

(No Model.)

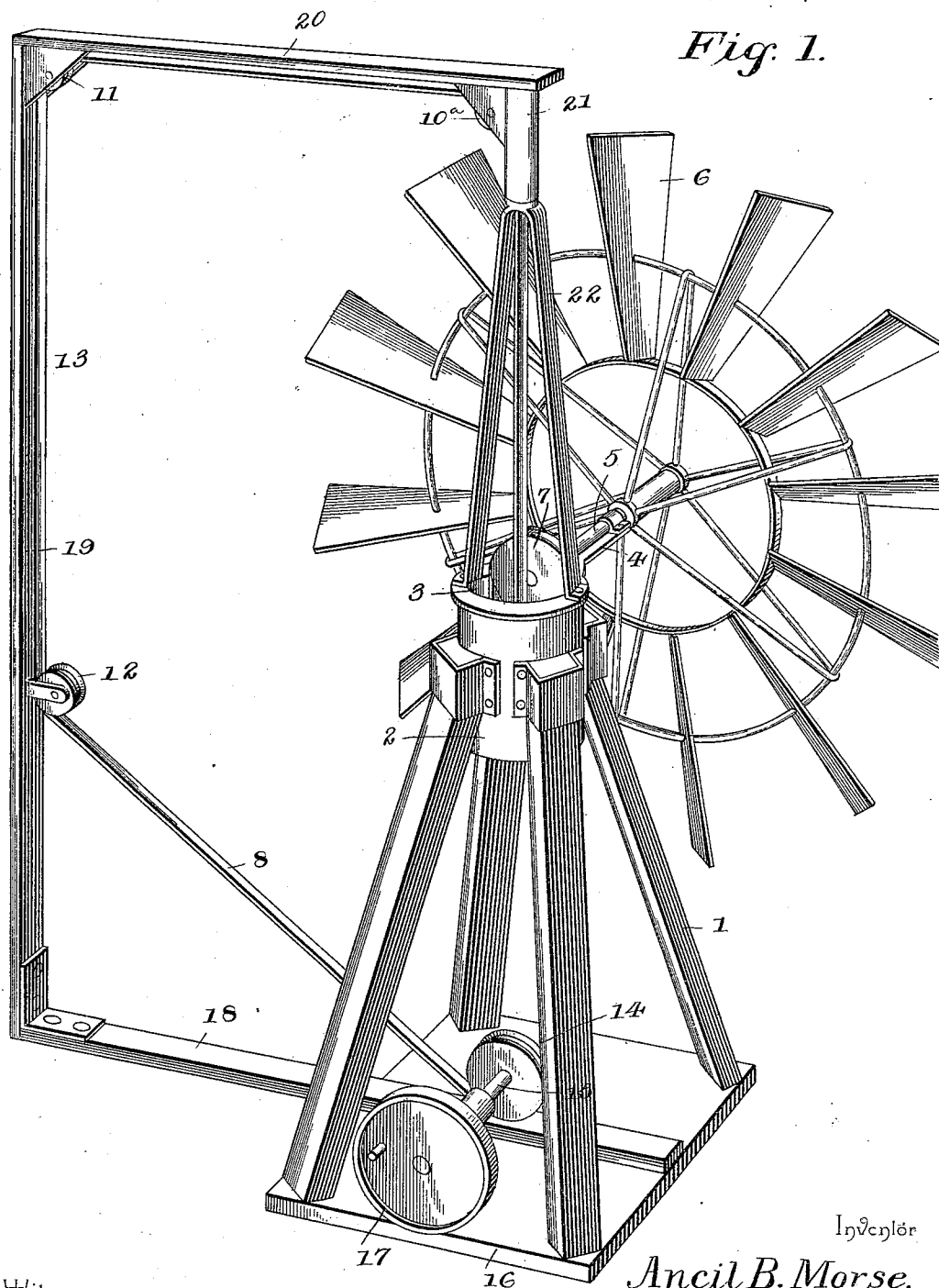
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A. B. MORSE.
WINDMILL.

No. 554,786.

Patented Feb. 18, 1896.

Fig. 1.



Inventor

Ancil B. Morse,

Witnesses

Chas. A. Ford.

J. H. Piley

By his Attorneys.

C. A. Snow & Co.

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2 Sheets—Sheet 2.

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Fig. 2.

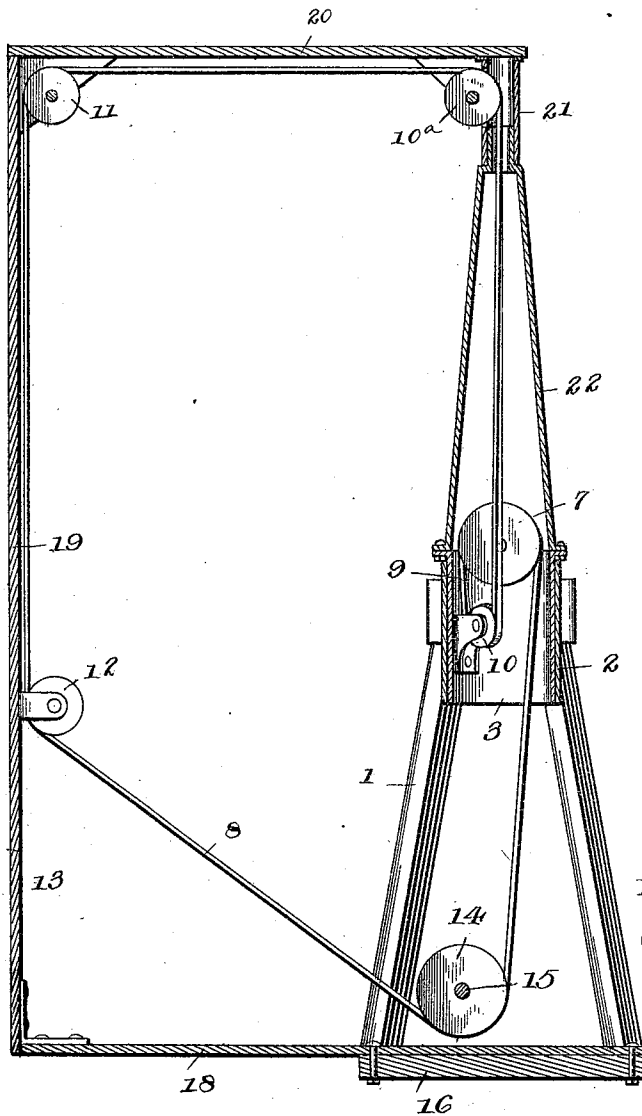
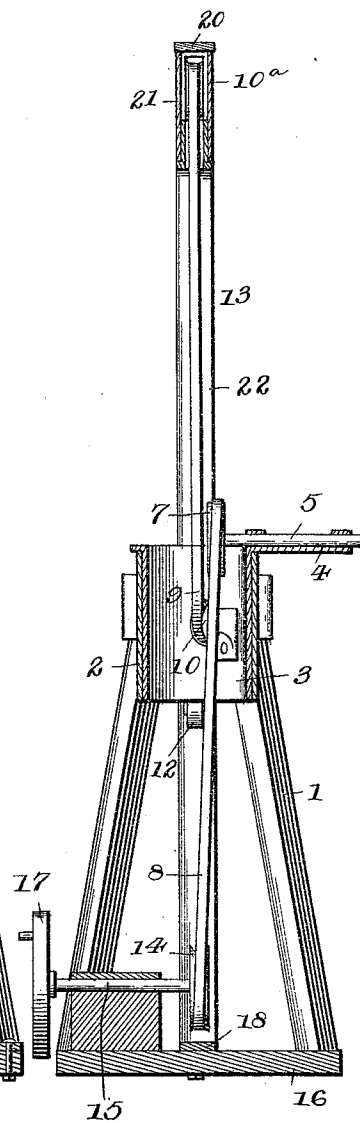


Fig. 3.



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UNITED STATES PATENT OFFICE.

ANCIL B. MORSE, OF BARABOO, WISCONSIN.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 554,786, dated February 18, 1896.

Application filed July 10, 1895. Serial No. 555,550. (No model.)

To all whom it may concern:

Be it known that I, ANCIL B. MORSE, a citizen of the United States, residing at Baraboo, in the county of Sauk and State of Wisconsin, have invented a new and useful Windmill, of which the following is a specification.

The invention relates to improvements in windmills.

The object of the present invention is to improve the construction of windmills, more especially the gearing for transmitting power from the windmill-shaft to a pump, or to a machine or the like, and to enable the wind-wheel to face the wind squarely at all times, and to mount the gearing on the tower without interfering with the operation of the wind-wheel.

The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a portion of a windmill constructed in accordance with this invention. Fig. 2 is a vertical sectional view of the same, taken longitudinally of the bracket for supporting the gearing. Fig. 3 is a similar view taken transversely of the gearing.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the upper portion of a windmill tower provided with a tubular bearing 2, receiving a turn-table 3, which has a horizontal arm 4, provided with bearings for the reception of a horizontal wind-wheel shaft 5. The wind-wheel shaft extends outward from the turn-table and carries a wind-wheel 6, and its inner end is arranged over the turn-table and has fixed to it a pulley 7.

A belt 8 is arranged on the pulley 7 and extends downward therefrom, and one side or leaf of the belt forms a loop 9 and passes around a pulley 10, and extends upward from the turn-table, and is arranged on guide-pulley 10^a, 11, and 12 of a substantially rectangular bracket 13. The belt also passes around a pulley 14 of a shaft 15, which is mounted in suitable bearings of the tower at a point below the turn-table, and which also carries

a crank-wheel 17 for the attachment of a pump-rod; but the belt may be continued, and connected with any other mechanism or machine to be operated at the base of the tower or a distance from it.

The bracket is composed of a lower horizontal arm, 18, extending outward from the platform or other desired portion of the tower, a vertical standard 19 extending upward from the outer end of the arm 18, and an upper horizontal arm, 20, extending inward from the top of the standard and provided at its inner end with a depending socket 21. The depending socket 21 receives and swivels the top of a supporting-frame 22. The supporting-frame 22 is composed of converging sides, secured at their lower ends rigidly to the turn-table, and rotating with the same, and provided at their upper ends with a vertically-disposed tubular pivot fitting in the socket 21.

The guide-pulleys 10^a and 11 are located at the ends of the upper horizontal arm of the bracket, and the guide-pulley 12 is located on the standard 19 at a point to cause the belt to form an open loop of sufficient size to permit the passage of the wind-wheel when the turn-table rotates. By this construction the gearing does not interfere with the operation of the wind-wheel, which is adapted to shift its position freely, so as to catch the wind properly.

It will be seen that the gearing is simple and inexpensive in construction, that the pulleys with the exception of those carried by the turn-table have rigid supports, and that the arrangement of the belt is such that it does not interfere with the rotation of the turn-table.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, such as the arrangement of the pulleys and the like.

What I claim is—

1. In a windmill, the combination of a tower, a turn-table mounted thereon and provided with a vertically-disposed supporting-frame, a bracket rigidly mounted on the tower and extending outward therefrom and inward over the supporting-frame and hav-

ing the latter swiveled to it, said bracket forming an opening to permit the passage of a wind-wheel, a wind-wheel shaft, a pulley fixed to the wind-wheel shaft, guide-pulleys mounted on the bracket, and a belt arranged on said pulleys and forming a loop to permit the passage of a wind-wheel, substantially as described.

2. In a windmill, the combination of a tower, a turn-table mounted thereon, a supporting-frame extending upward from the turn-table and rigid with the same, a substantially rectangular bracket rigid with the tower and swiveled to the supporting-frame, a wind-wheel shaft, a pulley fixed to the wind-wheel shaft, a guide-pulley located adjacent to the said pulley, guide-pulleys mounted on the bracket, and a belt arranged on the pulley of the wind-wheel shaft and provided with a loop arranged on the pulley 10, said belt being arranged on the guide-pulleys of the bracket and forming an open loop to permit

the passage of a wind-wheel, substantially as described.

3. In a windmill, the combination of a tower, a rectangular bracket rigid with the tower and having an upper horizontal arm located above the tower and provided with a depending socket, a turn-table mounted on the tower and provided with a supporting-frame disposed vertically and pivoted in the socket, a wind-wheel shaft, a pulley fixed to the same, guide-pulleys arranged on the bracket, and a belt arranged on said pulleys and forming an open loop to permit the passage of a wind-wheel, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

A. B. MORSE.

Witnesses:

EDWIN SELLECK,
C. W. LAMBERTON.