

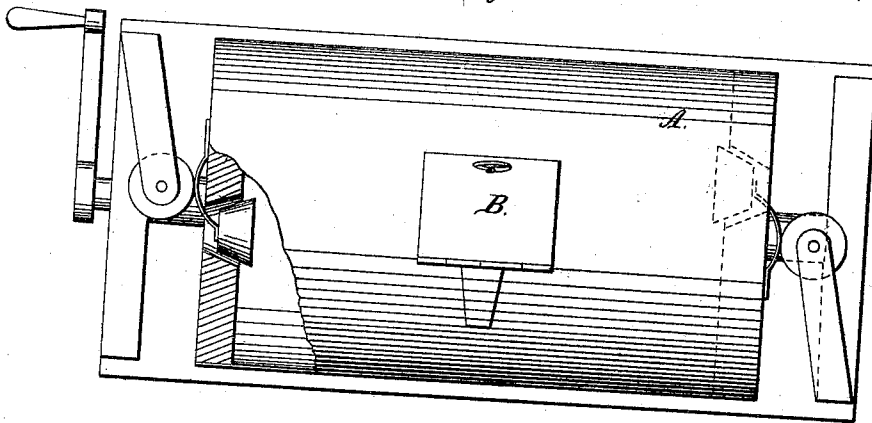
*W. Silver.*

*Mach. for Making Powder.*

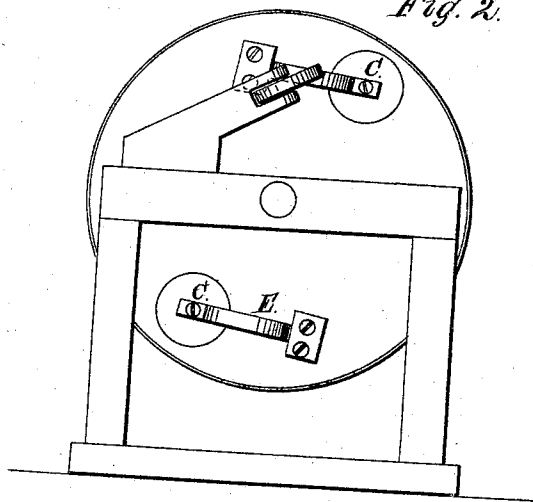
*N<sup>o</sup> 88,674.*

*Patented Apr. 6, 1869.*

*Fig. 1.*



*Fig. 2.*



*Witnesses.*

*John H. Brooks  
E. Green Collins.*

*Inventor.*

*W. Silver.*

*per Wm. L.  
Attorneys.*

# United States Patent Office.

WILLIAM SILVER, OF BLOOMSBURG, PENNSYLVANIA.

Letters Patent No. 88,674, dated April 6, 1869.

## IMPROVED MACHINE FOR MAKING BLASTING AND OTHER POWDER.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, WILLIAM SILVER, of Bloomsburg, in the county of Columbia, and State of Pennsylvania, have invented a new and improved Machine for Making Powder; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in the glaze-barrels, or cylinders, commonly used for mixing the component parts of blasting and other powder, designed to ventilate the same, whereby the operation is rendered much safer, and may be accomplished better and in less time.

The invention consists in the application of spring-valves to the cylinder, to be opened at certain periods of the revolution of the cylinder, to allow the escape of the damp and explosive gases generated within, and the admission of fresh air.

Figure 1 represents a side elevation, partly broken out; and

Figure 2 represents an end elevation.

Similar letters of reference indicate corresponding parts.

A represents the ordinary glaze-barrel, or cylinder into which the compound is placed, and tightly closed in by a door, B, which, as is well known to those skilled in the manufacture of powder, causes the ingredients

to stick to the inside of the barrel, after the saltpetre, or nitrate of soda is put in, and prevents as perfect incorporation of the same as is desirable, and sometimes causing explosion by the frictional heat generated by the balls.

Moreover, powder glazed in cylinders not ventilated, to allow the gases and damp air generated by the friction to escape, will not retain its color.

To avoid these difficulties, I arrange the spring-valves in the ends of the cylinder, to be opened at each revolution, to allow the escape of the gases generated within, and the admission of fresh air.

The said opening being accomplished by the friction-rollers D, arranged by any suitable means to strike the spring supports E of the said valves, connected to the ends of the barrel, and arranged to hold the valves in a closed position, when not pressed open by the said rollers.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The combination, with the barrel A, of the valves C, arranged to be opened at each revolution of the barrel, substantially as specified.

WILLIAM SILVER.

Witnesses:

C. W. MILLER,  
R. R. LITTLE.