

No. 627,019.

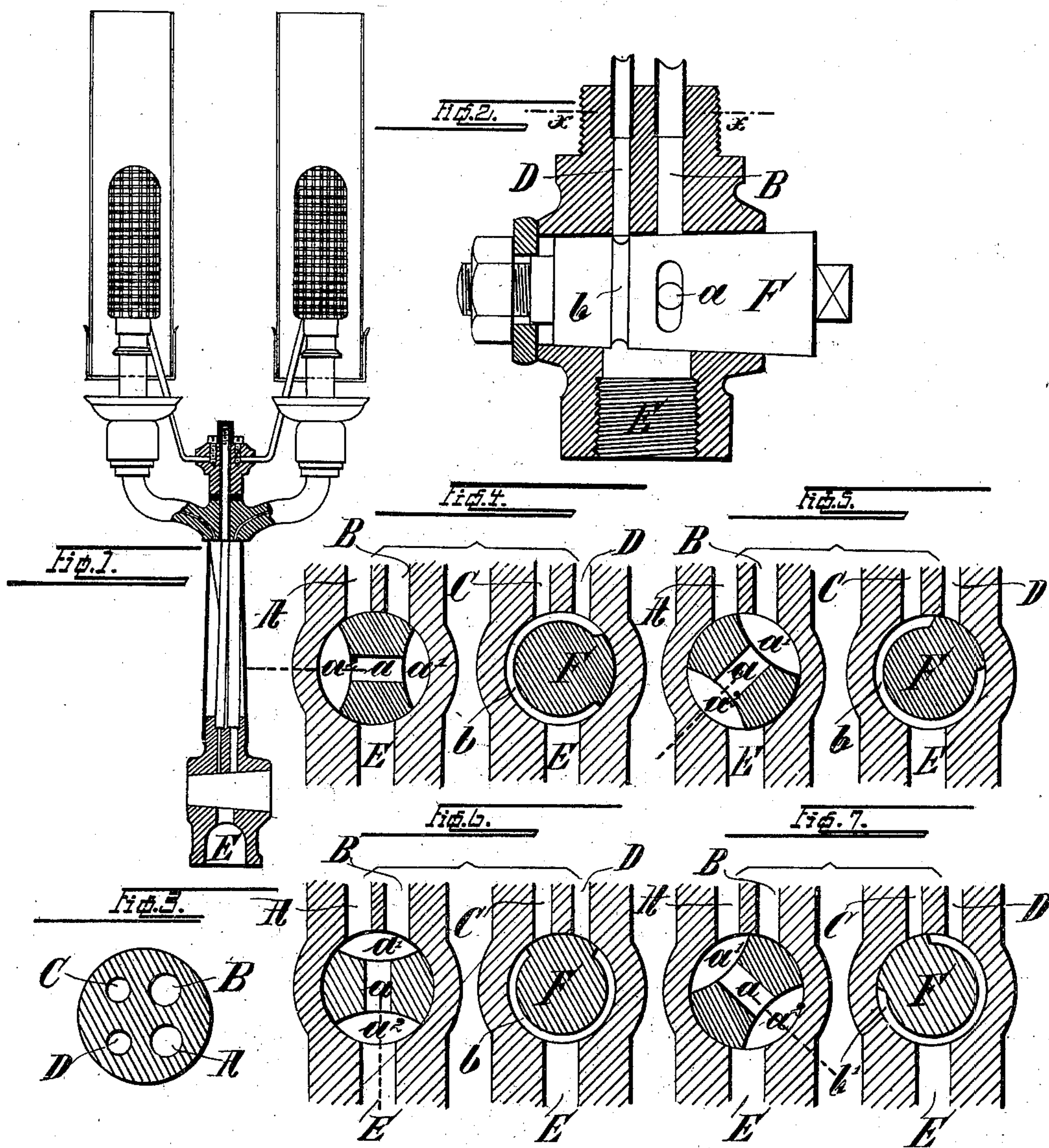
Patented June 13, 1899.

A. STREUBEL.
GAS COCK FOR GAS BURNERS.

(Application filed Jan. 3, 1899.)

(No Model.)

2 Sheets--Sheet 1.



Witnesses

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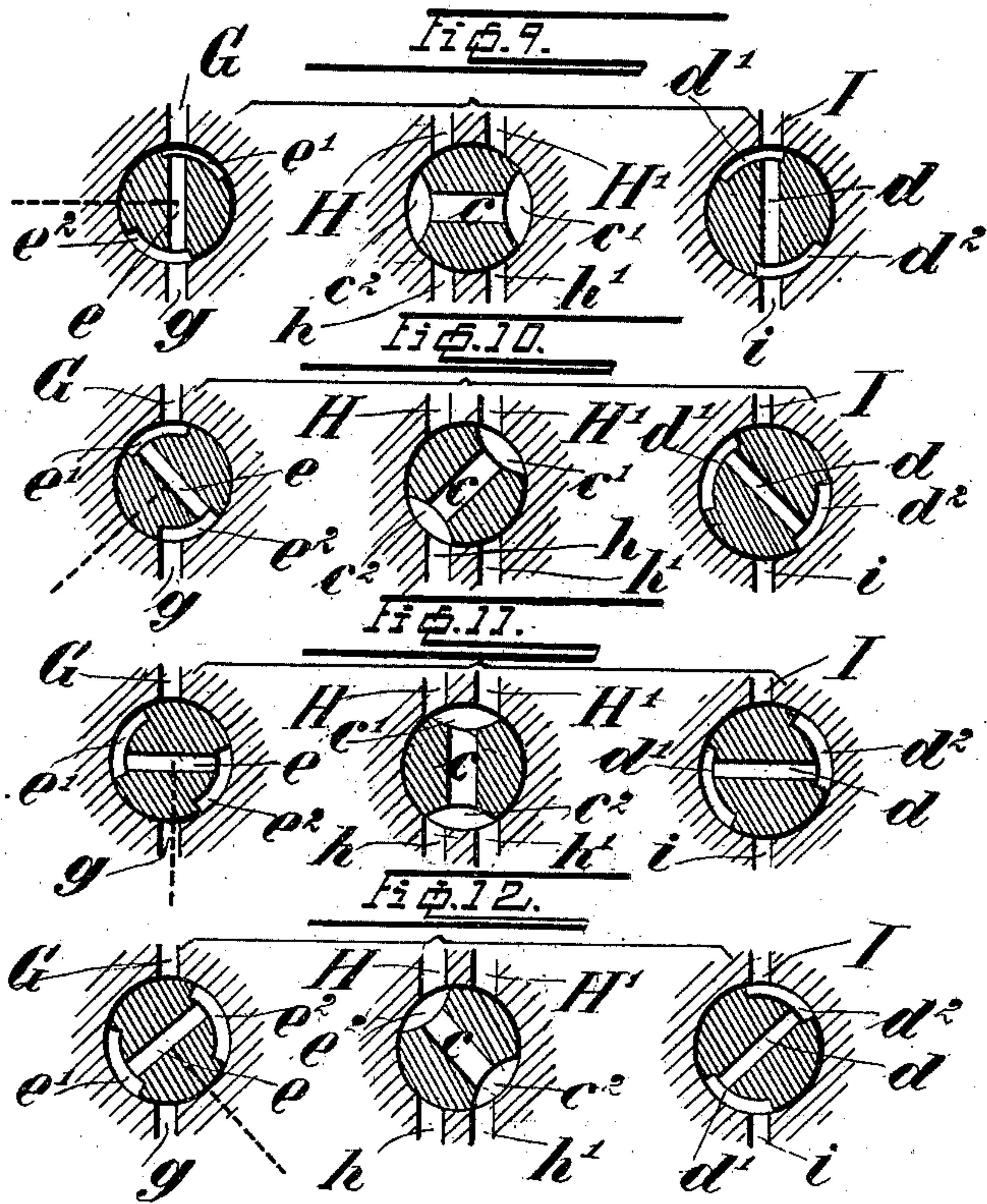
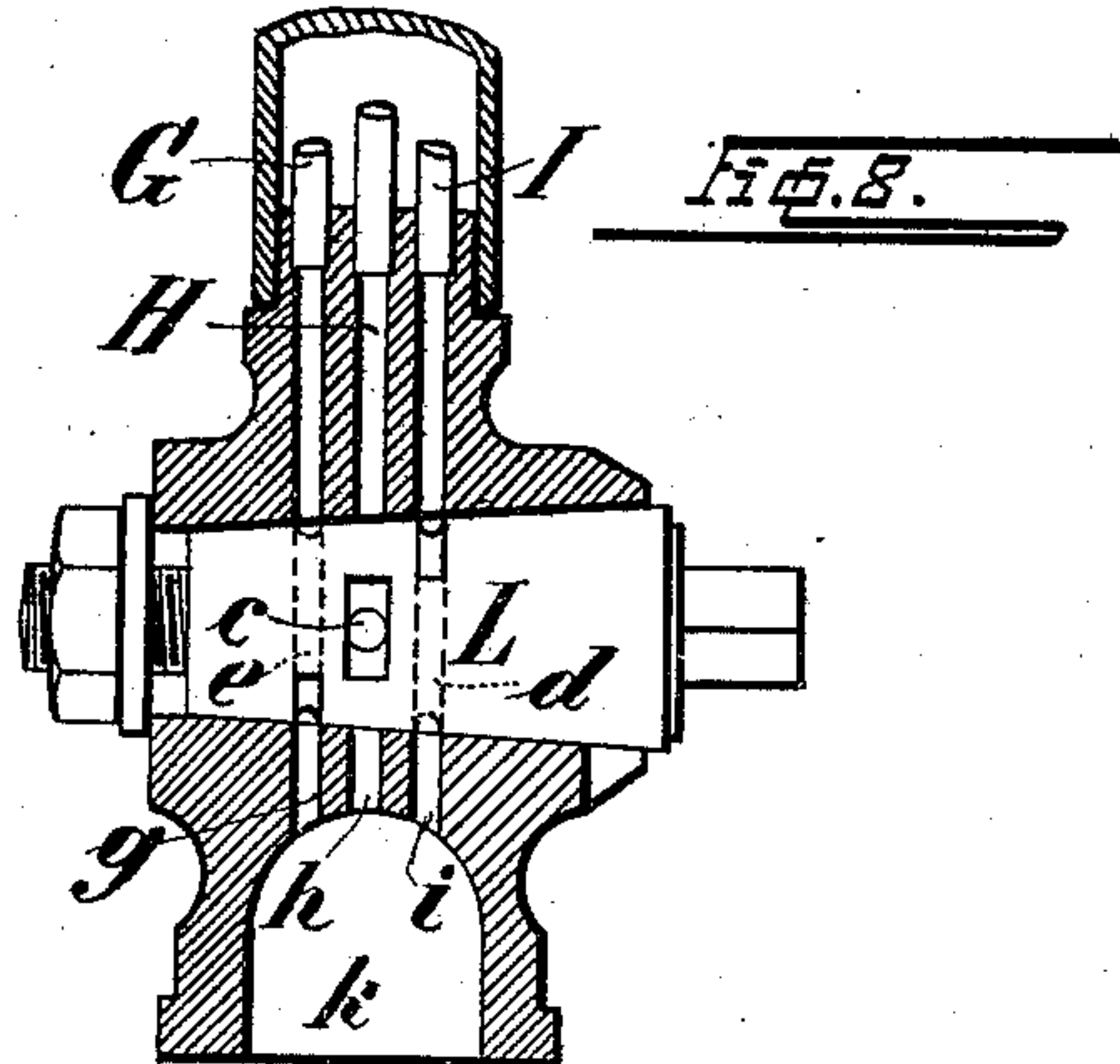
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UNITED STATES PATENT OFFICE.

ALEXANDER STREUBEL, OF HAMBURG, GERMANY.

GAS-COCK FOR GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 627,019, dated June 13, 1899.

Application filed January 3, 1899. Serial No. 701,004. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER STREUBEL, engineer, a subject of the Emperor of Germany, residing at 43 Lehmweg, Hamburg, in the Empire of Germany, have invented certain new and useful Improvements in Gas-Cocks for Gas-Burners, of which the following is a specification.

This invention relates to a gas-cock for lamps provided with two or more burners, each of which is furnished with an ignition-flame. The plug of this cock is so arranged that one of the principal flames and the ignition-flame of the opposite principal flame are ignited or extinguished alternately, while in two other positions of the cock either both the principal flames opposite each other or their ignition-flames are alight. In the case of lamps provided with a number of burners—four or eight, for example—all the principal flames upon one side of the lamp or the whole of the principal flames upon the other side may be either alight or extinguished, or in two other positions of the cock all the principal flames or all the ignition-flames may be extinguished. The possibility of alternately igniting or extinguishing the burners of lamps provided with a number of burners—for example, with four or eight light gaseliers—is advantageous, inasmuch as it enables the illumination to be caused to correspond to the traffic at any particular time of night, and thus to effect economy in the consumption of gas, as it is possible to extinguish the principal burners in thoroughfares where there is no traffic and leave those in frequented thoroughfares ignited. According to my invention this result may be attained by a single cock.

In the accompanying drawings a double burner is illustrated by way of example.

Figure 1 illustrates the general arrangement of the double burner as a whole, partly in section. Fig. 2 is a section taken through the cock and its casing. Fig. 3 is a section taken upon the line xx of Fig. 2. Figs. 4 to 7 illustrate various positions of the cock. Figs. 8 to 12 illustrate a modified form of cock, Fig. 8 being a view corresponding to Fig. 2, while Figs. 9 to 12 show various positions of the cock.

In the casing of the cock, Figs. 2 to 7, are

formed four passages A B C D, to which are fitted the gas-pipes for the principal and the ignition flames. The passages A B serve for the supply of the principal flames and the passages C D for the supply of the ignition-flames. The gas-pipes may divide or branch off above, when instead of two principal and ignition flames, as here shown, there are four or more. A single passage E serves to conduct the gas to the plug of the cock F. The four pipes fitted to the passages A B C D are supplied with gas in such a manner that one principal flame and the ignition-flame of the opposite burner are always ignited alternately. For this purpose the plug of the cock is provided with a passage a , which terminates at each end in an enlargement a' a^2 and with a groove b cut in the upper portion and extending for about three-fourths of its circumference. The gas-supply passage E in the casing of the cock is sufficiently wide to cover at the same time the enlargement a^2 of the passage a and the groove b , while the gas-passages A B of the principal flames coincide with the passage a by means of the enlargement a' and the gas-passages C D of the ignition-flames with the groove b .

In Fig. 4 the cock is shown turned by means of its lever in such a manner that both the ignition-flames are alight, the two principal flames being extinguished. The passage E and the groove b form the direct gas-supply with the passages C and D, while the passage a is not in communication with the path of the gas to the principal flame. If the lever of the plug is now rotated forty-five degrees in the downward direction, Fig. 5, the right-hand ignition-flame is extinguished after it has ignited the right-hand principal flame, while the left-hand ignition-flame remains burning. The gas for the supply of the ignition-flames passes from the passage E through the groove b into the left-hand ignition-passage C, while the right-hand ignition-passage D is blocked. The gas for the principal flames enters the passage B for the right-hand principal flame through the enlargement a^2 , the passage a , and the enlargement a' , while the passage A for the left-hand principal flame is closed.

In order that both the principal flames may be ignited, the lever of the cock is turned

through a further angle of forty-five degrees, (see Fig. 6)—that is to say, into a vertical position. The enlargement *a'* of the passage *a* will then coincide with the two passages A and B, while the ignition-flame passages C D are closed by the portion of the plug which is not provided with a groove.

In order to ignite the left-hand principal flame and the right-hand ignition-flame, the lever of the gas-cock is caused to rotate through yet another angle of forty-five degrees, Fig. 7. In this case the right-hand ignition-flame passage D is opened—that is to say, placed in communication with the groove *b*—while the right-hand principal-flame passage B is closed.

In the form of cock illustrated in Figs. 8 to 12 the passages *g h h' i'* serve for the supply of gas to the gas-cock plug, while the passages *G H H' I* conduct the gas to the principal and ignition flames.

For the purpose of allowing the gas to pass through the plug three passages *c d e* are provided therein, of which *c* serves for the principal flames and *d* and *e* serve for the ignition flames. The passages are provided with groove-like enlargements upon the circumference of the plug, *c' c²* being the enlargements for the passage *c*, *d' d²* those for the passage *d*, and *e' e²* for the passage *e*. These enlargements enable the supply of gas to be suitably regulated by turning the plug.

The four positions of the cock shown in Figs. 9 to 12 correspond to the four positions described with reference to Figs. 4 to 7. In the position of the cock shown in Fig. 9 both

ignition-burners are alight and the two principal burners are extinguished. In Fig. 10 the left-hand ignition-burner and the right-hand principal burner are alight, while the right-hand ignition-flame and the left-hand principal flame are extinguished. In the position of the cock represented in Fig. 11 both the principal flames are ignited, while the two ignition-flames are extinguished, and in Fig. 12 the left-hand principal flame and the right-hand ignition-flame are alight, the left-hand ignition-flame and the right-hand principal flame being extinguished.

What I claim is—

The combination of the casing formed with a plurality of principal-flame passages and a plurality of ignition-flame passages, with the plug having a transverse passage and opposite peripheral concavities into which the ends of the transverse passage open, respectively, and provided between one end and the peripheral concavities with a groove extending partially around its periphery to communicate alternately or simultaneously with the ignition-flame passages, a solid part of the plug serving to close either or all of the latter, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand, in presence of two subscribing witnesses, this 12th day of December, 1898.

ALEXANDER STREUBEL.

Witnesses:

EPH. MUMNENHOFF,
W. P. LEONHARD.