No. 880,700. PATENTED MAR. 3, 1908.

A. TURNEY.

SANITARY FLOOR FOR ANIMAL STALLS.

APPLICATION FILED MAR. 30, 1906.

Fig. 1.

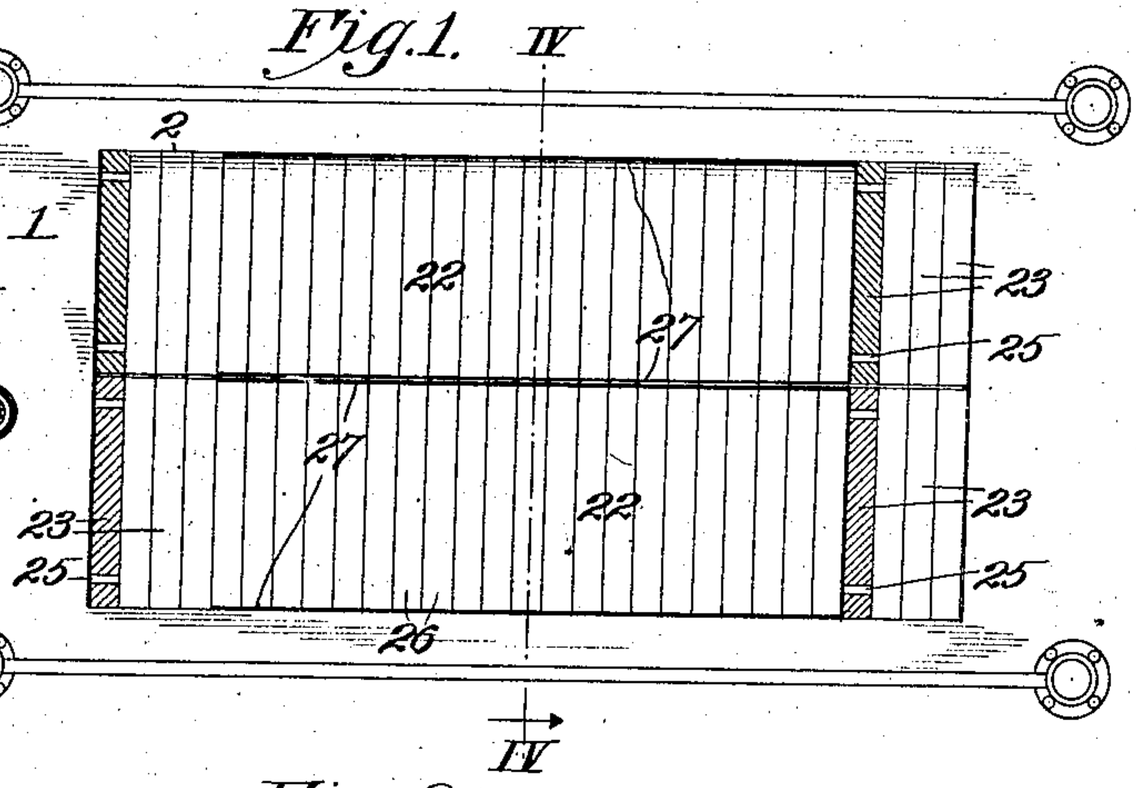

Fig. 6.

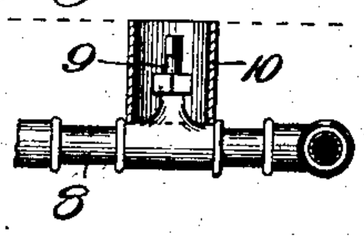

Fig. 5.

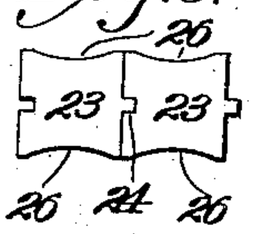

Fig. 2.

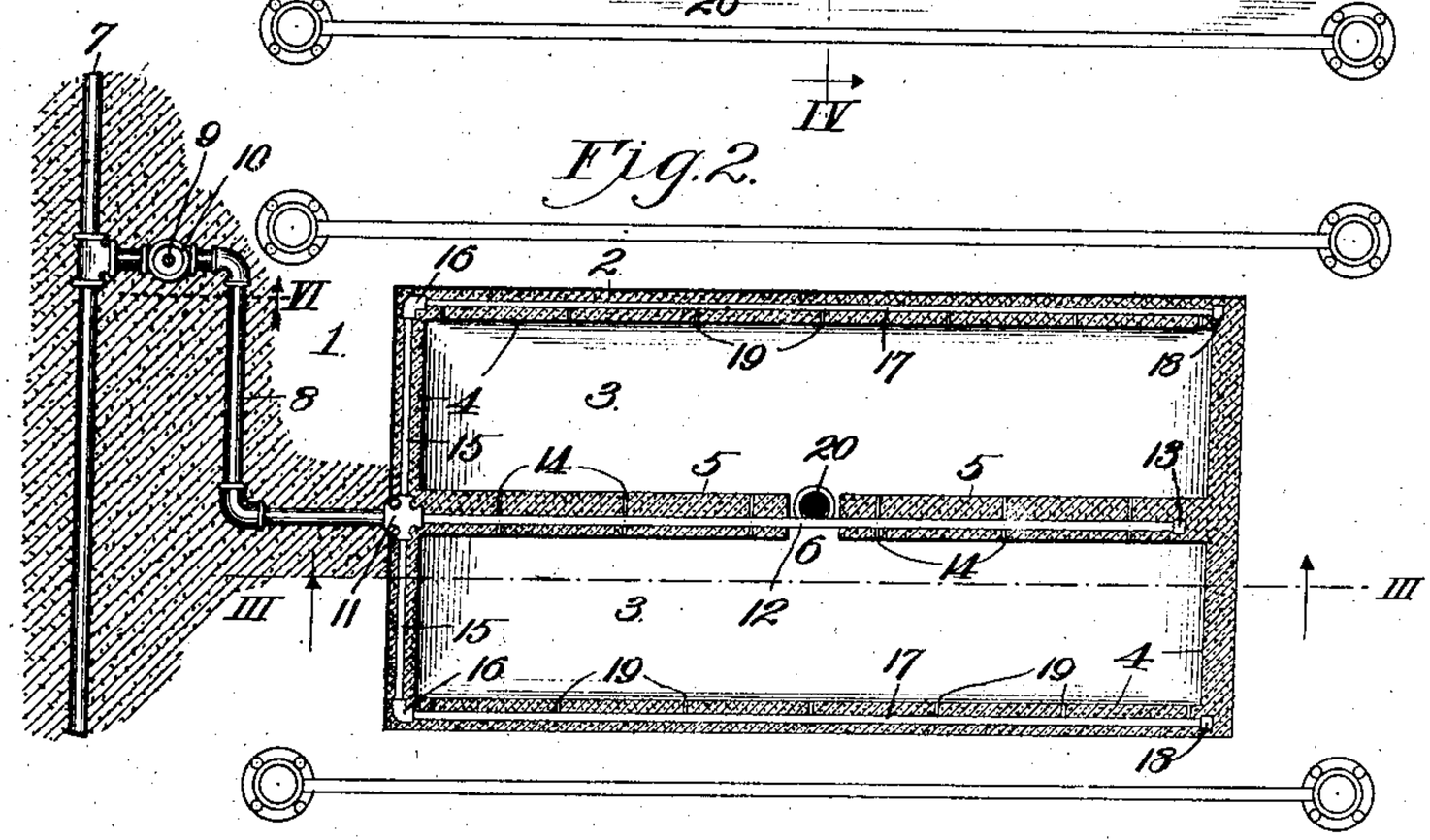

Fig. 3.

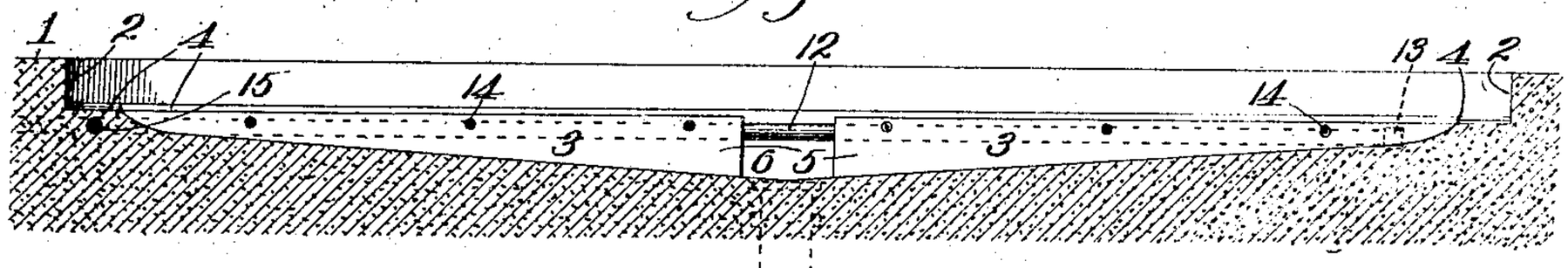

Fig. 4.

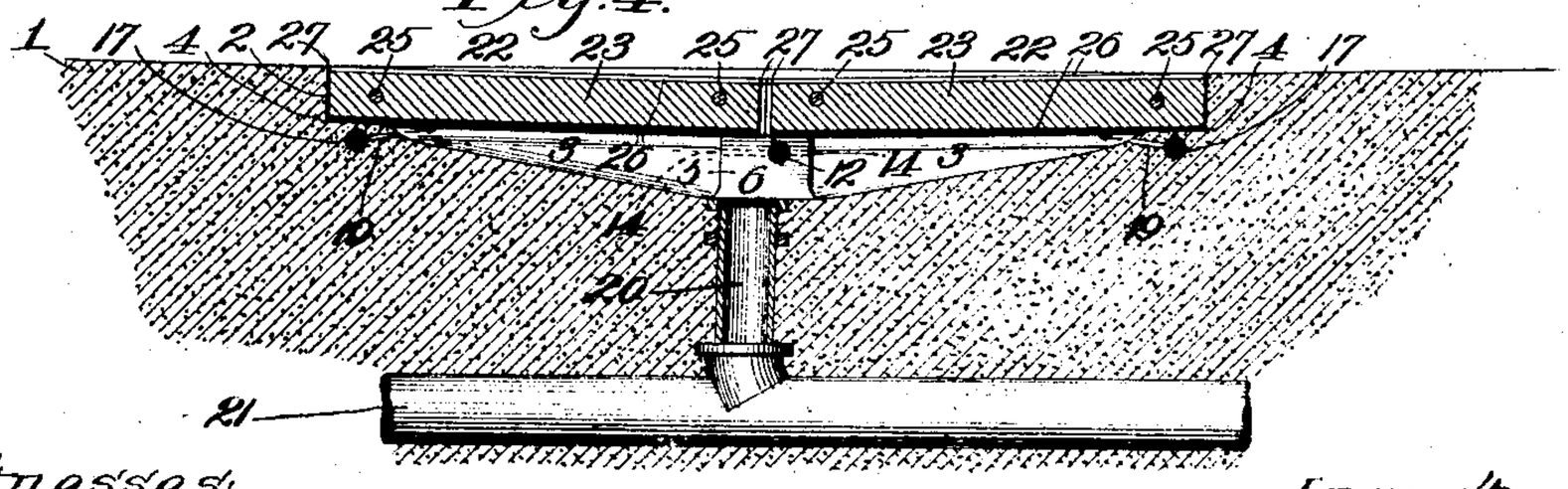

Fig. 7.

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UNITED STATES PATENT OFFICE.

ALBERT TURNEY, OF KANSAS CITY, MISSOURI.

SANITARY FLOOR FOR ANIMAL-STALLS.

No. 880,700. Specification of Letters Patent. Patented March 3, 1908

Application filed March 30, 1906. Serial No. 308,867.

To all whom it may concern:

Be it known that I, ALBERT TURNEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Sanitary Floors for Animal-Stalls, of which the following is a specification.

My invention relates to stall-floors for animals, and my object is to produce a floor of this character which can be efficiently, thoroughly and economically washed and cleaned in an exceedingly short time.

A further object is to produce a stall-floor of such construction as to permit of a free circulation of air thereunder to aid in restoring it to and keeping it in sanitary condition.

With these and other objects in view as hereinafter appear, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings in which—

Figure 1, is a top plan view of a stall equipped with a floor embodying my invention, portions of the floor platform being shown in horizontal section. Fig. 2, is a plan view with the platform omitted and with certain parts of the floor shown in horizontal section. Fig. 3, is an enlarged vertical section taken on the line III—III of Fig. 2. Fig. 4, is an enlarged cross section taken on the line IV—IV of Fig. 1. Fig. 5, is an enlarged end view of two of the boards forming part of the platform. Fig. 6, is a section on the dotted line VI of Fig. 2, with the valve-protecting tube in section and with the floor omitted. Fig. 7, is a detail view of a plug to be used at times.

In the said drawings, 1 indicates a concrete or equivalent floor of a stable, and 2 a rectangular recess in said floor, said recess being preferably deepened to form panels 3 having their bottoms sloping toward their center and inner edges as will be seen by reference to Figs. 3 and 4, the production of these panels resulting in the formation of shoulders 4 at the outer and end margins of the recess, and longitudinal ribs 5 which terminate opposite the center of the floor to provide the passage 6 establishing communication between the panel portions of the recess.

7 indicates a water-supply pipe adapted to be connected to the service pipe of a water distributing system, not shown, said pipe 7 being embedded in the floor below the surface thereof. 8 indicates a Z-shaped pipe composed of sections coupled together and likewise embedded in the floor, one end of pipe 8 being coupled to the supply pipe.

9 indicates a valve in said pipe, and 10 a short vertical tube surrounding said valve and extending up to the level of the floor (see Fig. 6) in order that a suitable wrench may be utilized to open or close said valve, for a purpose which hereinafter appears.

11 indicates a four-way or cross coupling embedded in the concrete centrally of one end of the recess 2, and 12 a pipe secured to said coupling and extending through and embedded below the surface in ribs 5, said pipe bridging the passage 6 between the ribs and having its rear end closed by cap 13, and projecting in opposite directions from said pipe are a series of nozzles 14, for discharging jets of water in opposite directions for flushing purposes, as hereinafter explained.

15 indicates pipes embedded in the concrete below shoulder 4, at the front end of the recess, and connected to said pipes by elbow couplings 16 are longitudinally extending pipes 17 which are likewise embedded in the concrete below the shoulders 4, said pipes 17 having their rear ends closed by caps 18, and being provided with nozzles 19, which by preference project upwardly at a slight angle and are also staggered with relation to the nozzles 14.

20 indicates a drain pipe having its upper end flush with the lowest portion of the floor and anchored securely in the concrete to avoid settling, and 21 indicates the soil pipe to conduct to the sewer, not shown, all water and matter foreign thereto received by the drain pipe 20. In this connection it is to be understood that the Z-shaped pipe 8, pivotally connected at its opposite ends to the pipe 7 and the cross-coupling, accommodates any slight difference in the depth at which pipe 7 and the cross-coupling may be buried.

The platform is preferably composed of two wood sections 22, of identical construction, each platform section consisting of a series of transverse bars 23 tongue-and-grooved together as at 24, and secured rigidly upon a pair of rods 25 extending through the bars, the latter being each provided in its upper and lower faces with shallow channels 26 to facilitate the flow of

water or other liquid and also to keep it as far as practicable away from the joints between the bars. The channeling or corrugating of the platform furthermore gives the animal occupying the stall, a more secure and reliable footing than would be the case if the surfaces of the platform sections were perfectly smooth. The platform sections fit snugly in the recess 2, and, because of the fact that the ribs 5 are slightly lower than the side shoulders 4 as will be noticed by reference particularly to Figs. 3 and 4, are pitched downwardly and inwardly at a slight angle so that their contiguous side edges abut, as shown clearly in Fig. 1, and in order that water or other liquid may drain more readily the sections are recessed at their inner edges at 27, to provide a long narrow slot between the contiguous edges.

By constructing the sections as described it is obvious that they can be interchanged and reversed in position so as to present several distinct and different wear surfaces to the animal occupying the stall and consequently will last a proportionately longer time than if not interchangeable.

When it is desired to clean the stall the attendant throws a bucket or two of water upon or turns water on the platform, solid matter being by preference swept or otherwise removed from the top of the platform before the water is turned thereon. This water washes the surface and with the sweepings flows through the slot formed by mating recesses 27 and escapes through the drain pipe. The attendant by means of a wrench or other device, opens valve 9, and as a result discharges jets of water from each nozzle 14 toward opposite sides of the recess, such jets of water by preference striking upon the outer portions of the paneled bottom of the recess. If the pressure is sufficient the water will find its way between the platform and the side portions of shoulders 4 and will even boil up into the space between the outer edges of the platform and the side walls of the recess and thus thoroughly cleanse the latter and the edges of the platform. At the same time the water flows through pipes 15 and 17 and is discharged from the latter through nozzles 19 toward the center of the recess, the jets of water from nozzles 19 being preferably between the jets from nozzles 14 and also taking an upward course so as to thoroughly wash the lower surface of the platform, as will be readily understood by reference to Fig. 4. The recess and the platform can be thoroughly cleansed by leaving valve 9 open for about thirty seconds and such cleansing may take place without discommoding the animal in the stall and at practically no expense. The stall can therefore be cleansed immediately after becoming soiled and consequently can be kept in a sanitary and odorless condition, as there is no possibility of an accumulation of water or other liquid to become stagnate.

It is frequently desirable to soak the hoofs of horses in water for several hours to keep the hoofs in a healthy condition. With my floor the hoofs can be soaked with the greatest convenience by simply removing the wood platform, closing pipe 20 by means of the plug 28 or its equivalent and opening valve 9 until the recess 2 is charged with water to the required depth. When desired the plug can be removed and the water will escape through pipe 20, which it will be noted is of sufficient capacity to carry off anything which will pass under the platform so that there can be very little chance of clogging, though even should it become clogged the obstruction can be readily removed after removing the platform sections.

If it be desired to provide a bed of earth or other substance, for the animal, the wood platform can be removed and pipe 20 be plugged by preference, to avoid clogging the drain pipe, any part of the bed which may enter the nozzles 14 and 19 being instantly discharged when the water is turned on.

From the above description it will be apparent that I have produced a stall floor embodying the features of advantage enumerated as desirable, and I wish it to be understood that I do not desire to be limited to the exact construction shown and described but that various modifications in the form, proportion, detail construction and arrangement of the parts may be made without departing from the principle of construction involved.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:—

1. A stall floor having a recess, means to discharge jets of water toward the sides of the recess, a platform fitting in and spaced above the bottom of the recess, having its upper surface sloping downward and inward, means to discharge water from the sides toward the center of the recess and against the bottom of the platform, and a drain pipe for the recess.

2. A stall floor having a recess with its bottom sloping downward and inward, longitudinal pipes arranged within the recess near its center and sides and adapted to discharge water transversely, the center pipe discharging toward the sides, and the side pipes toward the center of the recess, a platform fitting in and spaced above the bottom of the recess and sloping downwardly and inwardly from the sides toward the center of the same, and means to drain the water from the recess.

3. A stall floor having a paneled recess with the bottoms of the panels sloping and a passage connecting the panels, a drain pipe for the recess at the lowest points thereof, a longitudinal pipe embedded in the floor cen-

trally of the recess and bridging said passage and closed at one end and provided at opposite sides of said passage with transverse nozzles communicating with said panels, a pair of longitudinally extending pipes embedded in the floor at the outer sides of the panels and closed at one end and provided with transverse nozzles communicating with the panels, pipes embedded in the floor and coupled to said side pipes, a valve-controlled water-supply pipe coupled to said first-named longitudinal pipe and the pipes coupled to the side pipes, and a removable platform fitting in said recess and bridging said panels and the passage connecting the same.

4. A stall floor provided with a recess having its bottom sloping downwardly and inwardly and provided with substantially horizontal side and end shoulders below the plane of the floor and in the horizontal plane of the outer and end edges of said bottom, a removable platform supported on said shoulders and sloping downward and inward from its outer sides and provided with a drain slot at its lowest point, a drain pipe communicating with the lowest point of the recess, pipes embedded in said shoulders of the recess and provided with nozzles for discharging jets of water into the latter in a substantially horizontal plane and below said platform, and means to control the supply of water to said pipes.

5. A stall floor having a recess deepened to provide a pair of longitudinally extending parallel panels and a passage connecting the same and having their bottoms sloping downward toward said passage, a drain pipe communicating with said passage, communicating pipes embedded in the floor and provided with transverse nozzles to discharge water in opposite directions into said panels, a supply pipe embedded in the floor, a substantially Z-shaped pipe connecting the supply pipe with the first-named pipes, a valve in said connecting pipe, and a tube surrounding said valve and opening at its upper end through the floor.

6. A stall provided with a recess having its bottom sloping downward and inward, substantially horizontal shoulders at the sides of the recess below the plane of the floor and in the plane of the side edges of said sloping bottom, end shoulders sloping downward slightly and inward from the side shoulders, longitudinally alined ribs extending centrally of the recess and terminating short of each other to provide a connection between the portions of the recess at opposite sides of the ribs, a drain pipe communicating with the lowest point of the recess, pipes embedded in the ribs and in certain shoulders of the recess and provided with nozzles to discharge jets of water in substantially horizontal planes into said recess, and a removable platform resting upon the shoulders and ribs of the recess, above said nozzles.

In testimony whereof I affix my signature, in the presence of two witnesses.

ALBERT TURNEY.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.