

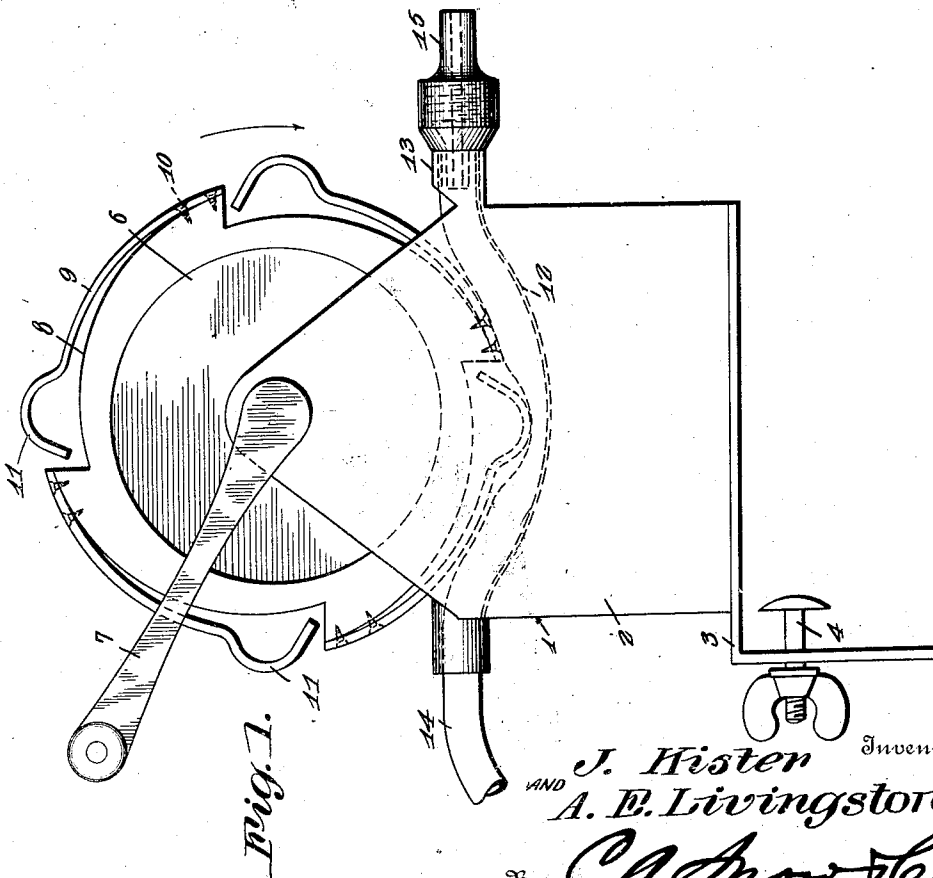
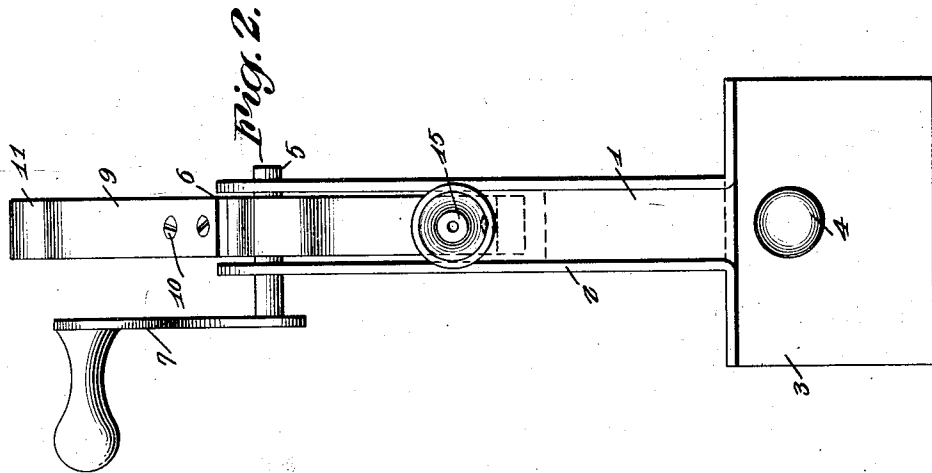
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FORCE PUMP

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FORCE PUMP.

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This invention relates to a force pump designed primarily for use in embalming human bodies.

One of the objects of the invention is to provide a simple and efficient structure which will operate intermittently to force the embalming fluid into the body, thereby setting up pulsations simulating those produced by the human heart so that there is no danger of stoppage of flow during the embalming process due to clots.

A further object is to provide a device of this character which can be operated easily and which is formed of but few parts.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—

Figure 1 is a side elevation of the structure.

Fig. 2 is an end elevation thereof.

Referring to the figures by characters of reference 1 designates a base block secured between wings 2 upstanding from an attaching brackets 3, this bracket 3 being provided with a bolt 4 whereby it can be attached readily to a supporting structure. The wings constitute bearings for a shaft 5 to which is secured a rotor 6. A crank 7 is connected to the shaft and by means thereof the wheel can be rotated readily.

Formed in the periphery of the wheel are regular spaces 8 each of which gradually increases in depth toward one end. Arranged within each recess is a leaf spring 9, one end of which is attached to the periphery of the wheel as shown at 10 while the other end is bowed outwardly as at 11 to provide a compressing shoe normally projecting beyond the periphery of the wheel.

The top of the block 1 is concaved longitudinally as at 12 so as to lie substantially concentric with the shaft 5. The wings 2 are formed with tubular extensions 13 in which is seated a flexible compressible tube 14. This tube extends between the block 2 and the wheel 6 and provided, at one end

with a coupling 15. In using this device the intake tube used for supplying fluid to the pump is connected to the coupling 15 while the other end of the tube 14 is adapted to supply the fluid to the body. After proper connections have been made the wheel 6 is rotated in the direction indicated by the arrow in Fig. 1. This will cause the shoes 11 to move successively into contact with that portion of the tube above block 2.

Thus the shoe will place the tube under compression and will flatten it at the points of contact. Obviously as the wheel is rotated, the compressed portion will be shifted longitudinally of the tube so that any fluid contained in the tube in the path of the compressed portion will be expelled therefrom. Shortly after one shoe has moved out of contact with the tube another shoe comes into contact therewith, compresses it, and wipes longitudinally along the tube. Thus a pulsating pumping action is set up which will force the embalming fluid into the body intermittently and tend to break up clots and such action simulates that set up by the human heart which has been found in practice that the body is more readily embalmed than would otherwise be possible.

By referring to Figure 1 it will be noted that the distance between the ends of the concaved face of the block 1 is less than the distance between any two adjoining shoes 11 of the rotor. Thus it is possible to bring the rotor to a position where the shoes will be above or beyond the end of the block and not fully compressing the tube. When the shoes are thus located liquid can flow freely through the tube.

The shoes can be adjusted to increase or reduce the pressure on the tube simply by adjusting the screws 10. By loosening those screws nearest the ends of the springs 9 and tightening the remaining screws the shoes can be shifted inwardly toward the axis of the rotor. By reversing this adjustment the shoes can be adjusted outwardly from the rotor.

What is claimed is:—

A pump including a block a rotor having its axis fixed relative to the block, said rotor having a series of peripheral recesses gradually increasing in depth in a direction opposite to the direction of rotation, springs extending partly around the rotor and seated within the respective recesses, means for adjustably attaching the advancing ends of the

springs to the walls of the recesses at the shallow or outer ends thereof, the other end of each spring being bowed outwardly to constitute a compressing shoe, said block
5 having a concave face a portion of which is concentric with the axis of the rotor, the length of said concentric portion being less than the distance between any two shoes of the rotor, a flexible tube supported by the
10 concave face of the block for successive en-

gagement by the shoes, said shoes constituting means for compressing that portion of the tube upon the concentric portion of the concave face; and means for actuating the rotor.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

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JAKE KISTER.