No. 887,911. PATENTED MAY 19, 1908.

C. BEVILL.

IRRIGATING SYSTEM.

APPLICATION FILED JULY 19, 1906.

2 SHEETS—SHEET 1.

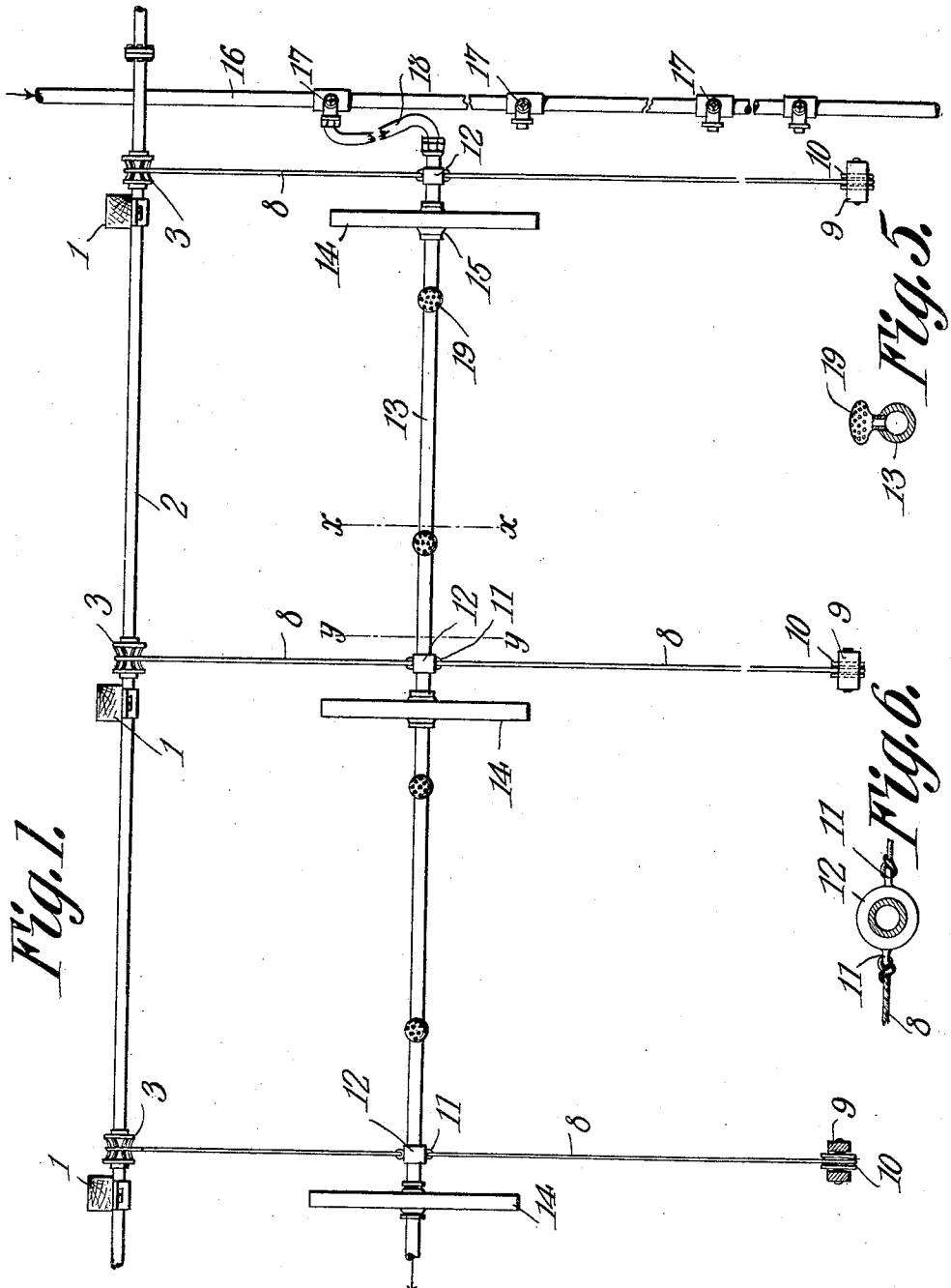


Fig. 1.

Fig. 3.

Fig. 4.

WITNESSES:

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Hubert D. Lawson.

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2 SHEETS—SHEET 2.

Fig. 2.

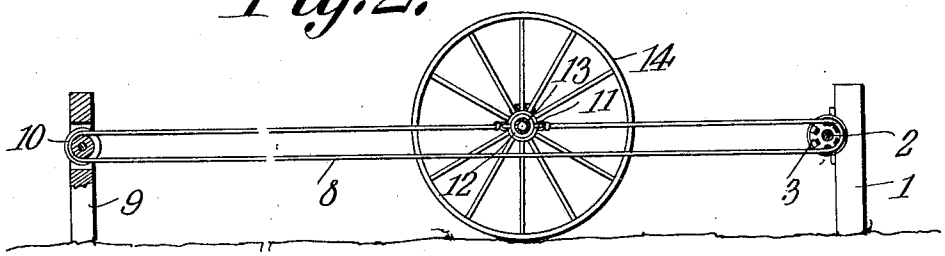
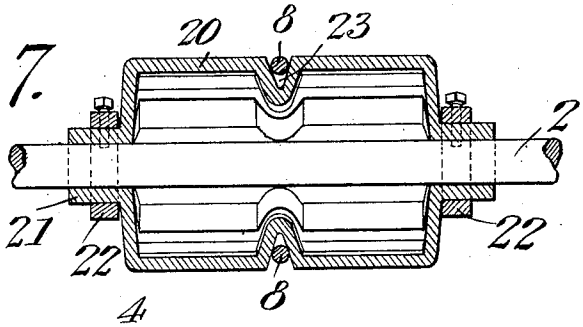


Fig. 7.



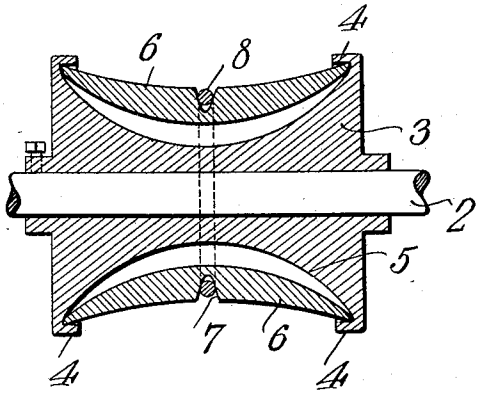


Fig. 3.

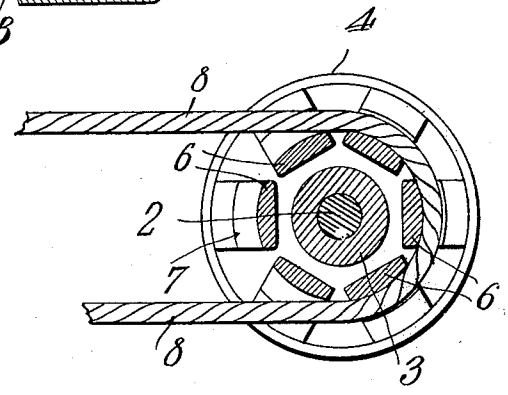


Fig. 4.

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UNITED STATES PATENT OFFICE.

CLAIBOURN BEVILL, OF BUSHNELL, FLORIDA.

IRRIGATING SYSTEM.

No. 887,911. Specification of Letters Patent. Patented May 19, 1908.

Application filed July 19, 1906. Serial No. 326,952.

To all whom it may concern:

Be it known that I, CLAIBOURN BEVILL, a citizen of the United States, residing at Bushnell, in the county of Sumter and State of Florida, have invented a new and useful Irrigating System, of which the following is a specification.

This invention relates to an apparatus for irrigating land and its object is to provide simple mechanism whereby a large area of land may be irrigated thoroughly and rapidly at comparatively slight cost.

The invention consists of a power shaft on which is disposed a desired number of driving cables which may be of any preferred lengths and are supported at points removed from the shaft by pulleys. The ends of the cables are connected to a tubular shaft of desired length and supported by wheels which are loosely mounted thereon. Spraying nozzles are connected to this shaft and a flexible connection is adapted to be made between the shaft and a water supply pipe extending lengthwise of the apparatus.

The invention also consists in providing means upon this power shaft for automatically gripping the cables so as to prevent slipping.

The invention also consists of certain other novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In the drawings: Figure 1 is a plan view of the apparatus; Fig. 2 is a longitudinal section therethrough; Fig. 3 is an enlarged longitudinal section through one of the drive pulleys; Fig. 4 is a transverse section therethrough; Fig. 5 is a section on line x—x Fig. 1; Fig. 6 is a section on line y—y Fig. 1; and Fig. 7 is a view in section showing a modified form of drive pulley.

Referring to the figures by characters of reference, 1—1 are standards on which is journaled a power shaft 2 which may be of any desired length and driven by any suitable mechanism. At desired intervals upon this shaft are secured drive pulleys or drums 3 which, as shown particularly in Figs. 3 and 4, are formed with inwardly extending circular flanges 4 disposed at opposite sides of the annular groove 5 within the drum. These flanges overlap the ends of bow springs 6 and serve to hold them against displacement. The thickness of each bow spring increases toward the center thereof where a V-shaped recess 7 is formed. This recess is of sufficient size to receive a cable 8. The walls of the recess 7 constitute jaws for binding upon the cable whenever the central portion of the spring is pressed inward toward the drum. At points removed desired distances from the shaft 2 are disposed standards 9 in which are mounted pulleys 10 and the cables 8 are mounted on these pulleys. The ends of the cables are fastened to ears 11 extending in opposite directions from collars 12 secured to or formed with a tubular non-rotatable shaft 13. This shaft may be of any desired length and has supporting wheels 14 rotatably mounted on it at desired intervals and held against lateral displacement by collars 15. A water supply pipe 16 extends longitudinally of the apparatus and has valved outlets 17 arranged at intervals thereon any one of which may be connected to one end of the shaft 13 by means of a flexible hose 18.

It is believed that the operation of this apparatus will be fully understood from the foregoing description. By rotating the shaft 2 the cables 8 are caused to pull the shaft 13 toward one of the outlets 17, this operation causing the wheels 14 to roll along the ground. After the shaft 13 has been brought to a predetermined position the water is turned on and will be discharged through nozzles 19 upon the shaft 13. Said shaft can be moved backward or forward while the water is turned on so that all of the ground which can be reached can be thoroughly irrigated The area covered by the apparatus while connected to one of the outlets is of course regulated by the length of the hose 18. After said area has been irrigated shaft 2 is rotated to move the shaft 13 into position to be connected with another outlet 17. As a result of the peculiar construction of the drums the cables will be automatically gripped by the springs so that a cable of considerable length can be operated by each drum without slipping thereon. As hereinbefore stated shafts 2 and 13 may be made of considerable length so that a very large area of ground will be covered by the apparatus. The distance traveled by the apparatus is practically unlimited and the cost of irrigating in proportion to the increase of area is only increased to the extent of adding to the length of the cables and of the pipes 16 or shafts 2 and 13.

Instead of employing the construction of

drum or pulley shown particularly in Figs. 3 and 4 a modified construction such as shown in Fig. 7 may be utilized. This construction consists of springs 20 arranged around the shaft 2 and having annular extensions 21 which are clamped upon the shaft by means of collars 22. V-shaped recesses 23 are formed within the springs for the purpose of receiving the cable 8. These springs act in the same manner as those which are secured to the drums 3.

What is claimed is:

In an irrigating apparatus the combination with a water supply pipe having a plurality of valved outlets; of a tubular shaft disposed at right angles to said pipe and movable along one side thereof, a plurality of spraying devices upon the shaft, wheels revolubly mounted upon the shaft at the ends thereof and at intermediate points, a flexible tubular connection between said shaft and the valved outlets, said connection limiting the movement of the shaft, a stationary drive shaft parallel with and at one end of the path of movement of the tubular shaft, fixedly supported pulleys at the other end of said path of movement, collars mounted on the tubular shaft, cables extending around the drive shaft and pulleys and secured at their respective ends to opposite portions of the collars, and cable gripping and actuating means revoluble with the drive shaft.

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

CLAIBOURN BEVILL.

Witnesses:
S. STEPHENS,
W. F. NOBLE.