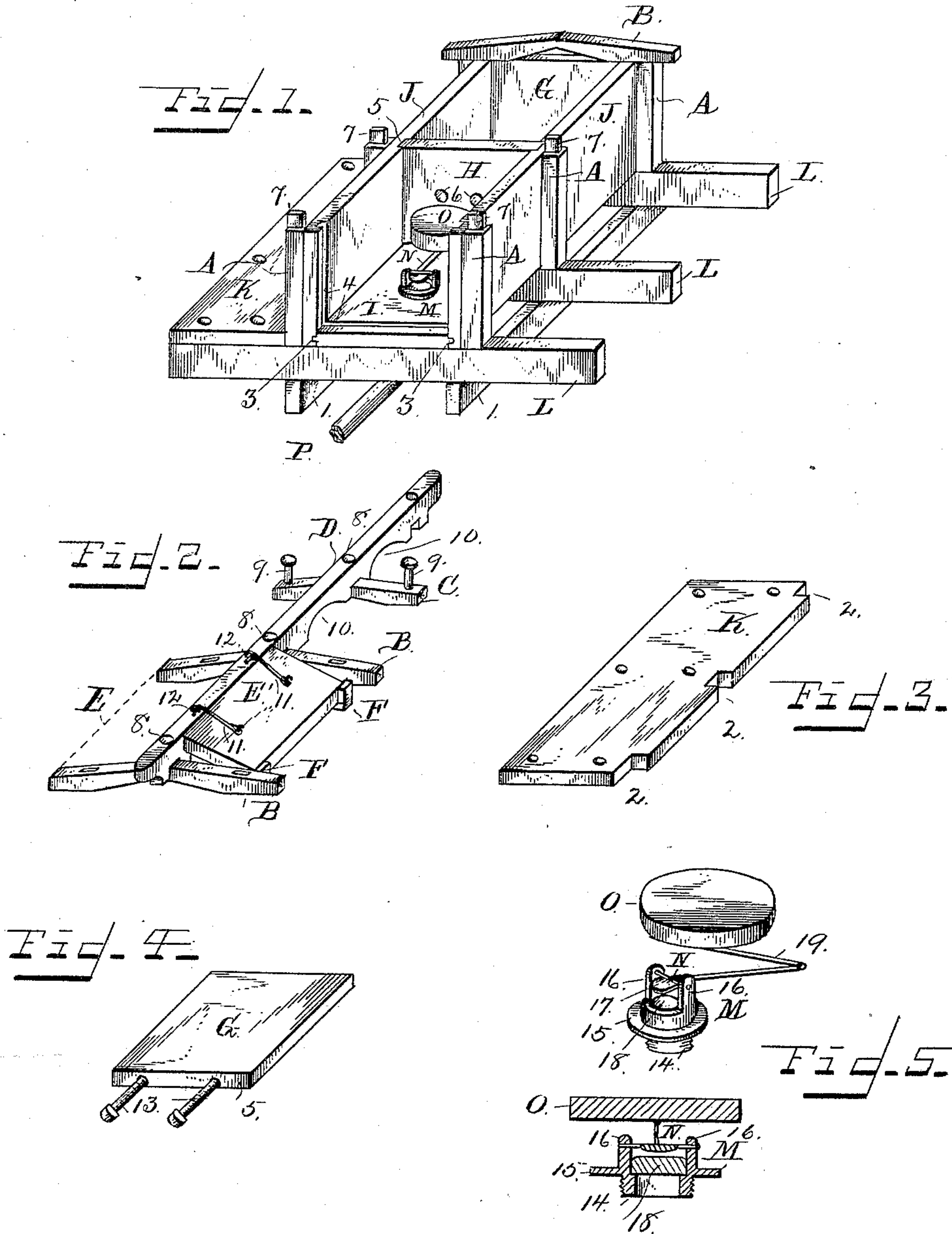


(No Model.)

S. E. SMITH.
PIG TROUGH.

No. 436,956.

Patented Sept. 23, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

SUSAN EMMA SMITH, OF MINNEAPOLIS, KANSAS.

PIG-TROUGH.

SPECIFICATION forming part of Letters Patent No. 436,956, dated September 23, 1890.

Application filed November 10, 1887. Serial No. 254,833. (No model.)

To all whom it may concern:

Be it known that I, SUSAN EMMA SMITH, a citizen of the United States of America, residing at Minneapolis, in the county of Ot-tawa and State of Kansas, have invented a new and useful Improvement in Pig-Troughs, of which the following is a specification.

My invention has relation to improvements in pig-troughs, and the object is to improve existing articles of the kind; and with this in view my invention consists in the novel construction of parts and their combination, as will be hereinafter more fully specified, and specially as I have particularly pointed out the same in the claims.

I have fully and clearly illustrated my invention in the accompanying drawings, wherein—

Figure 1 is a perspective of the trough, one end piece, one of the platform-boards, and the top frame being removed to better show the construction. Fig. 2 is a perspective of the top frame and cover of the valve-chamber of the trough. Fig. 3 is a view of one of the platforms. Fig. 4 is a view of one of the end gates or boards. Fig. 5 is a view of the valve mechanism.

Reference being had to the drawings, L designates substantial base-pieces, made long enough to receive and sustain the platforms which are secured to their projecting ends. These base-pieces may be supported on longitudinally-arranged sills 7 and the parts securely fixed together. In the base-pieces are formed mortises, in which the tenoned ends of standards A are set and secured. These standards A constitute the means for holding the sides of the trough in vertical fixed position, as seen in Fig. 1 of the drawings.

On the extended parts of the base-pieces are laid and secured platform-pieces K, which may be cut away, as at 2, to set about the standards and so that the inner edge of the board shall set snug against the edge of the trough.

J designates the sides of the trough, and I the bottom, which are tongued and grooved together, as at 3, in order that they may be held water-tight.

The inner faces of the side pieces and bottom are provided with grooves 4, in which the tongues 5 of the end pieces G and the inter-

mediate partition H are arranged, as seen in Fig. 1 of the drawings.

In the partition H are formed apertures 6, which constitute the water ports or ways, through which the water finds its way from the valve-chamber.

On the tenoned ends 7 of the standards A are mortised and secured cross-pieces B, which constitute the means for holding the standards A firm in position and the trough from spreading, and also, in conjunction with the shorter cross-piece C, serve to prevent the animals from getting bodily into the trough.

Arranged longitudinally over the middle of the trough and secured to the several cross-pieces is a top rail D, which is let into the cross-pieces, as at 8, and has its ends fastened by bolts to the two end cross-pieces, substantially as shown in the drawings.

The short cross-piece C is secured to the trough by bolts 9 let into the side piece of the trough, and the top rail D is cut away on its under side, as at 10, to give plenty of room for the head of the animal when drinking.

To keep dirt and other outside objects from getting into the valve-chamber, I put a stationary cover E on one side and secure it there by any suitable means, and on the other side I arrange a detachable piece E'. This latter E' is held in place by two blocks F, fixed at an angle in the faces of the cross-pieces B, to take the lower edge corners of the cover, and then secured by hooks 11, engaging staples 12 in the top rail. By simply unlocking the hooks the lid may be removed, and it can be replaced by setting the lower edge in the angle of the blocks and fastening the hooks in the staples, as seen in Fig. 2 of the drawings.

The end partition-pieces are held firm and securely in their seats by bolts 13 let up through the bottom into the respective pieces, as indicated in Fig. 4 of the drawings.

In Fig. 5 of the drawings is illustrated the valve mechanism designed to automatically feed and regulate the supply of water to the trough. This consists of a valve-seat M, formed with a threaded shank 14, to fit tight the aperture in the bottom of the trough, a wide flange 15 to set over the floor of the bottom, and vertical studs 16, in which is journaled a lever N. This lever N is formed with

an eccentrically-shaped end 17, which, as the lever is raised or lowered, bears upon or releases the valve 18 in the valve-seat.

To the end of the lever is attached a small
5 rod 19, which is connected at its other end to the center of the float O, which may be of any suitable construction. In the shank of the valve-seat is secured the induction-pipe P, which is connected at its other end to the
10 supply-source. (Not shown.)

The operation of the valve mechanism is as follows: As the water enters the valve-chamber of the trough, the float is raised, which lifts the handle of the lever gradually as the
15 supply increases, closing the valve and stopping the flow. The water has during this operation entered the drinking-compartment of the trough, where, if by use it is depleted in volume, the float is lowered and the valve af-
20 fected and opened just to the extent of depletion, and thus the supply is kept at about the same level all the time.

What I claim is—

1. In a pig-trough, the combination of the

base-pieces L, extended beyond the sides of 25 the trough and provided with standards A and platforms K, the trough arranged between the standards and having communicating partitions, the cross-pieces B, secured across the top of the trough on the standards, 30 the cross-piece C, the top rail D, arched out on its under side, the covers E E', and an inlet-pipe having a valve within the covered part of the trough, all substantially as described.

2. The combination, with the pig-trough, of 35 a valve mechanism, consisting of a valve-seat M, provided with a threaded shank and a valve, a lever pivoted in supports on the valve-seat and formed with an eccentrically-shaped 40 end to bear on the valve, a link fixed to the end of the lever, and a float attached to the other end of the link, substantially as described.

SUSAN EMMA SMITH.

Witnesses:

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