S. S. WILLIAMS.

BUOYANT PROPELLER.

APPLICATION FILED NOV. 28, 1908.

915,398.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.

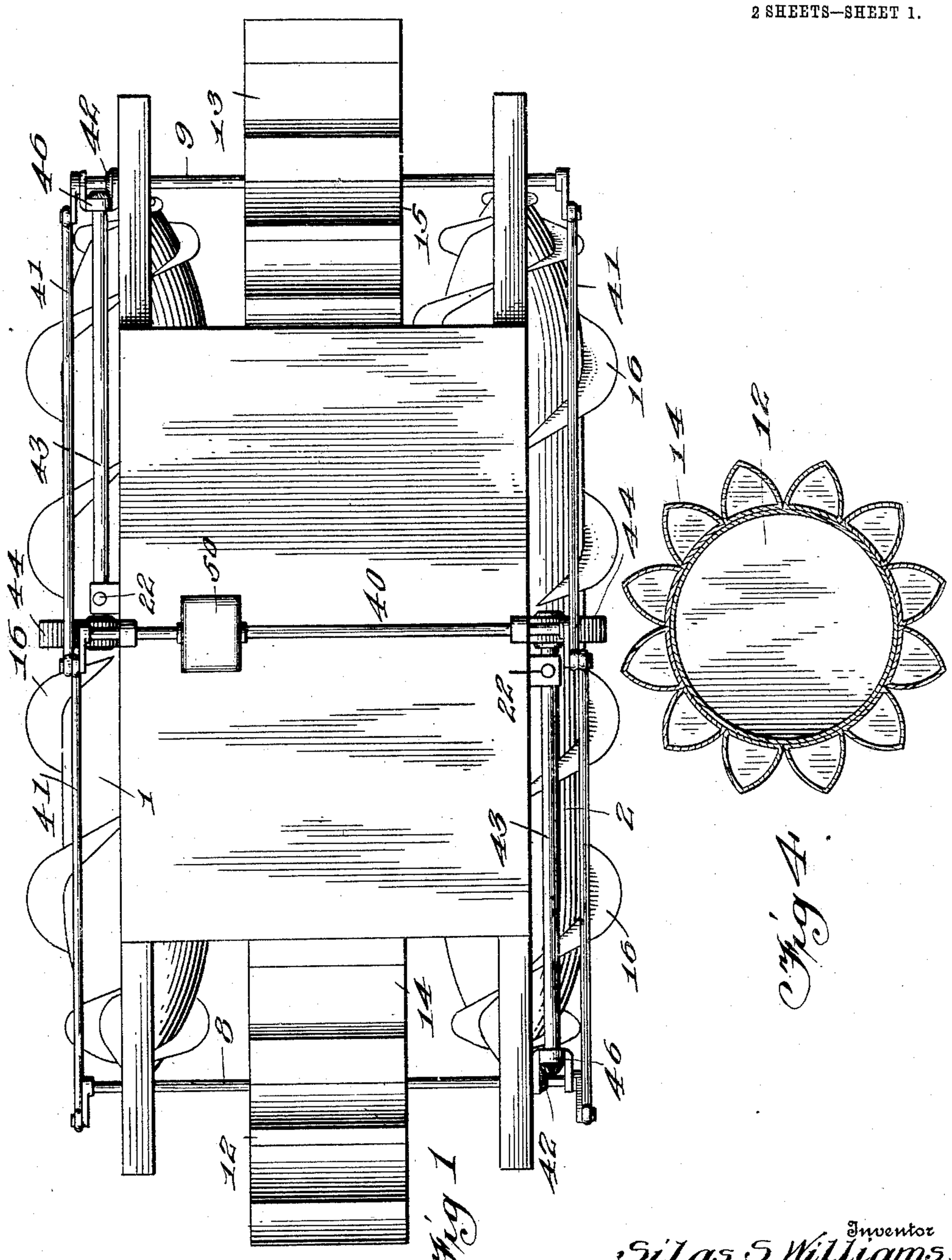

Fig 1.

Witnesses

Fred L. Kemp

Arthur Wesley

Inventor

Silas S. Williams.

By Geo. E. Lewis

Attorney

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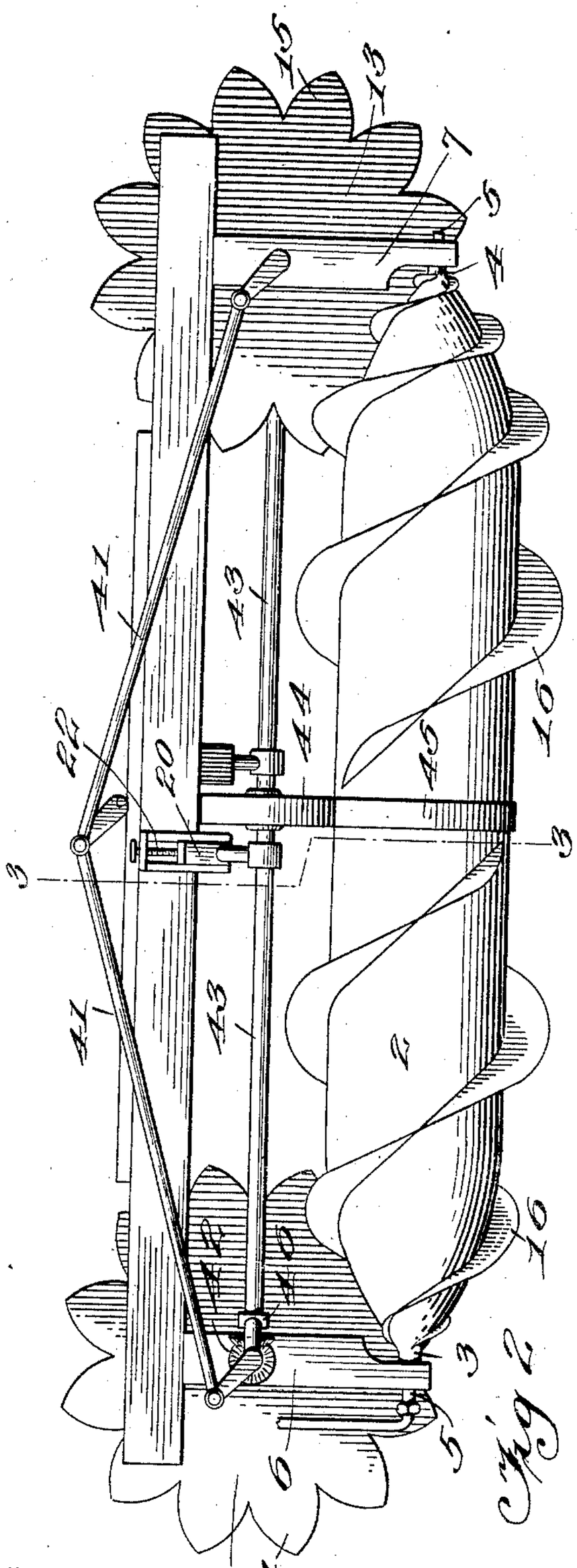

Fig. 2.

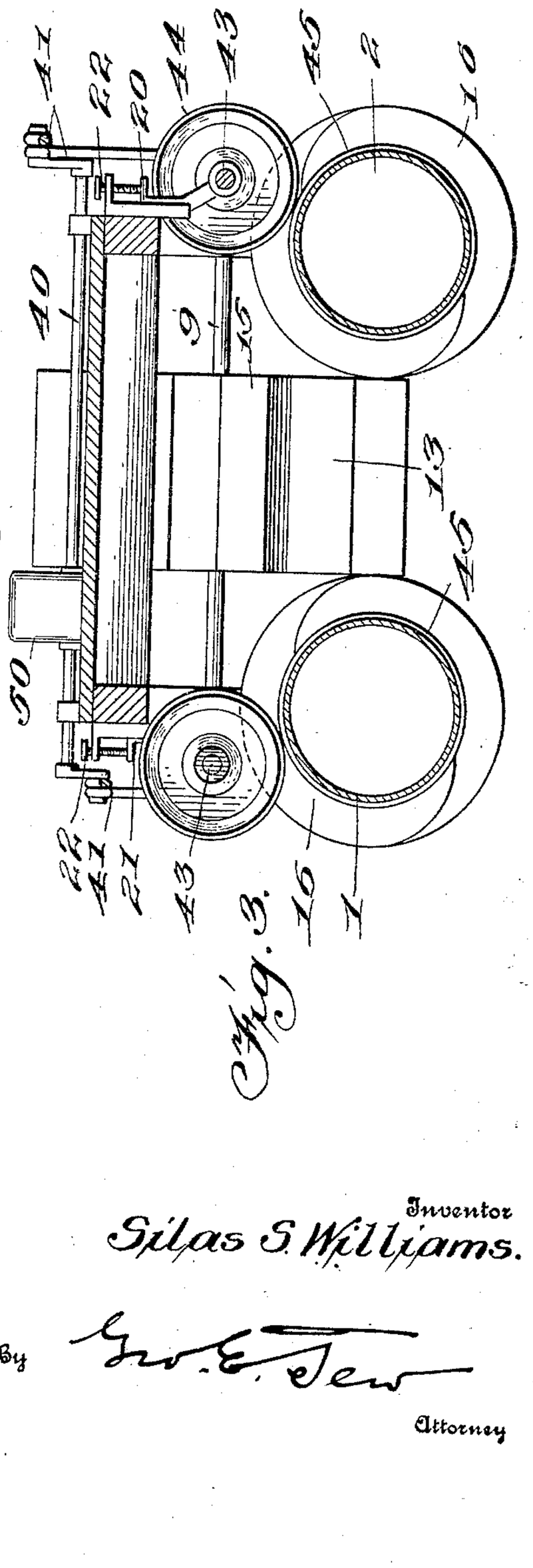

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

SILAS S. WILLIAMS, OF ROUSEVILLE, PENNSYLVANIA.

BUOYANT PROPELLER.

No. 915,398. Specification of Letters Patent. Patented March 16, 1909.

Application filed November 28, 1908. Serial No. 464,907.

To all whom it may concern:

Be it known that I, SILAS S. WILLIAMS, citizen of the United States, residing at Rouseville, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Buoyant Propellers, of which the following is a specification.

The invention about to be set forth and claimed pertains to a new and useful combination float and propeller.

The invention in its fundamental characteristics creates as its primary object to provide a float, comprising particularly elliptical hollow screw floats having hollow spiral threads, ribs or raised portions, which act as means for causing a boat or similar device to be advanced through water, and circular hollow drums having about their peripheries or circumference hollow Gothic shaped arches or raised portions, which also assist in advancing a boat or similar device through the water, as will be readily and clearly manifest.

The invention provides as a further object means to prevent water from entering the hollow shafts of the said elliptical hollow screw floats, when the device is submerged in water, and in case water does enter the hollow shafts of the screw floats, any suitable means (not shown) may be employed for drawing the same therefrom, as will be clearly evident.

To cause the elliptical screw floats and circular drums to rotate so as to propel a boat or similar device through the water, a conventional form of mechanism is provided, which consists of frictional disks or wheels which coöperate with one another, and so arranged within the frame of the device, as shown, that the speed may be increased or decreased, as desired, and further conventional forms of mechanism are provided for operating the various frictional disks or wheels, as will be apparent from the drawings.

This invention comprises further objects and combination of elements, which will be hereinafter more fully described, shown in the accompanying drawings, and the novel features thereof will be pointed out by the appended claim. The features, elements and the arrangement thereof, which constitute the above entitled invention, may be changed and varied, that is to say, in an actual reduction to practice, with the understanding that the changes and variations accruing from said reduction to practice are limited to the scope of the appended claim.

To obtain a full and correct understanding of the details of construction, combination of features, elements and advantages, reference is to be had to the hereinafter set forth description and the accompanying drawings in connection therewith, wherein—

Figure 1 is a plan view of the combination float and propeller, Fig. 2 is a side elevation. Fig. 3 is a sectional view on line 3—3 of Fig. 2. Fig. 4 is a sectional view through one of the circular drums, clearly illustrating the Gothic shaped hollow arches or raised portions.

In regard to the drawings, wherein similar reference characters indicate corresponding parts in the several illustrations, by figures, 1 and 2 designate a pair of elliptical hollow screw floats having extensions 3 and 4, which form shafts 5, and which are mounted in suitable bearings in the standards 6 and 7 of the frame of the apparatus. 8 and 9 designate shafts extending at right angles to the said screw floats, and which are mounted in bearings in standards 6 and 7 and are provided with circular hollow drums 12 and 13, on which about their periphery or circumference are formed Gothic shaped arches or raised portions 14 and 15 which assist the screw floats in propelling a boat or similar device through the water. These hollow Gothic arches or raised portions may be integrally formed with the drums, or detachable therefrom, as clearly shown in the drawings, so that when repairs are necessary, the said arches or raised portions may be renewed.

The floats 1 and 2 are provided with hollow spiral threads, ribs or raised portions 16, which extend spirally the entire length of the elliptical shaped floats, as will be clearly evident from the drawings. These ribs, threads or raised portions may be integral or detachable. These screw floats and drums may be embodied upon various devices which are utilized in the water, for instance, the screw floats may be conveniently utilized upon submarine boats or vessels, and by pumping or withdrawing the water therefrom or thereinto by any conventional method or means, (not shown) the depth of a submarine vessel may be gaged or regulated, as will be clearly apparent.

It is to be understood that the applicant is

not to be confined or limited to any special or specific means for propelling the screw floats and drums, or confined or limited to any special or specific device or means for furnishing power for the propelling means, but in the present application the applicant has illustrated one of the many conventional forms of means by which the screw floats and drums may be propelled or rotated, for the purpose of advancing the boat or vessel through water, as will be clearly evident upon an examination of the drawings.

As shown, the means for furnishing power for propelling the screw floats and drums consists of a drive shaft 40 having cranks at the ends connected by rods 41 to cranks on the ends of the shafts 8 and 9, which by means of bevel gearing 42 drives longitudinal shafts 43 which have friction wheels 44 engaging similar rims 45 on the screw floats 1 and 2. The ends of the shafts 43 having the friction wheels are supported by two frames 20 and 21, which may be of any desired construction and configuration, in which the shafts are mounted, which frames are so mounted as to allow them to be raised and lowered, by means of adjusting screws 22, so as to increase or decrease the frictional contact of the friction wheels thereby increasing or decreasing the speed of the screw floats, as is clearly evident from the drawings. The ends of the shafts 43, having the bevel gears are supported by swinging brackets 46 which will turn on the shafts 8 and 9. A motor is conventionally indicated at 50.

From the foregoing, the essential features, elements and the operation of the device, together with the simplicity thereof, will be clearly apparent.

Having thus fully described the invention, what is claimed as new and useful, by the protection of the Letters Patent, is:—

In a device as set forth, the combination of a rotary elliptical hollow screw float having spiral ribs, a parallel shaft above said float, said shaft having a friction wheel thereon, and means to shift the shaft to engage the wheel with or disengage the same from the exterior surface of the float.

In testimony whereof, I affix my signature in presence of two witnesses.

SILAS S. WILLIAMS.

Witnesses:
A. E. O'DONNEL,
JAMES J. HANNON.