

A. V. PELLET.
SPARK PLUG.
APPLICATION FILED SEPT. 14, 1907.

914,451.

Patented Mar. 9, 1909.

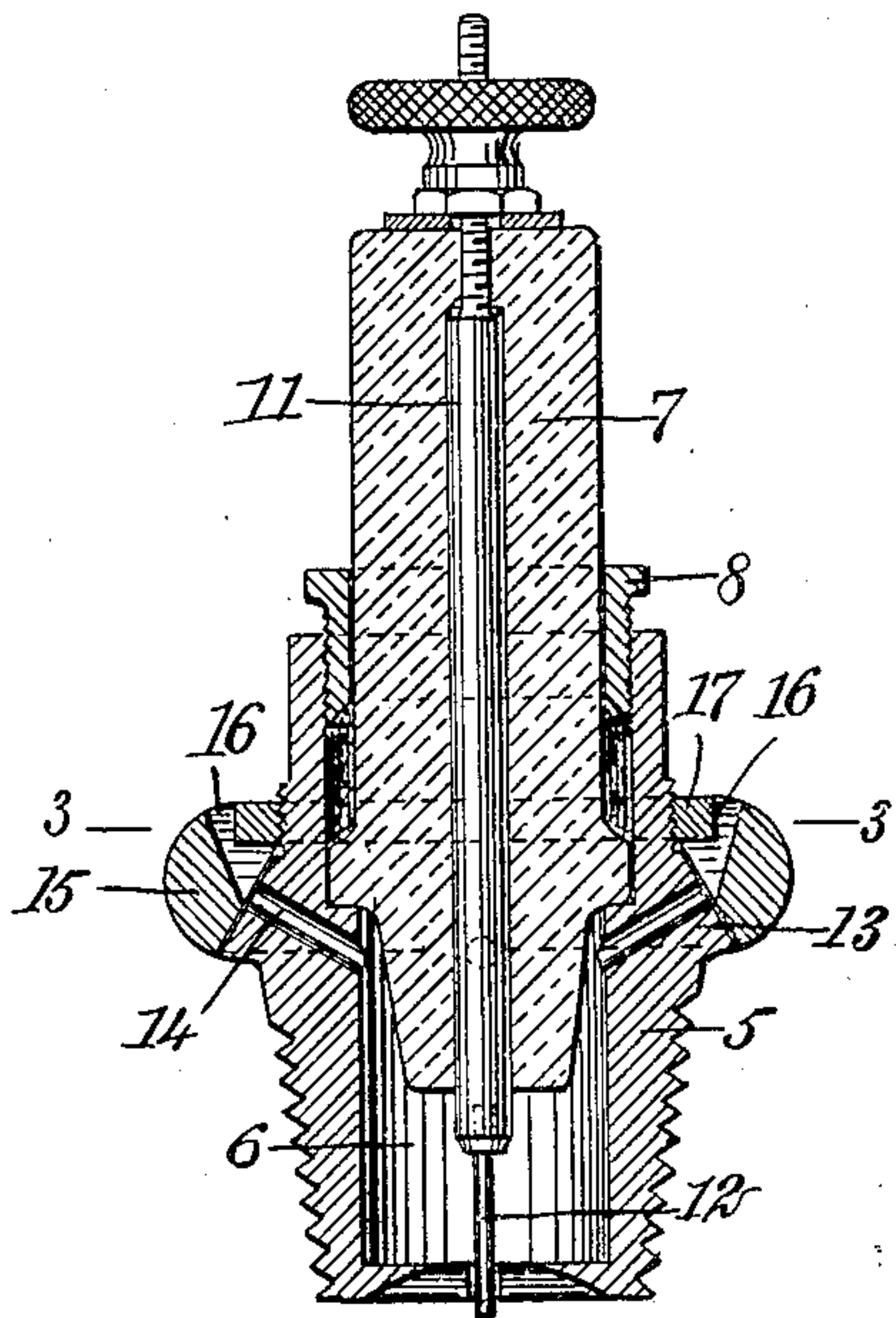


Fig. 2.

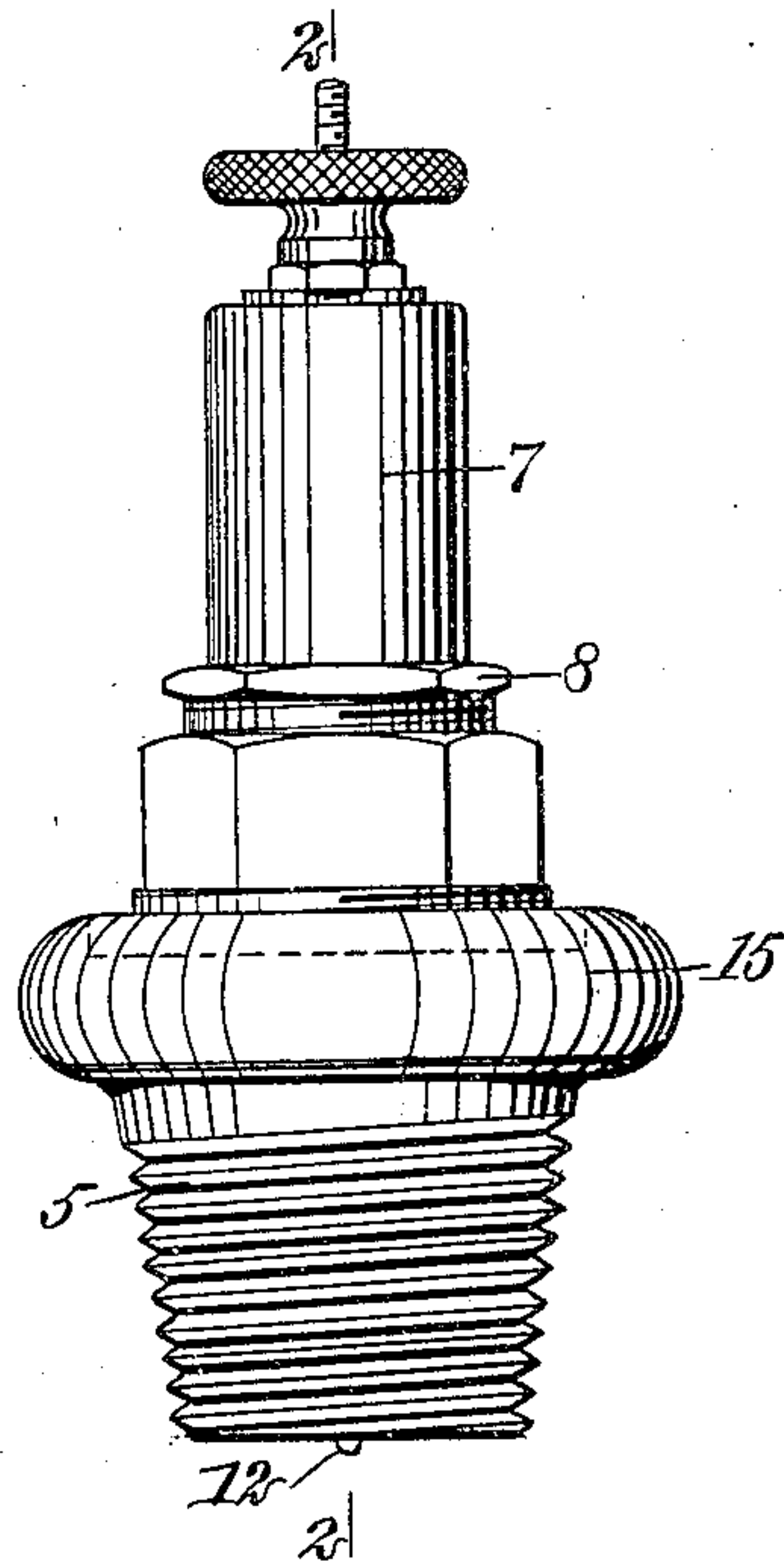


Fig. 1.

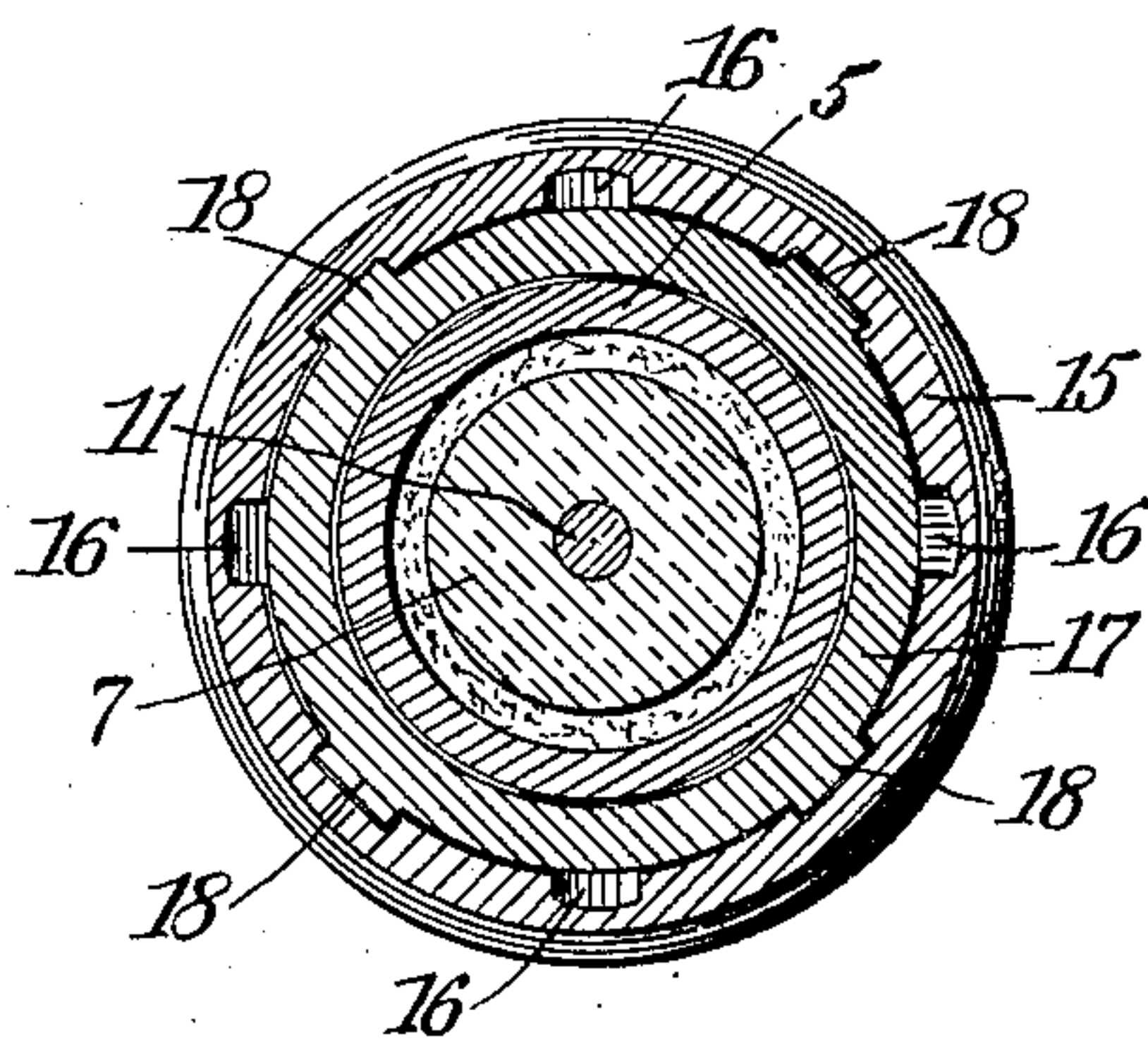


Fig. 3.

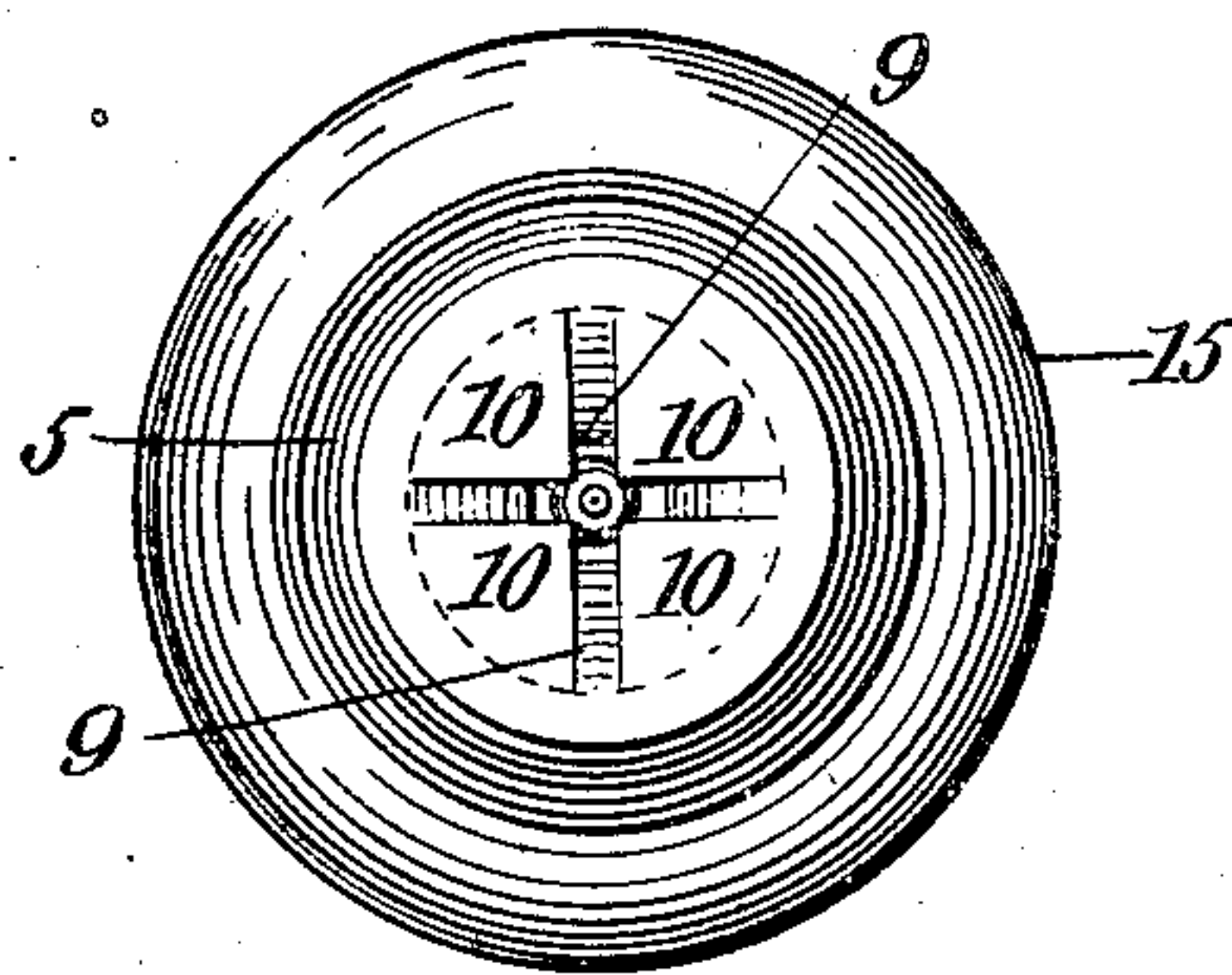


Fig. 4.

WITNESSES
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AUGUST V. PELLET, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, W. F. AUSTIN, AND C. E. LIPSCOMB, OF NEW YORK, N. Y., A COPARTNERSHIP.

SPARK-PLUG.

No. 914,451.

Specification of Letters Patent.

Patented March 9, 1909.

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To all whom it may concern:

Be it known that I, AUGUST V. PELLET, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented new and useful Improvements in Spark-Plugs, of which the following is a full, clear, and exact description.

This invention is an improved spark plug for internal combustion engines, the object of which is to provide means whereby the explosion of the charge within the cylinder will operate to clean the sparking terminals of the plug, thus making it unnecessary to remove the plug from the cylinder for this purpose. This object I attain by providing the bore of the plug with openings which may be placed in communication with the outer atmosphere and thereby permit a portion of the exploding charge to blow through the plug past the sparking terminals and free them of collected soot, etc.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a plug embodying my invention; Fig. 2 is a vertical central section of the same on the line 2—2 of Fig. 1; Fig. 3 is a cross-section of the plug on the line 3—3 of Fig. 2; and Fig. 4 is an inverted plan of the plug.

The preferred construction of my improved plug, described in detail, consists of the exteriorly-threaded plug 5, having a bore 6, which is counterbored at its upper end to receive and provide a seat for the usual porcelain insulating stem 7, the said stem being tightly forced to its seat by the packing gland 8, threaded within the upper end of the plug 5 and surrounding and snugly fitting the stem. The bottom or base of the plug is provided with a plurality of cross-slots 9, passing into the bore 6 and dividing the bottom into a series of sectors 10. The porcelain stem 7 carries the usual conductor 11, which is provided at its upper end with the customary binding-post, and the lower end or sparking terminal 12 passes within the intersection of the cross-slots 9, whereby the spark will jump between this terminal and the points of the sectors 10.

The head of the plug 5 is exteriorly in the form of a cone 13, through which a series of upwardly and outwardly-directed apertures

14 pass, leading from the bore 6. A collar 15, having a conical bore, snugly fits the cone 13 and is constructed with a series of openings 16, passing substantially vertically therethrough, which are equal in number and adapted to be brought into register with the apertures 14, thus providing communication between the bore of the plug and the outer atmosphere. For forcing the collar 15 to its seat, a nut 17 fits within an annular recess formed in the same, and is threaded upon the plug 5. The nut 17 as best shown in Fig. 3 has a series of circumferential projections or keys 18, designed to engage with corresponding notches formed in the collar 15 intermediate the openings 16, thus securely connecting the nut and the collar together, and adapting the collar to be shifted on the nut when the latter is loosened, in order that the collar may be firmly pressed to its seat when the nut is tightened. This construction permits of the collar being turned to bring the openings 16 into register with the apertures 14, whereby the exploded charge in the engine will rush past the sparking terminals, freeing them of soot, etc., and thence escape to the outer atmosphere. When the sparking terminals have been cleaned, the nut 17 is tightened to carry the openings in the collar out of alinement with the apertures, thereby forming a gas-tight joint on the conical faces of the cone 13 and collar 15.

The invention as shown and described, while being the preferred practical embodiment of my improved spark plug, may obviously be modified in numerous minor particulars without departing from the nature of the invention as defined in the claims annexed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A spark plug having an interior bore with a passage leading therefrom to the atmosphere, a valve controlling said passage and providing in its open position a communication between the interior bore and the atmosphere through said valve.

2. A spark plug provided with a head and an interior bore and a passage leading from the bore through said head, and a collar seated on said head and provided with an opening arranged to be brought into and out of register with said passage.

3. In a spark plug, a plug having a bore

and provided with a conical head with apertures leading from the bore of the plug through said head, and a collar fitting the conical head and provided with openings adapted to register with said apertures, whereby communication through the plug with the outer atmosphere is provided for the purpose described.

4. In a spark plug, a plug having a bore, and provided with a conical head with an aperture leading from the bore through said head, a collar seated upon and closely fitting the conical head of the plug, having an opening adapted to be brought into and carried out of register with said aperture, and a nut keyed to said collar and threaded on the plug for forcing the collar to its seat.

5. In a spark plug, a plug having a bore, and provided with an aperture leading from the bore through the plug, a collar surrounding the plug, having an opening adapted to be turned into and out of register with said aperture, a nut threaded on the plug, and means connecting the nut and collar, adapting the same to be axially revolved a partial revolution with respect to the plug for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST V. PELLET.

Witnesses:

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JOHN P. DAVIS.