No. 679,965. Patented Aug. 6, 1901.

F. VON HOLDT.

CLAY TROUGH FOR IRRIGATING DITCHES.

(Application filed Dec. 18, 1900.)

(No Model.)

Fig. 1.

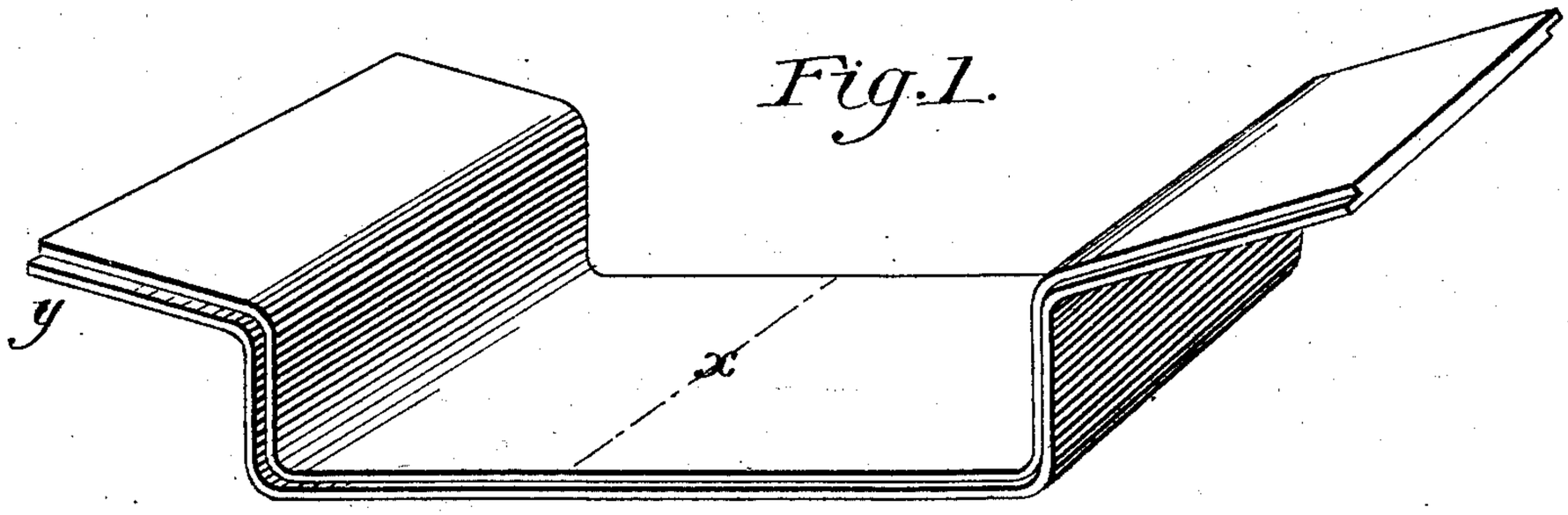

Fig. 2.

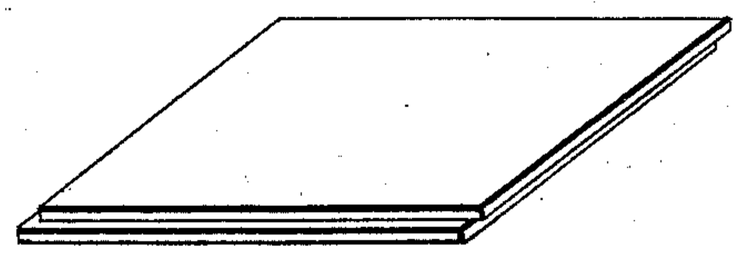

Fig. 3.

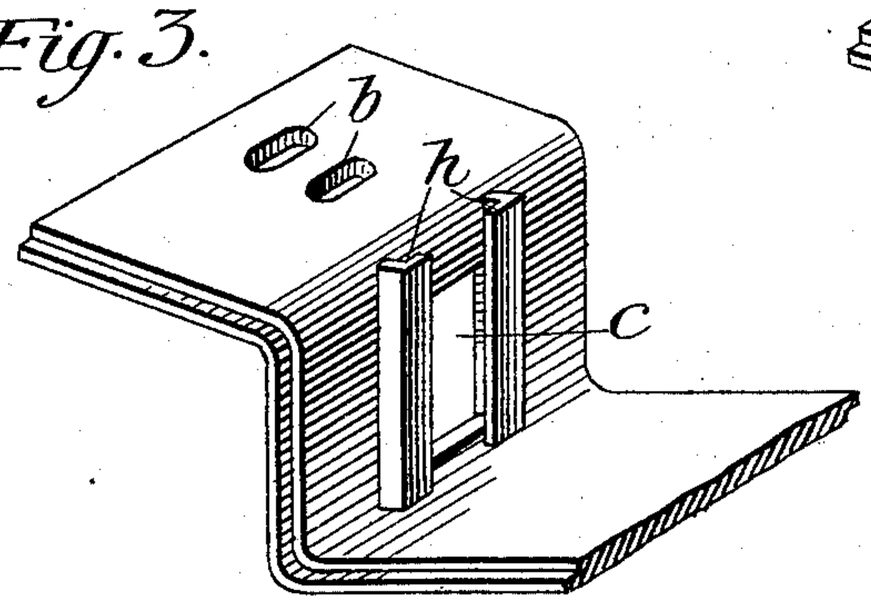

Fig. 4.

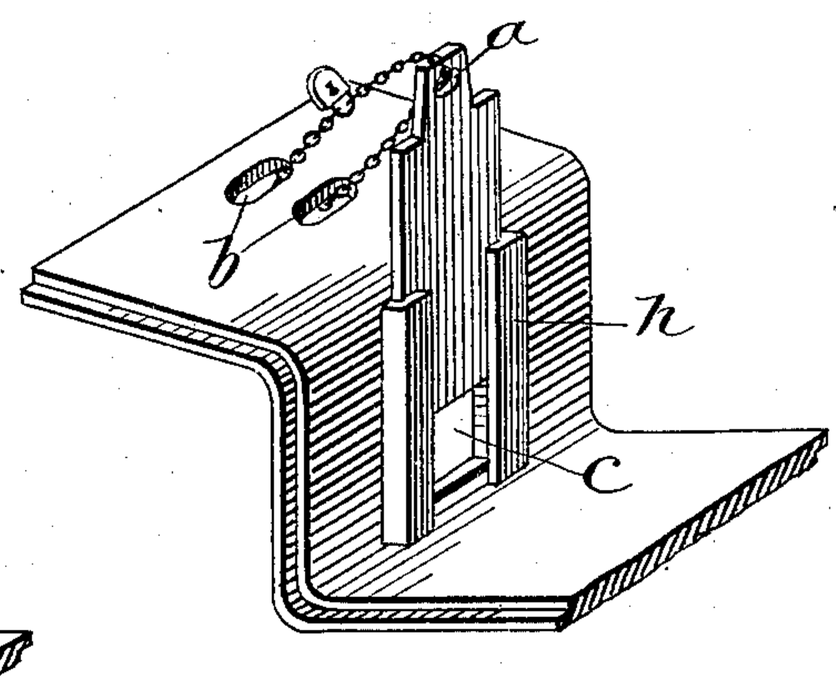

Fig. 5.

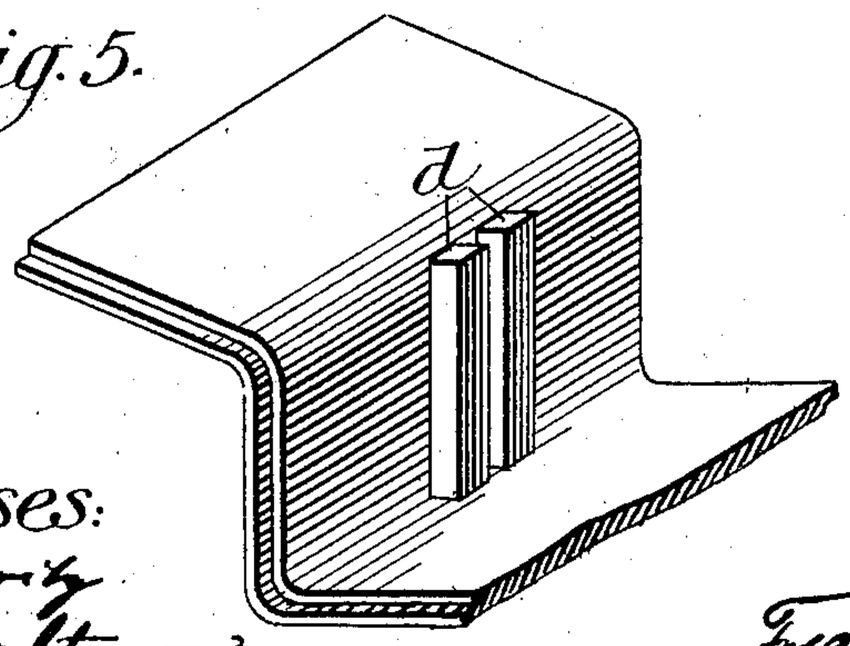

Fig. 6.

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FREDERICK VON HOLDT, OF ALCOTT, COLORADO.

CLAY TROUGH FOR IRRIGATING-DITCHES.

SPECIFICATION forming part of Letters Patent No. 679,965, dated August 6, 1901.

Application filed December 18, 1900. Serial No. 40,247. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK VON HOLDT, a citizen of the United States, residing at Alcott, in the county of Arapahoe and State of Colorado, have invented a new and useful way of building ditches of various sizes for the conduct of water by means of clay troughs minus cross ends, of which the following is a full, clear, and exact description.

This invention consists in the construction of the troughs, which are fully explained by reference to the accompanying drawings.

Figure I shows the fundamental idea in constructing the troughs, which are best made of clay and burned in kilns like common sewer-pipes. The troughs join in the same manner as such pipes by lapping into each other, as shown near *y*, Fig. I. Fig. II shows the clay plate, which can be inserted where the dotted line *x* is in Fig. I for the purpose of making the trough wider. There is no limit of how many plates may be inserted one onto the other, as they properly fit into each other on all four sides, as shown in Fig. II. For this purpose I would make troughs cut in two where the dotted line *x* is. Fig. III shows the construction of either side of a trough where the same as a section of a ditch admits of a side opening, which is indicated by the open place *c* in Fig. III. This square hole can be closed with a slide, Fig. IV, which is held in its proper place by the two holders *h* in Fig. III. Fig. V shows the construction of either side of a trough, which is intended to admit the insertion of a stopper in the shape of a piece of oak board, Fig. VI, in the spaces between the two holders *d*, which are alike on both sides of the trough. The slide in Fig. IV is made of clay, like a plate, and of sufficient thickness to answer its purpose. Fig. IV shows the manner in which the slide is held by a locked chain in such a position that it cannot be raised, as specifically described below. Fig. VI is a detail view of the slide.

The practical use of the troughs can be fully described as follows: After the course of the ditch is properly surveyed and constructed these troughs are then put in their place as close together as possible and their sides properly supported with dirt solidly packed. The upper halves of the sides of the troughs being bent in a semi-erect position, as shown in the drawings, serve to prevent overflowing of the ditch. While the sides of the troughs can be made of any length to answer all possible demands, the bottom can be cut on the dotted line *x*, as already described, and the ditch can thus be constructed of any desired width by the insertion of rows of plates. It stands to reason that the trough, Fig. I, can be constructed in two ways, one as shown in Fig. I and the other where the trough is cut in two on the line of the dotted line *x*. The troughs, Figs. III and V, must always be laid adjoining each other, Fig. V below Fig. III, as the water runs, to insure a proper exit of the water through the hole *c*, Fig. III.

As shown in Fig. III, there are two rectangular holes *b* cut in that portion of the trough side which is bent outside and upward. The purpose of these holes is thus explained. After the slide, Fig. IV, is put in place between *h* and *h*, Fig. III, it is raised to any desired height and a square stick of lumber put under each end of it to hold it in position. The length of the sticks governs the water-supply for the lateral ditch. A chain is then put through the hand-hole *a*, Fig. IV, and also through the holes *b*, Fig. III, and its end links are brought together tightly and closed with a lock, so that the slide cannot be raised and more water admitted to run into the lateral ditch than allowed by the management. Water cannot be stolen through the opening in the side of the trough without violence. When the lateral ditch is supplied with water, the stopper may be put in below the side opening, if necessary. It can be held here in any desired elevation by square sticks of lumber. The stopper can be of different sizes, so that it will answer different purposes in different sizes of ditches. A ditch so constructed must be fenced in to keep farm-stock from crossing or walking in it. With such provision the ditch is practically indestructible, it can be cleaned very easily, and the annual cost of keeping it in order is very small. Its principal merit is the prevention of the loss of a large amount of water, especially in sandy soil, through seepage, rat-holes, washouts, &c., at the same time preventing theft and solving the question of equal and honest distribution of water to perfection and in a simple manner.

The longitudinal axis of the troughs may be straight, as shown in the drawings, or bent to either side in any degree for the purpose of constructing a bend of the ditch.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The clay-trough section of size and shape, substantially as set forth and adapted to be severed for the insertion of an additional plate or plates for variation of the width of the ditch.

2. The combination with severable clay-trough sections, of supplemental plates insertible between the severed parts to vary the width of the ditch as set forth.

3. The combination with the trough-section, having a side opening and gate as described, of apertures in the gate and section and a fastening-chain, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK VON HOLDT.

Witnesses:

G. SCHINNER,

EUGENE WOLF.