

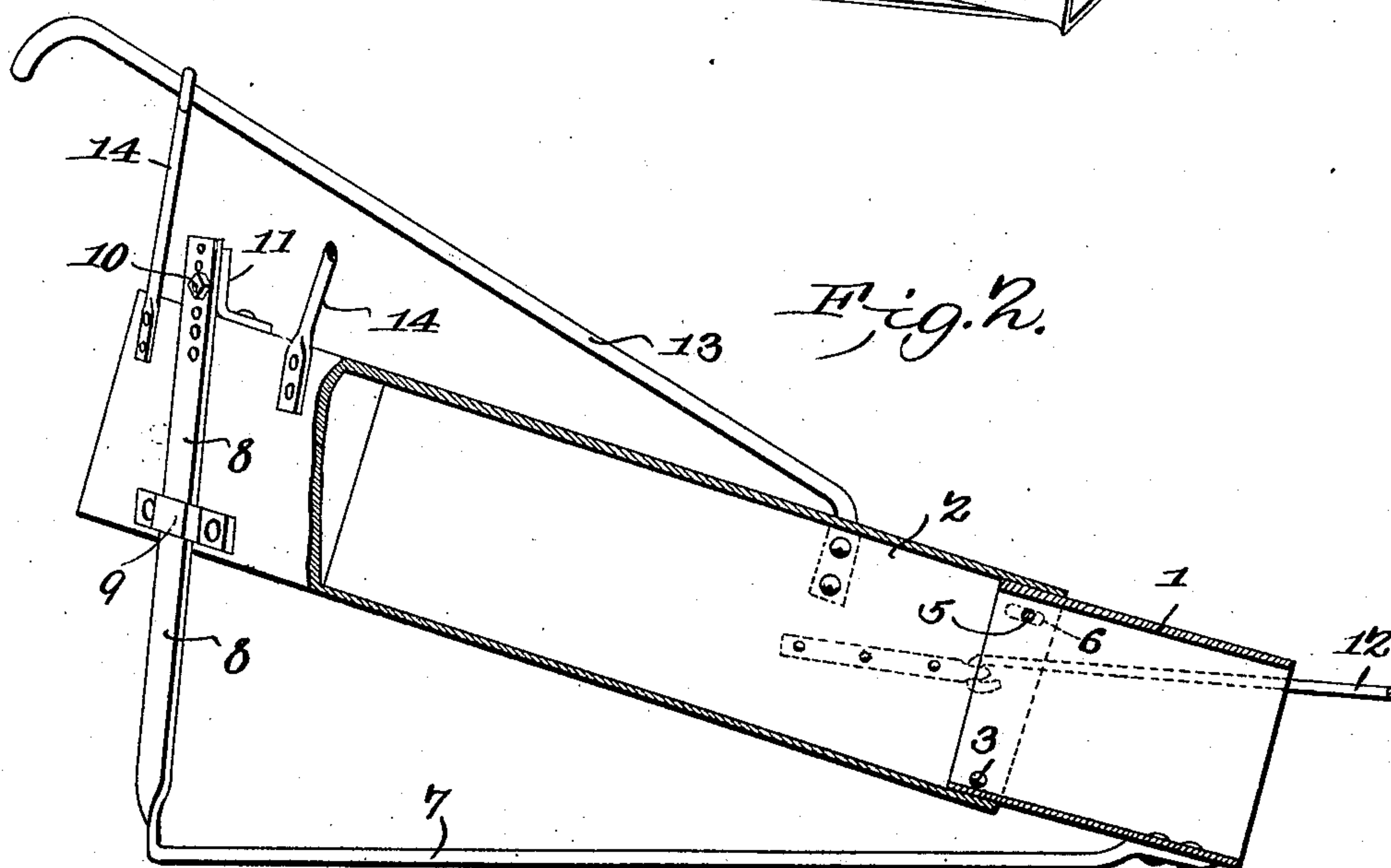
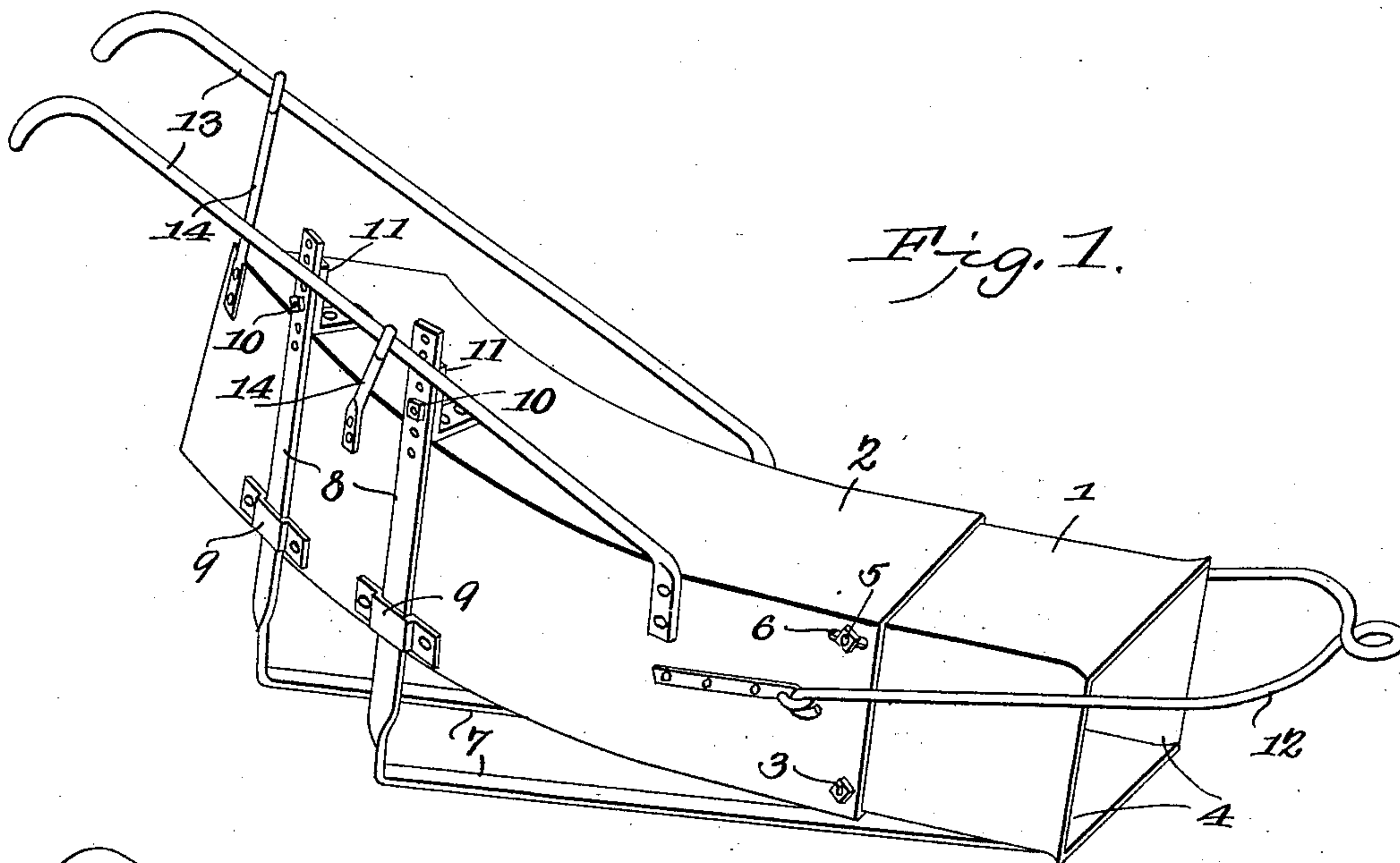
No. 819,313.

PATENTED MAY 1, 1906.

R. E. REED & W. PICKFORD.

## DITCHING MACHINE.

APPLICATION FILED JAN. 8, 1906.



*WITNESSES:*

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# UNITED STATES PATENT OFFICE.

ROBERT E. REED AND WILLIAM PICKFORD, OF CANON CITY, COLORADO.

## DITCHING-MACHINE.

No. 819,313.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed January 8, 1906. Serial No. 295,148.

*To all whom it may concern:*

Be it known that we, ROBERT E. REED and WILLIAM PICKFORD, citizens of the United States, residing at Canon City, in the county of Fremont and State of Colorado, have invented a new and useful Ditching-Machine, of which the following is a specification.

This invention relates to ditching-machines; and it has for its objects to present a machine of this class which may be usefully employed for the purpose of cleaning irrigating-ditches and laterals.

Other objects of the invention are to simplify and improve the construction and operation of this class of machines.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be made when desired.

In the drawings, Figure 1 is a perspective view of a machine constructed in accordance with the principles of the invention. Fig. 2 is a longitudinal sectional view of the same.

Corresponding parts in both figures are indicated throughout by similar characters of reference.

The body of the improved ditching-machine or ditch-cleaning machine is composed of two tubular members 1 and 2, both of which are preferably of rectangular cross-section and of any suitable dimensions, the width being preferably of approximately the width of the ditch that is to be operated upon. The members 1 and 2 are pivotally connected near their lower edges, as by means of bolts 3, the rear end of the front member 1 being inserted into the front end of the rear member 2. The mouth of the front member 1 is preferably made slightly flaring, as indicated at 4. In addition to the pivots 3 the members 1 and 2 are connected by means of bolts 5, extending through the side walls of the member 1 and through slots 6 in the side walls of the member 2, so that there may be a degree of

adjustment of the two members with relation to each other.

The front member 1 is firmly mounted and secured upon the front ends of a pair of runners 7, which are upturned at their rear ends to form upstanding brackets 8.

The tubular rear member 2 is curved laterally, and it is provided upon the curved portion thereof near its rear end with guides or keepers, as 9, for the passage of the bracket members 8. The latter are connected adjustably, as by means of bolts 10, with brackets 11 upon the upper side of the member 2. The latter will thus be supported in any of the various positions to which it may be adjusted not only by the bolts 5, but more particularly by the bolts 10, which connect the bracket members 8 and 11 adjustably with each other.

A draft-yoke, as 12, is suitably connected with the member 2, and the latter is provided with handles, as 13, supported by means of braces 14.

The operation and advantages of this improved machine will be readily understood from the foregoing description when taken in connection with the drawings hereto annexed. The runners 7 will support the machine in the bottom of the ditch, and when the machine is dragged along in the ditch accumulations of dirt and mud in the bottom of the ditch will pass into the tubular duct or passage formed by the members 1 and 2 and will be displaced upwardly through said passage and be discharged at the side of the ditch, the curvature of the tubular member 2 being of such an extent that its discharge end will overhang the side of the ditch. When the ditch operated upon is shallow, the tubular member 2 may be adjusted at a slight inclination, so as to avoid the necessity of raising the excavated material to a higher point than is absolutely necessary. When the ditch is deeper, the inclination of the tubular member 2 may be increased, as will be readily understood.

The construction of the improved machine is simple and inexpensive, ordinary sheet metal being usually employed in the construction of the tubular members. At the same time the construction is such as to enable the machine to resist any strain to which it is liable to be subjected in operation.

It is obvious that the improved machine of this invention may be usefully employed not



only for cleaning ditches and laterals, but also in the actual construction of ditches and laterals, and that no limitation is intended in this respect.

5 Having thus described the invention, what is claimed is—

1. In a ditching-machine, a duct including a plurality of tubular members hingedly and adjustably connected with each other.

10 2. In a ditching-machine, a duct including a plurality of tubular members hingedly and adjustably connected with each other; one of said members having a flaring mouth.

3. In a ditching-machine, a duct composed 15 of a plurality of tubular members hingedly and adjustably connected with each other; one of said members having a flaring mouth and another of said members being laterally curved.

20 4. In a ditching-machine, a duct including a plurality of tubular members, runners supporting one of said members and having upturned terminal brackets, means for pivotally connecting the tubular members of the 25 duct, and means for connecting one of the duct members adjustably with the upturned bracket members of the runners.

5. A ditching-machine having a duct composed of a plurality of tubular members

hingedly and adjustably connected, runners 30 supporting one of said members and having upturned terminal brackets, means for connecting one of the duct members adjustably with said terminal brackets, and handles and draft means connected with the tubular duct 35 member thus supported.

6. A ditching-machine having a duct composed of a plurality of tubular members hingedly and adjustably connected, one of 40 said members having a flaring mouth and another of said members being curved laterally; runner members connected with and supporting the tubular member having the flaring 45 mouth, said runner members being provided with upturned brackets at their rear ends; means for connecting said brackets adjustably with the laterally-curved tubular member; and a draft-yoke and handles connected 50 with said laterally-curved tubular member.

In testimony that we claim the foregoing 50 as our own we have hereto affixed our signatures in the presence of two witnesses.

ROBERT E. REED.  
WILLIAM PICKFORD.

Witnesses:

ROBERT E. LOVERN,  
JOSEPH ESSER.