

# UNITED STATES PATENT OFFICE.

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## BOILER-CLEANING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 536,396, dated March 26, 1895.

Application filed September 8, 1894. Serial No. 522,484. (No specimens.) Patented in Austria-Hungary March 8, 1893, No. 27,828.

*To all whom it may concern:*

Be it known that I, JOHANN ROHRKRAUT, a subject of the Emperor of Austria-Hungary, residing at Buda-Pesth, Pesth-Pillis, Austria-Hungary, have invented a new and useful Boiler-Cleaning Compound, (patented in Austria-Hungary March 8, 1893, No. 27,828,) of which the following is a specification.

All water upon being vaporized leaves a residue which settles in the boiler and connecting pipes, causing waste of fuel by overheating, an expansion and contraction of the lead pipes, and often explosions, and the usual injurious hammering and scraping of the boiler and pipes in order to loosen the incrustation may be avoided by the use of a solvent boiler cleaning compound, embodying my invention, and consisting of the following ingredients combined in the proportions indicated by the appended quantities: catechu, 4.50 kiloliters; salt, 3.50 kiloliters; soda, 4.50 kiloliters; nutgalls, 3.50 kiloliters; gum arabic, 1.25 kiloliters; sugar, 2.50 kiloliters. To one hundred kiloliters of the above add sixty to seventy kiloliters of water. The mixture is then ready for use.

Each time the compound is used it must first be thoroughly shaken, and it is preferable to bring it into the boiler by means of the feed water. When the feed water is taken from a reservoir, the composition is put into the reservoir, when the latter holds but little water, so that the mixture may be led into the boiler before it has a chance to settle to the bottom of the reservoir. If the feed water pipes are placed too high to take the composition from the reservoir, it should be forced

ly injected at a suitable point of the pipe. If the boiler is fired both night and day, the given quantity of compound must be used twice a day, morning and evening.

For locomotives the composition is led into the boiler through the tender so that it may mix thoroughly with the fresh water, and each time water is taken a little steam must be let into the tender so that the compound will be stirred and held in suspension.

To every one hundred and twenty kiloliters of water contained by the boiler, the first time ten liters of my composition must be used, and after that six liters each time the boiler is filled. At every cleaning three liters are added to the water. For clean boilers, three liters to every one hundred and twenty kiloliters is sufficient to prevent incrustation. It requires from five to six weeks to thoroughly clean a boiler. Through experience it will be found whether to use more or less of the composition, according to the purity of the water employed.

Having thus described my invention, I claim—

A boiler cleaning compound consisting of catechu, salt, soda, nutgalls, gum arabic, sugar, and water, in substantially the proportions specified.

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

JOHANN ROHRKRAUT.

Witnesses:

IGNAC BUDNER,  
ALFRED MAYER.