

# UNITED STATES PATENT OFFICE.

EDWARD H. FORD, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILLIAM KENT,  
OF SAME PLACE.

## SMOKELESS POWDER.

SPECIFICATION forming part of Letters Patent No. 675,472, dated June 4, 1901.

Application filed September 28, 1900. Serial No. 31,382. (No specimens.)

*To all whom it may concern:*

Be it known that I, EDWARD HENRY FORD, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have  
5 invented a new and useful Improvement in Smokeless Powders, of which the following is a specification.

The object of my invention is to provide a smokeless powder for firearms which will im-  
10 part a high muzzle velocity to the projectile without undue pressure in the gun-barrel at the moment of firing and which will not de-  
teriorate with age.

My powder consists of fifty parts of picrate  
15 of ammonia and fifty parts of nitrate of barium, thoroughly ground and mixed together in a wheel-mill with the assistance of a small quantity of water. This will result in a ho-  
mogeneous pasty mass, which is then granu-  
20 lated by reducing the pressure of the wheels and the grains separated by passing it through a sieve, and it is then dried. This produces a powder efficient for some purposes, but

lacking in durability. In order to give it this latter property, I add fifteen parts of picric  
25 acid. This may be added before the process of granulation above described or it may be melted and thoroughly mixed with the granu-  
lated powder.

What I claim, and desire to secure by Let-  
30 ters Patent, is—

1. The herein-described powder containing picrate of ammonia and nitrate of barium  
combined in about equal proportions, sub-  
stantially as specified. 35

2. The herein-described powder containing picrate of ammonia and nitrate of barium  
combined in about equal proportions, and  
about fifteen parts of picric acid to one hun-  
dred parts of the aforesaid combination, sub-  
stantially as specified. 40

EDWARD H. FORD.

Witnesses:

CHARLES J. DRIEVER,  
LOUIS V. LE MOYNE.