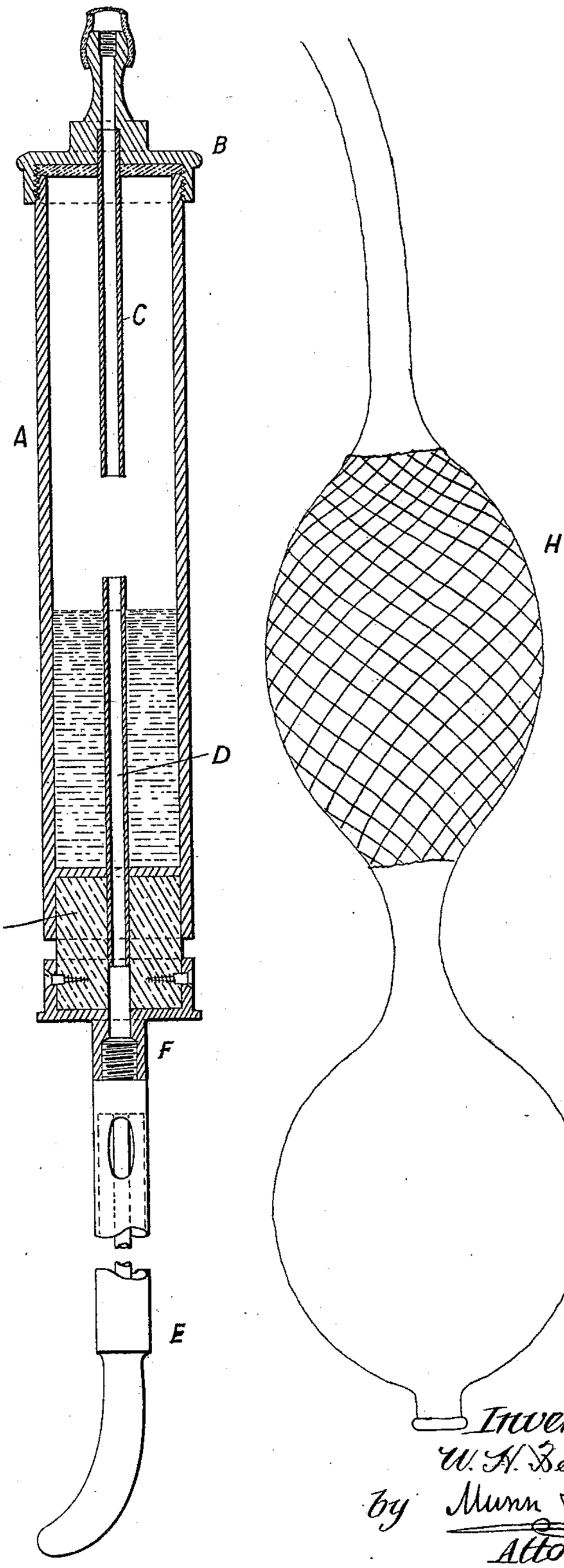
(No Model.)

W. H. BEACH.

THERMO CAUTER.

No. 420,672. Patented Feb. 4, 1890.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY BEACH, OF BRIDGENORTH, COUNTY OF SALOP, ENGLAND.

THERMO-CAUTER.

SPECIFICATION forming part of Letters Patent No. 420,672, dated February 4, 1890.

Application filed October 23, 1889. Serial No. 327,909. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY BEACH, veterinary surgeon, of 25 East Castle Street, Bridgenorth, in the county of Salop, England, have invented new and useful Improvements in Thermo-Cauters, of which the following is a full, clear, and exact description.

This invention relates to a portable receiver for use in connection with Dr. Paquelin's well-known thermo-cauter, the purpose of the receiver being to contain and retain the volatile liquid while permitting the carrying off of its vapor, in order to maintain the cauter at its proper state of incandescence.

The invention has special reference to that form of the Paquelin thermo-cauter in which a bottle is provided for containing the benzoline, which bottle it has been usual to suspend from the button-hole of the operator's coat, the bottle being connected by flexible tubes with the pneumatic bulb on the one hand and with the thermo-cauter on the other.

The thermo-cauter is used both for human surgery and in veterinary practice, and in the latter case this means of holding the store of benzoline is apt to lead to dangerous accidents, as, owing to a sudden movement of the operator, in order to escape injury by the animal under treatment or from other cause, the bottle is liable to be broken. Moreover, the movements of the operator are cramped, as, should he assume a stooping position, the bottle is apt to be inverted. The benzoline is consequently liable to choke the outlet-tube leading to the cauter, extinguish the latter, and escape in the liquid state from the instrument.

The object of my invention is to provide a reservoir which forms an integral part of the cauter itself, and which may be held in any position without causing the grave objections above referred to.

Reference is to be had to the accompanying drawing, forming part of this specification, wherein I have represented a central longitudinal section of my improved reservoir as applied to the Paquelin thermo-cauter.

The invention consists of a cylindrical metal chamber A, closed at the one end and fitted at the other end with a screw-cap B. Axially into the opposite ends of this cylinder project the inlet and outlet tubes C D, these tubes being separated by a sufficient interval to allow the air-current to exercise its inductive action on the vapors contained in the cylinder.

E is the Paquelin thermo-cauter, which, being well known, needs no description. It is connected by a screw-joint with a metal cap F, which is connected with the closed end of the cylinder A only through the intervention of a block G of ebony or other poor conductor of heat. The outer tube D communicates with an orifice through said block and with the bore of the screw-nozzle of the cap F, to which the cauter is screwed.

The receptacle A thus constitutes the handle of the cauter, and is filled to so much less than half its capacity that the benzoline cannot run out of the tubes C D in whatever position it may be held. The screw-cap B is provided with a nozzle for the attachment of a flexible tube by which the inlet-tube C is connected with the pneumatic bulb H. Screw-plugs (not shown) are provided for closing the inlet and outlet orifices in the caps B F when the air-pipe and cauter are disconnected from the reservoir for transport.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

1. The combination, with a thermo-cauter, of a cylindrical reservoir for volatile liquid, said reservoir having inlet and outlet tubes projecting axially within it from opposite ends and respectively in connection with the pneumatic bulb and with the cauter, said reservoir forming the handle for the thermo-cauter, substantially as specified.

2. The combination, with a thermo-cauter, of a cylindrical reservoir for volatile liquids,

said reservoir having air-inlet and air and vapor outlet tubes projecting axially within it from opposite ends and terminating within a short distance from each other, the said reservoir serving as the handle for the cauter and being connected thereto through a non-conducting block, substantially as specified.

The foregoing specification of my improvements in thermo-cauters signed by me this 10th day of September, 1889.

WILLIAM HENRY BEACH.

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