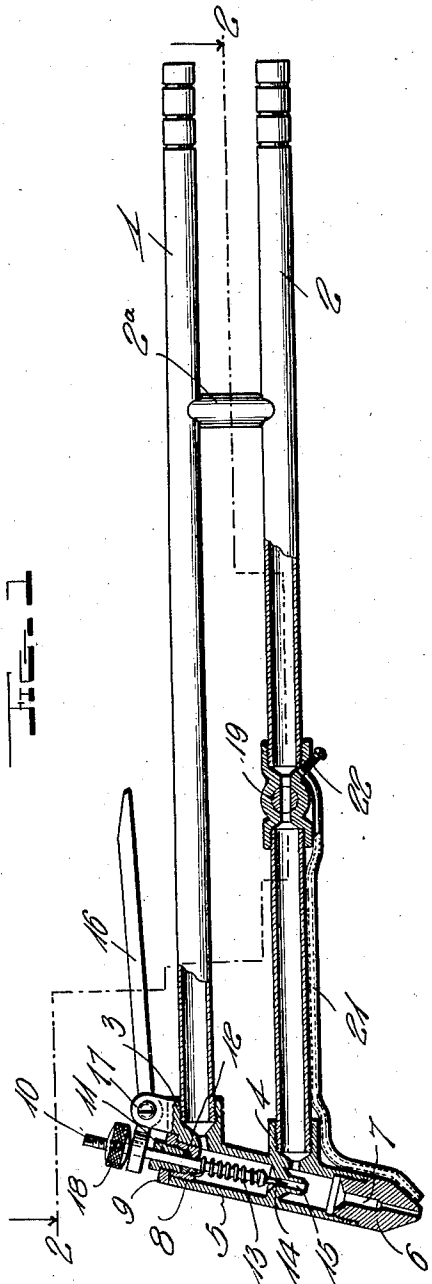
J. KREISLER.

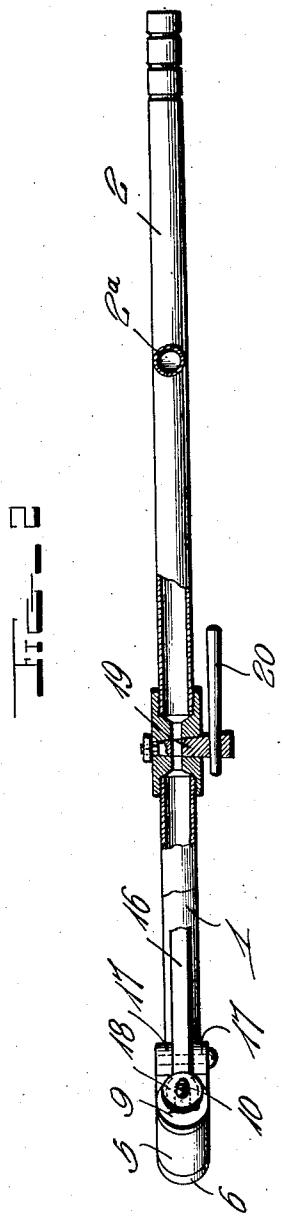
JEWELER'S TORCH.

APPLICATION FILED NOV. 3, 1919.

1,362,877

Patented Dec. 21, 1920.





Inventor

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# UNITED STATES PATENT OFFICE.

JACQUES KREISLER, OF NEW YORK, N. Y.

## JEWELER'S TORCH.

1,362,877. Specification of Letters Patent. Patented Dec. 21, 1920.

Application filed November 3, 1919. Serial No. 335,253.

*To all whom it may concern:*

Be it known that I, JACQUES KREISLER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Jewelers' Torches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to torches, and it has more particular reference to a torch which is especially designed to be used by jewelers, although it is not to be restricted to such use.

Intermittent use of a torch is prevalent among jewelers, and it is therefore the object of this invention to provide a torch for this purpose which is light and effective, one with which a fine regulation of the flame may be had, it also having means for automatically closing the valve which controls the supply of oxygen, and being so designed that it may be easily and readily operated with one hand.

Another object of the invention is to provide a torch for jewelers' use which is extremely simple in construction, effective in operation, one which is strong, durable and extremely inexpensive to manufacture.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation, partly in section of a torch constructed in accordance with my invention.

Fig. 2 is a sectional view on the plane of the line 2—2 of Fig. 1.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numerals 1 and 2 designate a pair of feed pipes. Oxygen passes through the pipe 1, while ordinary illuminating gas passes through the pipe or tube 2. A spacing pipe $2^a$ serves to hold the pipes apart. The forward ends of both of the pipes 1 and 2 are screw-threaded in nipples or sockets 3 and 4 of the head 5 which is preferably inclined with respect to the ends of the pipes 1 and 2. The opposite ends of the pipes are corrugated or provided with grooves adapted to receive or permit rubber fuel supply tubes to be attached thereto.

The head 5 is in the form of a cylindrical shell or barrel and is preferably cast from a single piece of metal. Socket 3 is adjacent one end of the head and the other socket 4 is at a point adjacent the center of said head, both of said sockets communicating with the head 5 through apertures, as shown. One end of the head is closed by a tapered nozzle 6, which is preferably threaded therein and which is provided with a centrally disposed bore 7 extending therethrough. This bore 7 is of a greater diameter at the inner end of the nozzle, which construction serves to project a thin needle-like flame therefrom which is essential in jewelers' work. Such construction will also prevent back-firing of the flame into the head 5. The opposite end of the head is closed by a unitary needle valve structure indicated as a whole by the numeral 8, and which includes a screw-threaded plug or bushing 9, a needle valve 10, packing members 11 and 12, and a valve actuating spring 13. The spring 13 surrounds the valve 10 and normally holds it to its seat 14. The bushing 9 serves to keep or hold the spring 13 under compression. With the above construction it will be seen that a stuffing box for the valve 10 will be had and leakage thus prevented. The seat 14 is also cast integral with the head 5 and is disposed at a point adjacent the center, and includes a neck 15 which extends below or beyond the inlet opening 4. With this construction it will be seen that the oxygen passing from the pipe 1 and through the valve seat 14 and neck 15 will carry the gas with it on its way through the nozzle 6. The needle valve 10 is operated by a handle or lever 16. This handle is preferably pivoted between the upstanding ears or lugs 17 which are also a part of the cast head 5. Handle 16 is forked as shown in Fig. 2, and it straddles the needle valve 10 beneath the adjusting nut 18 which is threaded on the outer end of the needle valve 10. Valve 10 is normally held closed by the spring 13, but when it is desired it may be normally held slightly open by adjusting the nut 18, as is obvious.

A controlling valve 19 is placed in a convenient position in the gas supply pipe 2

and it is operated by a handle 20. Hence, it will be seen that the lever or handle 16 and handle 20 may both be conveniently operated with one hand.

To obviate the necessity of using a match every time it is desired to use the torch I preferably equip the device with a pilot pipe 21 and small screw valve 22, whereby a constant light may be had at a small expense.

A torch of the above construction will be found extremely effective for use by jewelers in that it is very light, and the parts are so arranged that the entire device may be held and operated by one hand while the object being worked on may be held with the other hand. The construction of the nozzle 6 is such that a very fine, or sharp flame, will be projected therefrom, which is very essential to jewelers. It will also be seen, that as soon as the handle 16 is released, the valve 10 will be automatically closed, which of course is also convenient and saves fuel. Another point which I particularly desire to emphasize is the fact that the entire head 5, including the already mentioned parts, is made from a single casting which is extremely inexpensive to both the user and the manufacturer. Torches of this general type already patented, are all very heavy, and the arrangement of the valve, and its actuating means is such that these devices would not, and could not be used to advantage by jewelers. On the other hand, my torch will overcome these disadvantages and will be found very convenient and effective, as it is particularly designed for fine workmanship.

The manner of using and operating the device is thought to be obvious from the foregoing description, and further description thereof is deemed unnecessary.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

A jeweler's torch comprising a cylindrical head of the same diameter throughout its length, said head being in the form of a single casting which is open at its opposite ends and internally screw-threaded at these points, being provided adjacent one end and adjacent the center with sockets which communicate with the interior thereof and through small ports, fuel feed pipes connected with said sockets, a relatively short internally screw-threaded plug tapped into the lower end of the head, this plug having a bore extending therethrough which is decreased in diameter at its outer end to retard the passage of fuel therethrough, the inner end of said plug being recessed to provide an entrance to the bore for the fuel, an integral partition disposed in the head intermediate the ends of the same and spaced from the inner end of said plug, forming a valve seat and dividing the head into upper and lower chambers, the latter of which constitutes a mixing chamber for air and gas, a relatively short neck carried by the valve seat and depending into the mixing chamber, the same being spaced from the inner end of said plug and extending to a point slightly beyond the lower port in the head, said seat and neck having a passage extending therethrough which is alined with the bore in the plug, a second internally screw-threaded, bored plug tapped into the opposite end of the head, a needle valve extending through the bore of this plug and beyond the outer end of the latter, a coiled spring surrounding the valve between the seat and the last named plug, serving to retain the valve normally closed, and an operating handle mounted on one of the fuel feed pipes and co-acting with the exposed portion of said valve for actuating it.

In testimony whereof I have hereunto set my hand.

JACQUES KREISLER.