

No. 844,495.

PATENTED FEB. 19, 1907.

A. R. BULLOCK.
SPARK PLUG FOR EXPLOSIVE ENGINES.
APPLICATION FILED OCT. 6, 1905.

Fig. 1

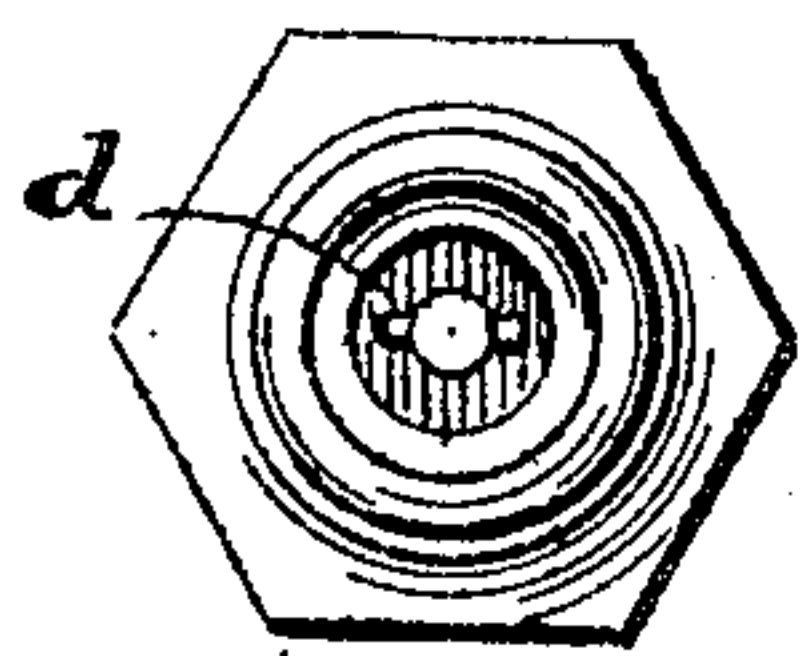
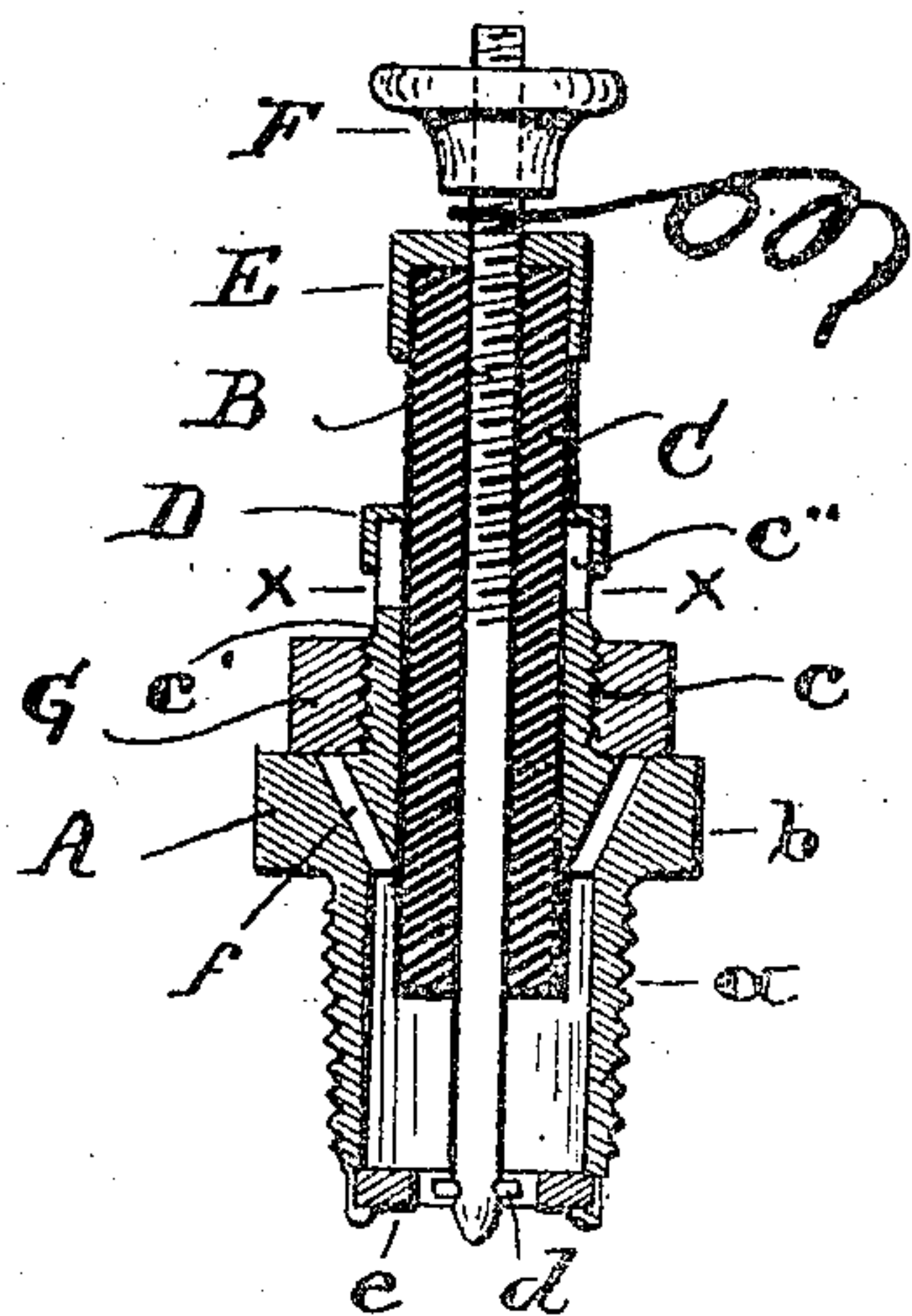


Fig. 2

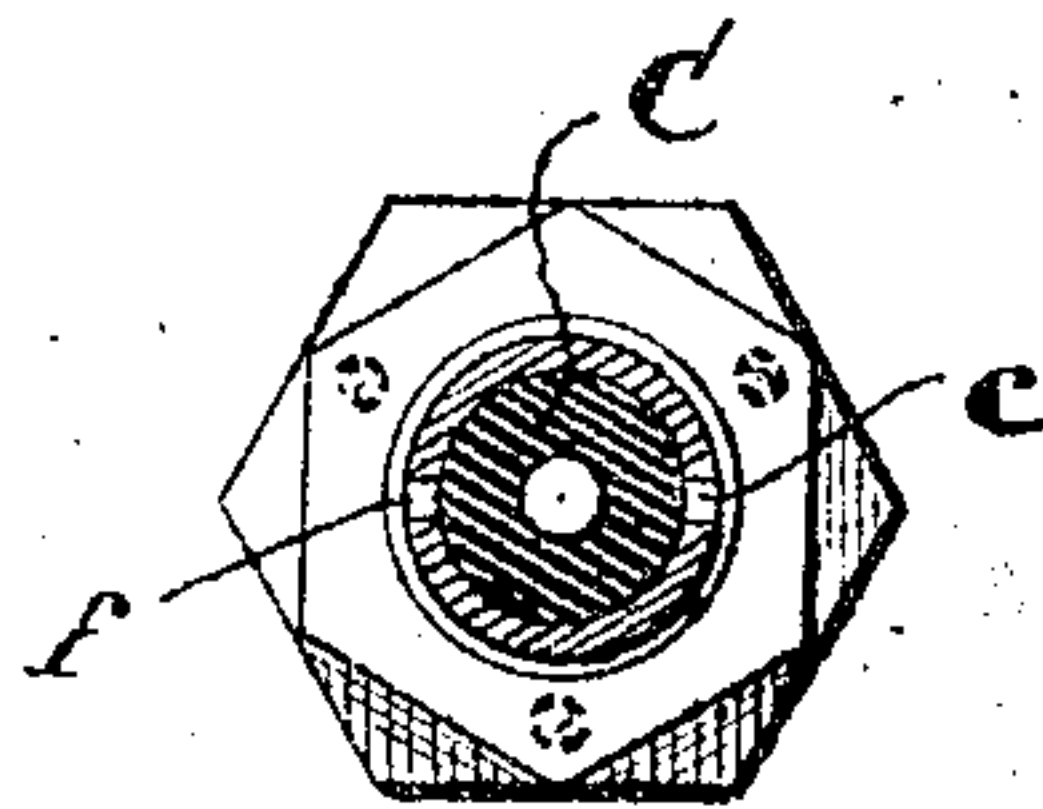


Fig. 3

WITNESSES

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UNITED STATES PATENT OFFICE.

ARTHUR R. BULLOCK, OF CLEVELAND, OHIO, ASSIGNOR TO EXCELSIOR
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SPARK-PLUG FOR EXPLOSIVE-ENGINES.

No. 844,495.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed October 6, 1905. Serial No. 281,654.

To all whom it may concern:

Be it known that I, ARTHUR R. BULLOCK, of the city of Cleveland, county of Cuyahoga, and State of Ohio, have invented new and useful Improvements in Spark - Plugs for Explosive-Engines, of which the following is a specification.

My invention relates to improvements in so-called "jump-spark" plugs for explosive-engines; and the object of my improvement is to provide means and to establish conditions whereby such plugs can be maintained in perfect working order in a quick, simple, and efficient manner. I attain this object in a spark-plug constructed and arranged substantially as shown in the accompanying drawings, in which—

Figure 1 represents a central sectional view of said plug. Fig. 2 represents an inner face view of same, and Fig. 3 is a horizontal sectional view of same on line X X. (See Fig. 1.)

Like letters of reference denote like parts in the drawings and specification.

Substantially this plug comprises the body part A, the combined binding-post and electrode B, and the insulating-sleeve C, means enabling wire connection with said electrode and a contrivance whereby the electrodes may instantaneously and most effectively be freed from soot or other detrimental deposits which there is a tendency to accumulate in the operation of such engines. As shown, the part *a* of the body-part A is screw-threaded to afford a ready connection with a suitable part of the engine. The center part *b* is preferably of hexagonal or other polygonal form to enable convenient application of a wrench or the like, and next to the polygonal part projects another screw-threaded part *c*, terminating in a nipple *c'*.

Internally the body portion receives the sleeve or insulating medium C, and the latter supports the rod B, which serves in the capacity of an electrode-carrier and binding-post at or by its internal and external terminals. In splitting the blank portion *c'*, as at *c'' c''*, and by applying the ferrule D to compress said portion the sleeve C can be se-

curely fastened in and to the body portion A. Also by extending the screw-threaded portion of the rod B way into said sleeve an increased hold for the cement is afforded which unites the rod and sleeve. A flanged metallic cap E is placed over the sleeve C, and a thumb-nut F holds one wire of the source of electrical energy in contact with the rod B. Projections *d d* in conjunction with the ring *e* form the electrodes proper, it being presupposed that said ring is a part of the ground circuit. Said ring is preferably made up as a separate part and secured to the body part A, as shown in Fig. 1. One or more ports *f* lead from the interior to the exterior of the body part A. As shown, their exit is under control of the collar G, which engages the threaded portion *c*. Simply by loosening the collar or nut G one or more turns a free passage through said ports *f* is afforded, and soot or other deposits may be ejected there- through.

The electrodes in jump-spark plugs become very easily coated with soot and oil, and as such deposits render the electrodes inoperative it is necessary to clean said electrodes from time to time or as often as may be necessary. The spark-plug above described affords facilities for cleaning the electrodes in a ready and efficient manner. Furthermore, its construction is compact, neat, and inexpensive. Also the extension of the rod below the projections *d d* serves in a measure automatically in the capacity of a distractor of oily or smutty substances from said projections or electrodes.

What I claim, and desire to secure by Letters Patent, is—

In a jump-spark plug for explosive-engines the combination with the body part thereof having ports which lead from its internal cavity to an exterior face of an adjustable collar controlling said ports in the manner as and for the purpose set forth.

ARTHUR R. BULLOCK.

Witnesses:

BERNH. F. EIBLER,
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