

O. F. ERICSON.
 COMBINED WINDMILL DERRICK AND RESERVOIR.
 APPLICATION FILED FEB. 17, 1912.

1,035,431.

Patented Aug. 13, 1912.

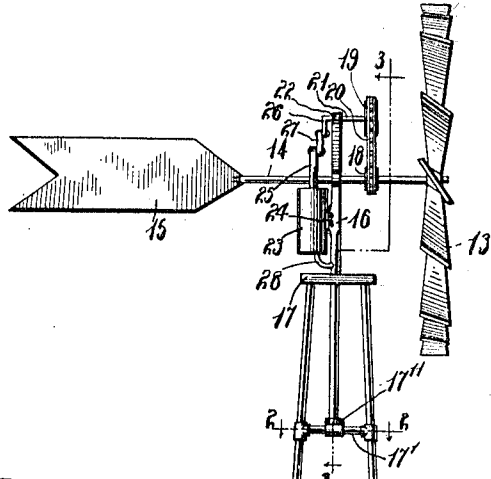


FIG. 1.

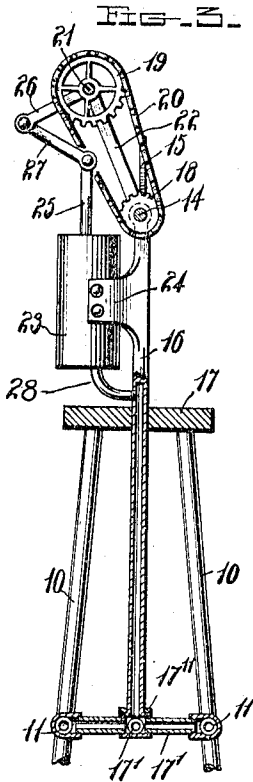


FIG. 3.

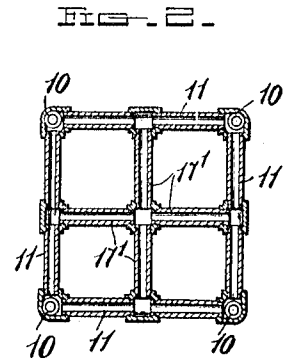
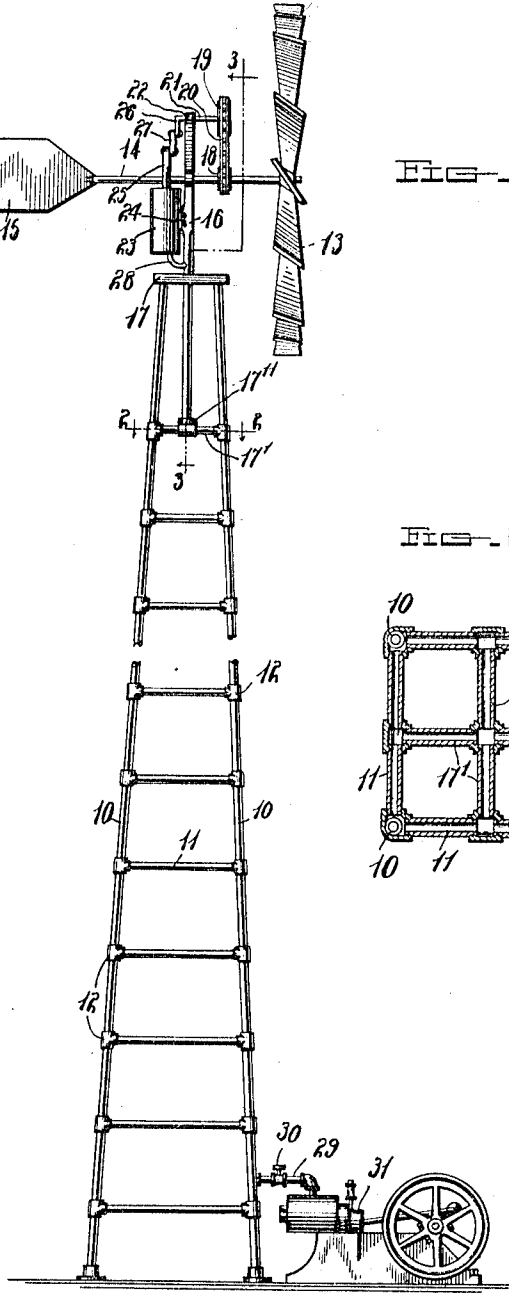


FIG. 2.



Witnesses

W. C. Fielding
Francis Boyle

Inventor

O. F. Ericson

By *Harry Ellis Chausse*

Attorney

UNITED STATES PATENT OFFICE.

OSCAR F. ERICSON, OF STRATFORD, IOWA.

COMBINED WINDMILL DERRICK AND RESERVOIR.

1,035,431.

Specification of Letters Patent. Patented Aug. 13, 1912.

Application filed February 17, 1912. Serial No. 678,249.

To all whom it may concern:

Be it known that I, OSCAR F. ERICSON, a citizen of the United States, residing at Stratford, in the county of Hamilton and State of Iowa, have invented certain new and useful Improvements in Combined Windmill Derricks and Reservoirs, of which the following is a specification.

This invention relates to wind mills and has for an object to provide a wind mill having a derrick formed of tubing adapted to constitute a compressed air reservoir, the air compressor being situated at the top of the derrick and delivering compressed air into the tubular uprights of the derrick, the compressed air preferably being drawn off from the combined derrick and reservoir through a valve controlled outlet preferably secured to one of the tubular uprights at the bottom of the derrick.

With the above object in view the invention consists of certain novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawing forming part of this specification:—Figure 1 is a side elevation of the device. Fig. 2 is a cross sectional view taken on the line 2—2 Fig. 1. Fig. 3 is a longitudinal sectional view taken on the line 3—3 Fig. 1.

Referring now to the drawing in which like characters of reference designate similar parts, 10 designates tubular uprights and 11 designates cross braces connecting the uprights, there being preferably four uprights converging toward the upper ends, each upright being formed of short tubular sections connected together by fourway unions 12, the cross braces being tubular and connected to the uprights through the instrumentality of the fourway unions as clearly shown in Fig. 2. In this manner continuous intersecting ducts are presented so that the derrick formed by the uprights and cross braces, constitutes a reservoir.

A wind wheel 13 having a shaft 14 equipped with a vane plate 15, is supported upon the derrick through the instrumentality of a pedestal 16 the latter in the present instance being hollow and shown projecting through a platform 17 which connects the upper ends of the uprights and being swivelly secured to a pair of the cross braces 17' below the platform as shown at 17". The shaft 14 is equipped with a pinion 18 over which and a sprocket gear 19 a sprocket chain 20 is trained, the sprocket gear 19 being fixed to a crank shaft 21 which is journaled in a bearing 22 carried upon the pedestal 16. An air compressing cylinder 23 is secured to the pedestal 16 through the instrumentality of a bracket 24, and the piston 25 of the cylinder is connected with the crank 26 of the crank shaft through the instrumentality of a pitman 27. A feed pipe 28 connects the cylinder with the hollow pedestal as shown. Upon actuation of the piston through the instrumentality of the crank shaft, air will be compressed and fed into the combined reservoir and derrick. For drawing off the compressed air, an outlet pipe 29 controlled by a valve 30 is secured to the lower end of one of the uprights as shown. This pipe may be connected to a compressed air engine shown conventionally at 31 or to other desired machinery.

It is known that a cylindrical reservoir or tank has been previously used to support a wind mill equipped with an air compressor for storing air in the reservoir, however the present invention is designed to obviate the disadvantages of this type of reservoir, by providing a skeleton derrick formed entirely of intersecting pipes connected together, this structure forming a skeleton reservoir which will be strong and will offer the least resistance to heavy winds and the like.

What is claimed, is:—

A wind mill including a skeleton reservoir formed of upright tubes and cross tubes connecting said upright tubes, a platform connecting the upper ends of said upright tubes, a wind wheel above said platform, a

tubular pedestal forming a support for said wind wheel and projecting through said platform, a pair of crossed tubes swivelly receiving the lower end of said pedestal at their crossing and being connected at their outer ends to said uprights, a pump carried by said pedestal, means operatively connecting said wind wheel with said pump,

and a conductor pipe connecting said pump with said pedestal.

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

OSCAR F. ERICSON.

Witnesses:

FRANK ROSE,
GEO. H. HARMON.