

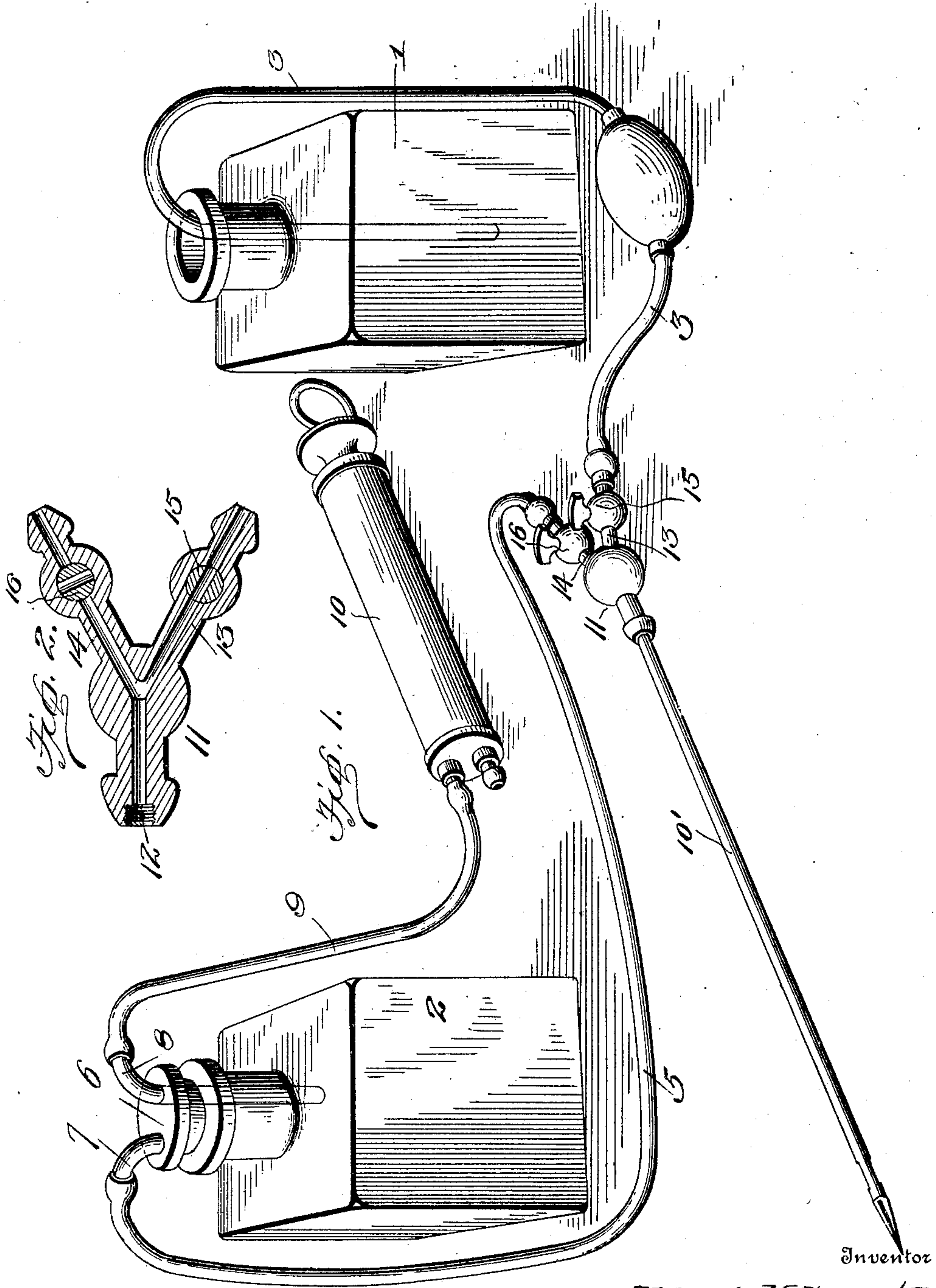
No. 711,394.

Patented Oct. 14, 1902.

A. H. GRANT.  
EMBALMING APPARATUS.

(Application filed June 2, 1902.)

(No Model.)



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Witnesses

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# UNITED STATES PATENT OFFICE.

ALBERT H. GRANT, OF RICHMOND, VIRGINIA.

## EMBALMING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 711,394, dated October 14, 1902.

Application filed June 2, 1902. Serial No. 109,965. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT H. GRANT, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Embalming Apparatus; and I do 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.

The invention relates to an improved embalming apparatus.

The object of the invention is to provide an embalming apparatus whereby the operations of aspirating and injecting and, if desired, washing out of any of the organs of the body may be carried out without the necessity of removing the trocar or any of the tubes, thus obviating all liability of the escape of any portion of the embalming fluid or any of the fluids from the body and rendering the apparatus safe in use and free from objections on the score of soiling the clothes or person of the operator or the contents of the apartment in which the operation is performed.

With this object in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of an embalming apparatus embodying my invention; and Fig. 2 is a sectional view of the coupling, showing the adjacent ends of the trocar and tubes connected thereto.

Referring now more particularly to the drawings, the numeral 1 represents a vessel designed to contain the embalming fluid and the numeral 2 a vessel to receive the fluids or substances drawn off during the operation of aspiration. The embalming fluid is conducted from the vessel 1 to the trocar or injecting instrument through a tube 3, while the fluids drawn off from the body by the trocar are conducted therefrom to the vessel 2 through a tube 5.

The vessel 2 has inserted therein a nozzle or fitting 6, provided with branches 7 and 8,

to one of which is applied the tube 5 and to the other a tube 9, connected to a pump 10, whereby a suction action is produced to draw off from any of the organs any fluids that may be contained therein prior to the operation of injecting the embalming fluid.

The trocar 10' may be of any ordinary construction and has applied thereto the coupling or fitting forming the subject-matter of the invention, the same consisting of a Y connection 11, having an internally-threaded end 12 to receive the threaded outer end of the trocar and provided with the divergent branches 13 and 14, having controlling-valves 15 and 16. These branches are adapted to receive the ends of the tubes 3 and 5, which are to be connected therewith. The valves 15 and 16 are provided for opening and closing communication between the trocar and the two tubes 3 and 5, so that either may be used at will independently of the other and without the necessity of detaching said tubes from the coupling.

In the use of the device it will be readily understood that after the trocar has been inserted into the desired organ the operation of aspiration may be carried out by closing the valve 15, so as to cut off communication with the tube 3, and opening the valve 16, so as to open communication between the trocar and vessel 2 through the medium of the tube 5. Upon the operation of the pump a suction will then be produced whereby the contents of the organ will be drawn out through the trocar and pass therefrom through the tube 5 into the vessel 2. The embalming fluid may then be injected by closing the valve 16 and opening the valve 15 and operating a bulb or force-feed device applied to the tube 3, whereby the fluid will be drawn from the vessel 1 and forced through a tube 3 and trocar into the organ under treatment. If it be desired to cleanse or wash out the organ prior to the introduction of the embalming fluid, this may be accomplished in a similar manner by applying the free end of the tube 3 to a vessel containing water or a cleansing fluid. These several operations may be performed without the necessity of detaching the trocar or removing either one of the tubes 3 and 5 from the Y coupling or fitting.



Heretofore it has been customary in the use of the ordinary embalming apparatus to fit or apply the tubes separately to the trocar, which necessitated the detachment of a tube 5 when another was to be fitted to the trocar in its place. As this often resulted in the escape from the trocar of fluids from the organ under treatment or in the escape from the tubes of the embalming fluid or matter drawn off 10 during the operation of aspiration, it will be readily understood that the operation of embalming was not only objectionable from a sanitary standpoint, but also on account of the danger of infection from the fluids. The 15 operation was further objectionable because of the difficulty experienced by the operator in preventing soiling of his hands or clothing or the contents of the apartment in which the operation was carried out. These objections 20 are avoided by the use of my invention, which provides a means whereby the parts necessary for carrying out the operations are all connected to the trocar and independently controlled in such manner that either may be 25 employed at will independently of the other without the necessity of detaching or disturbing any of the parts. Owing to the fact that both tubes 3 and 5 are connected with the trocar, it will be seen that as the valves 30 and 16 permit either to be used at will no necessity for the removal of either tube exists while the instrument is in use in aspirating and in injecting. Hence all liability of any of the fluids escaping will be entirely avoided. 35 By these means also the necessity of withdrawing the trocar from the organ after aspiration is obviated, thus avoiding the difficulties attendant after the removal of the trocar in again inserting the trocar within a 40 collapsed organ.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily un-

derstood without requiring an extended explanation. 45

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of 50 the advantages thereof.

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

1. In an embalming apparatus, the combination with a trocar, an eduction device, an 55 induction device, and tubes connected with said devices, of a coupling for connecting said tubes to the trocar, and means applied to said coupling for controlling independent 60 communication between said tubes and the trocar, whereby communication may be established between either tube and the trocar and communication cut off between the other tube and trocar, thus permitting the opera- 65 tions of aspirating and injecting to be carried out in regular order without removing the trocar or either tube, substantially as set forth.

2. In an embalming apparatus, a trocar, a 70 Y-coupling applied thereto, tubes provided with induction and eduction devices and connected to the branches of the coupling, and valves in said branches, whereby communication may be established between either tube 75 and the trocar and communication cut off between the other tube and trocar, thus permitting the operations of aspirating and injecting to be carried out in regular order without removing the trocar or either tube, 80 substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALBERT H. GRANT.

Witnesses:

J. C. WILLSON,  
BENJ. E. COWL.