

XR

1,005,917

1 K + 1000
Box - 10

P.R.
207

W. ZERNIK.

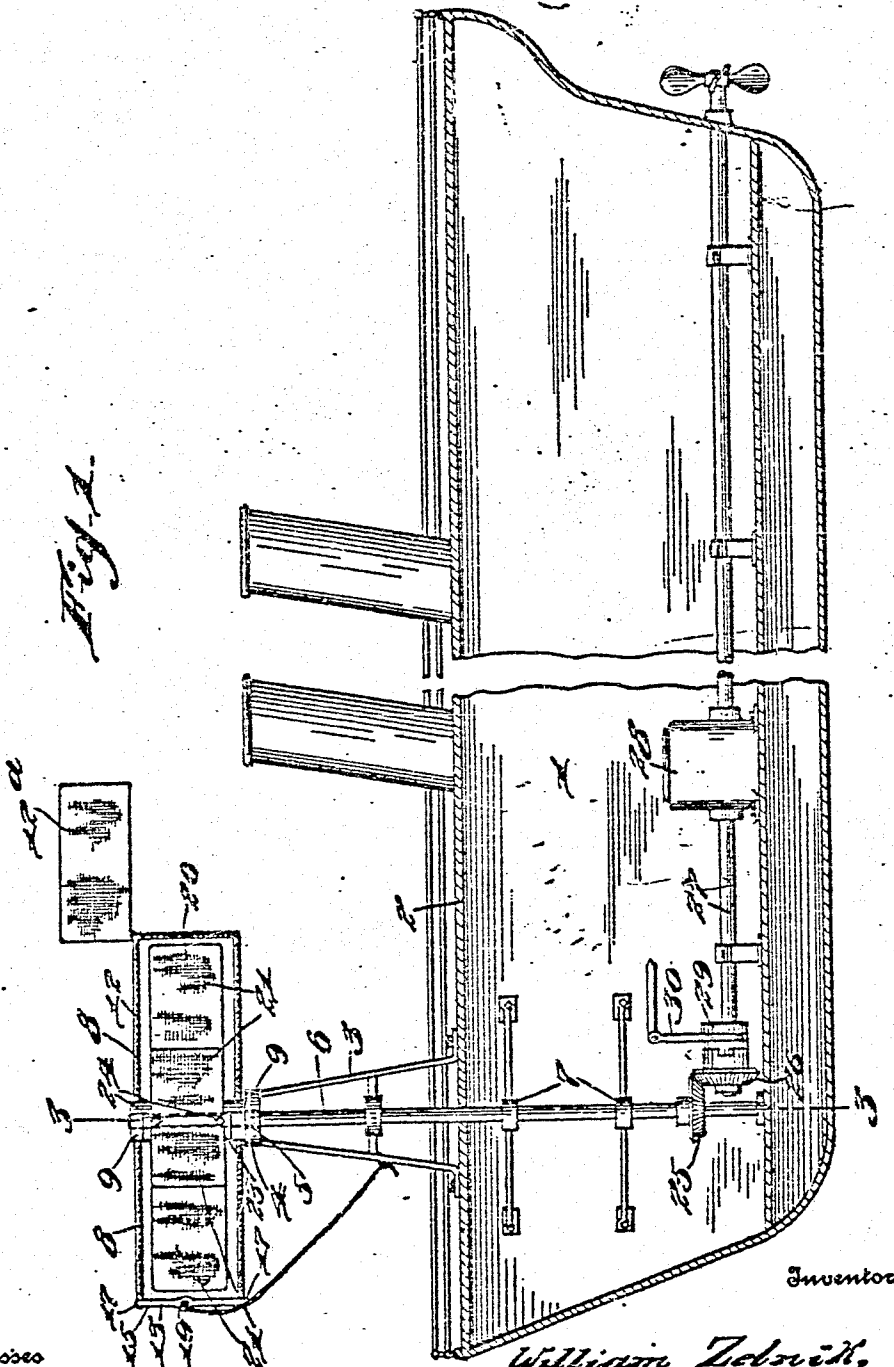
WIND WHEEL MECHANISM.

APPLICATION FILED NOV. 4, 1910.

1,005,917.

Patented Oct. 17, 1911.

3 SHEETS-SHEET 1.



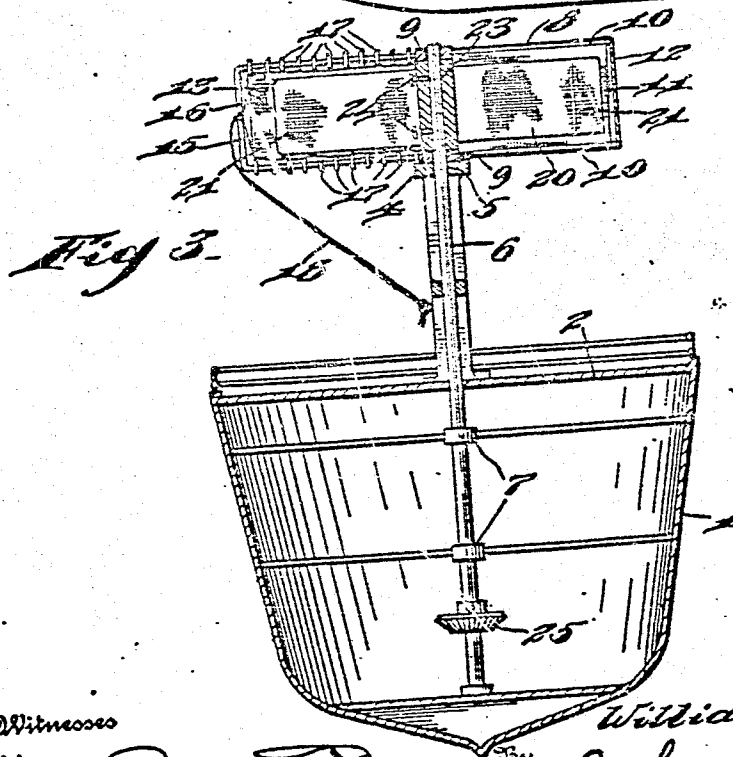
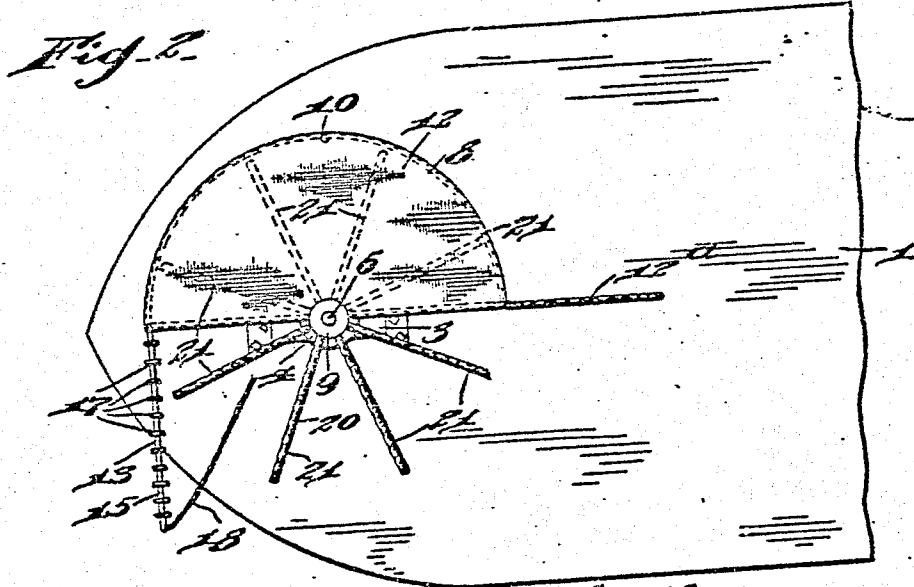
Witnesses
Thos. P. Remann.
R. H. Krenkel.

Inventor
William Zernik,
By Joshua R. F. Potts,
Attorney.

W. ZELNIK.
WIND WHEEL MECHANISM.
APPLICATION FILED NOV. 4, 1910.

Patented Oct. 17, 1911.
3 SHEETS-SHEET 2.

1,005,917.



Inventor

Witnesses

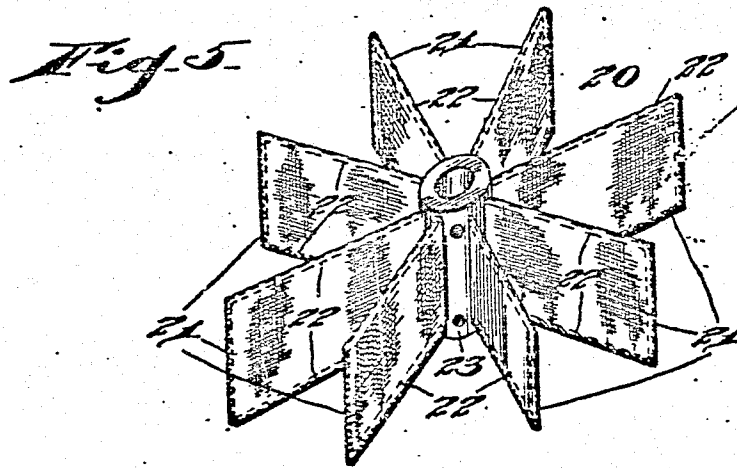
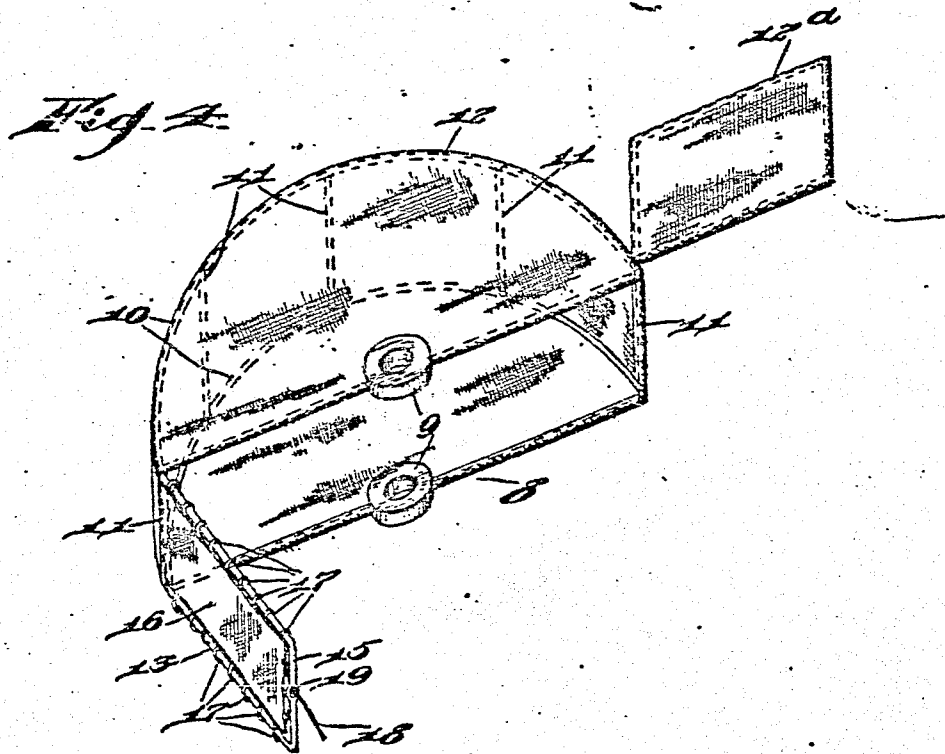
Geo. Breman,
R. H. Krenkel.

William Zelnik,
Joshua R. Forts,
Attorney

W. ZELNIK.
WIND WHEEL MECHANISM.
APPLICATION FILED NOV. 4, 1910.

1,005,917.

Patented Oct. 17, 1911.
3 SHEETS-SHEET 3.



Inventor

Witnesses

Geo. P. P. P. P.
R. H. Krenkel

William Zelnik,
By *Joshua R. P. P. P.*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM ZELNIK, OF PHILADELPHIA, PENNSYLVANIA.

WIND-WHEEL MECHANISM

1,005,917.

Specification of Letters Patent. Patented Oct. 17, 1911.

Application filed November 4, 1910. Serial No. 590,768.

To all whom it may concern:

Be it known that I, WILLIAM ZELNIK, a subject of the Emperor of Austria-Hungary, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Wind-Wheel Mechanism, of which the following is a specification.

My invention relates to improvements in mechanism for propelling vessels, the object being to utilize power derived from the wind to drive the propeller shaft of a vessel.

A further object of my invention is to provide an improved windmill, which can be readily placed in position on a vessel, and the power derived from the wind by said windmill utilized in conjunction with the ordinary engine power to drive the propeller shaft of a vessel. A further object of my invention being to provide a windmill of simple construction, and one which will operate the propeller shaft of a vessel, no matter in which direction the wind is blowing, and one that can be manipulated to be readily stopped, all of which is done by a construction of a character as will be hereinafter described and more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in vertical longitudinal section illustrating my improvements in position on a vessel. Fig. 2, is a plan view of my improved windmill. Fig. 3, is a view in section on the line 3—3 of Fig. 1. Fig. 4, is a view in perspective of my semi-circular windmill hood, and Fig. 5, is a view in perspective of my improved wind-wheel.

1 represents the hull of a vessel, 2 the upper deck upon which in the bow of the vessel, a frame work 3 is secured. This frame work 3 has a bearing platform 4 at its upper portion, provided with a central opening 5 in which the vertical wind-wheel shaft 6 has its bearing, and said shaft extends through the deck of the vessel, and is also supported in a vertical position in the bearing brackets 7, which are secured in the hull of the vessel. Positioned on this platform 4 is my improved construction of windmill, comprising

a semi-circular hood 8 held distended by means of a frame, consisting of upper and lower sleeves 9, 9, to which semi-circular rods 10, 10, are secured, and held apart by vertical rods 11. This frame work of rods is covered with canvas 12, thus forming semi-circular hood 8. At the rear end of this semi-circular hood 8, one of the vertical rods 11 extends above the top of the hood 8, and is bent into a rectangular shape, and covered with canvas forming the weather vane 12*. At the other end of the hood 8, I have provided a wind breaker or shield 13, which consists of an outwardly extending U-frame 15, in which a sheet of canvas 16 provided with rings 17 on its upper and lower edges is mounted to slide on the upper and lower rods of the U-frame 15. This sheet of canvas 16 is fixed at one end to the semi-circular hood 8, and to the other end of this canvas 16 a rope 18 is fastened, and passed through the eye 19 in the outer vertical rod of the U-frame 15, and extends downward near the deck of the vessel, in order that said rope 18 can be readily manipulated to operate the breaker or shield.

Between the sleeves 9, 9, of the semi-circular hood 8 is positioned my improved wind-wheel 20, comprising a plurality of radially disposed blades 21, which consist of U-shaped rod frames 22, covered with canvas. These U-shaped rod frames 22 are secured to a hub 23, and the latter secured to the vertical wind-wheel shaft 6 by means of set screws 24. On this shaft 6, the sleeves 9, 9, of the semi-circular hood 8 are movable, and the lower sleeve 9 is positioned on the bearing platform 4 of the frame 3. This bearing platform 3 has a central opening 5, in which the vertical wind-wheel shaft 6 has its bearing.

Near the lower end of the vertical wind-wheel shaft 6 is secured a beveled gear 25, meshing with a beveled gear 26 secured on the propeller shaft 27 of the vessel, thereby transmitting the power derived from the wind-wheel 20, to the propeller shaft 27. The propeller shaft 27 is also driven by any suitable form of engine as illustrated at 28.

between the engine 13 and the bevel gear 26. I have provided a clutch 29 on the propeller shaft 27, said clutch to be operated by a lever 30 by any suitable means to lock or release gear 26 from shaft 27.

In the operation of my improved windmill, it is necessary to have the breaker or shield 13 in an open position, in order that the wind can strike the blades of the wind-wheel 20, and turn the same, thereby turning the vertical wind-wheel shaft 6 and transmitting power to the propeller shaft 27.

In order that the wind will always strike the blades of the wind-wheel, weather vane 12^a is provided on the semi-circular hood 3, which will hold the said semi-circular hood 3 in a position in regard to the wind-wheel 20 to utilize the wind to secure the greatest efficiency.

When it is desired to stop the windmill, the rope 18 is manipulated to pull the sheet canvas 16 of the breaker or shield 13 into a closed position, thereby preventing the wind from contacting or striking the blades of the wind-wheel 20.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A wind mill comprising a frame, a bearing platform on said frame, a semi-circular hood rotatably mounted on said frame, said hood consisting of an upper and lower sleeve, curved rods connected to said sleeves and vertical rods positioned between and secured to the curved rods to form a framework for the said semi-circular hood, said framework adapted to be covered with canvas on its upper, lower and curved surfaces, to form the semi-circular hood, a rectangular weather vane rigidly secured to the rear and above the said semi-circular hood, an outwardly extending breaker or shield at the opposite end of the semi-circular casing at right angles to the rectangular weather vane at the rear end of the semi-circular hood, substantially as described.

2. A wind mill comprising a frame, a bearing platform on said frame, a semi-circular hood rotatably mounted on said frame, said hood consisting of the upper and lower sleeve, curved rods secured to said sleeves, vertical rods positioned between and secured to the curved rods to form a framework for the said semi-circular hood, said framework adapted to be covered with canvas on its upper, lower and curved surfaces to form the semi-circular hood, a rectangular weather vane rigidly secured to the rear and above the said semi-circular hood, said rectangular weather vane consisting of a rod bent into rectangular shape and covered with canvas, an outwardly extending breaker or shield at

the opposite end of the said semi-circular hood at right angles to the rectangular weather vane at the rear end of the semi-circular hood, substantially as described.

3. A wind mill comprising a frame, a bearing platform on the upper portion of said frame, a semi-circular hood rotatably mounted on said bearing platform, said hood consisting of an upper and a lower sleeve, curved rods secured to said sleeves and held apart by vertical rods to form a framework, said framework adapted to be covered with canvas at its upper, lower and curved surfaces to form the semi-circular hood, a rectangular weather vane rigidly secured to the rear and above the said semi-circular hood, said rectangular vane consisting of a rod bent in a rectangular shape, and covered with canvas, an outwardly extending breaker or shield at the opposite end of the said semi-circular hood at right angles to the rectangular weather vane at the rear of said semi-circular hood, said breaker or shield comprising two outwardly extending rods held apart at their outer end by a vertical rod, a sheet of canvas between the said rods, rings on the upper and lower edges of said sheet of canvas, and adapted to slide on said rods, one end of said canvas secured to the semi-circular hood, and a rope attached to the other end of said sheet of canvas, said rope passing through an eye in said aforesaid mentioned vertical rod, and extending downward and adapted to be manipulated to operate the breaker or shield, substantially as described.

4. A wind mill comprising a frame, a bearing platform on the upper portion of said frame, a semi-circular hood rotatably mounted on said bearing platform, said hood consisting of an upper and lower sleeve, curved rods connected to said sleeves, and held apart by vertical rods to form a framework, said framework adapted to be covered with canvas at its upper, lower and curved surfaces to form the semi-circular hood, a wind wheel rotatably mounted within said semi-circular hood, consisting of a hub, a plurality of radially disposed blades extending from said hub, said blades formed from U-shaped rods, and adapted to be covered with canvas, a rectangular weather vane rigidly secured to the rear and above said semi-circular hood, said rectangular weather vane consisting of one of the aforesaid mentioned vertical rods bent into rectangular shape, and covered with canvas, an outwardly extending breaker or shield at the opposite end of said semi-circular hood at right angles to the rectangular weather vane at the rear end of said semi-circular hood, said breaker or shield com-

prising two outwardly extending rods, held
apart at their outer ends by a vertical rod, a
sheet of canvas between said rods, rings on
the upper and lower edges of said sheet of
5 canvas and adapted to slide on said rods, one
end of said canvas secured to the semi-cir-
cular hood, a rope attached to the other end
of said sheet of canvas, said rope passing
through an eye in said aforesaid mentioned
10 vertical rod, and extending downward and

adapted to be manipulated to operate the
breaker or shield, substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

WILLIAM ZELNIK.

Witnesses:

R. H. KRENKEL,

CHAS. E. POTTS.

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