C. M. PRIMM.

LIFE PRESERVER.

APPLICATION FILED DEC. 30, 1918.

1,307,752.

Patented June 24, 1919.

2 SHEETS—SHEET 1.

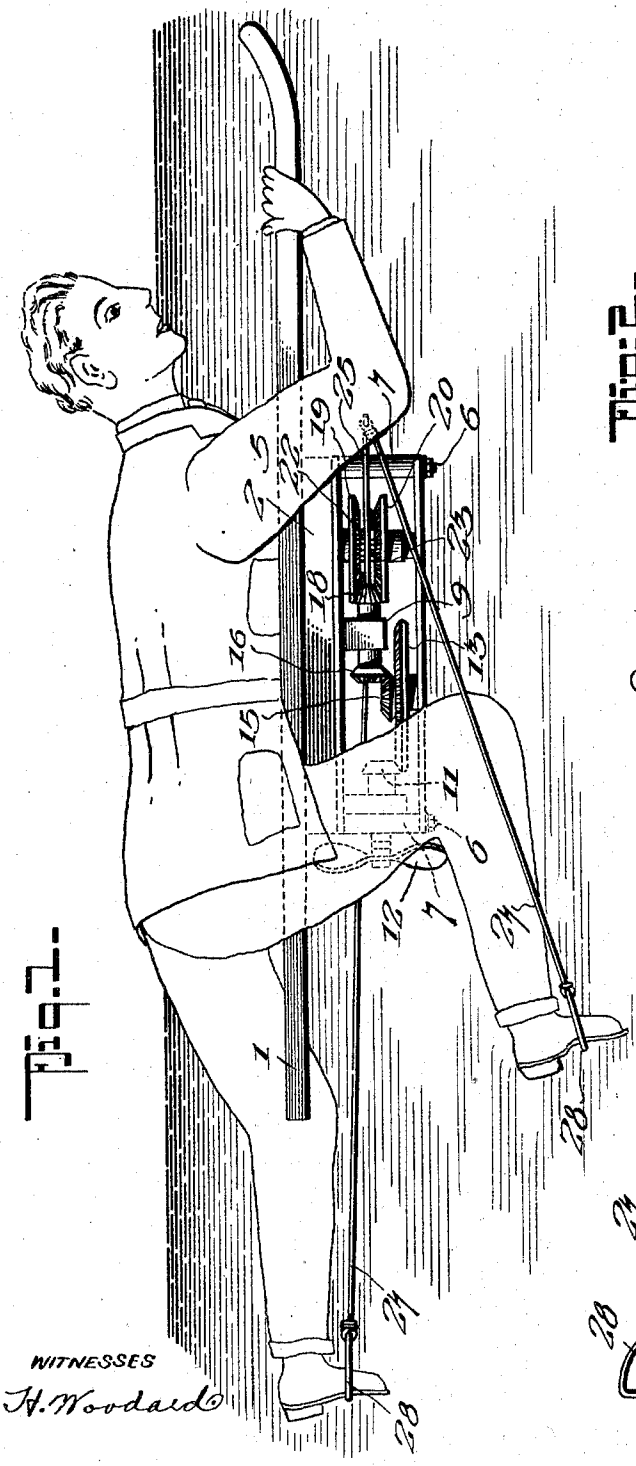


Fig. 1.

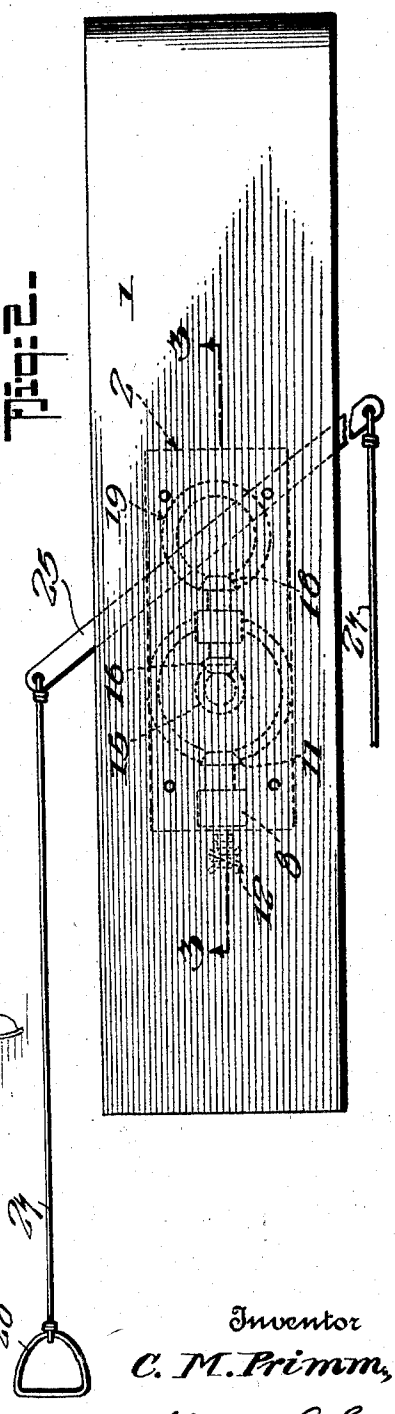


Fig. 2.

WITNESSES

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Inventor

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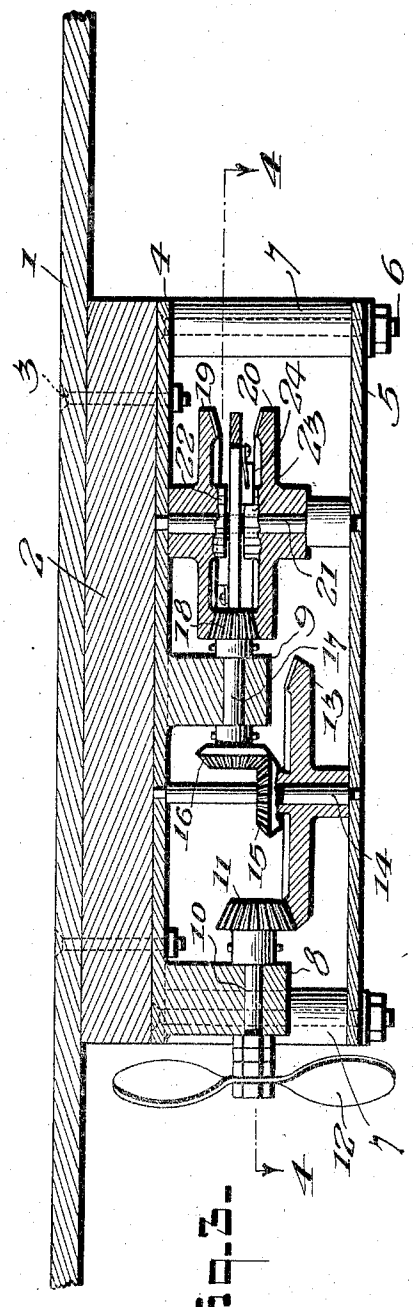


Fig. 2.

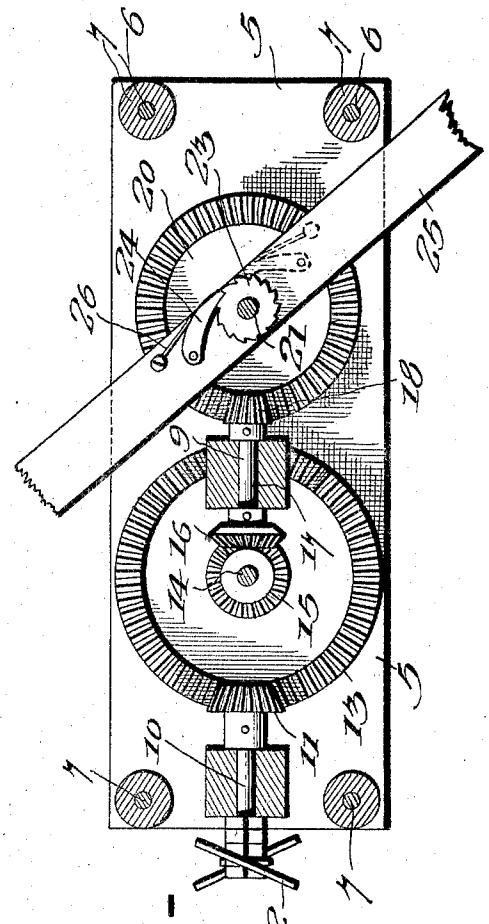


Fig. 3.

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UNITED STATES PATENT OFFICE.

CARLON M. PRIMM, OF LONG BEACH, CALIFORNIA.

LIFE-PRESERVER.

1,307,752. Specification of Letters Patent. Patented June 24, 1919.

Application filed December 30, 1918. Serial No. 268,894.

To all whom it may concern:

Be it known that I, CARLON M. PRIMM, a citizen of the United States, and a resident of Long Beach, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Life-Preservers, of which the following is a specification.

My invention is an improvement in life preservers, and has for its object to provide a device of the character specified by means of which one in the water may propel himself or herself while supported at the surface of the water.

In the drawings:

Figure 1 is a side view of the improved preserver in use;

Fig. 2 is a top plan view;

Fig. 3 is a section on the line 3—3 of Fig. 2;

Fig. 4 is a section on the line 4—4 of Fig. 3.

In the present embodiment of the invention, a plate 1 is provided, of wood or the like, shaped like a surf board, and to the under face of this plate at about the center is secured a block 2, by means of bolts and nuts 3, and these bolts and nuts also connect a frame to the block and to the board, the said frame supporting the operating mechanism to be described.

This frame consists of plates 4 and 5 spaced apart from each other and rigidly connected in spaced relation by means of bolts and nuts 6 and arbors 7. The plate 4 has depending lugs 8 and 9, and in the lug 8 is journaled a propeller shaft 10. This shaft has a bevel pinion 11 secured to the rear end thereof and a propeller 12 secured to the front end outside of the frame. The pinion 11 meshes with a bevel gear wheel 13 secured to a shaft 14 which is journaled between the plates 4 and 5.

A bevel pinion 15 is rigid with the gear wheel 13 and this pinion 15 meshes with a pinion 16 on a horizontal shaft 17 journaled in the lug 9. The horizontal shaft has a bevel pinion 18 at its rear end, which extends between a pair of disks 19 and 20 journaled on a shaft 21 which is held between the plates 4 and 5. Each of these pinions 19 and 20 carries an annular series of bevel gear teeth on its inner face and with these teeth the teeth of the pinion 18 mesh. Each bevel gear 19 and 20 has rigid therewith a ratchet wheel 22 and 23, respectively, and each ratchet wheel is engaged by a pawl 24 on a lever 25 which is journaled on the shaft 12, and which is of a length to extend beyond the surf board at each end of the lever. Each pawl 24 is normally pressed into engagement with the ratchet wheel by means of a spring 26. Flexible members 27 are connected with the ends of the lever 25, and each of the said flexible members carries a stirrup 28 at its rear end which may be engaged by the feet of the operator, as shown in Fig. 1.

In operation, the operator rests upon the board in the manner shown in Fig. 1, with his feet in the stirrups 28, and it is obvious that a kicking movement of the feet will vibrate the lever 25, imparting to the disks 19 and 20 an intermittent and alternate movement in the opposite directions, and these intermittent movements of the gear wheels 19 and 20 will impart a continuous movement to the shaft 17 and to the propeller.

The device is especially useful for those learning to swim or for poor swimmers or for life savers, since they may be handled more quickly and expeditiously than a boat. It will be noticed that the front end of the plate 1 is upturned, in order to facilitate its movement through the water.

I claim:

1. A device of the character specified comprising a plate, a frame secured to the under face of the plate, a propeller shaft journaled at the rear of the frame and carrying a propeller at its outer end, a lever mounted to vibrate at the front of the frame and having flexible members provided with stirrups for engagement by the feet to vibrate the lever, means controlled by the vibration of the lever for imparting continuous movement in one direction to the propeller, said means comprising a pair of disks arranged in spaced relation and coaxial, and having gear teeth on their adjacent faces, a gear wheel driven by the teeth of the disks, a gearing connecting the said gear wheel with the propeller, each disk carrying a ratchet wheel, and a spring pressed pawl on the lever engaging the wheel.

2. A device of the character specified comprising a plate, a frame secured to the under face of the plate, a propeller shaft journaled at the rear of the frame and carrying a propeller at its outer end, a lever mounted to vibrate at the front of the frame and having flexible members provided with stirrups for engagement by the feet to vibrate the lever, and means controlled by the vibration of the lever for imparting continuous movement in one direction to the propeller.

CARLON M. PRIMM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."