J. DANISCHEVSKI.

CLEANING DEVICE FOR HYDROCARBON VAPORIZERS.

APPLICATION FILED MAY 1, 1908.

**947,056.** Patented Jan. 18, 1910.

*Fig. 1.*

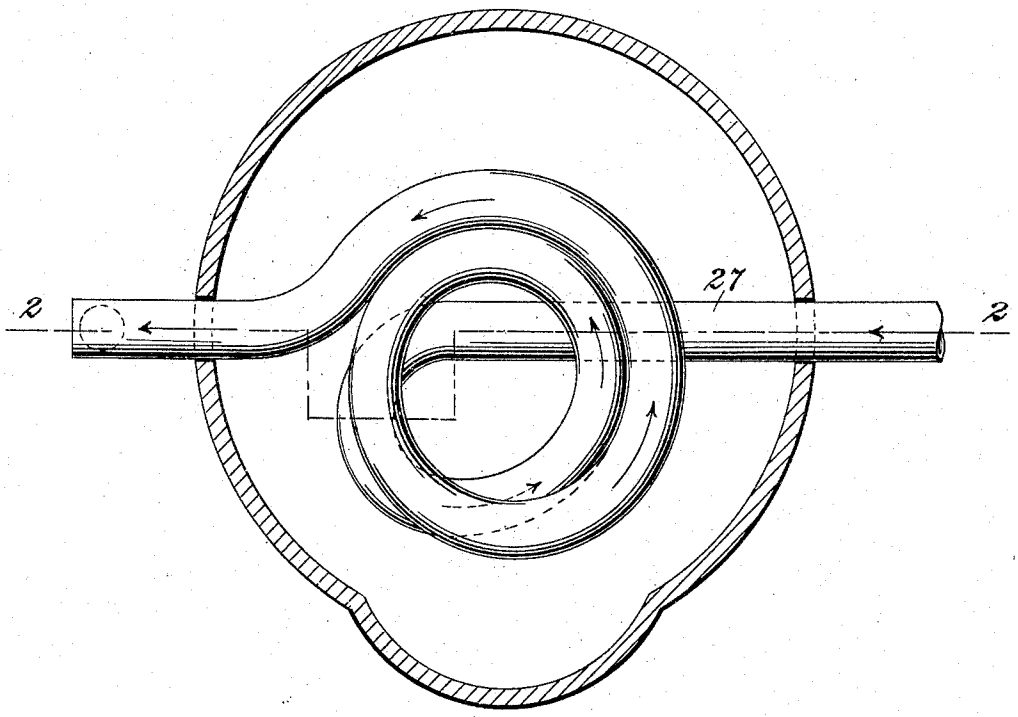


*Fig. 2.*

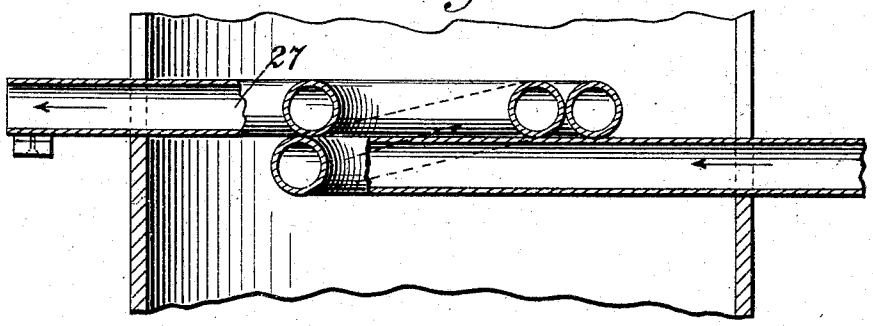


*Fig. 3.*

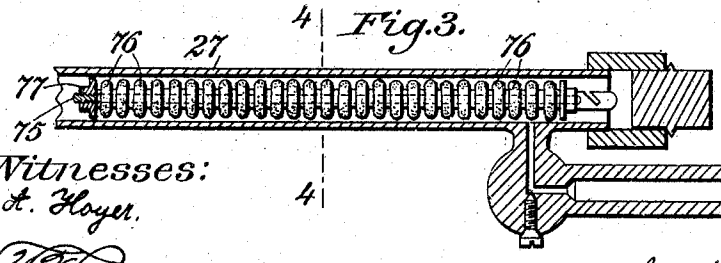


*Fig. 4.*

Witnesses:

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by Alfred Miller, Atty

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# UNITED STATES PATENT OFFICE.

JOSEPH DANISCHEVSKI, OF ST. PETERSBURG, RUSSIA.

## CLEANING DEVICE FOR HYDROCARBON-VAPORIZERS.

947,056. Specification of Letters Patent. Patented Jan. 18, 1910.

Original application filed August 11, 1906, Serial No. 330,254. Divided and this application filed May 1, 1908. Serial No. 430,401.

*To all whom it may concern:*

Be it known that I, JOSEPH DANISCHEVSKI, a subject of the Russian Emperor, and residing at St. Petersburg, in the Empire of Russia, have invented certain new and useful Improvements in Cleaning Devices for Hydrocarbon-Vaporizers, of which the following is a specification.

This invention relates to incandescent hydrocarbon-lamps, such as described in my original application, filed August 11th, 1906, Serial No. 330254, of which application this is a division.

The present invention, forming the subject-matter of this application, refers more particularly to vaporizers, used in connection with such lamps, and the object of my invention is to provide means for readily cleansing the vaporizers, and in order that the invention may be better understood, reference is had to the accompanying drawing, in which—

Figure 1 is a top view and Fig. 2 a section on the line 2—2 of Fig. 1. Fig. 3 a longitudinal section of a straight portion of the vaporizing tube, showing the cleaning device in position, and Fig. 4 a sectional view on the line 4—4 of Fig. 3.

The vaporizer shown in Figs. 1 and 2 consists of a single drawn tube, which is bent in the shape of a spiral or it may be bent in some other shape, the tube being so located, as to receive the heat from the burning lamp. For cleaning such tubes, it has been proposed to use wire-coils, covered with a layer of asbestos, which coils were ordinarily placed in the tube, where the beat is greatest. It also has been proposed to fill the tubes with thin sticks or stems of poorly conducting material. The inventor, however, has found that a much better result can be obtained for quickly and thoroughly cleaning the tube by placing therein a series of washers, which washers are connected by means of a central rod, the washers being made of a heat insulating material, such as asbestos. By using such a cleaner, the same may be easily removed, after which the washers can be taken from the rod and cleaned and then be assembled again and put back into the tube, all of which can be done quickly and conveniently.

As shown in Fig. 3, the washers 76 are placed on a rod 75, which itself is inserted in the vaporizer tube 27. The end of the rod 75 is provided with a screw-thread, on which a nut 77 is screwed, to hold the washers in place. Instead of a nut and screw thread, of course, other means can be used for the same purpose. When it becomes necessary to clean the tube 27, the rod 75 together with the washers 76 placed thereon is pulled out. After the nut 77 has been unscrewed, the washers 76 may be easily removed from the rod and cleaned by means of a brush or the like, after which they are again placed on the rod.

The washers may be of any desired shape. In the drawing they are shown as provided with rounded edges, so that they will not offer much friction when the rod 75 is inserted into the tube or removed therefrom.

What I claim and desire to secure by Letters Patent is:

1. A cleaning device for the vaporizer of an incandescent hydrocarbon lamp, comprising a rod and a plurality of heat insulating washers removably placed on said rod, and means for holding the washers on the rod.

2. A cleaning device for the vaporizing tube of an incandescent hydrocarbon lamp, comprising a rod adapted to be inserted in the vaporizer tube, a plurality of heat insulating washers removably placed on said rod, and a nut adapted to be screwed on to the end of said rod to hold the said washers in place.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH DANISCHEVSKI.

Witnesses:

H. A. LOVIAGUINE,

EDWD. WAASCHIEDT.