

1,429,756.

J. C. MITCHELL.
IRRIGATING MACHINE.
APPLICATION FILED JAN. 12, 1921.

Patented Sept. 19, 1922.
3 SHEETS—SHEET 1.

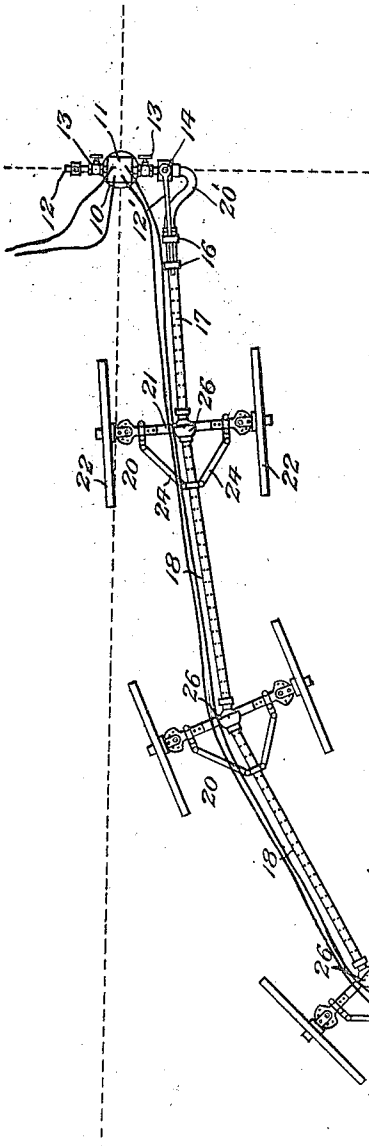


Fig. 1.

Fig. 6.

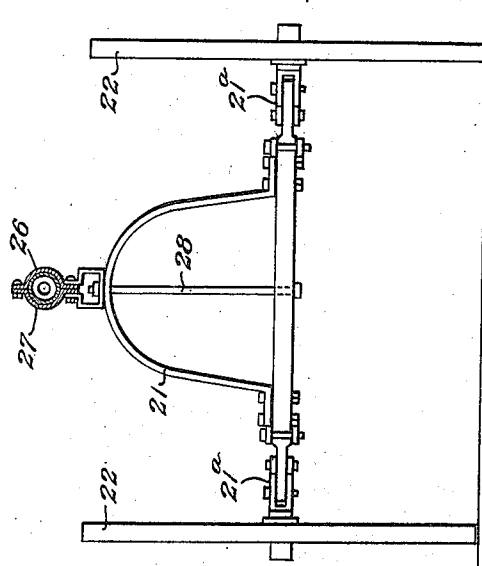
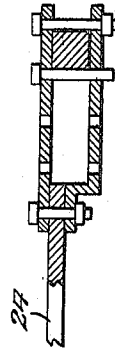
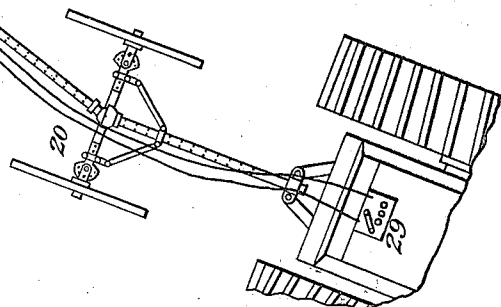


Fig. 5.



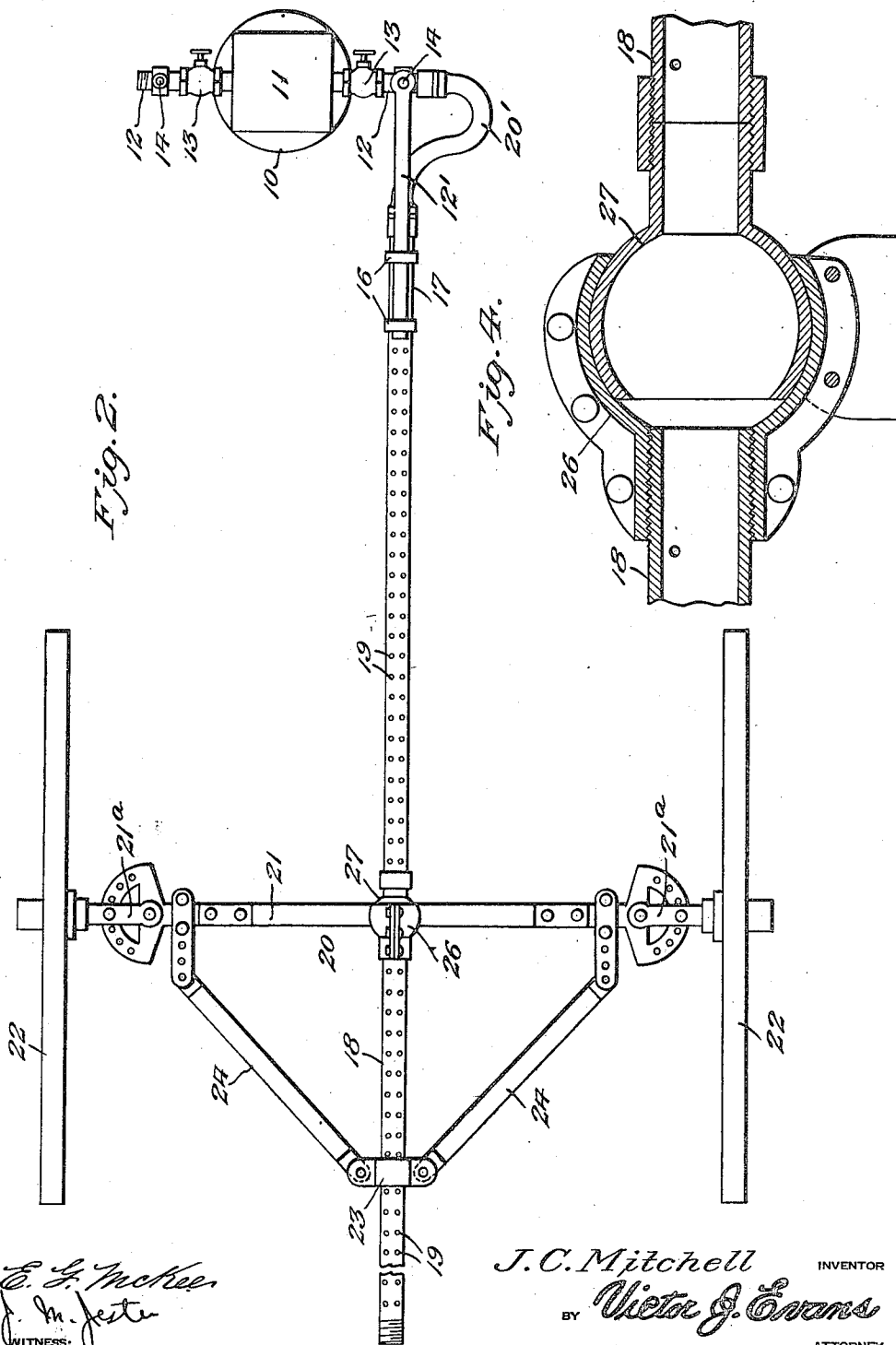
Edwin G. McKee
J. M. Jester
WITNESS:

J. C. Mitchell
INVENTOR
BY Victor J. Evans
ATTORNEY

1,429,756.

J. C. MITCHELL.
IRRIGATING MACHINE.
APPLICATION FILED JAN. 12, 1921.

Patented Sept. 19, 1922.
3 SHEETS—SHEET 2.



E. L. McKee
J. M. Jester
WITNESS:

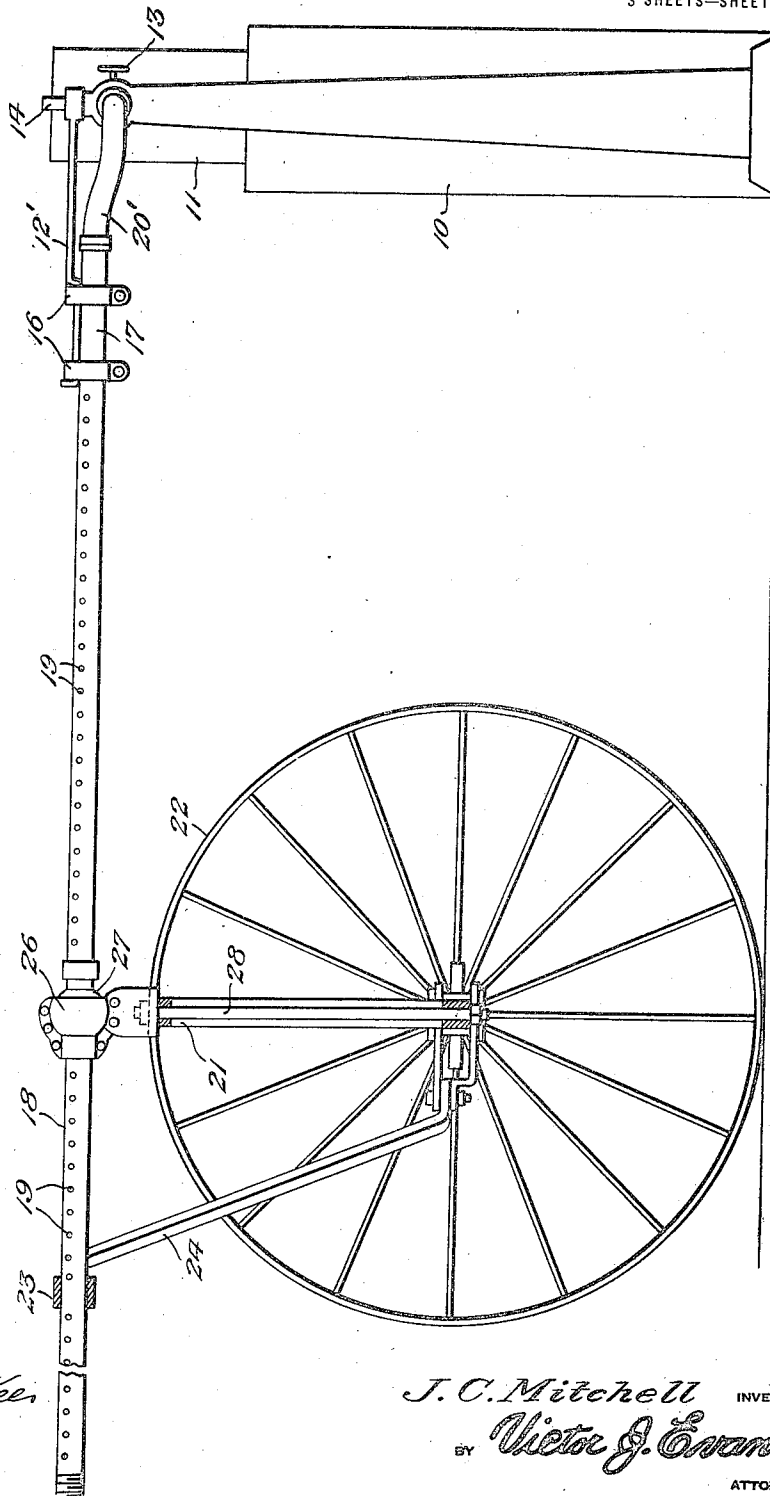
J. C. Mitchell INVENTOR
BY *Victor J. Evans* ATTORNEY

1,429,756.

J. C. MITCHELL.
IRRIGATING MACHINE.
APPLICATION FILED JAN. 12, 1921.

Patented Sept. 19, 1922.
3 SHEETS—SHEET 3.

Fig. 3.



E. L. McKee
J. M. Foster
WITNESSES

J. C. Mitchell INVENTOR
BY *Victor J. Evans* ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN C. MITCHELL, OF STERLING, KANSAS.

IRRIGATING MACHINE.

Application filed January 12, 1921. Serial No. 436,725.

To all whom it may concern:

Be it known that I, JOHN C. MITCHELL, a citizen of the United States, residing at Sterling, in the county of Rice and State of Kansas, have invented new and useful Improvements in Irrigating Machines, of which the following is a specification.

This invention relates to water distribution devices and has for its object the provision of novel means for watering or irrigating fields and the like, the invention consisting in the provision of a long pipe formed of flexibly connected sections supported upon a plurality of wheeled trucks, the pipe being swivelly connected at one end with a distributing pipe leading from a pumping device associated with a well or stream, the pipe being provided throughout its length with perforations for the discharge of water and having its other end hinged to a tractor whereby the pipe and all of the operating mechanism may be pulled about a field so that water may be applied thereto in a thorough and efficient manner and be evenly distributed.

An important object is the provision of an irrigating system in which the pumping means is located centrally of the tract to be irrigated, a plurality of valved distributing pipes leading from the pumping means and either being adapted to have a discharge pipe mounted upon trucks associated therewith.

An additional object is the provision of a device of this character which will be simple and inexpensive, easy to operate and control, highly efficient in use, durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed and illustrated in the accompanying drawings in which—

Figure 1 is a diagram of my irrigating system,

Figure 2 is an enlarged view showing my apparatus in plan,

Figure 3 is a side elevation,

Figures 4 and 6 are detail views of the connection of the discharge pipe with the distributing pipe and the associated parts, and

The remaining figures are detail views of the trucks and associated parts.

Referring more particularly to the draw-

ings, the numeral 10 designates a well with which is associated a pump structure shown diagrammatically at 11 and this pump may be of the centrifugal or any other preferred type and is provided with two outlet pipes 12, each of which is provided with a cut-off valve 13. In actual practice it is designed that this pump structure be located at the center of the tract to be watered or irrigated and in sizes of tracts up to one hundred and sixty acres it is preferable that the pump be at the center thereof and have two of the outlet pipes 12.

Disposed adjacent each outlet pipe 12 is an upright post 14. Either post may be used, depending upon which section of the tract is to be irrigated. Adapted to be swiveled upon either post is a bar 12 which is suitably secured, as by means of clamps 16, to one end of an outlet pipe 17 which is formed of a plurality of similar sections 18 and provided with perforations 19 of any suitable size and number. Clamped upon this end of the pipe 17 is a flexible hose which is also clamped upon the desired outlet pipe 12. This flexible connection permits movement of the pipe 17 while not interfering in any way with the flow of water from the outlet pipe 12 to the pipe 17.

As stated above, all the sections 18 of the pipe 17 are similar and each section, which may be of any desired length, is supported upon a truck 20 which includes an upwardly arched axle 21 provided at its ends with pivoted knuckles 21^a carrying wheels 22. Associated with each section is a collar 23 from which extend brace bars 24 connected with the end portions of the axle. Connected with the axle are hounds 25 upon which the pipe section bears and which serve as supports for preventing sagging or dropping down of the sections. The ends of the adjacent pipe sections 18 are connected by the novel coupling means fully illustrated in the detailed figures. This coupling includes hollow ball and socket members 26 and 27, respectively, so that relative movement between the sections may occur as when the device is used in hilly country. The coupling is pivoted upon the truck by a king bolt 28.

The pipe 17 may be drawn by any desired means though in actual practice I prefer to make use of a tractor indicated at 29 and connected with the free end of the endmost section 18.

In the operation of the device it will be seen that the tractor 29 moves about the field and draws the trucks carrying the pipe along, the pivoted knuckles 21^a permitting full movement. Water passing from the outlet pipe 12 will pass through all the sections of the pipe 17 and be discharged through the perforations 19 so that the ground traveled over will be very efficiently watered or irrigated. It is necessary that the wheels 22 of the trucks be of considerable diameter so that the perforated discharge pipe will be at a sufficient height above the ground to clear growing plants. It is also necessary that the axle arch be sufficiently high to permit the wheels to pass under the pipe. In actual practice it is preferable that the pumping device 11 be operated by electricity and that any suitable control means may be associated with the electric current and capable of actuation by the driver of the tractor as by means of wires or the like trained along the pipe 17 and connected with such a mechanism.

After the irrigating has been carried out from one of the outlet pipes 12, the flexible hose 20 is disconnected therefrom and the bar 15 is disconnected from the post 14, after which the hose and bar are connected with the other pipe and post and the operation carried out in conjunction with the other outlet pipe 12.

It is of course to be noted that more than one pipe may be used if preferred, though only one is shown.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided a simply constructed and easily operated irrigating device which will be very efficient inasmuch as the device is entirely portable and is drawn about the area to be irrigated so that the exact amount of water desired may be applied.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form,

construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In an irrigating apparatus, a plurality of similar flexibly connected sections each including a wheel carrying truck, an upstanding yoke carried by the axle of the truck, an upstanding bracket member mounted at the center of each yoke and formed as a ball socket, a pipe secured at one end within said ball socket and having its other end formed with a hollow ball head engaged within the socket of the next adjacent section whereby the successive sections will be pivotally connected, the pipe being perforated throughout its length, and an upwardly inclined brace bar secured upon the axle of the truck and having its upper end connected with the pipe.

2. In an irrigating apparatus including a post and a stand pipe, distributing means comprising a plurality of similar sections including a truck including an axle provided at its ends with dirigibly mounted wheels, an upstanding yoke carried by the axle and extending above the wheels, a bracket member secured centrally upon the yoke and formed as a ball socket, a pipe section secured at one end within the ball socket and provided throughout its length with a plurality of perforations and having its other end formed with a hollow ball head, the ball head of one section being engaged within the socket of the other section, a pipe section flexibly connected with the stand pipe and having a ball head engaged within the socket of the first pipe section carried by the truck, a pair of brackets secured upon the axle of each truck near the ends thereof, forwardly and upwardly inclined brace bars pivotally connected with said last named bracket, and a sleeve member connected with the upper end of said brace bars and surrounding the associated pipe sections.

In testimony whereof I affix my signature.

JOHN C. MITCHELL.