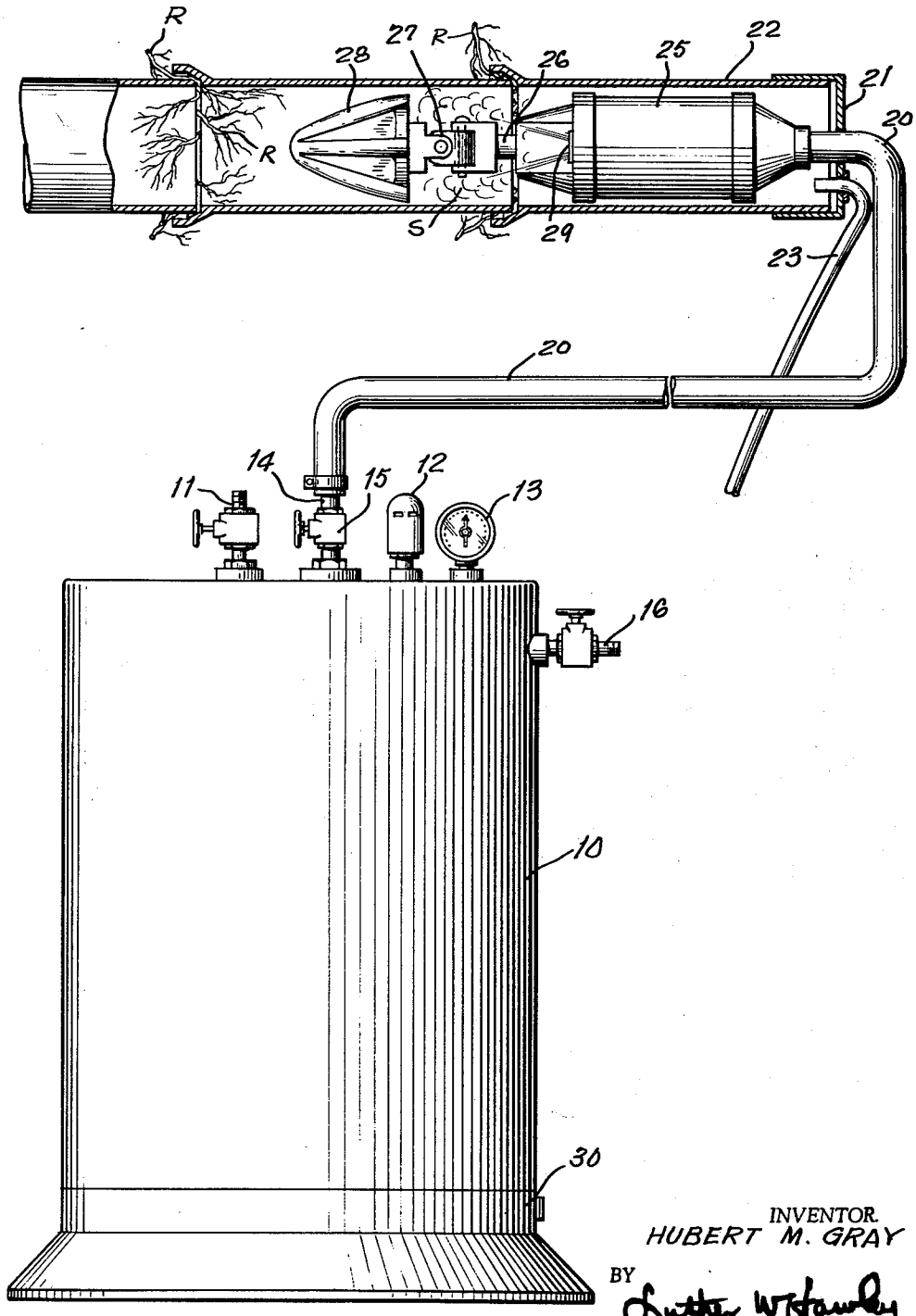
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DRAINPIPE CLEANING APPARATUS

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DRAINPIPE CLEANING APPARATUS

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1 Claim. (Cl. 15—104.12)

This invention relates to apparatus for cleaning drain pipes such as sewage pipes.

It is well known that roots of trees often enter sewage pipes through breaks or joints in the pipes, or clog or stop up the passage therethrough.

This invention has for its salient object to provide apparatus for clearing the passage through clogged pipes by cutting roots or clogged material and so treating the roots as to prevent regrowth thereof.

Further objects of the invention will appear from the following specification taken in connection with drawing which illustrates the apparatus embodying the invention.

In the drawing there are shown a tank or boiler **10** for the steam having an inlet conduit **11**, a safety valve **12**, a pressure gauge **13**, and an outlet conduit **14**, controlled by a valve **15**. The tank **10** also has an overflow conduit **16**.

The conduit **14** has connected thereto a flexible hose or pipe **20** on the outer end of which is placed a cap **21** dimensioned to fit over the end of the drain or sewer pipe **22**. The cap **21** has extending therethrough a pipe **23** for venting the steam in case of a flow back into pipe **22** due to clogging thereof. The end of pipe **20** has mounted thereon a steam turbine **25** of any suitable construction and the driven shaft **26** of the turbine is connected through universal joint **27** to a cutter unit **28** suitably constructed to cut the roots R. These roots as shown have penetrated the pipes through the pipe joints or through cracks therein and clogged the passage through the pipe.

The steam S escapes through vents **29** at the front of the turbine unit and the hot steam causes the roots to shrivel thereby effectively preventing regrowth thereof.

When the unit is in place for operation the tank or boiler **10** is filled with water to the proper working level by providing for approximately two inches of steam space. The water is then heated by a suitable heating element **30** and when the steam pressure has reached the desired point the outlet valve **15** is opened and steam passes through the hose **20** and energizes the steam turbine **25** causing the shaft **26** to rotate and also rotating the cutter connected thereto. This will effectively cut the

roots R and the steam escaping through vents **29** will cause the roots to shrivel thereby effectively preventing regrowth thereof. In case of a flow back of the steam due to stoppage in the pipe the steam will be vented through the cap **21** and vent pipe **23**.

In order to flush the pipe water may be introduced through the conduit **23** and also in order to clean oil and grease solvents may be introduced through the cap without danger of explosion.

Although one specific embodiment of the invention has been particularly shown and described it will be understood that change in construction and parts of the apparatus may be made without departing from the spirit of the invention as expressed by the following claim.

I claim:

Apparatus for cleaning a pipe comprising a source of steam, a flexible conduit, a valve between said source of steam and said conduit for regulating the passage of steam from said source to and through said conduit, a cap adapted to fit over the end of a pipe which is to be cleaned by said apparatus, said cap including a first generally centrally axially disposed opening slidably receiving said conduit and a second opening beneath said first opening, a vent pipe received in said second opening whereby excess stem, condensate and cut vegetable matter in the bottom portion of the pipe passes freely outwardly thereof, a steam turbine connected to said conduit beyond said cap relative to said source of steam, said turbine having a plurality of vents in fluid communication with the interior of the turbine for directing the steam from the turbine interior against vegetable matter in the pipe, said turbine further including a rotatable output shaft projecting beyond said vents, and a universal joint connecting said shaft to a cutter whereby vegetable matter in the pipe is cut by said cutter and thereafter scalded by steam from the plurality of vents to prevent the regrowth thereof.

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