

# UNITED STATES PATENT OFFICE.

ARSEN F. WOODS, OF LAGRO, ASSIGNOR TO HARVEY E. MISENER, OF SERVIA,  
INDIANA.

## GUNPOWDER.

SPECIFICATION forming part of Letters Patent No. 418,635, dated December 31, 1889.

Application filed April 22, 1889. Serial No. 308,143. (No specimens.)

*To all whom it may concern:*

Be it known that I, ARSEN F. WOODS, of Lagro, in the county of Wabash and State of Indiana, have invented certain new and  
5 useful Improvements in Gunpowder; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the  
10 same.

My invention relates to an improvement in gunpowder; and it consists in a new and peculiar compound forming an explosive possessing great advantages over the explosives  
15 of this class heretofore in use—that is, possessing great strength with a minimum recoil, exceedingly cheap, and easy to manufacture, requiring no dry-house in process of manufacture, there is no danger in manufacturing  
20 the same, possesses great advantages for use in sporting-guns, rifles, &c., as it generates but little smoke, leaves no smell, and leaves the gun dry and requires but very little cleaning after its use.

25 This compound consists of the following ingredients, in about the proportions named, to wit: chlorate of potash, two parts; prussiate of potash, one-half of one part; sugar, (granulated,) one-half of one part; or the proportions might be as follows, to wit: chlorate  
30 of potash, four parts; prussiate of potash, one part; sugar, (granulated,) one part.

In manufacturing the ingredients they are separately ground and then mixed as any powdered compound is mixed. The prussiate  
35 of potash is preferably the yellow variety, and as this substance is a non-explosive it reduces the excessive force and power of the chlorate of potash, which is too great an explosive to be used alone. The sugar is in-  
40 tended to moisten the compound and dissolve particles that otherwise would remain unburned when the explosion takes place, and, further, the sugar makes the compound less inflammable and slower in burning, but has a  
45 power and spirit that adds to the compound.

What I claim is—

1. An explosive in powdered form containing as ingredients chlorate of potash, yellow prussiate of potash, and a carbohydrate, such  
50 as specified.
2. An explosive powder composed of chlorate of potash, yellow prussiate of potash, and sugar, in proportions substantially as set forth.

In testimony that I claim the foregoing as  
55 my own invention I affix my signature in presence of two witnesses.

ARSEN F. WOODS.

Witnesses:

WARREN BIGLER,  
JOHN H. DECKER.