UNITED STATES PATENT OFFICE.

ELMER W. HILL, OF PORTLAND, OREGON.

COMPOUND.

1,076,118. Specification of Letters Patent. Patented Oct. 21, 1913.

No Drawing. Application filed June 10, 1913. Serial No. 772,905.

To all whom it may concern:

Be it known that I, ELMER W. HILL, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Compound, of which the following is a specification.

This invention relates to an improved compound, one object of the present invention being the production of a paste carrying an abrasive ingredient, especially adapted for use in grinding valves and valve seats, the several abrasive ingredients coöperating to prevent the grooving of the valve or valve seat, and producing the desired grinding thereof with a continuous rotary movement, such continued rotary movement requiring a shorter time with this paste to produce the desired grinding, than with the many other pastes, that require an oscillatory motion to properly grind the valve or seat.

The ingredients of the present compound are: gum camphor dissolved in turpentine, 5%; kerosene 5%; refined crude oil, known as first class cylinder oil, 10%; oxid of tin 10%; carborundum (two grades, No. 220 and No. 1 F) 40%; and pure leaf lard 30%. These ingredients are thoroughly commingled to produce a paste, and preferably put up in compressible tubes for the market.

In using the present paste, a small quantity thereof is placed upon the valve or seat, and the valve is then rotated in a single direction for a period approximately thirty seconds, or until there is a "mirror" finish or polish on the parts.

Two sized particles, or grades, of carborundum are employed, preferably No. 220 and No. 1 F, and it has been found that by using these two grades, and also the oxid of tin, that the grains do not pack together and circumferential grooves are not formed upon the valve or seat. This is thought to be due to the fact that the two sized granules will pass each other and move across the seat instead of circumferentially thereof.

It has been demonstrated that by the use of the present valve grinding compound, the time in grinding the valves is greatly reduced, and that no special machinery is necessary, it simply being necessary to rotate the valve upon its seat in a single direction and for an exceedingly short time as compared with the present method of grinding valves.

What is claimed is:

1. A compound composed of an oleaginous vehicle, a ground abrasive, and oxid of tin.

2. A compound, composed of an oleaginous vehicle, two grades of pulverized carborundum, and oxid of tin.

3. A compound, composed of a non-running oil, a ground abrasive mixed therewith, oxid of tin, and kerosene.

4. A valve grinding compound, composed of gum camphor, kerosene, crude oil, oxid of tin, carborundum, and a non-running oil.

5. A valve grinding compound, composed of gum camphor, kerosene, crude oil, oxid of tin, carborundum, and lard.

In testimony that I claim the foregoing as my own, I have hereunto affixed my signature in the presence of two witnesses.

ELMER W. HILL.

Witnesses:
G. R. HUBNER,
THURZA O. WILMORE.