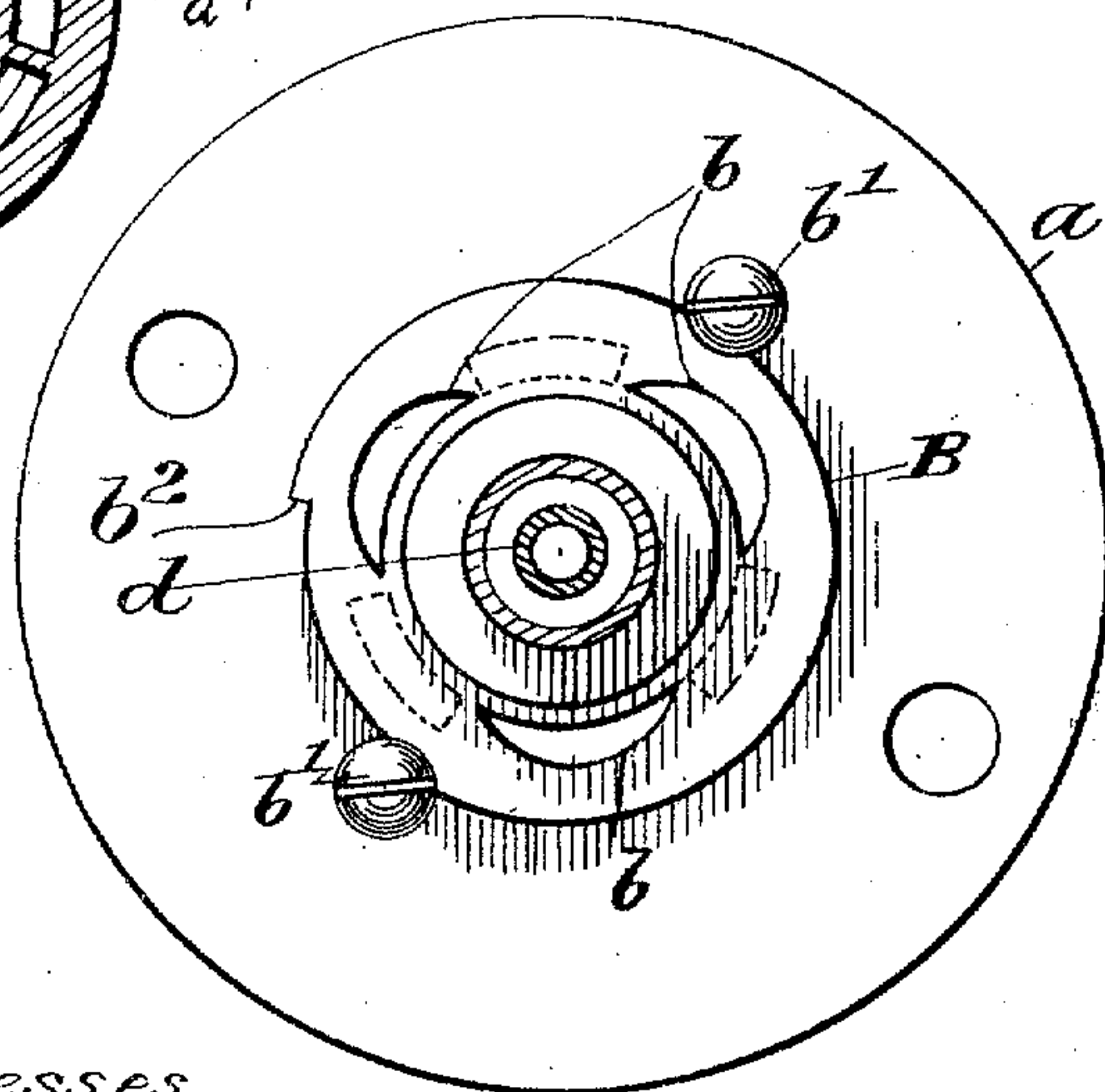
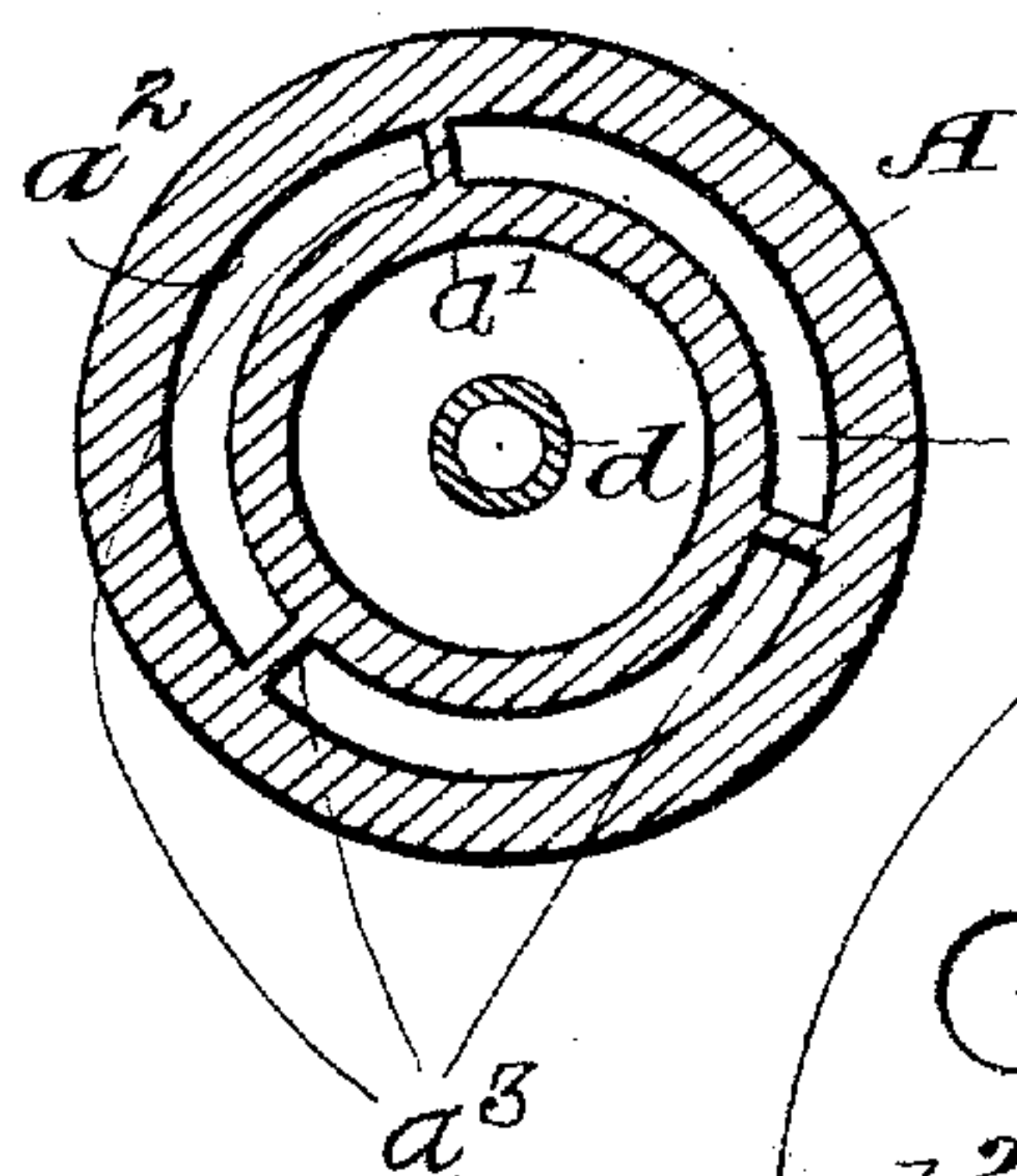
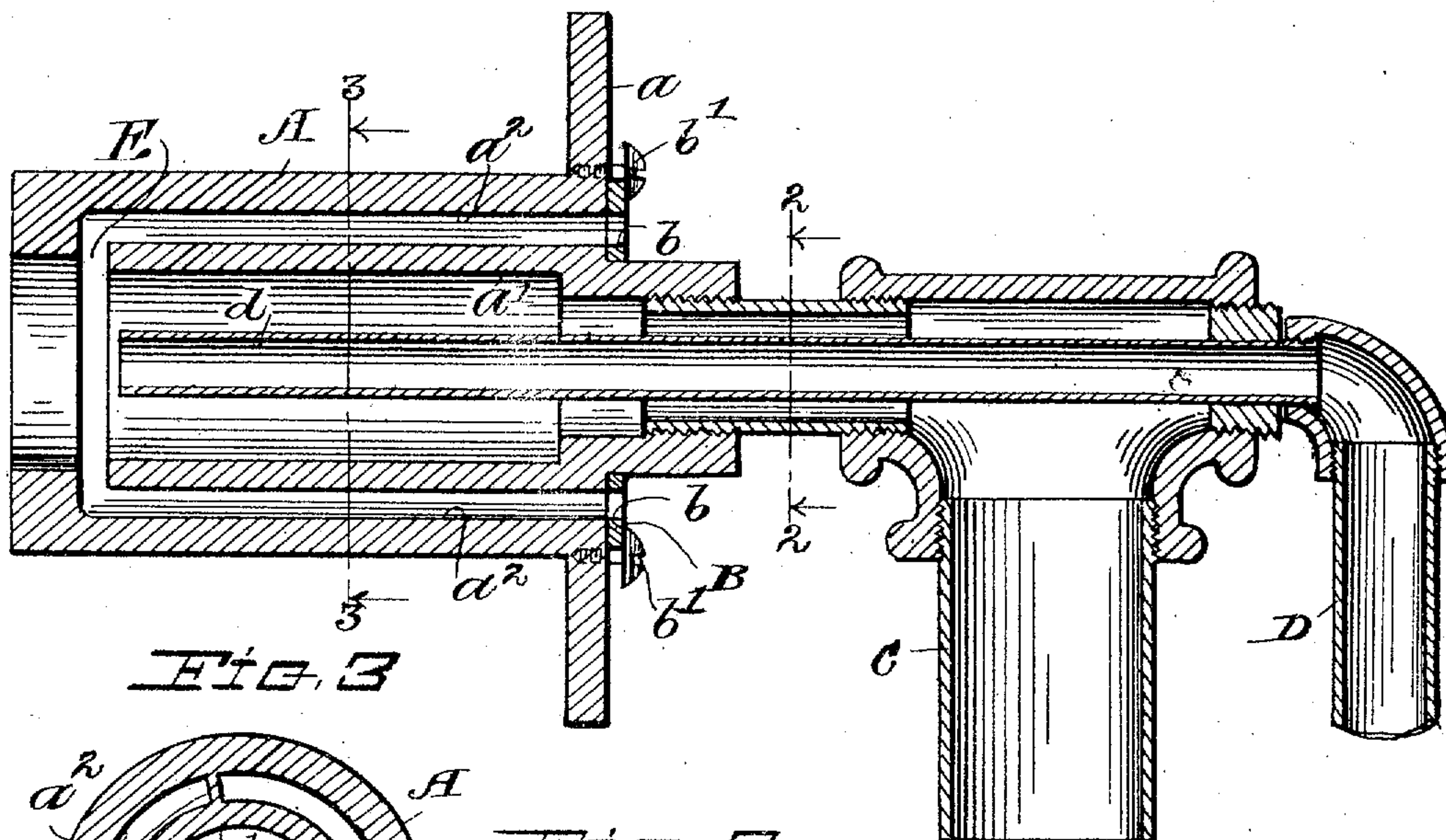


986,663.

FIG. 1



Inventor:
Jacob Heintz
By J. B. Fay
Attorney.

UNITED STATES PATENT OFFICE.

JACOB WEINTZ, OF CLEVELAND, OHIO, ASSIGNOR TO THE STRONG, CARLISLE & HAMMOND COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

ARTIFICIAL-GAS BURNER.

986,663.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed January 17, 1910. Serial No. 538,379.

To all whom it may concern:

Be it known that I, JACOB WEINTZ, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Artificial-Gas Burners, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present invention relates to gas burners, and has more particular relation to a burner designed for the purpose of burning artificial gas.

In the burning of artificial gas, as compared with natural gas, it is important that the amount of air fed to the mixture in order to effect complete combustion shall be capable of considerable variation. Owing to various conditions, the amount of air so fed, if constant and unvariable, will not at all times produce an effective combustion, and it is the general object of the present invention to provide a burner for use with artificial gas which is adapted to provide a regulable auxiliary air supply.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 is a vertical section of a burner embodying my invention; Fig. 2 is a vertical section on the line 2—2 in Fig. 1; and Fig. 3 is a vertical section on the line 3—3 in Fig. 1.

The burner comprises primarily a metal casing A which is formed at one end with an outwardly extending flange *a*. The casing A is integrally formed with two concentric tubes *a'* and *a''* extending therethrough. The outer tube *a''* is longitudinally divided by partitions *a'''* so as to provide a plurality of longitudinal passages *a''''*, which passages open at the inner end of the burner into the passage provided by tube *a'*, while at their outer ends they open into the atmosphere through the flange *a*. A plate B is mounted exteriorly against the flange *a* and is secured thereto by screws *b'*, which screws engage the outer edge of the plate B so as to allow rotation thereof, and the plate is

provided with a notch *b''* in its edge, the ends of which engage one of the screws *b'* and serve to limit rotation of the plate. The plate B is formed with a plurality of apertures *b* therein which, in the assembled condition of the burner, are adapted in one rotative position of the plate to register with the openings of the passages through the tube *a''*, and in another rotative position of the plate to be out of register therewith, and hence to close the outer ends of such passages. An air supply pipe C exteriorly of the casing is connected with the tube *a'* by a suitable coupling. A gas tube *d* extends centrally through the casing concentric with tubes *a'* and *a''* and exteriorly of the casing is connected with a gas supply pipe D.

From this brief description the operation of my burner will be obvious and its advantages apparent. The supply of gas and air admitted to the burner through the respective tubes combine at the common orifice E thereof to form a resultant combustible mixture. If, under varied conditions, it is found that more or less air is desired to produce a mixture of the required efficiency, the supply of such additional air may be regulated by rotation of the plate B so that the apertures therein will be put into, or out of, register with the longitudinal passages of the outer tube, and thus will allow or prohibit the passage of air through the outer longitudinal passages. By means of this readily accessible regulator, then, the exact amount of air desired to be mixed with the gas in order to form a mixture of the required efficiency may be quickly and easily controlled.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A gas burner, comprising three concentric tubes having a common orifice, a gas supply pipe connected with one of the tubes, an air supply pipe connected with another of the tubes, the third tube being divided into a plurality of longitudinal passages

communicating at their outer ends with the atmosphere, and means for controlling such communication.

2. A gas burner, comprising three concentric tubes having a common orifice, a gas supply pipe connected with the inner tube, an air supply pipe connected with the intermediate tube, the outer tube being divided into a plurality of longitudinal passages communicating at their outer ends with the atmosphere, and means for controlling such communication.

3. A gas burner, comprising three concentric tubes having a common orifice, a gas supply pipe connected with the inner tube,

an air supply pipe connected with the intermediate tube, the outer tube being divided into a plurality of longitudinal passages having openings at their outer ends into the atmosphere, and a plate rotatable in a plane transverse to the axis of the tubes, the plate being provided with apertures adapted to register with said openings.

Signed by me this 17th day of December, 1909.

JACOB WEINTZ.

Attested by—

ANNA L. GILL,
JNO. F. OBERLIN.