

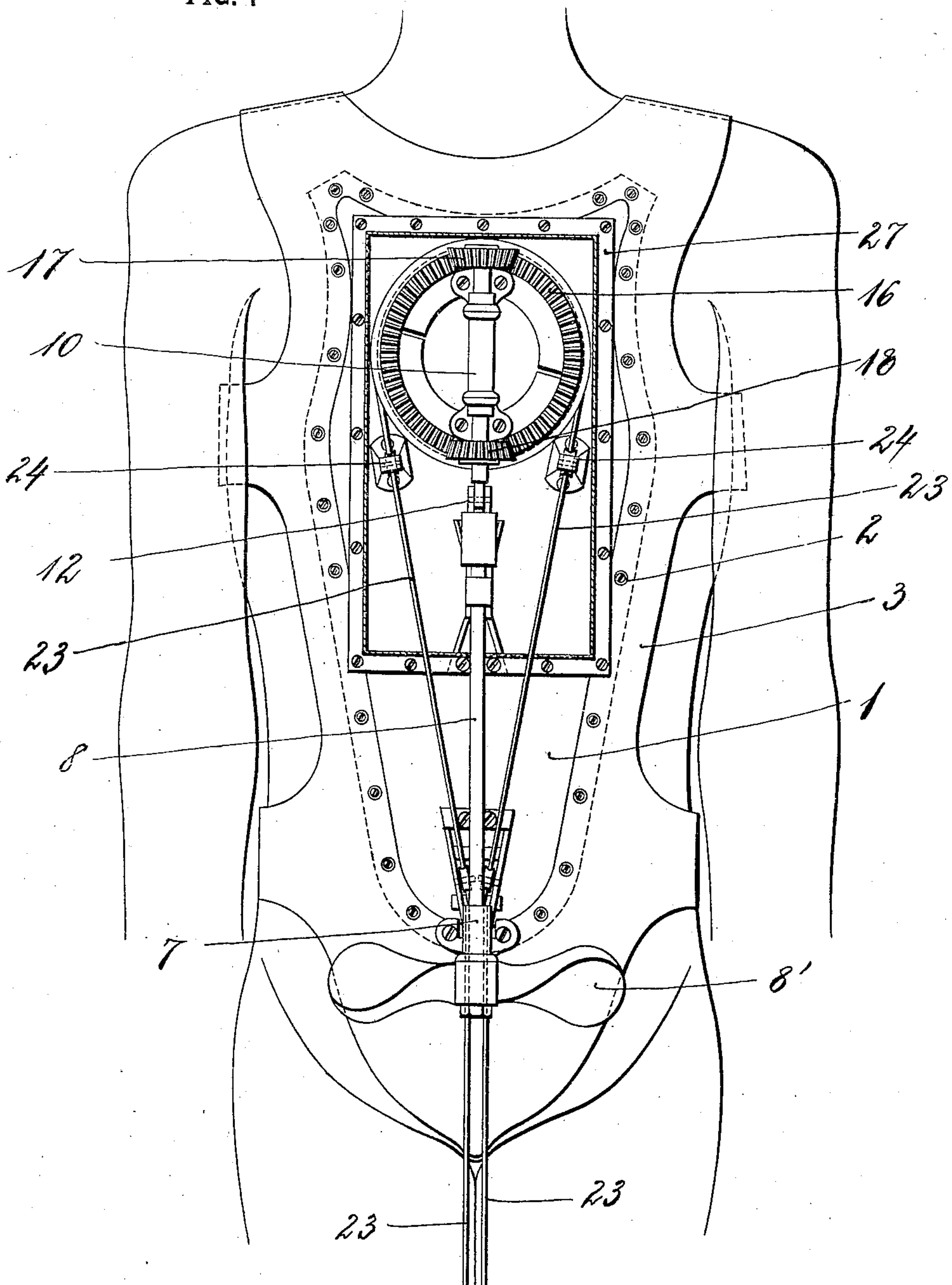
No. 863,013.

PATENTED AUG. 13, 1907.

J. G. BAUM.
SWIMMING APPARATUS.
APPLICATION FILED OCT. 3, 1906.

4 SHEETS—SHEET 1.

FIG. 1



Witnesses
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Alexander Ordman

Inventor
John G. Baum
By his Attorney
Max W. Ordman

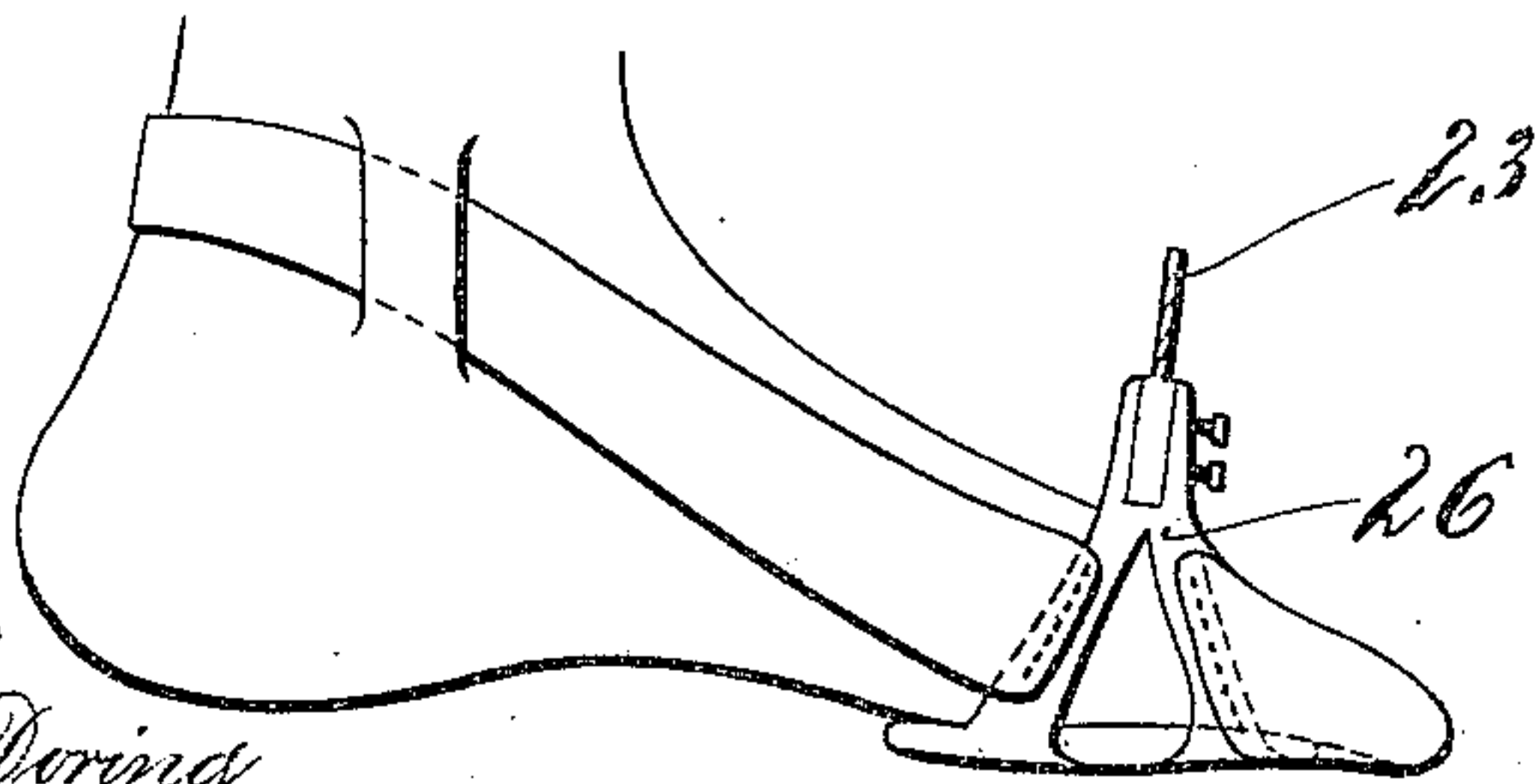
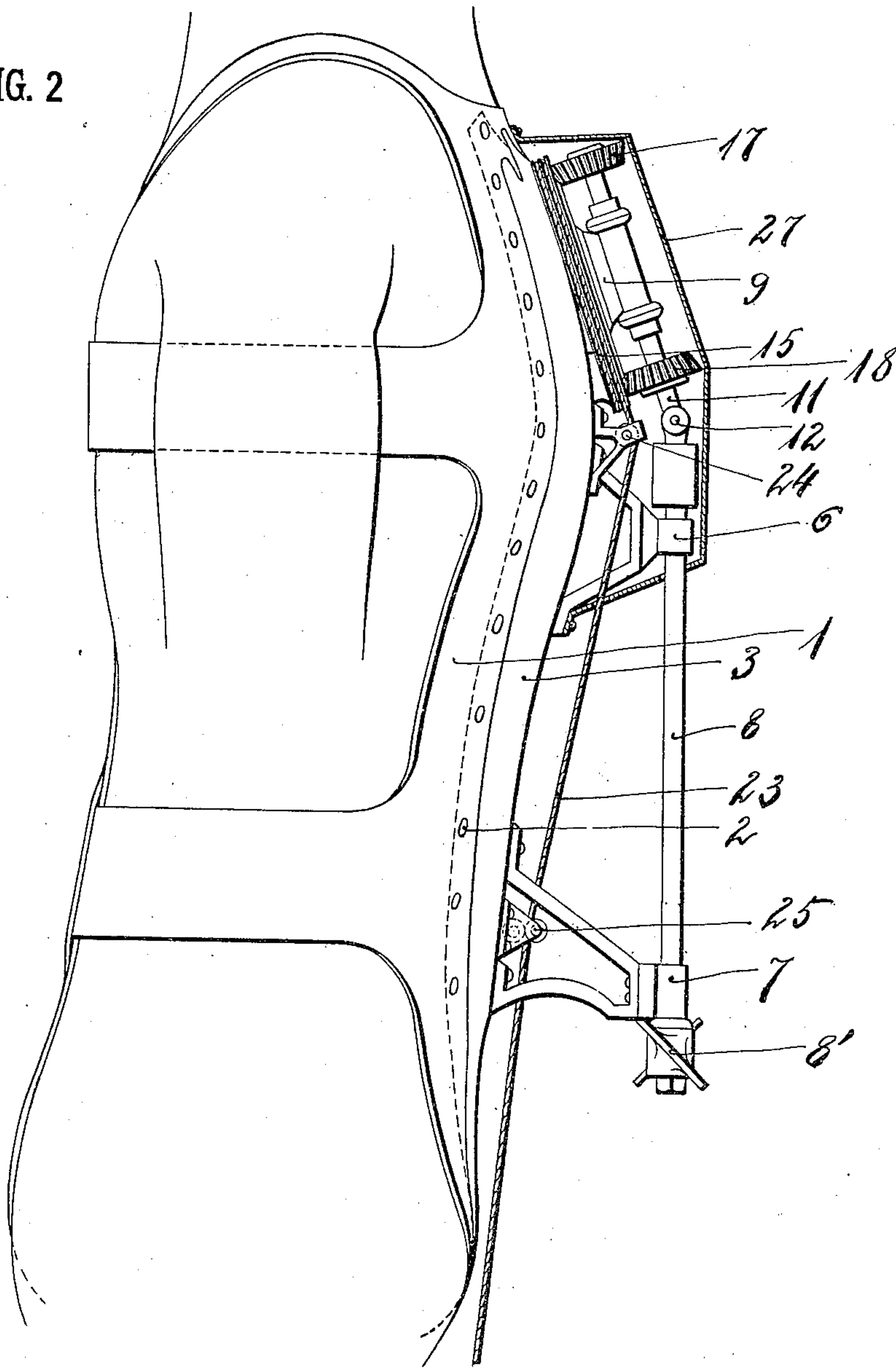
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4 SHEETS—SHEET 2.

FIG. 2



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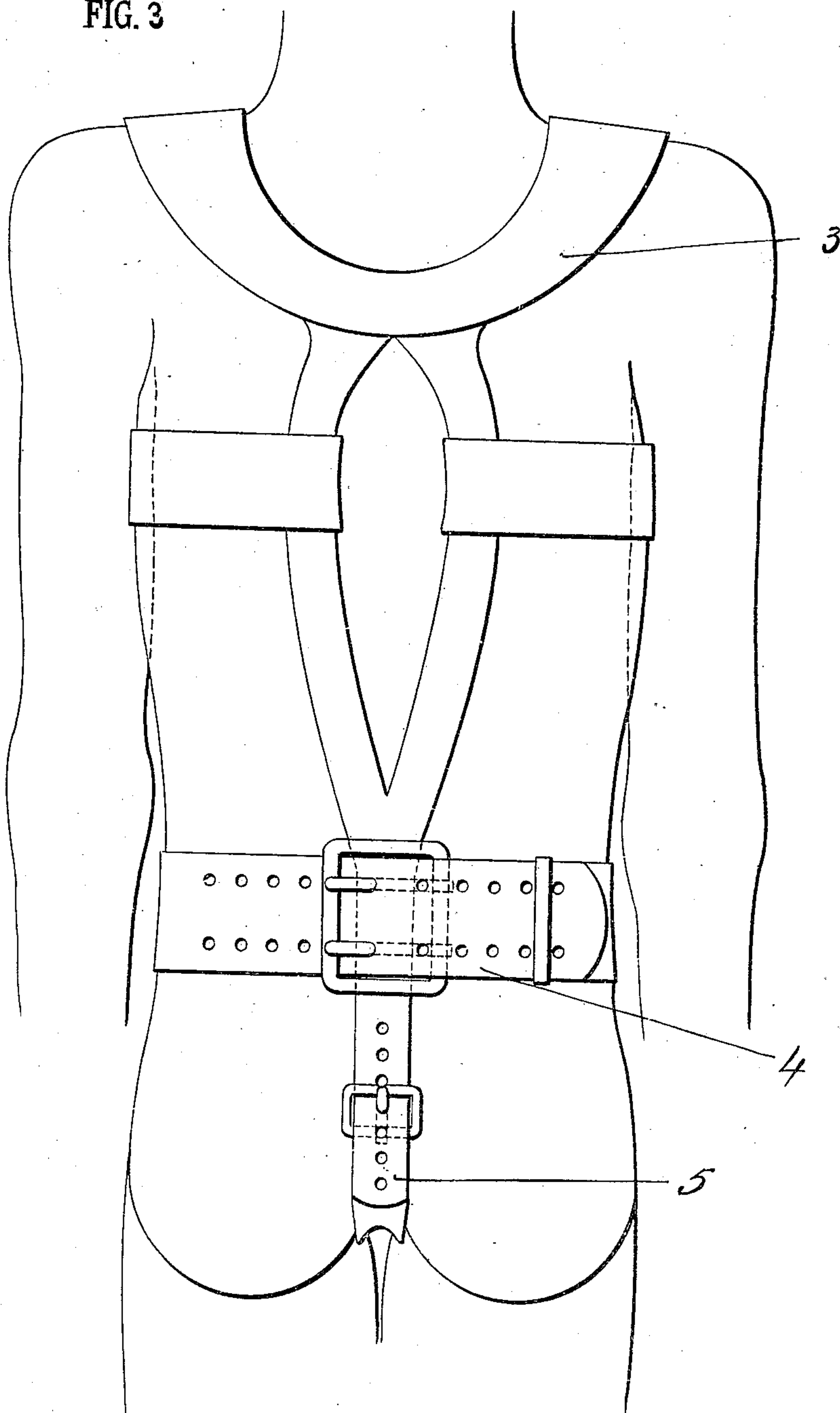
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4 SHEETS—SHEET 3.

FIG. 3



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4 SHEETS—SHEET 4.

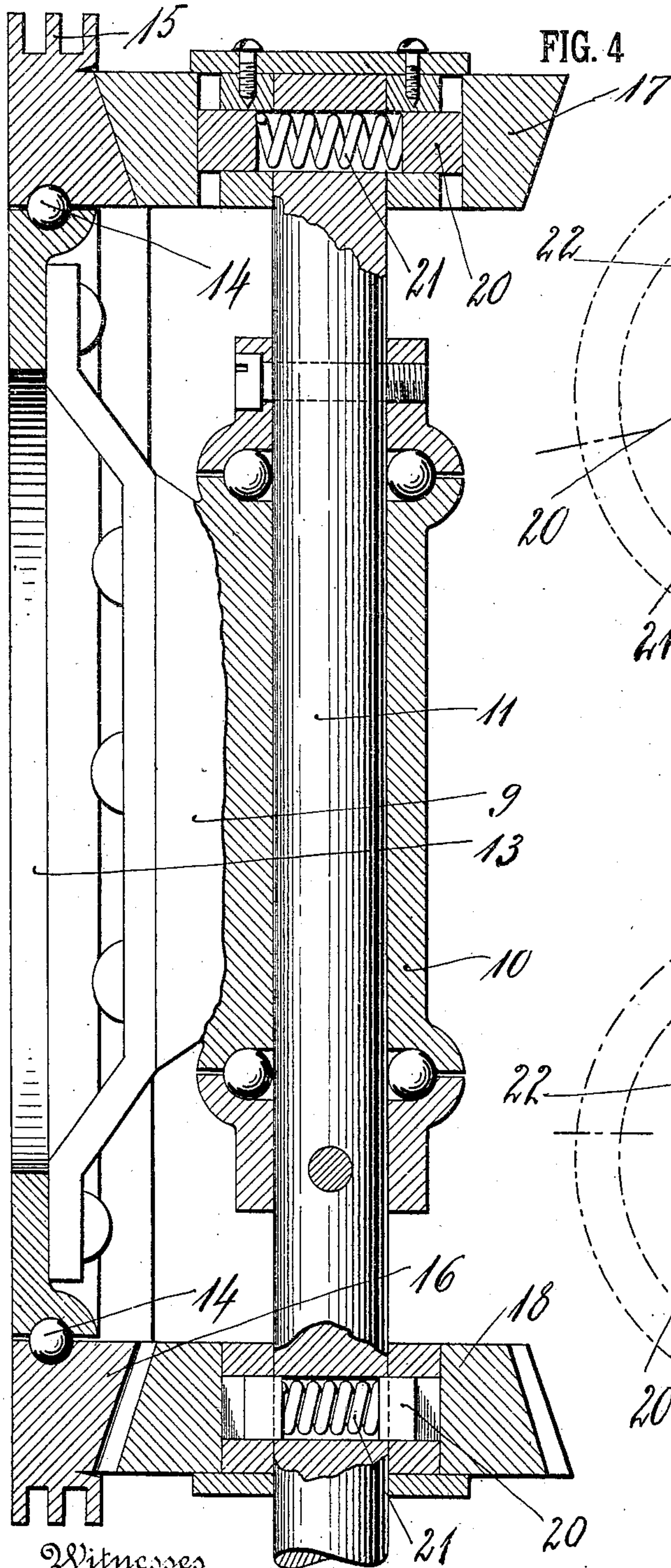


FIG. 4

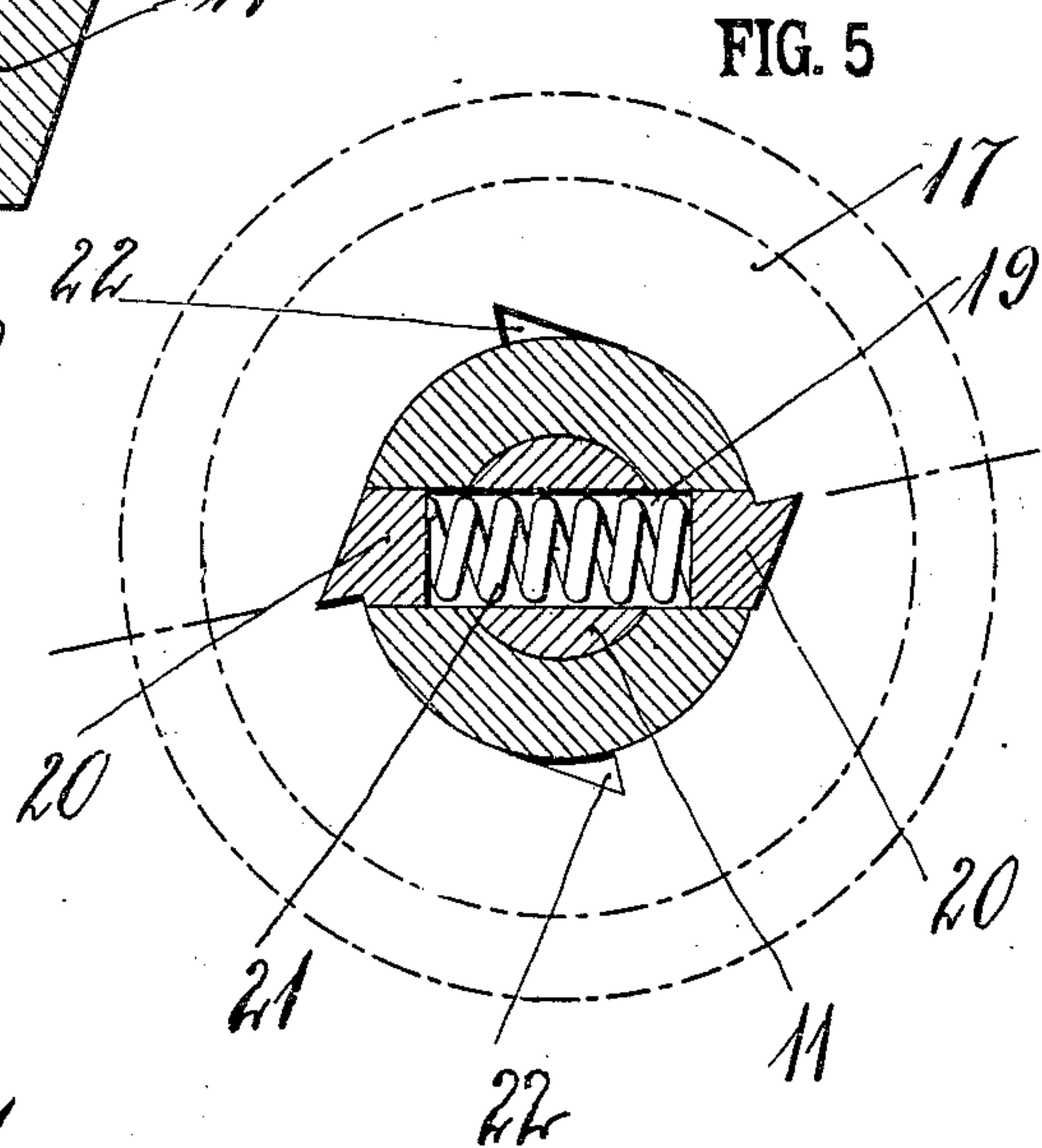


FIG. 5

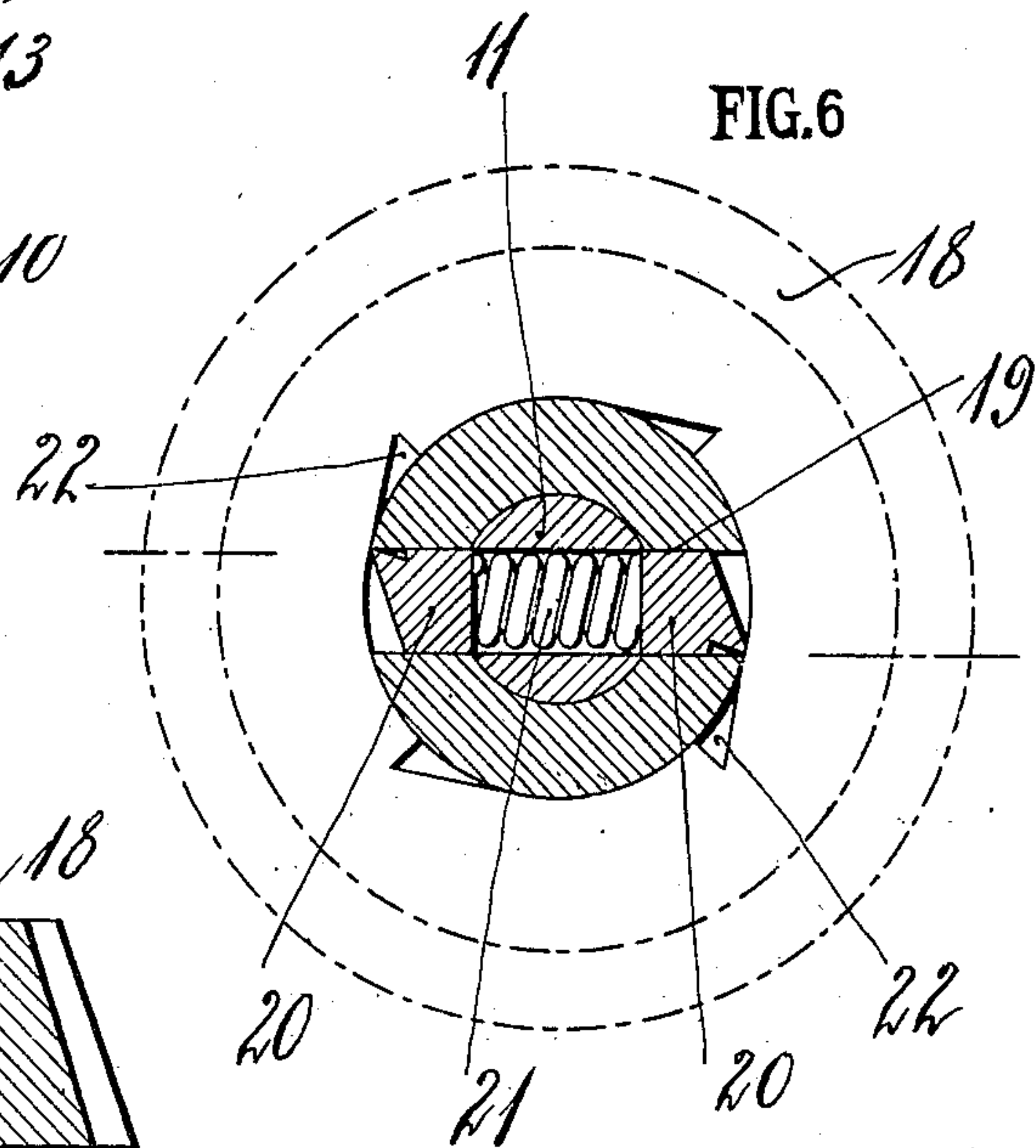


FIG. 6

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN G. BAUM, OF NEW YORK, N. Y.

SWIMMING APPARATUS.

No. 863,013.

Specification of Letters Patent.

Patented Aug. 13, 1907.

Application filed October 3, 1906. Serial No. 337,176.

To all whom it may concern:

Be it known that I, JOHN G. BAUM, a subject of the German Emperor, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Swimming Apparatus, of which the following is a specification.

The object of my invention is to provide a swimming apparatus whereby a person will be enabled to propel himself in water for longer distances and to keep afloat for a longer period of time than by the ordinary swimming movements of his legs and arms, even when he be a bad swimmer or no swimmer at all.

My invention principally consists in the arrangement of a breast or armor shaped plate preferably of floating material, as wood or the like, that is adapted to be strapped to the body. Supported in bearings arranged on this breast plate is a shaft carrying a propeller screw, that can be operated upon by the forward and backward movement of the legs, whereby the person wearing the apparatus will be propelled.

My invention also consists in certain details of construction and combination of parts as will be hereinafter described and pointed out in the claims.

In the accompanying drawings, in which similar reference letters denote corresponding parts, Figure 1 is a front elevation of the apparatus the same being shown strapped to a body; Fig. 2 a side elevation and Fig. 3 a rear elevation thereof; Fig. 4 is an enlarged vertical section, and Figs. 5 and 6 are central cross sections of some details of construction.

In the drawing 1 denotes the breast plate that is armor shaped and preferably consists of suitable floating and hard material, as wood or the like, and that by rivets or screws 2 is attached to a garment shaped piece 3 of soft material, as leather or the like. The garment 3 is provided with straps 4 and 5 for its attachment to the body of the person (Fig. 3). Secured to and projecting forward from the breast plate are brackets 6, 7 that are adapted to bear a shaft 8 extending longitudinally of the breast plate and carrying at its lower end a suitable propeller screw 8'. In the bracket 9 having a suitable ball bearing 10 (Fig. 4) a shaft 11 is borne the lower end of which is connected with shaft 8 by a universal joint 12. This shaft 11 is adapted to extend about parallel to the chest or breast of the body, and will thus form an angle with the shaft 8 that is adapted to run parallel with the extended legs. Secured to the breast plate is a circular disk or ring 13 the outer circumference of which is formed to a ball bearing 14 to carry a pulley 15. At the front the latter is formed to a bevel gear 16 with which bevel gears 17, 18 oppositely

mounted upon the extremities of the shaft 11 are constantly meshing. The gears 17, 18 are each connected with shaft 11 by a suitable clutch coupling (Fig. 5) whereby the rotation movement of the pulley 15 in either direction will cause the propeller shaft 8 to revolve constantly in one and the same direction.

As shown, the clutch coupling in each gear 17, 18 consists of beveled teeth 20, 20 that are loosely fitted in a bore 19 of the shaft 11 and are being pressed outwards by a spring 21. The inner surface of the rim of the bevel gears has corresponding indentations 22 that at a certain direction of rotation of the gear will engage the teeth 20 and thus couple the shaft 11 with the gear. The slope of the beveled teeth and indentations in one of the gears is reversed to that of the other, so that when one gear is coupled with the shaft 11 the other is uncoupled and vice versa (Figs. 5 and 6).

Wound around the pulley 15 is a steel wire 23 (Figs. 1 and 2) which is guided over sheaves 24, 25 secured to the breast plate 1 and the ends of which are secured to stirrups 26 (Fig. 2) that are strapped to the feet of the wearer. An ordinary fore and backward movement of the legs will impart a reciprocating rotation movement to the pulley 15. This reciprocating movement will be transformed into a continuous rotation movement of the propeller shaft 8 by means of the gears 16, 17 and 18 and the clutch couplings 20, 21, 22.

27 is a casing to incase the gears of the apparatus.

It is understood that the apparatus may be modified by those skilled in the art without deviating from the spirit of my invention. I therefore do not wish to restrict myself to the particular construction described and shown, but

What I claim and desire to secure by Letters Patent is:

A swimming apparatus comprising a breast plate, a garment to which said plate is attached, a ball bearing secured to the said breast plate, a pulley mounted on said ball bearing, means for transmitting movement to said pulley by the fore and backward movement of the legs of the wearer, a shaft carrying a propeller and supported from the breast plate to run parallel to the extended legs, a second shaft running parallel to the breast and being angularly disposed to the first named shaft, a universal joint connecting both said shafts and means for transmitting a continuous rotation movement to said shafts from the pulley, substantially as and for the purpose specified.

Signed at New York this 1 day of October 1906.

JOHN G. BAUM.

Witnesses:

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MAX D. ORDMANN.