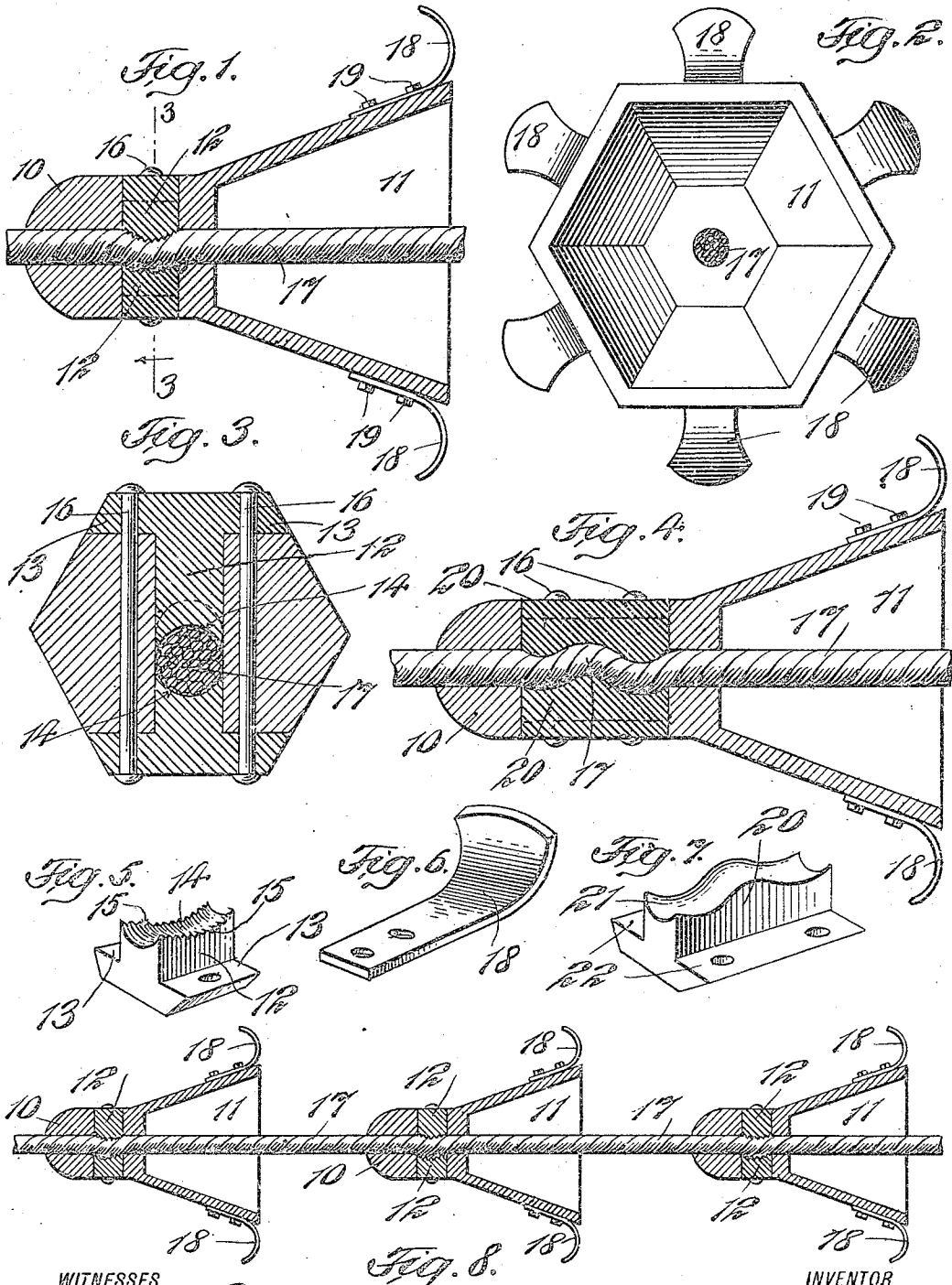


J. MASLIN.
 DEVICE FOR CLEANING PIPE LINES.
 APPLICATION FILED JAN. 22, 1909.

945,971.

Patented Jan. 11, 1910.



WITNESSES
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Detached Spigot

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DEVICE FOR CLEANING PIPE-LINES.

945,971.

Specification of Letters Patent. Patented Jan. 11, 1910.

Application filed January 22, 1909. Serial No. 473,664.

To all whom it may concern:

Be it known that I, JOHN MASLIN, a citizen of the United States, and resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Devices for Cleaning Pipe-Lines, of which the following is a specification.

This invention relates to a device for cleaning water pipes and mains, which is very flexible and therefore readily passes around the curves and angles of water mains.

The device consists of a multiplicity of individual elements fastened to any flexible connection, such as a cable or a rope, or attached to the cable used to pass the device through the main to be cleaned.

The invention has in view the production of an element that is securely and easily attached to a cable, and which does not injure the flexible body to which it is attached. The device is also simple, strong and easy to be repaired, all as now will be described, reference being had to the following description, the claim and the drawing, on which—

Figure 1 is a horizontal section of one of the individual elements constituting part of the device; Fig. 2 is a transverse section of the same element showing an expanded opening; Fig. 3 is a vertical section through line 3—3 of Fig. 1; Fig. 4 is a horizontal section of a modification of one of the individual elements; Fig. 5 is a perspective of a fastening key showing a toothed, hollow and curved side; Fig. 6 shows a scraper with a curved end; Fig. 7 is a perspective of a modified form of fastening key, showing a double curved hollow side without any teeth; Fig. 8 shows the complete device, in this case consisting of three elements fastened closely and flexibly on a cable.

In the drawing, Figs. 1, 4 and 8, there is shown a cylindrical portion 10, preferably provided with a curved end and forming the front end of a hollow expanded conical or bell shaped body 11, of a cleaning or scraping element. The cylinder 10 is attached to a cable 17, by means of keys 12, provided

with a base 13, and a projecting portion carrying a curved groove 14, provided with teeth, threads or other projections 15, shown in Fig. 5. The keys 12, are held in place by means of rivets or screws 16. The expanded conical or bell shaped body 11, carries a series of scrapers, 18, attached by means of rivets or screws 19.

In Figs. 4 and 7 is shown a modified form of fastening key 20, provided with a double curved groove 21, without any teeth or threads, and a base 22.

In practice I prefer to have a series of cleaning or scraping elements. Six of such elements fastened together constitute a satisfactory cleaning device for ordinary uses, but the number of elements may be increased or diminished as occasion may call for.

The device is pulled through the main to be cleaned by means of a cable as before stated. On account of the enlargement in the opening of the portion 11, the cable is free to move laterally, whereby the device is readily passed around curves and angles and the latter may even be as small as 90°.

Inasmuch as the hollow bodies may all be cast from the same mold, they can be produced very cheaply. Besides on account of the configuration of these bodies, they are very strong. It is evident that in the keys shown the teeth, threads or other projections may be used or omitted as may be desired, and also that the number of the curves used in the groove may be increased without departing from the spirit of the invention.

This device is an improvement upon the device shown in U. S. Patent 894,220, issued to me, and has the advantage over the old device that the elements are fastened more securely, that the teeth or threads of the groove 14 may be diminished in size, or entirely omitted. The form of peg used in this new device is stronger and enables pressure to be applied to the cable from both sides. It is also less liable to be torn loose by obstructing bodies in the main to be cleaned.

What I claim as new is:

In a device for cleaning water pipes or

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mains, a bell shaped body provided with
scrapers, a base attached to the bell shaped
body and provided with openings for fasten-
ing keys, and keys adapted to be inserted in
5 said openings and to hold a cable from oppo-
site sides.

Signed at Jersey City in the county of

Hudson and State of N. J. this 16th day of
Jan. A. D. 1909.

JOHN MASLIN.

Witnesses:

C. A. O. ROSELL,
EDWARD A. MARKLEY.