

(No Model.)

F. MOHR.  
PRIMER.

No. 573,897.

Patented Dec. 29, 1896.

FIG. 1.

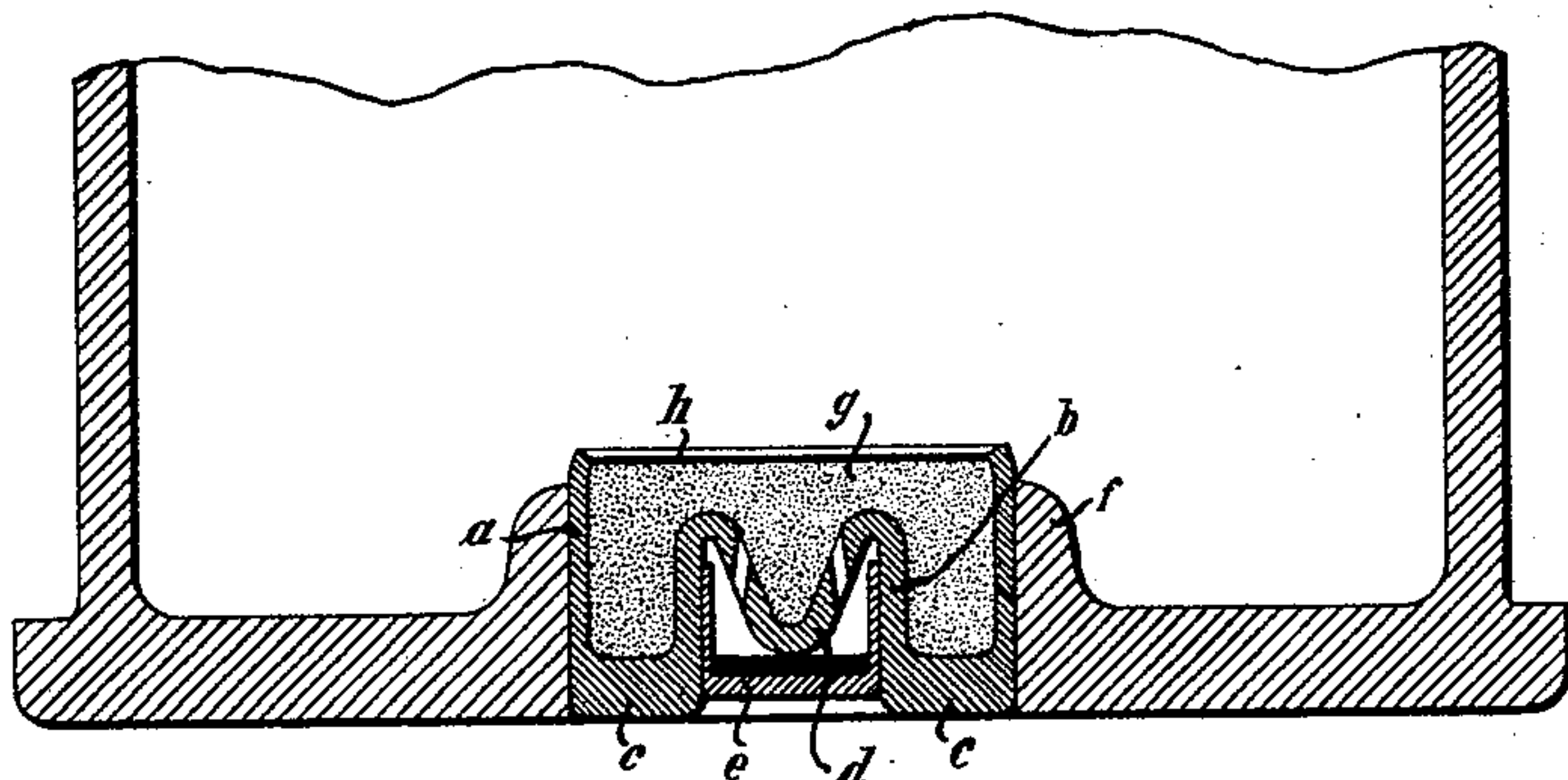
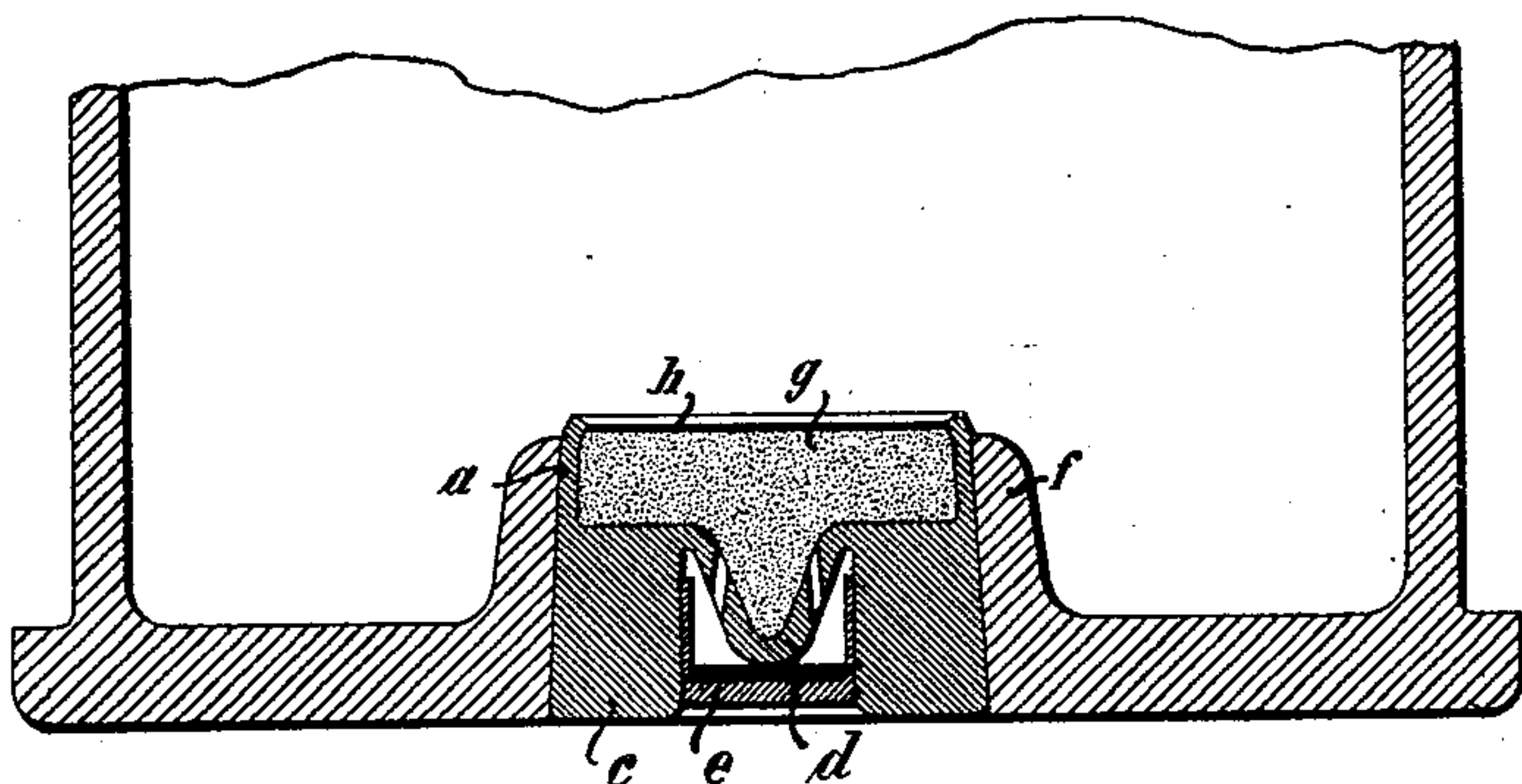


FIG. 2.



WITNESSES.

Walter C. Allen.  
Edward Knight

INVENTOR.

FREDERIK MOHR.

BY

*Knight Bros*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

FREDERIK MOHR, OF MAGDEBURG, GERMANY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE FRIED. KRUPP GRUSONWERK, OF SAME PLACE.

## PRIMER.

SPECIFICATION forming part of Letters Patent No. 573,897, dated December 29, 1896.

Application filed December 27, 1892. Serial No. 456,383. (No model.) Patented in Germany July 9, 1892, No. 74,405; in Belgium December 15, 1892, No. 102,563; in France December 15, 1892, No. 226,408; in England March 7, 1894, No. 4,832; in Austria April 9, 1894, No. 44/1,634; in Italy April 10, 1894, LXXI, 153, and in Hungary August 9, 1894, No. 2,159.

*To all whom it may concern:*

Be it known that I, FREDERIK MOHR, of Magdeburg, Kingdom of Prussia, German Empire, have invented certain new and useful  
5 Improvements in Igniting Devices for Cartridges, (for which I have obtained Letters Patent in Germany, No. 74,405, dated July 9, 1892; in Belgium, No. 102,563, dated December 15, 1892; in France, No. 226,408, dated December  
10 15, 1892; in England, No. 4,832, dated March 7, 1894; in Austria, No. 44/1,634, dated April 9, 1894; in Italy, LXXI, 153, dated April 10, 1894, and in Hungary, No. 2,159, dated August 9, 1894,) of which the following is a specification.  
15 tion.

My invention relates to improvements in igniting devices for cartridges.

The object of my said invention is to combine the supplementary charge necessary for  
20 igniting smokeless powder, and consisting of loose gunpowder, with the cartridge, and to insert it into the case of the cartridge in such a manner that the formation of a tight joint between the said case and the device containing the said charge is insured.  
25 ing the said charge is insured.

According to my invention I construct a device which contains in two different cavities, separated from each other by an anvil provided with ignition-channels, the percussion-cap with the explosive charge and the  
30 aforesaid supplementary charge necessary for igniting smokeless powder, but which differs from the igniting appliances heretofore used for the same purpose by the manner in which the device is applied to the base of the cartridge-case and which insures the formation of a perfectly gas-tight joint between them.  
35 them.

In order that my said invention may be  
40 clearly understood, I will now proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is a central section on the line of the axis of a cartridge fitted with an improved igniting device according to my invention. Fig. 2 is a view similar to Fig. 1, showing an alternative arrangement of the  
45 said igniting device.

Like letters of reference indicate corresponding parts in both the drawings.

The improved igniting device consists of a metallic plug provided with a perfectly-smooth cylindrical or slightly-conical outer surface, which plug in Fig. 1 is formed of a larger outer hollow cylinder or cone *a* and a  
50 smaller coaxial hollow cylinder *b*, connected with the former by the bottom *c* and carrying the anvil *d* with ignition-channels therein. The cavity of the inner cylinder *b*, serving for the reception of the percussion-cap *e*,  
55 is separated from the cavity of the outer cylinder or cone *a*, containing the supplementary charge *g*, by the anvil *d*. As the supplementary charge consists generally of loose gunpowder, it is expedient to prevent its falling from the cavity of the cone or cylinder *a* by a layer of shellac *h*.  
60

In the arrangement shown in Fig. 2 the thickness of the base *c* is made equal to the height of the inner cylinder *b* of Fig. 1, so  
65 that the annular space which would otherwise exist within the cylinder *a* is dispensed with.

The plug is pressed axially into a bore of suitable shape in the base of the cartridge-case, which is reinforced by a boss *f*. In  
70 order that the outer periphery of the plug and the inner periphery of the boss *f* may exert considerable pressure against each other to form a perfectly-tight joint, it is necessary  
75 to make the outside diameter of the plug slightly greater than the inside diameter of the bore which receives it. When the slightly-conical or cylindrical plug, the metal of which is slightly thinned at the front end, is forced  
80 axially into its bearing in the boss *f*, it acts as a round wedge and with considerable force widens the said boss a little, the latter at the same time compressing the plug a little. By the outward pressure thus produced perpen-  
85 dicularly to the surfaces of contact a perfectly-hermetic joint can always be formed. This is necessary in order to cause the powder-gases generated by the explosion of the supplementary charge to automatically ex-  
90 pand the plug against its bearing in the bore,  
95



for with the slightest leakage between the outer face of the plug and the face of the bore gases will enter and compress the plug and destroy the hermetic joint.

5 Igniting devices constructed according to my invention have the advantage that they can be made cheaply and can be easily removed from the cartridge for refilling purposes.

10 What I claim as my invention, and desire to secure by Letters Patent, is—

The combination with a cartridge formed with a smooth straight bore in its base, of an igniting device having two chambers separated from each other by the anvil, one of

these chambers containing the igniting substance and the other the supplementary charge, said igniting device being provided with a smooth straight outer surface and forced axially into the said smooth bore of the cartridge in such manner as to leave the igniting device under constant strains of compression and cause it to maintain a gas-tight closure of the bore, substantially as and for the purpose specified. 20

FREDERIK MOHR.

Witnesses:

KARL E. DETZNER,  
EMIL KALLNECKER.