

(No Model.)

H. C. THOMAS.

PARAFFINE BRUSH.

No. 304,470.

Patented Sept. 2, 1884.

Fig. 1.

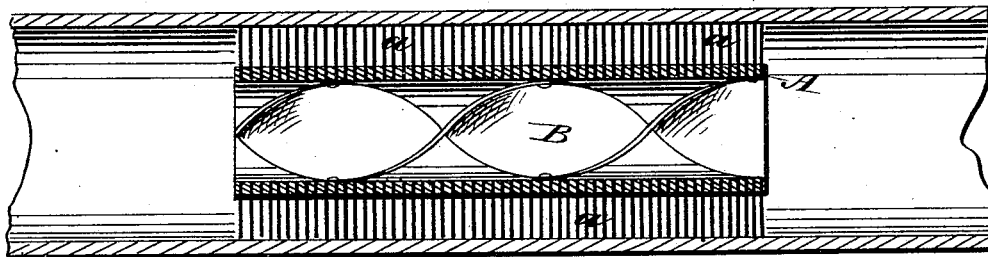
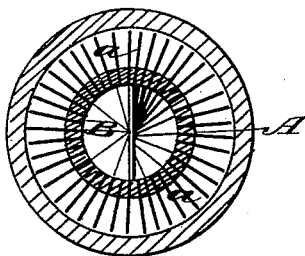


Fig. 2.



WITNESSES:

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HENRY C. THOMAS, OF ROCK VIEW, NEW YORK.

PARAFFINE-BRUSH.

SPECIFICATION forming part of Letters Patent No. 304,470, dated September 2, 1884.

Application filed February 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. THOMAS, of Rock View, in the county of Cattaraugus and State of New York, have invented a new and
5 Improved Paraffine-Brush, of which the following is a full, clear, and exact description.

It is well known that crude petroleum in its passage through pipes deposits paraffine on the walls of the pipe, thereby obstructing the
10 flow of petroleum and sometimes stopping it altogether. In very short pipes it is a simple matter to remove the paraffine by means of rods, scrapers, &c.; but in long lines of pipes it is impracticable to clean out the paraffine
15 by ordinary means.

The object of my invention is to provide means of clearing paraffine from long lines of pipe by mechanical means without the use of solvents or heat.

20 My invention consists of a clearing device preferably in the form of a cylinder suited to the size of the pipe to be cleaned, and provided with cutting-wires and with one or more spiral blades which are adapted to be acted on
25 by the flowing petroleum, so as to cause the clearing device to rotate and grind out any obstructions contained within the pipe.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate
30 corresponding parts in both the figures.

Figure 1 is a longitudinal sectional elevation of one of my improved clearing devices and a portion of pipe in which it is used.
35 Fig. 2 is a transverse section of the device and pipe.

In this example the clearing device is made in the form of a hollow cylinder, A, which may be of leather or other suitable material,
40 to which are suitably attached a series of wire-cutters, *a*, which project radially from

the exterior of the cylinder A, as shown. One or more blades, B, preferably made of metal in spiral form, are arranged within or otherwise suitably attached to the cylinder A, preferably within its interior, as shown. The
45 cylinder A is proportioned so that its length is about equal to four times its diameter.

The operation is as follows: The cleaning device A is inserted in the pipe to be cleaned,
50 and is pushed forward by the flowing petroleum or liquid, and the projecting wires *a* will loosen any paraffine or obstructive matter that may slightly adhere to the walls of the pipe, which matter, when loosened, will be carried
55 out by the current of the liquid. Should the wires come into contact with a deposit of paraffine or other matter of sufficient thickness to check the motion of the cleaning device A, or to stop it, the force of the current
60 will then act upon the blade B and cause the device A, with its cutters *a*, to rotate and cut away the deposit, after which the cleaning device will be pushed forward by the current,
65 as before described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A clearing device for petroleum and other pipes, made substantially as herein
70 shown and described, consisting of a cylinder with exterior cutters, and a blade to give rotation to the cylinder, as set forth.

2. The cylinder A, constructed with exterior cutters, *a*, and hollow center to receive a spiral
75 blade, substantially as shown and described.

HENRY C. THOMAS.

Witnesses:

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