

H. W. ARNEMANN.
 BARREL CLEANING APPARATUS.
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Fig. 1.

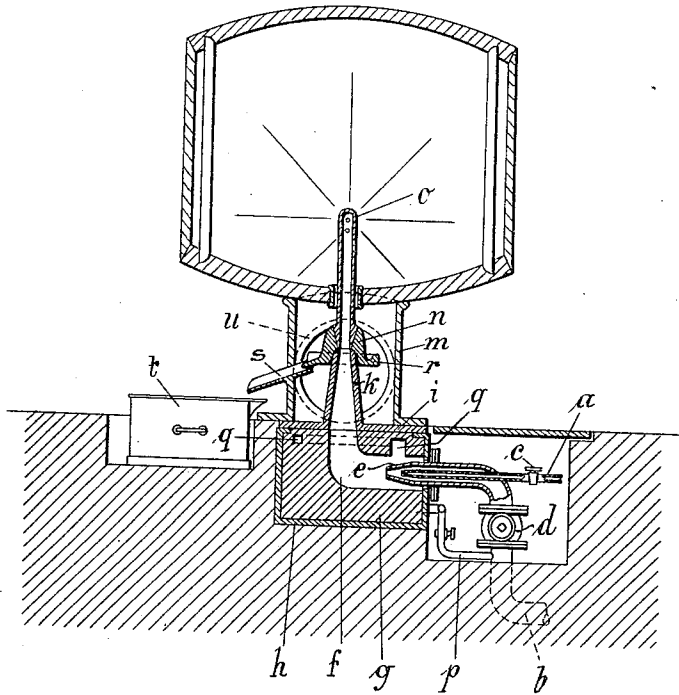
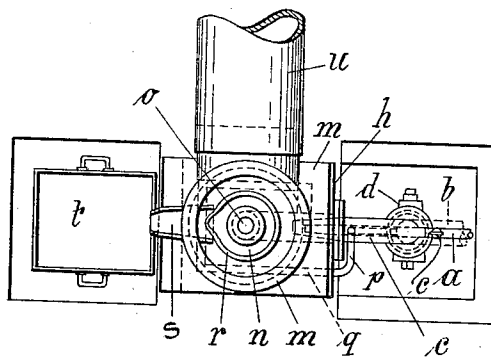


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

HEINRICH WILHELM ARNEMANN, OF HAMBURG, GERMANY.

BARREL-CLEANING APPARATUS.

1,125,930.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HEINRICH WILHELM ARNEMANN, a subject of the German Emperor, and resident of Hamburg, in the German Empire, have invented a new and useful Improvement in Barrel-Cleaning Apparatus, of which the following is a specification.

This invention relates to improvements in barrel treating apparatuses for instance of that sort which heat the barrels or take away the pitch from them by means of hot gases supplied through a nozzle, and it has for its object to provide an enlarged chamber in which the mixture of the fuel and air, for instance liquid hydrocarbons and air, introduced by an injector are set on fire before entering the nozzle-pipe. If desired additional air may be supplied to this chamber.

By means of this apparatus it is possible to very effectively take away the pitch from the barrels, no such dangerous devices being required as in the case of employing spirit-vapor.

In the accompanying drawings: Figure 1 is a sectional elevation and Fig. 2 a plan view of the new apparatus.

The oil-supply pipe *a* with valve *c* and the air-supply pipe *b* with valve *d* meet in such a known manner as to form a mixing nozzle *e* which discharges into a channel *f* in a block of fire-proof material *g*. Preferably the fire-proof walling is surrounded by a case *h* which is covered by a plate *i* or the flange of a pipe *k* forming the continuation of the channel *f*. The pipe *k* is inclosed in a hollow-base *m* upon which the barrel to be treated is placed. The nozzle *o* projecting into the barrel is connected with the pipe *k* by means of an intermediate element *n*.

A tube *p* branches from the air-pipe *b* and leads to a passage *q* surrounding the channel *f* and discharges into the latter near the nozzle *e*.

This device is used in the following manner: Before bringing the barrel and the nozzle *o* in position, and after having opened the valves *c* and *d* I inflame the mixture of air and hydrocarbons exhausting from the pipe *k*, put the nozzle *o* by

means of the connecting piece *n* upon the pipe *k* and then place the barrel to be cleaned upon the base *m* in such a manner that the nozzle *o* projects through the bung-hole of the same. If desired air may be supplied through the tube *p* into the channel *f*, so that the combustion of the gases may be regulated in broad limits. The nozzle *o* has a smaller diameter than the opening of the barrel into which it projects, so that the products of combustion may escape through the latter and the exhaust pipe *u*. Liquids such as the loosened pitch collecting in the barrel drop into the groove *r* surrounding the intermediate piece *n* and are drawn off by a chute *s* into a receptacle *t*.

I claim:

1. An apparatus for cleaning and heating barrels, comprising a nozzle adapted to project into the barrel to be treated, an injector for simultaneously supplying air and fuel, and an enlarged chamber interposed between the nozzle and injector.

2. An apparatus for cleaning and heating barrels, comprising a nozzle adapted to project into the barrel to be treated, a combustion chamber, a pipe connecting the nozzle with said combustion chamber, an injector for supplying fuel and air to the combustion chamber, and a hollow barrel carrier inclosing the connecting pipe and provided with an outlet for the products of combustion.

3. An apparatus for cleaning and heating barrels, comprising a nozzle adapted to project into the barrel to be treated, a combustion chamber, a pipe connecting said nozzle with the combustion chamber, a fitting surrounding the nozzle and the connecting pipe at their juncture and provided with a groove for catching the liquids dropping from the barrel, a chute for drawing off the contents of the groove, and a hollow barrel carrier inclosing each connecting pipe and provided with an outlet for the products of combustion.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."