

J. JAMES.
MOVABLE PARTITIONS FOR MANGERS.
APPLICATION FILED JAN. 26, 1911.

1,066,620.

Patented July 8, 1913.

2 SHEETS—SHEET 1.

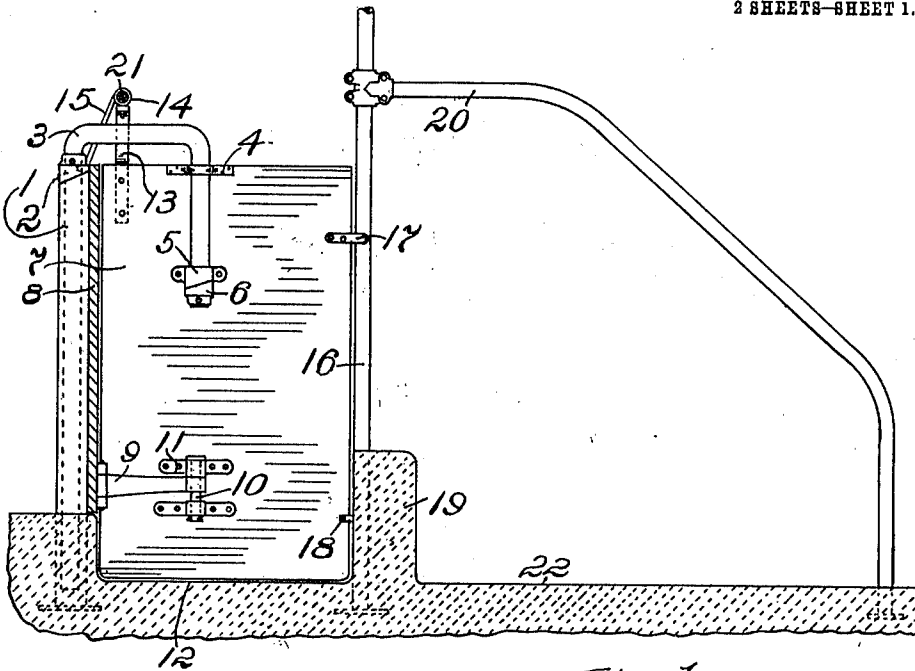


Fig. 1.

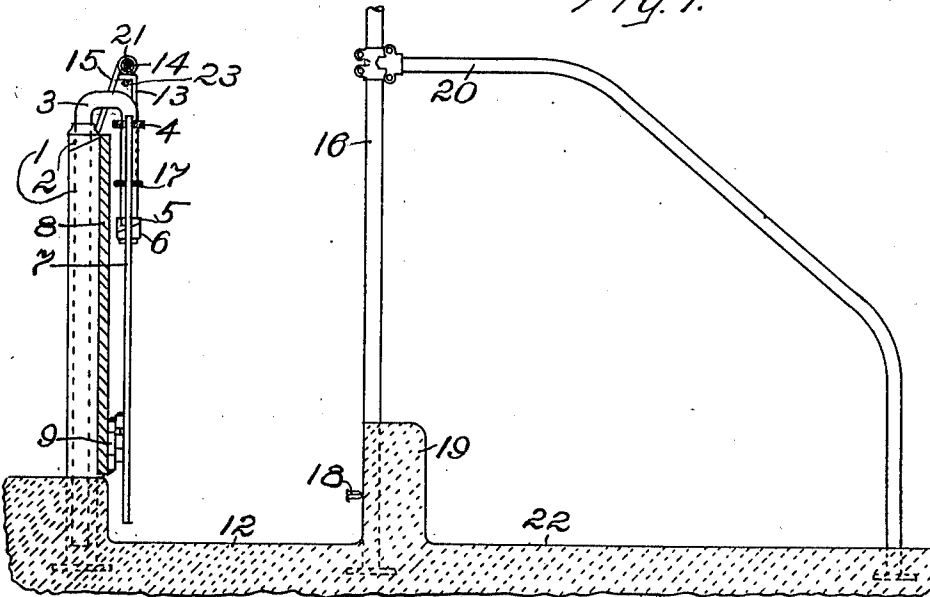


Fig. 2.

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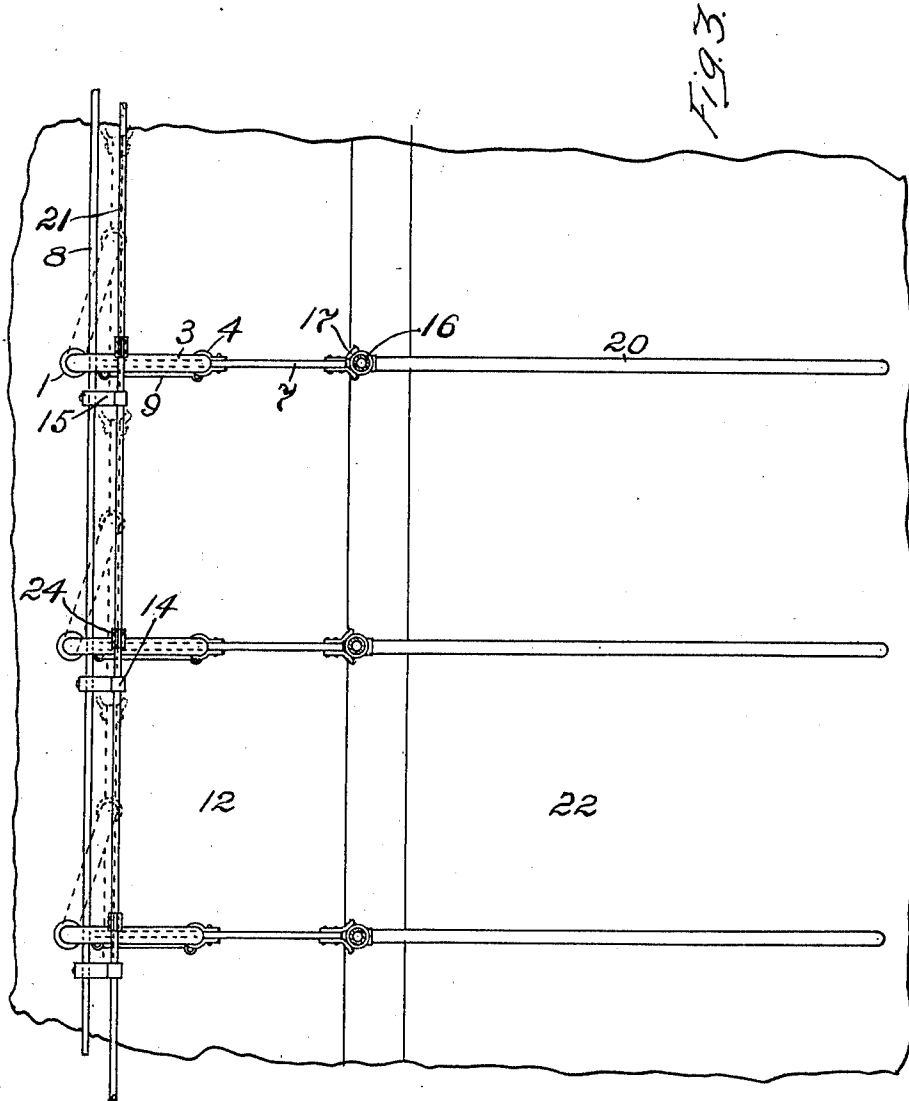
ATTORNEYS.

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MOVABLE PARTITIONS FOR MANGERS.

1,066,620.

Specification of Letters Patent.

Patented July 8, 1913.

Application filed January 26, 1911. Serial No. 604,737.

To all whom it may concern:

Be it known that I, JOHN JAMES, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Movable Partitions for Mangers, of which the following is a specification.

My invention relates to improvements in movable partitions for mangers, and the object of my improvement is first, to so arrange the movable partitions that they may be swung together to the back of the manger without interfering with the animals near them, and second, to so elevate such partitions when being swung backward as to lift them sufficiently above any litter remaining in the bottom of the manger, thus affording an opportunity to thoroughly and quickly clean the manger throughout of such litter. These objects I have accomplished by the means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a transverse section of a stall and manger equipped with my improved movable partitions. Fig. 2 is a similar section, but showing the movable partitions swung back against the rear wall of the manger. Fig. 3 is a plan view of such stall and manger and of my said movable partitions in the manger.

Similar numerals of reference designate corresponding parts throughout the several views.

The numerals 22 and 12 designate a stall and a manger, formed in concrete with a concrete dividing wall 19. The manger 12 is a sunken trough having a backing 8 supported by the hollow tubes 1, the latter being set vertically in the concrete base immediately back of said backing-plate. The hollow of each tube 1 forms a bearing for a vertical rock-shaft 3, whose upper end is bent forwardly and then downwardly at right-angles.

The manger partitions 7 are each formed of a rectangular body ordinarily closely fitting between the backing-plate 8 and the stanchion uprights 16, the latter having stall braces 20, and also forks 18 projecting toward the forward edge of the adjacent partition and adapted to removably hold the same. Each partition also has a fork 17

which engages the upright 16 adjacent to it. The numeral 9 designates the leaf of a hinge which is secured to the lower front face of the partition 8, and whose forward end is pivoted upon the pintle 10 set in the spaced apart brackets 11 on the partition, the brackets being separated sufficiently to permit of the pintle sliding up and down in the eye at the end of said leaf. Each partition has at its top a ring 4 and lower down a bearing body 5, the latter being hollow and receiving movably the lower end of the bent over branch or part of the rock-shaft 3. The end of this part has secured thereon a collar 6 which, with the upper bracket 11, support the partition, in its suspended position in the trough of the manger. The collar 6 and the bearing-body 5 have counter-part beveled bearings which cooperate when moving past each other to cause an up and down movement to the partition when the latter is swung by the means hereinafter to be described. A plurality of uprights 13 are secured to the rear parts of the upper edges of the partitions, one to each partition, and each has its upper end bent over at a right angle, the horizontal part being orificed to provide a bearing seat for the downwardly depending pintle or stem of a ring 14 which is secured to a longitudinally movable bar or tubing 21 arranged parallel to the backing-plate 8. This tubing is longitudinally slidable in the eyeleted ends 14 of the uprights 15 which project upwardly and lean forwardly from the upper edge of said backing-plate.

To draw the partitions back to be ranged close to and parallel with said backing-plate, it is only necessary to grasp the tubing 21 anywhere along its length and move it longitudinally a proper distance. In the same way the partition may be returned to its first position. It will be observed that when the tubing 21 is shifted to close the partition against said backing-plate, it is lifted for some distance above the bottom of the manger by reason of the interaction of the cooperating beveled parts of the hinge-connection 5-6, and that when the partition is returned to its first position it subsides to contact with or nearly touch the bottom of the manger. This lifting of the partitions permits them to pass over any litter which may remain in the bottom of the man-

ger, and to move back free therefrom. The manger may then be readily cleaned throughout.

It will be further observed that my method of hinging the partitions at or near their central vertical line causes them to move back toward the backing-plate in such a way that they do not interfere with the heads of animals projecting from the stanchions into the manger, the partitions being withdrawn backwardly as it were, instead of actually bodily swinging and sweeping the open space of the manger. When the partitions are returned to their first or dividing position, their forward edges tend to abut upon the stanchion uprights 16 and are received in the small forks 18 and in like manner the other small forks 17 then pass about the uprights, securing the partitions against sidewise movements. It will be seen also that I have formed the said backing-plate 8 as an integral structure and secured it to all the tubes 1, which braces said tubes, and forms a rigid structure to support the moving parts of my device.

I am aware that other movable partitions for mangers have been devised, but as to the new features shown and claimed herein, I intend to include in the scope of my invention all the mechanical equivalents to which I am by law entitled, and which come properly within the scope of my invention, the details shown and described being merely illustrative in their character.

When desired, as shown in Figs. 1 and 2, the top of each tubular upright 1 may be beveled similarly to the collar 6, and the rock-shaft 3 may have a like beveled collar 2 to that of the bearing body 5 on the partition 7. This additional beveled bearing hinge adds stability, and ease of movement to the parts, equalizing the lift.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. In combination, a manger having a plurality of movable partitions therein, a fixed support adjacent to each partition, a rock-connection between each fixed support and the adjacent partition, the pivotal connections between said rock-connections and said supports and also between said connections and said partitions being beveled to adapt them to impart a rising movement to the

partitions while moving back against the manger wall, and to fall in moving forward to their first or transverse positions.

2. In combination, a manger having a back-plate secured to a plurality of tubular fixed uprights, rock-shafts in said uprights having their upper ends bent forwardly then downwardly, a plurality of movable partitions in said manger, one adjacent to each of said uprights and having a pivotal connection at a point intermediate of its edges with the downturned end of said rock-shaft, a hinge connection between the said back-plate and each of said partitions at a point intermediate of the edges of the latter, and means for moving said partitions to and fro simultaneously.

3. In combination, a manger having a back-plate secured to a plurality of tubular fixed uprights, rock-shafts in said uprights having their upper ends bent forwardly then downwardly, a plurality of movable partitions in said manger, one adjacent to each of said uprights and having a slidable and pivotal connection at a point intermediate of its edges with the downturned end of said rock-shaft, a hinge-connection pivotally also slidably connected between said back-plate and each partition, and means for simultaneously moving said partitions to and fro while also elevating them in moving in one direction and lowering them while moving in the opposite direction.

4. In combination, a manger having a plurality of movable partitions therein, a fixed support adjacent to each partition, a rock-connection between each fixed support and the adjacent partition, the pivotal connections between said rock-connections and said supports and also between said connections and said partitions being beveled to adapt them to impart a rising movement to the partitions while moving back against the manger wall, and to fall in moving forward to their first or transverse positions, and means for retaining said partitions in a fixed position when adjusted transversely to the longitudinal walls of the manger.

Signed at Waterloo, Iowa, this 18th day of Novr. 1910.

JOHN JAMES.

Witnesses:

G. C. KENNEDY,
P. T. KNISS.