No. 707,775. Patented Aug. 26, 1902.

W. W. HARRIS.

EMBALMING CATHETER.

(Application filed Mar. 22, 1902.)

(No Model.)

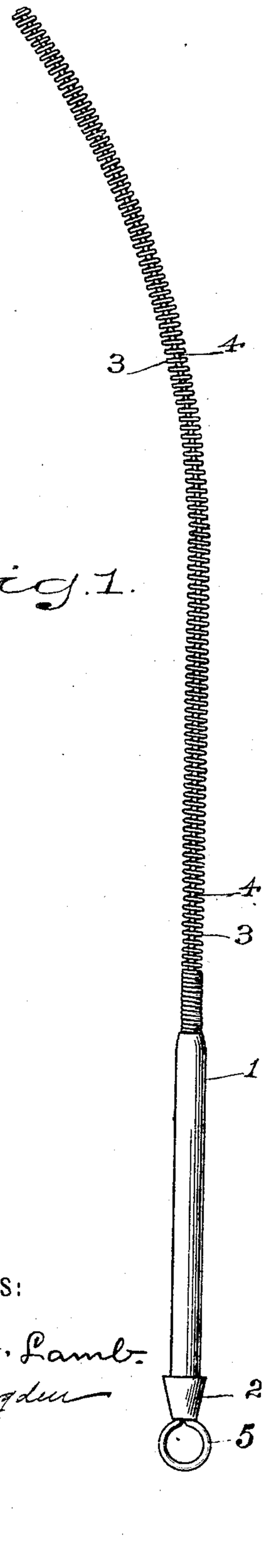

Fig. 1.

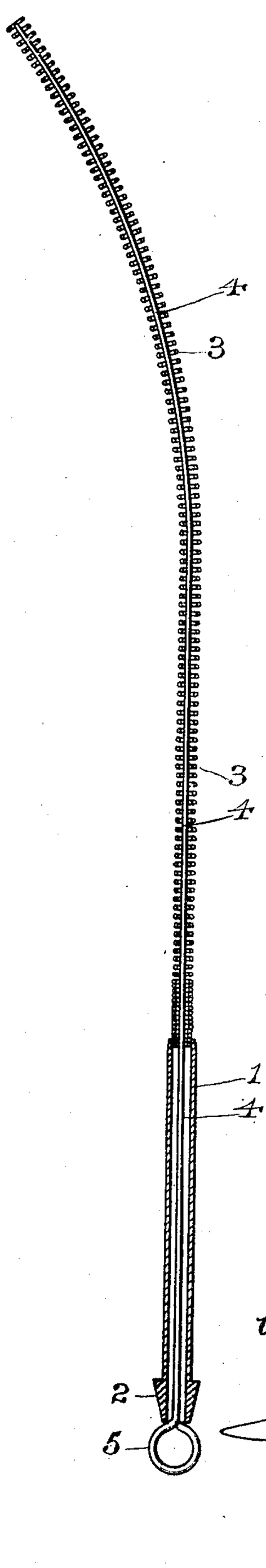

Fig. 2.

WITNESSES:

H. N. Lamb.
M. J. Snyder

INVENTOR
William W. Harris
BY
ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM W. HARRIS, OF NEW YORK, N. Y., ASSIGNOR TO THE MAX HUNCKE CHEMICAL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

EMBALMING-CATHETER.

SPECIFICATION forming part of Letters Patent No. 707,775, dated August 26, 1902.

Application filed March 22, 1902. Serial No. 99,473. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. HARRIS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Catheters for Embalming Purposes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in catheters, which are devices used for the purpose of draining the arteries and veins of the human body prior to the operation of embalming.

The object of my invention is to provide a device of this description which may readily be inserted within the arteries or veins, so that the blood may be drained from the human system, while at the same time the catheter will afford an efficient means whereby the embalming fluid may be pumped into the veins or arteries.

With this end in view my invention consists in the details of construction and combination of parts, such as will be hereinafter fully set forth and then specifically be designated by the claims.

In the accompanying drawings, which form a part of this application, Figure 1 is an elevation showing my improved catheter, and Fig. 2 is a sectional elevation of the same.

Similar numbers of reference denote like parts in both figures of the drawings.

Heretofore catheters have been made in coil-spring form of any desired length, and it has been customary to cut off short sections of such a device, so as to obtain the proper length of drainage-tube for a wound, and the coils have been spread so as to allow the walls of the wound to drain into the catheter; but this prior construction has never been used or adapted as a means for draining long veins or arteries for the purpose of embalming, for the reason that the coil-spring construction is collapsible and could never be introduced within the basilic vein, for instance, throughout its length.

My improvement comprises a metal tube 1, whose outer end is formed into an enlargement 2, over which any suitable rubber tube may be forced, a coil-spring 3, secured to the other end of said tube in such manner that the inside of the coil-spring and the inside of the tube form a continuous passage, while the coils of the spring are slightly spread, and a flexible wire 4, which extends through said passage throughout its length and is provided at its outer end with any suitable finger-ring 5.

In practice the catheter, with the wire 4 inside the same, is inserted within the vein or artery and pushed within the latter until the enlargement 2 barely projects beyond the body. The wire is then withdrawn and the blood is allowed to drain from the artery and from the lateral veins and small arteries which lead into the main artery, and this draining process may be assisted by suction from a suitable pump, if desired. After the draining process is completed a pump is attached to the metal tube 1 by means of a rubber-tube coupling forced over the enlargement 2, and the embalming fluid is pumped through this tube into the arteries and veins that have been drained. The tube is then withdrawn and the embalming process is completed.

The form of catheter shown in the drawings would not be serviceable for embalming purposes unless the interior wire was used to temporarily stiffen the catheter during its insertion, and right here I would state that a person familiar with the human anatomy will know just when to slightly withdraw the wire or to insert it a little farther within the catheter, according to the flexibility desired at the end of the catheter in following the course of the vein or artery. The coils of the spring 3 will hold the walls of the veins or arteries distended, so that they cannot collapse during the draining, and there can be no clogging whatever, since that portion of the catheter which holds the veins or arteries distended is open throughout its entire length.

I claim—

1. In a catheter for draining and embalming purposes, the combination of a metal tube,

a relatively long coiled spring normally of less diameter than the aforesaid tube and secured to the end of the same, the construction and arrangement of the parts being such that when the spring is distended a continuous passage between the tube and the aforesaid spring is formed, substantially as described.

2. In a catheter for draining and embalming purposes, the combination of a metal tube provided at its outer end with an enlargement to receive and hold any suitable coupling means, a relatively long flexible coiled spring, normally of less diameter than the aforesaid metal tube, and secured to the same, but adapted when distended to form a continuous passage with the interior of such tube, and a flexible wire entending through said tube and spring, whereby the catheter may be temporarily stiffened during its insertion, substantially as described.

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

WILLIAM W. HARRIS.

Witnesses:

F. A. KIRSCHMAN,

H. B. HANSON.