

No. 768,523.

PATENTED AUG. 23, 1904.

G. DITTMAR.

MASSAGE IMPLEMENT.

APPLICATION FILED JAN. 15, 1904.

NO MODEL.

Fig. 1

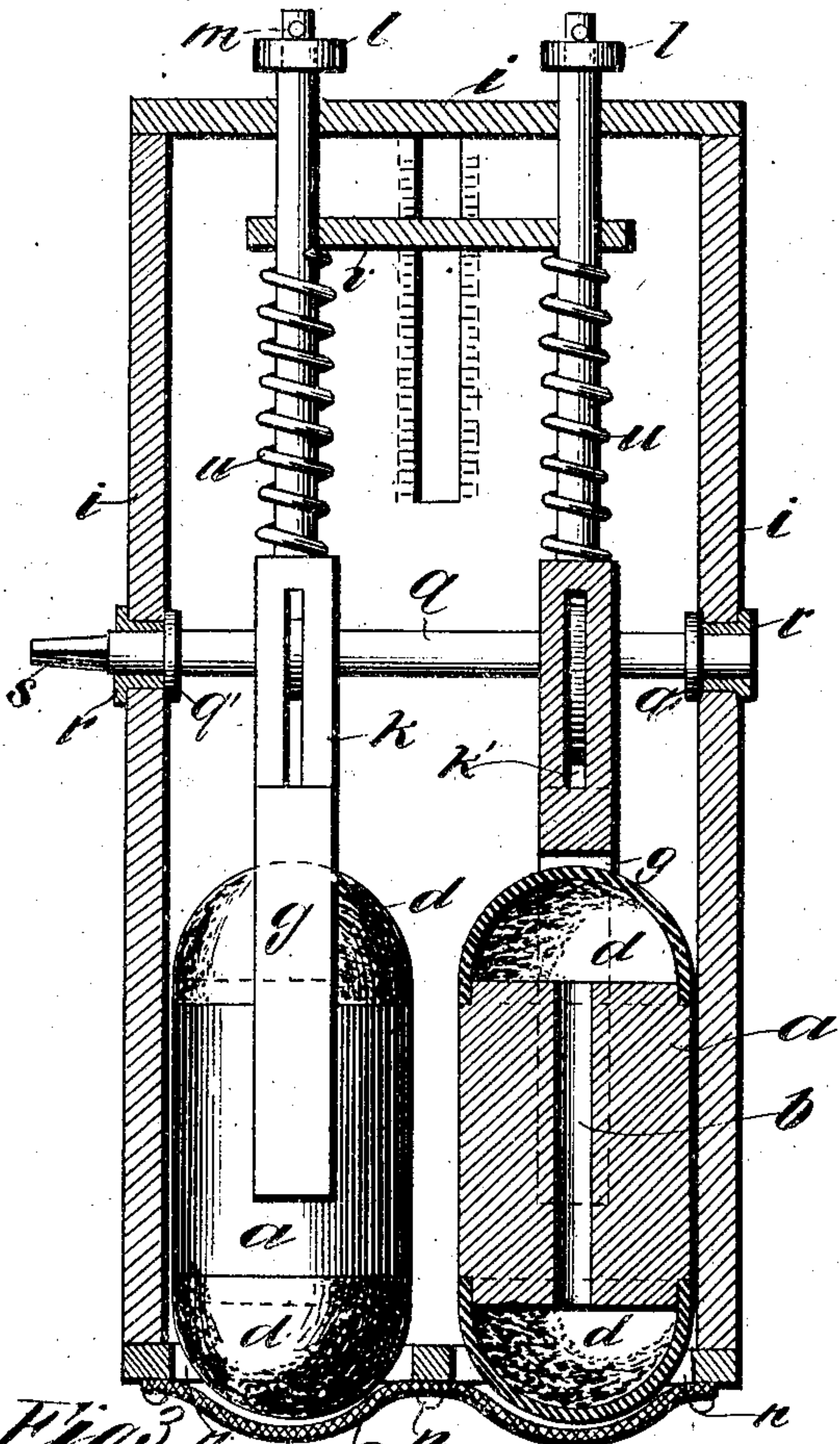


Fig. 2

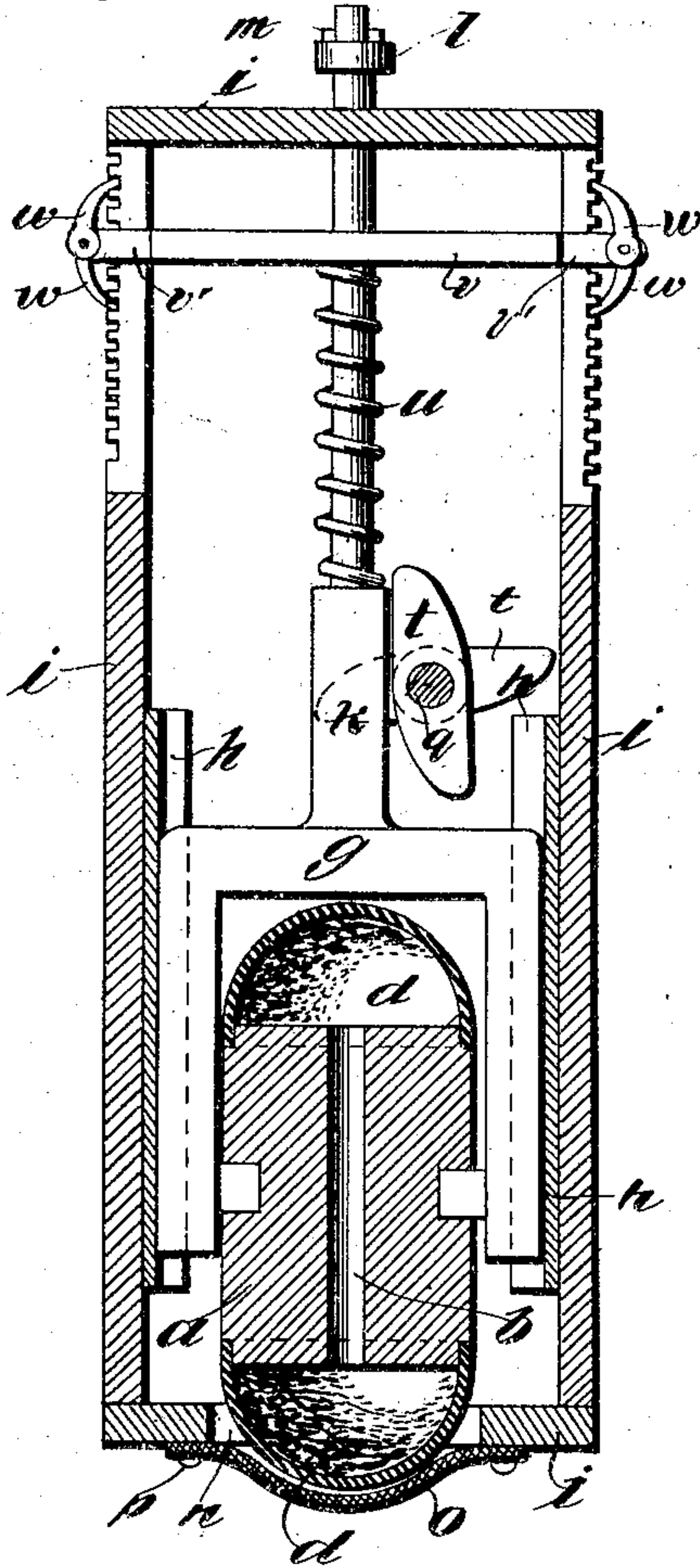


Fig. 3

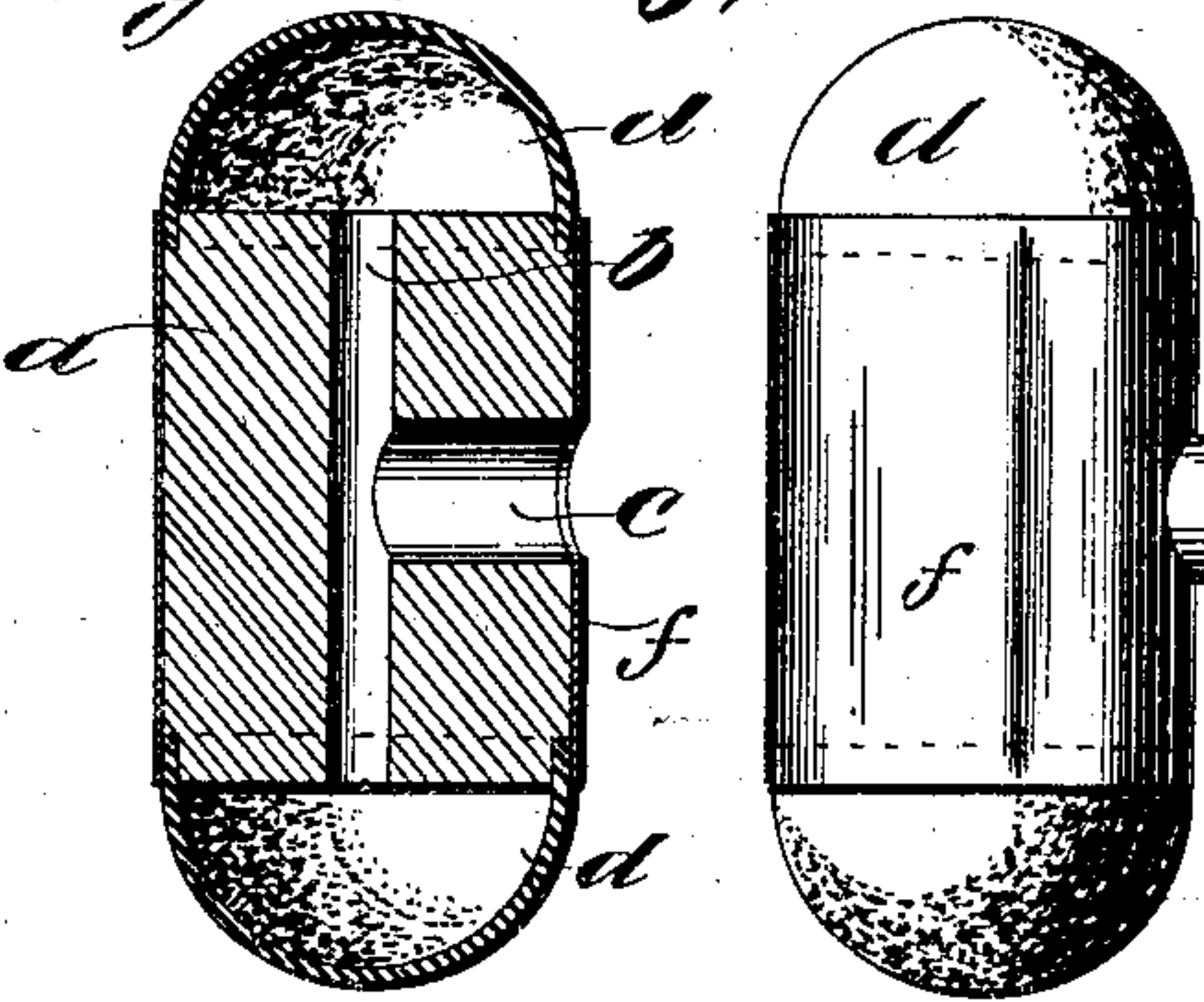
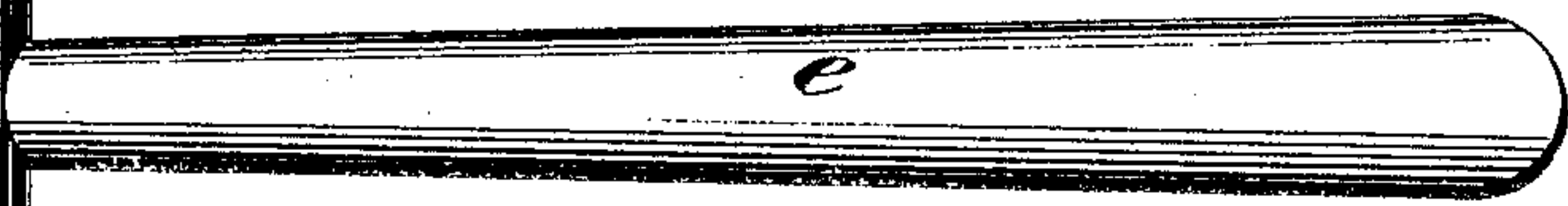


Fig. 4



WITNESSES

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MESSAGE IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 768,523, dated August 23, 1904.

Application filed January 15, 1904. Serial No. 189,211. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE DITTMAR, a citizen of the United States of America, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Massage Implements; 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 an implement to be used for mechanical massage, and it is especially intended for home or individual use, where the services of a professional masseur are not desired or convenient.

The apparatus comprises a number of reciprocating hammers provided with very soft elastic, preferably pneumatic, faces which are applied to the muscles by a light pounding action. A rubbing action is in most instances objectionable, because it displaces more or less the delicate network of the capillaries, while a direct gentle pressure obtained by a blow with a soft pneumatic implement produces in the tissues a kneading of every flexible part from the surface skin to the bone without bruising, abrasing, or distorting the parts.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical section through the machine, showing one of the hammers in elevation and another in longitudinal section. Fig. 2 is a vertical section taken at right angles to Fig. 1. Figs. 3 and 4 show in section and elevation a hammer by itself, provided with a handle for manual use.

The massage-hammer (more particularly illustrated in Figs. 3 and 4) consists of a cylindrical body of wood *a*, provided with a longitudinal bore *b* and a transversal bore *c*, having secured to both ends a hemispheric hollow rubber ball *d*. A handle *e* is glued in the bore *c*, and *f* is a nickel-plated tube which covers the body *a* and the joints between the same and the rubber balls, so as to offer a very neat appearance. A lateral hole of the same size as the bore *c* is cut into the metal tube *f* for the passage of the handle *e*, which is preferably made of wood. The bore *b* serves as an open communication between the rubber

half-balls *d d*, and thus the elasticity of an entire rubber ball is combined with the weight of the body *a*, enabling the user to impart blows more or less hard without danger of bruising.

In using the elastic hammers in the machine, Figs. 1 and 2, they are secured to a yoke *g*, which is guided in suitable guides *h*, secured to the walls of a casing *i*. A shank *k* projects from the yoke *g* upwardly and is provided with a slot *k'* for a purpose which will be hereinafter explained. The upper part of the shank *k* is smaller in diameter and passes through a hole in the top of the casing *i*, guiding the hammer and the yoke in the reciprocations. A rubber washer *l* may be secured to the end of the shank in any suitable manner—for instance, by a cross-pin *m*, as shown. The upper washer serves to limit the downward motion of the hammer produced by a spring when a cam or tappet is lifting the hammer against the action of said spring, as will be hereinafter explained. The bottom of the casing *i* is provided with circular openings, allowing the surfaces of the hammers to pass far enough so as to come in contact with the human body, as may be desired. These openings *n* may be free or may be covered with an elastic cloth *o*, which can be secured to the bottom of the casing by screws or rivets *p*. *q* is a revolving shaft having two collars *q' q'* and revolving in bearings *r* in the side walls of the casing. One end of the shaft *q* is provided with a square head *s*, serving to receive a crank or the end socket of a flexible shaft, which may be run by foot-power. The collars *q'* secure the shaft against longitudinal displacement, and the shaft carries in register with the slots *k'* in the shanks *k* cams or tappets *t*, adapted to enter the slots *k'* and to lift the shanks *k* and the hammers. Each cam has the shape of a double-armed lever capable of lifting the hammer twice during the revolution of the shaft. The second cam is displaced with respect to the first at an angle of ninety degrees, and thus the body can receive four blows at each revolution of the shaft, as will be easily understood.

It is evident that the device as shown and described can be doubled by arranging two

shafts *q* parallel to each other and by having four hammers in a casing *i* of double size.

The offset of the shank *k* supports a spring *u*, which is compressed when the cam *t* lifts the hammer. The upper ends of the springs *u* lean against a plate *v*, which is provided at two opposite sides with trunnions *v'*, passing through vertical slots of the walls of the casing *i* and carrying outside pawls *w*, which engage a rack or racks provided in the outer surface of the casing alongside of these slots. Thus by disengaging the pawls *w* the plate *v* may be adjusted along the racks in any suitable position, giving to the springs *u* more or less tension, and the plate will be held in said position when the pawls *w* are thrown again into engagement with the teeth of the racks. In this manner the blows of the hammers can be varied in force according to circumstances.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

1. A massage implement or hammer having at both ends of its body the face as well as the pin end an approximately hemispherical hollow body of a soft elastic material firmly and air-tightly secured, and having a longitudinal bore through the body, forming a communicating channel between said hollow bodies, substantially as described and for the purpose set forth.

2. A massage implement or hammer having at both ends of its body the face as well as

the pin end an approximately hemispherical hollow body of a soft elastic material firmly and air-tightly secured; and having a longitudinal bore through the body, forming a communicating channel between said hollow bodies, said hammer being suitably guided and being provided with means to impart to it a reciprocating motion in such guides substantially as described.

3. A massage implement or hammer having at both ends of its body the face as well as the pin end an approximately hemispherical hollow body of a soft elastic material firmly and air-tightly secured, and having a longitudinal bore through the body, forming a communicating channel between said hollow bodies, said hammer being secured in a yoke, adapted to slide in guides on the walls of a casing inclosing the hammer and having openings in the top for the passage of an extension or shank of said yoke, in combination with a spring, coiled around said extension and adapted to exert a pressure on the hammer, one end of said spring pressing against an adjustable plate, and cooperating with a shaft, carrying-cams adapted to enter slots in the shank and to move the hammer against the spring, substantially as described.

In testimony whereof I affix my signature.
GUSTAVE DITTMAR.

In presence of
GEO. HEINICKE,
F. FRANKE.