Witnesses:

SOLON C. KEMON,
PERRY B. TURPIN.