Feb. 1, 1927.

1,615,820

F. BEESON

WINDMILL ATTACHMENT

Filed Aug. 25, 1925

Fig. 1.

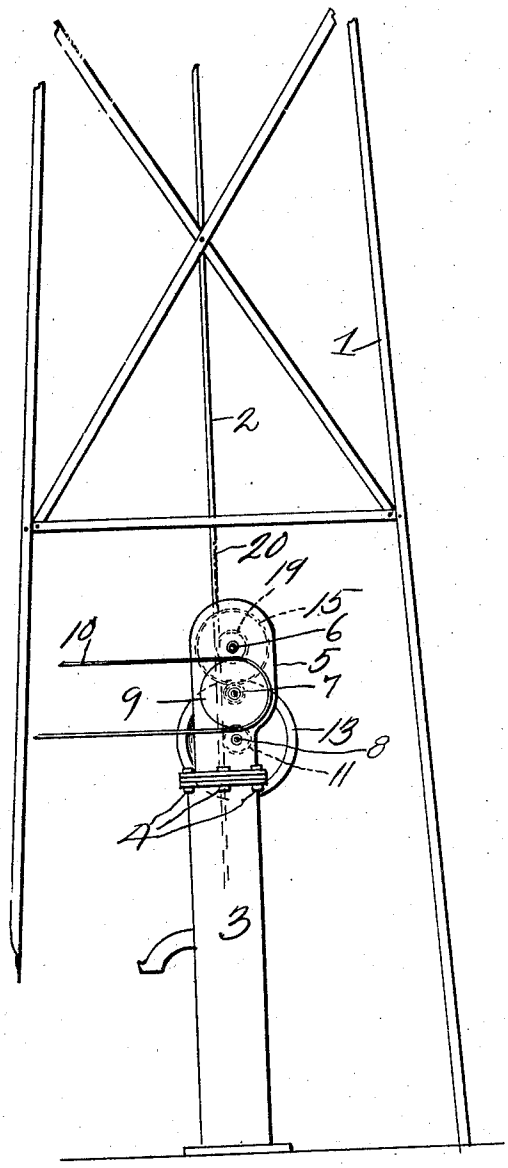


Fig. 2.

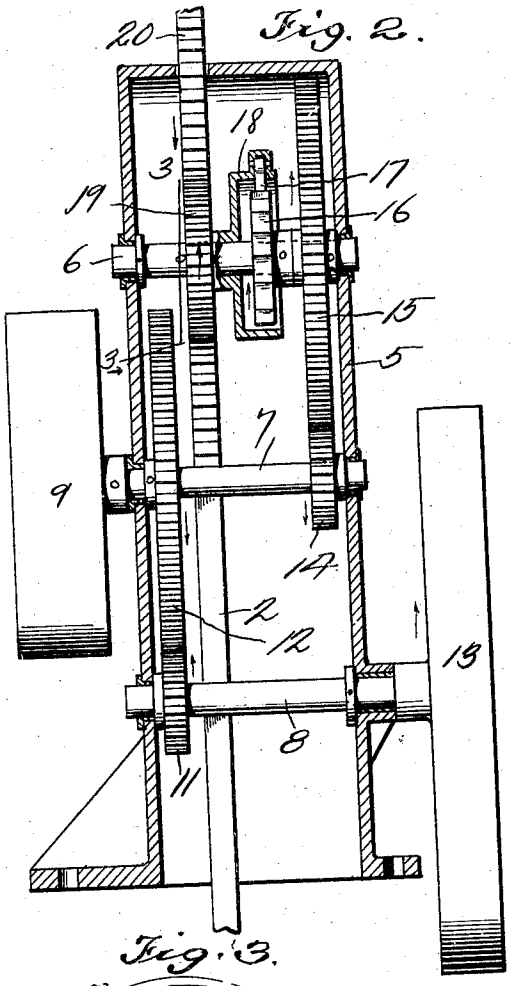
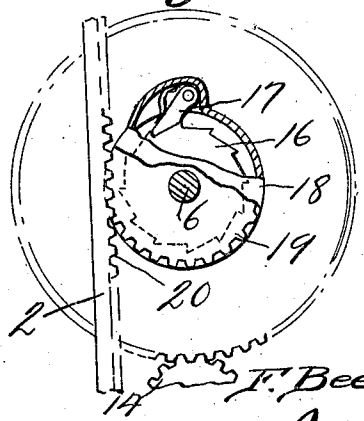


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRANK BEESON, OF ALLIANCE, NEBRASKA.

WINDMILL ATTACHMENT.

Application filed August 25, 1925. Serial No. 52,420.

The invention relates to windmill attachments, and has for its object to provide a device of this character which is detachably connected to the pump casing, and provided with a gear train in connection with a drive shaft, and with which gear train a rack carried by the reciprocating pump rod meshes, whereby during the reciprocation of the pump rod the drive shaft will be rotated and a pulley carried thereby, thereby allowing production of power for operating various machines, for instance as cream separators, churns and other farm machinery.

A further object is to provide the drive shaft with a gear which meshes with a gear carried by a counter-shaft, and on which a fly wheel is mounted for imparting momentum to the drive shaft and pulley upon the upward strokes of the pump rod, at which time the gear train is not operated, thereby insuring the rotation of the drive shaft and belt pulley during the upward stroke of the pump rod.

A further object is to provide a ratchet connection in the gear train whereby the pump rod will be allowed to move upwardly without interferences from the mechanism.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawing, described and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—

Figure 1 is a side elevation of a conventional form of windmill pump showing the power device applied thereto.

Figure 2 is a vertical transverse sectional view through the power device.

Figure 3 is a detail sectional view taken on line 3—3 of Figure 2.

Referring to the drawing, the numeral 1 designates a conventional form of windmill tower, and 2 a vertically disposed pump rod, which is vertically reciprocated in the usual manner, and which pump rod extends downwardly into the pump casing 3. Secured by means of bolts 4 to the casing 3 is a motor casing 5, and which pump rod 2 extends through the casing 5, and vertically reciprocates therein. Rotatably mounted in bearings of the casing 5 are shafts 6, 7 and 8, which shafts are horizontally disposed and in parallel relation to each other. The outer end of the shaft 7 is provided with a drive pulley 9, over which a belt 10 extends, and which belt 10 may extend to a piece of machinery to be operated in the usual manner. Shaft 8 is provided with a gear 11, which meshes with a large gear 12 on the shaft 7, and also with a fly wheel 13, which, incident to its rapid rotation insures the continued rotation of the pulley 9 as the pump rod 2 moves upwardly, and at which time the driving connection between the pump rod, and the pulley is broken. Shaft 7 is provided with a gear 14, which meshes with a large gear 15 carried by the shaft 6, and which gear rotates with the shaft 6. The shaft 6 has secured thereto and rotatable therewith a ratchet wheel 16, with which ratchet wheel a pivoted dog 17 carried by a casing 18 cooperates. The casing 18 is carried by a drive pinion 19, which rotatably mounted on the shaft 6, and which drive pinion 19 meshes with the rack 20 of the pump rod 2. It will be seen that when the pump rod 2 moves downwardly, the shaft 6 will be rotated through the medium of the rack 20, gear 19, and ratchet 16, thereby imparting rotation to the large gear 15. The large gear 15 will in turn rotate the gear 14 carried by the shaft 7, thereby imparting rotation to the belt pulley 9 for driving a piece of machinery. When the pump rod 2 reaches the bottom of its stroke and starts upwardly the ratchet pawl 17 will ride over the teeth of the ratchet wheel 16, therefore it will be seen that the driving connection will be broken and the shaft 7 and its pulley 9 may continue to rotate in the driving direction under the influence of the fly wheel 13, and which fly wheel will insure sufficient momentum to cause the pulley 7 to continue to rotate until there is again a driving connection through the ratchet upon the downward movement of the pump rod.

From the above it will be seen that a motor is provided in connection with a windmill pump whereby power created by the windmill pump rod may be utilized for operating auxiliary machinery, for instance, churns, feed cutters or electric generators.

It will also be seen that the device may be easily and quickly applied to a conventional form of windmill pump without modifying the construction thereof, thereby allowing the device to be generally sold.

The invention having been set forth what is claimed as new and useful is:—

The combination with a windmill pump rod, a pump casing into which the rod extends, of a motor casing secured to the pump casing and through which the pump rod extends, a drive shaft rotatably mounted in the motor casing, a gear carried by the drive shaft, a rack carried by the pump rod and meshing with the gear, a ratchet connection between the gear and the drive shaft, a pulley shaft, gear connections between the drive shaft and the pulley shaft, a fly wheel shaft, gear connections between the pulley shaft and the fly wheel shaft, a fly wheel carried by the fly wheel shaft, a pulley carried by the pulley shaft, said motor and motor casing being entirely supported by the pump casing.

In testimony whereof I have signed my name to this specification.

FRANK BEESON.