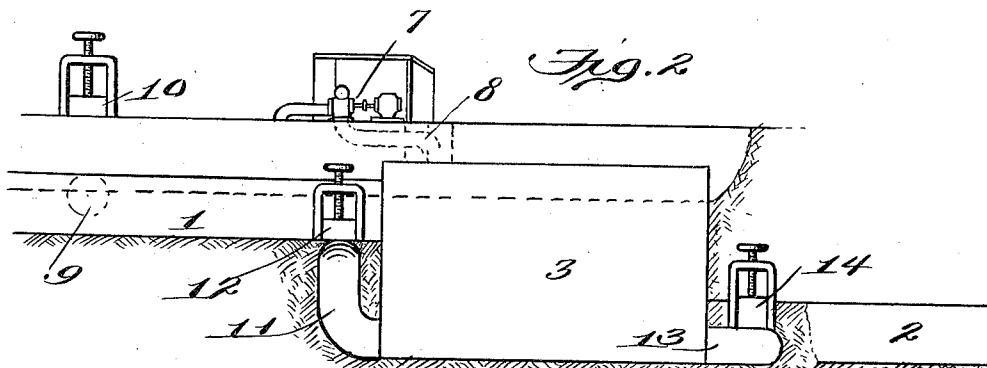
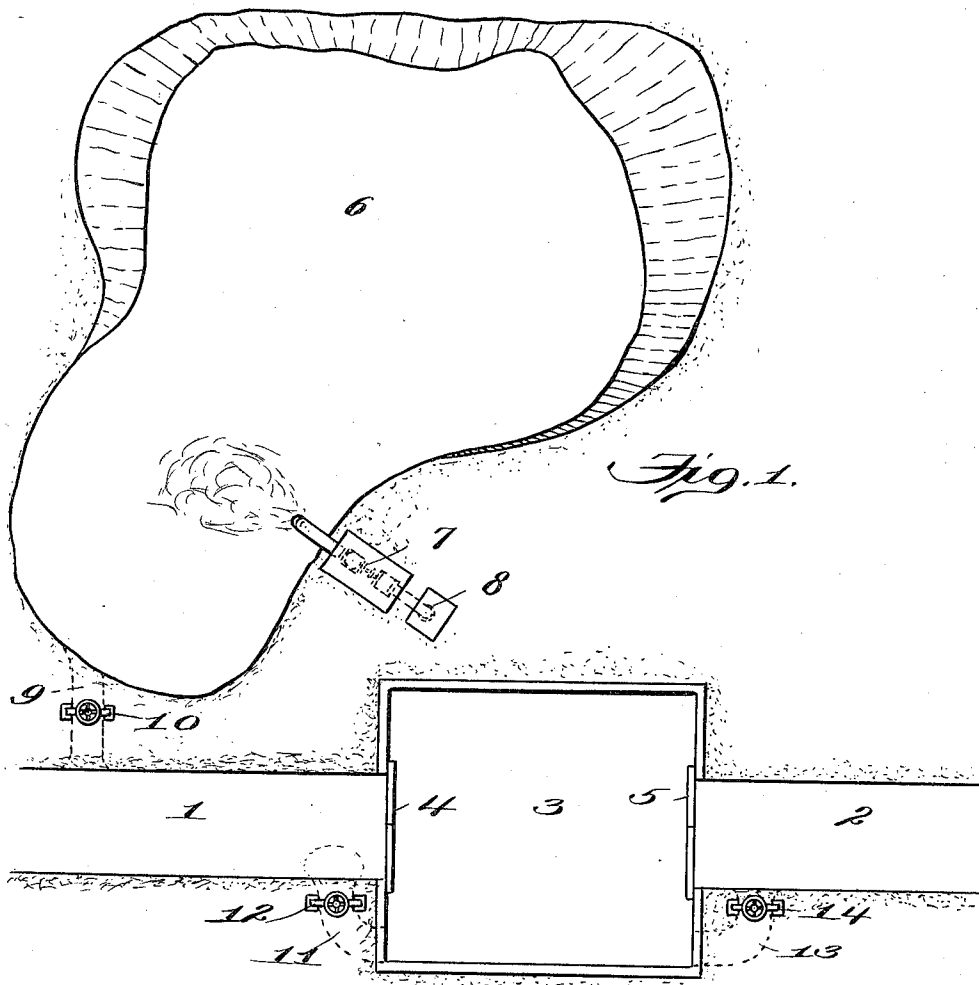


R. L. MARTIN.
CANAL FEEDER.
APPLICATION FILED OCT. 30, 1911.

1,029,505.

Patented June 11, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

ROBERT L. MARTIN, OF OCALA, FLORIDA.

CANAL-FEEDER.

1,029,505.

Specification of Letters Patent.

Patented June 11, 1912.

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To all whom it may concern:

Be it known that I, ROBERT L. MARTIN, a citizen of the United States, residing at Ocala, in the county of Marion and State of Florida, have invented new and useful Improvements in Canal-Feeders, of which the following is a specification.

My present invention relates to improvements in canals and more especially to those having sections or levels of different heights and connected by locks, and the primary object of the present invention is to provide means for feeding water to such canals where it is impracticable to utilize the gravity flow of water through the canal for such purpose, the feed water, according to the present invention being introduced preferably by pumping or other artificial means into a supply reservoir which is located adjacent to and above the lower end of the upper canal level, such water is conducted under proper control from the supply reservoir into the upper canal level, and the water is then conducted from the lower end of the upper level to the upper end of the lower level preferably through the connecting lock.

To these and other ends, the invention consists in certain improvements, and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out particularly in the claims at the end of the specification.

In the accompanying drawing:—Figure 1 is a plan view of the adjacent ends of two canal levels and the connecting lock showing the present invention applied thereto; and Fig. 2 is a vertical sectional view.

Similar parts are designated by the same reference characters in the several views.

The present invention is applicable generally to canals having sections or levels of different heights, the object of the invention being to maintain a proper supply of water in the canal in those cases where it is impracticable to utilize the gravity flow of the water through the canal for this purpose. In the present instance I have shown the invention applied as an example to a lock canal of the type used for the transport of vessels, 1 designating the lower end of the upper level or section, 2 designating the upper end of the next lower section, and 3 designates the lock which connects such

sections, the lock having upper and lower gates 4 and 5 whereby the lock may be operated in the usual manner to receive the vessels, to lower the same, and then permit the vessels to enter the lower level of the canal.

According to the present invention, a water supply reservoir 6 is employed and suitable means is provided for maintaining the water in this reservoir at a height above the height of water in the lower end of the canal level 1. Artificial means is preferably employed for this purpose because of its reliability, a pumping apparatus 7 being shown in the present instance which receives water from a well 8, this pumping apparatus being operated in a manner to maintain the water at a proper height in the reservoir. A flume or other suitable passage 9 connects the reservoir to the canal level 1 and the flow of water from the reservoir and into the canal level mentioned is controlled by a gate 10. A flume 11 leads from the lower end of the canal level 1 into the lock 3 and this flume is controlled by a gate 12. A flume 13 leads from the lower end of the lock 3 into the canal level 2, and this flume is controlled by a gate 14.

In operating a canal according to the present invention the pumping apparatus as before stated is operated in a manner to maintain a supply of water in the reservoir, this water standing at a height above the level of water in the canal section or level 1, and the height of water in the level 1 is maintained at the desired point by adjustment of the gate 10 which regulates or controls the flow of water from the reservoir into this canal section, the adjustment of the gate 10 also depending upon the adjustments of the gates 12 and 14, it being understood that the flumes 11 and 13 conduct water from the canal level 1 to the canal level 2 in order to maintain the water in the latter level at the proper height, and to this end the gates 12 and 14 are to be set or adjusted accordingly. To economize in the amount of water used, the gates 10, 12 and 14 may be adjusted so as to regulate the height of water in the canal according to the amount of traffic and also according to the draft of the vessels using the canal at different times. The gates 10 and 12 may also be closed temporarily while the water is being discharged from the lock into the

canal level 2 to lower the vessel or vessels into the lock.

I claim as my invention:

1. A canal having upper and lower levels, a lock connecting the lower end of the upper level and the upper end of the lower level, a reservoir having means for maintaining a supply of water therein at a height above that of the upper level, means for conducting water from said reservoir into the upper level of the canal, and means for conducting water from the upper to the lower level.

2. A canal having upper and lower levels, a lock connecting them, a reservoir having means for maintaining a supply of water therein at a height above that of the upper level, means for conducting water from the reservoir into the upper canal level, means for conducting water from the upper level into the lock, and means for conduct-

ing water from the lock into the lower level.

3. A canal having upper and lower levels, a lock connecting them, a reservoir, means for pumping water into the reservoir to maintain a supply of water therein at a height above that of the water in the upper canal level, gate-controlled means for conducting water from the reservoir into the upper level, gate-controlled means for conducting water from the upper level into the lock, and gate-controlled means for conducting water from the lock into the lower level.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT L. MARTIN.

Witnesses:

F. W. DITTO,
MAMIE E. FOX.

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