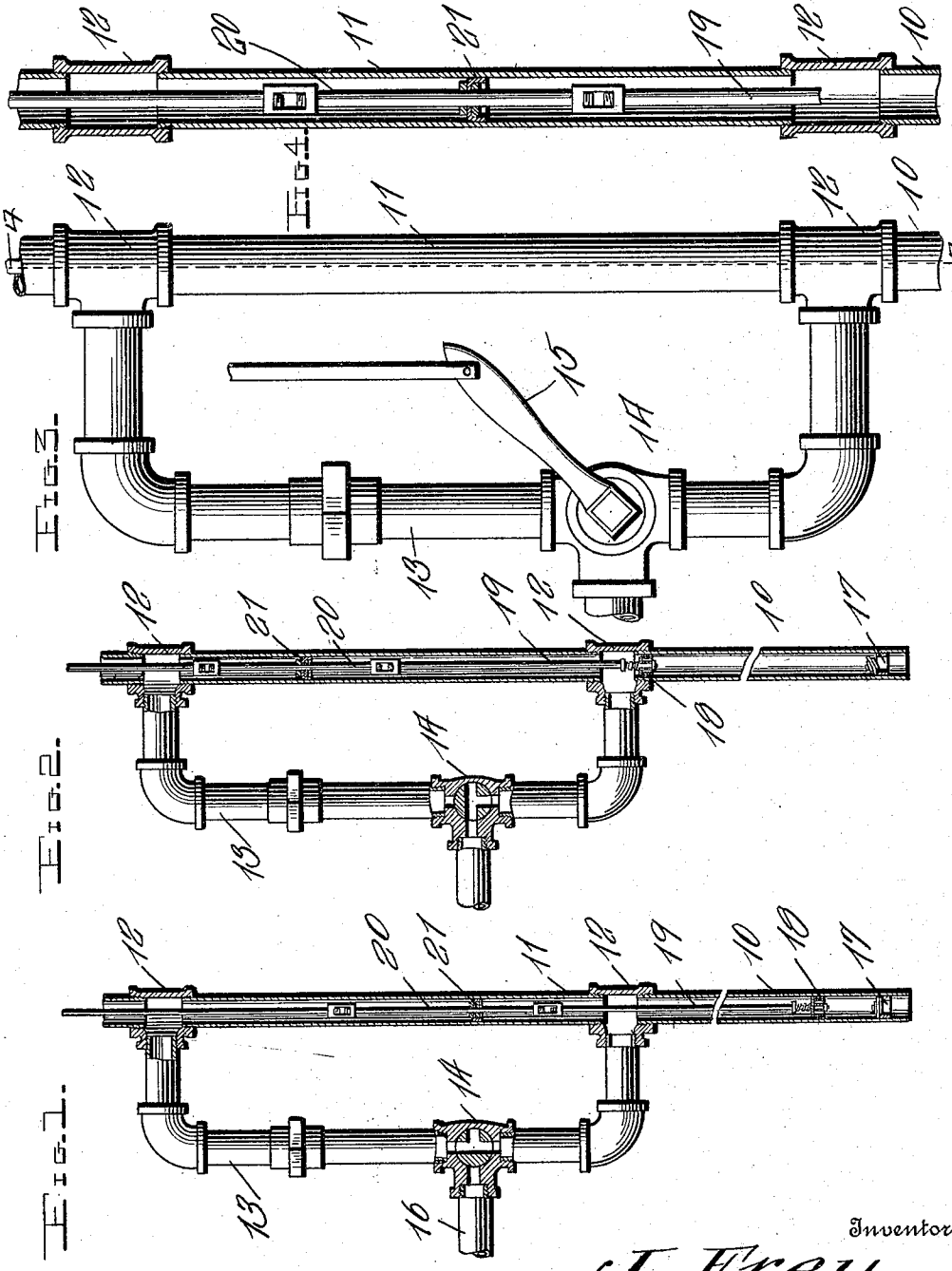
J. FREY.

PUMP ATTACHMENT.

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1,159,002.

Patented Nov. 2, 1915.



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JOHN FREY, OF GUIDE ROCK, NEBRASKA.

PUMP ATTACHMENT.

1,159,002. Specification of Letters Patent. Patented Nov. 2, 1915.

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To all whom it may concern:

Be it known that I, JOHN FREY, a citizen of the United States, residing at Guide Rock, in the county of Webster, State of Nebraska, have invented certain new and useful Improvements in Pump Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to pump attachments.

The object of the invention resides in the provision of an attachment which may be associated with an ordinary pump and when so associated will enable the pump to fulfill the office of a force pump and in addition will enable the water raised by the action of the plunger to be discharged through the nozzle or be directed through a branch pipe and delivered at any desired point.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claims.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is a vertical longitudinal section of a portion of a pump having the attachment associated therewith, the pump plunger being shown at the limit of its down stroke and the three-way valve of the attachment set to effect the discharge of the water through the pump nozzle. Fig. 2 a view similar to Fig. 1 showing the pump plunger at the limit of its upstroke and the three-way valve of the attachment set so that the water will be discharged into a branch pipe. Fig. 3 a view in elevation of the attachment on an enlarged scale, and Fig. 4 a section on the line 4—4 of Fig. 3.

Referring to the drawings, 10 indicates the barrel of the pump which has a suitable section removed therefrom in its length and substituted for this section is the tubular member 11 of the attachment, said member 11 being secured to the adjacent ends of the resultant barrel sections by means of T-joints 12. Secured to the T-joints 12 respectively are the terminals of a branch pipe line 13 and disposed in this branch pipe line 13 is a three-way valve 14 operated by a handle 15 and serving to divert the water passing through the branch pipe line 12 to a pipe line 16. Mounted in the lower end of the pump barrel 10 is the usual check valve 17 and slidable in the barrel 10 between the check valve 17 and the adjacent T-joint 12 is the usual plunger 18 secured to one end of a plunger rod 19. This rod 19 extends upwardly and is connected at its upper end to the usual pump operating handle (not shown). The plunger rod 19 includes a section 20 upon which is mounted a cup plunger 21 adapted for movement in the tubular member 11.

By this construction it will be apparent that as the plunger rod 19 is reciprocated in the usual manner the upstroke of the plunger 18 will draw the water above the valve 17, while the down stroke of said plunger will close the valve 17 and force the water through the plunger 18 into the barrel 10 thereabove. Continued reciprocation of the plunger rod will cause the water to fill the entire space between the cup plunger 21 and the valve 17 so that upon each down stroke of the cup plunger 21 the water will be forced into the branch pipe 13 at the lowermost T-joint 12. If the valve 14 is set as shown in Fig. 1 the water will continue through the branch pipe 13 and be delivered to the barrel 10 and section 11 above the cup plunger 21 and finally discharged through the pump nozzle. If the valve 14 is set as shown in Fig. 2 the water will be diverted through the pipe 16 as will be obvious.

What I claim is:—

In a pump, the combination of a pump barrel, a valved plunger movable in said barrel, a plunger rod secured to said plunger, a non-valved plunger on the plunger rod above the valved plunger, a by-pass pipe provided with a discharge outlet and having its ends communicating with the pump barrel at points respectively above and below the limits of movement of the non-valved plunger and further having its upper end

communicating with the space in the barrel between the same and the non-valved plunger, a three-way valve controlling communication between the interior of the by-pass pipe and said discharge outlet, and a check valve in the lower end of the pump barrel beneath the valved plunger.

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

JOHN FREY.

Witnesses:
J. H. CRARY,
S. G. SOMERHALDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."