

UNITED STATES PATENT OFFICE.

AUGUST BECK, OF GRAZ, AUSTRIA-HUNGARY.

METAL PRESERVING AND CLEANSING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 719,074, dated January 27, 1903.

Application filed September 20, 1901. Serial No. 76,003. (No specimens.)

To all whom it may concern:

Be it known that I, AUGUST BECK, a subject of the Emperor of Austria-Hungary, residing at Graz, in the Empire of Austria-Hungary, have invented certain new and useful improvements in metal preserving and cleansing compounds especially designed for protecting the barrels of firearms from rust or corrosion and for cleaning the same; 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 use the same.

This invention has reference to means for protecting the barrels of firearms from rust or corrosion and for cleaning the same; and its main object is to produce a new and improved preparation for these purposes.

As is well known, there are produced on explosion in firearms, especially in those firing so-called "smokeless" powder—i. e., powders evolving little smoke—residues of nitrocompounds. These residues are forced violently by the pressure of the gases liberated by the explosion into the rifling, or in the case of the barrels of shotguns into the roughness or irregularities of same, and finally under the action of atmospheric moisture cause rusting or corrosion of the firearms. My improved preparation will thoroughly and permanently neutralize and remove such injurious residues without mechanical action and effect a great saving of the material of the barrel, a result which has never to my knowledge been attained with the means hitherto employed.

In order that my invention may be readily understood and carried into effect by those skilled in the art, I will proceed to describe the same.

The following method may be employed by way of example to produce such a mixture; but it will be understood that the invention is not limited to the exact details thereof. I provide a lye which consists of fifty-four (54) parts, by weight, of carbonate of soda, (Na_2CO_3) and one (1) part, by weight, of carbonate of potash, (K_2CO_3) mixed with one hundred (100) parts, by weight, of water. A solution is prepared by moderately boiling six (6) parts, by weight, of this lye, three (3) parts, by weight, of soft soap or potash soap, known as "green soap," in one hundred (100)

parts, by weight, of water, and after this solution has cooled from two (2) to four (4) parts, by weight, of caustic potash, (KHO), are mixed therein. Into the resultant mixture is mixed forty (40) parts, by weight, of liquid ammonia consisting of ten (10) parts, by weight, of N.H_3 in one hundred (100) parts, by weight, of H_2O , by which the mixture is cleared and all gelatinous conditions removed, whereby it may be readily filtered. The excess residue of soap when mixed with pure vaseline constitutes an alkaline grease or lubricant which may be used with advantage for firearms. Instead of forty parts, by weight, of liquid ammonia there may be employed fourteen parts, by weight, of alcohol (of a strength of ninety (90) parts, by weight, of absolute alcohol and one hundred (100) parts, by weight, of water) or three parts, by weight, of common salt for clearing the solution. After skimming off this separated soap the solution, after filtering, constitutes the improved protecting and cleaning preparation above referred to.

By means of a small brush or wiper dipped in the preparation the barrels of firearms of any kind, whether firing smokeless or black powder, may be thoroughly cleaned and preserved. After cleaning the bore of the barrel should be left saturated with the preparation for ten to twenty minutes, so that any acid residues present in the minutest recesses of the rifling or of the barrel may be penetrated by the alkaline cleaning fluid and transformed into neutral compounds. The drying of the barrel may be effected in the ordinary way by means of a wad of tow or of cotton free from grease or in any other suitable way. The usual greasing or lubricating may, as above mentioned, be advantageously effected with the lubricant or grease obtained partly as a by-product in the preparation of the cleaning fluid.

An extended trial of my invention has shown that not only is the formation of rust or corrosion in the rifling and barrels of firearms prevented by the use of the improved preparation, but the wear of same is retarded or reduced if care be taken to clean them with the new preparation, as above directed, soon after ceasing fire.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

The herein-described preparation for protecting the barrels of firearms from rust or
5 corrosion, consisting of a mixture of carbonate of soda, carbonate of potash and water and green soap, caustic potash, and a clearing so-

lution, all the ingredients being in substantially the proportions named.

In testimony whereof I affix my signature. 10
AUGUST BECK.

In presence of—

JOSEF KLEIN,
JOHANN PALLAK.