Jan. 20, 1953 W. BERRY 2,626,387

DEVICE FOR COLLECTING EQUINE URINE SPECIMENS

Filed July 10, 1951 2 SHEETS—SHEET 1

FIG. 1.

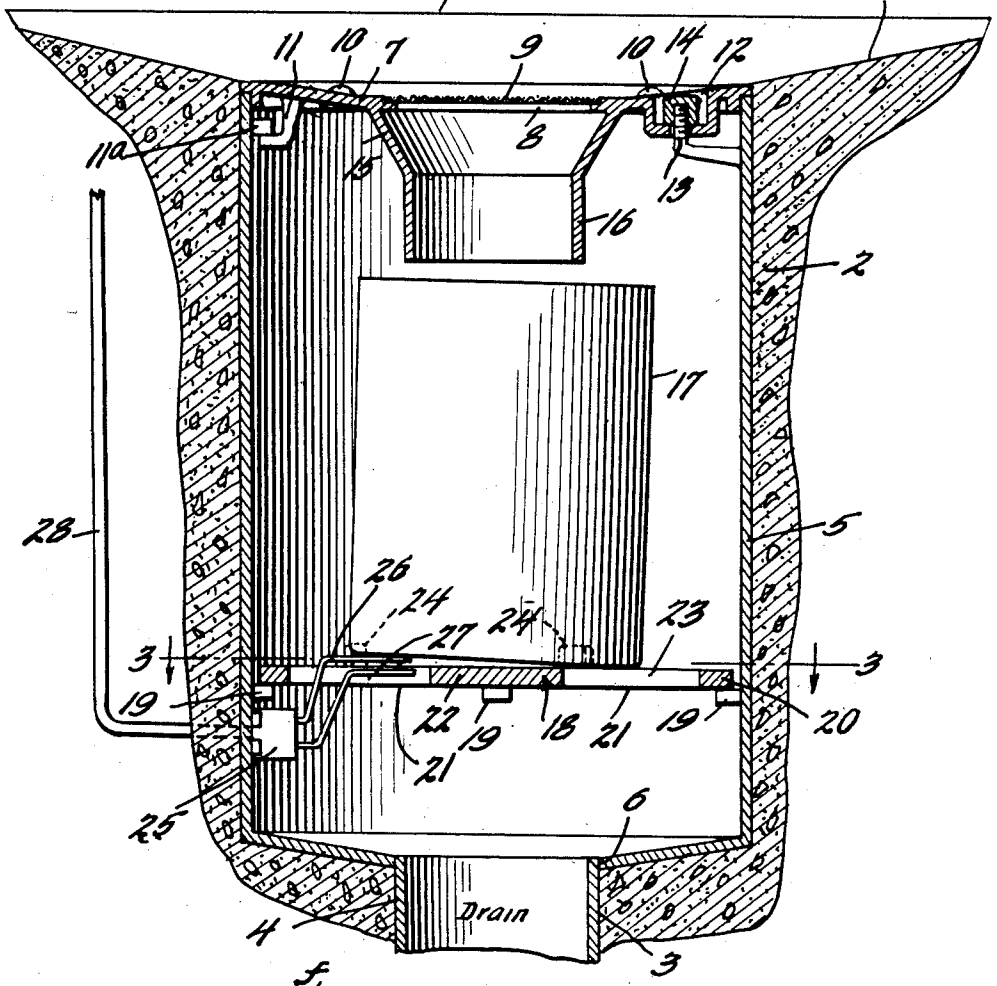
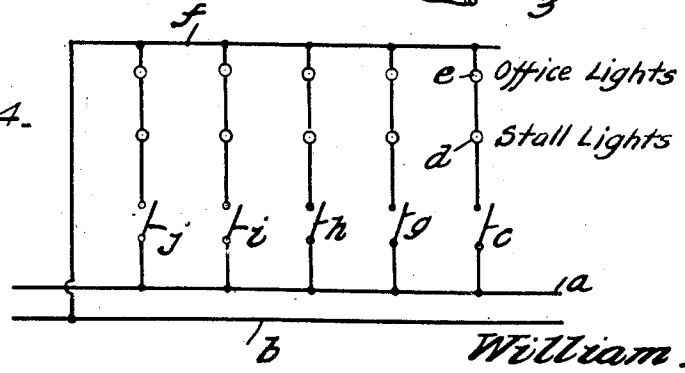



FIG. 4.




INVENTOR

William Berry,

BY Parker Cook

ATTORNEY

Jan. 20, 1953 W. BERRY 2,626,387

DEVICE FOR COLLECTING EQUINE URINE SPECIMENS

Filed July 10, 1951 2 SHEETS—SHEET 2

FIG. 2.

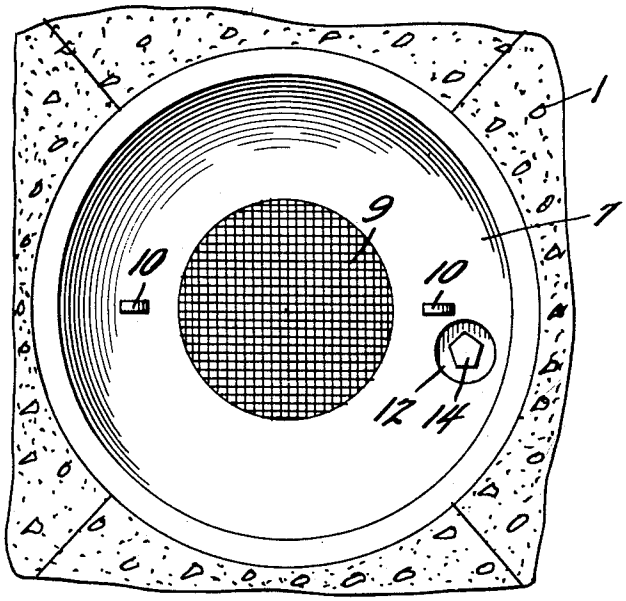



FIG. 3.

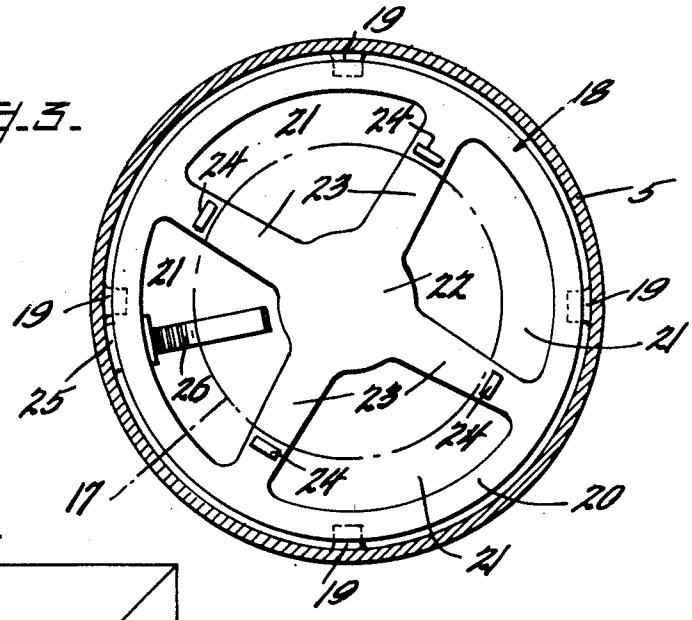
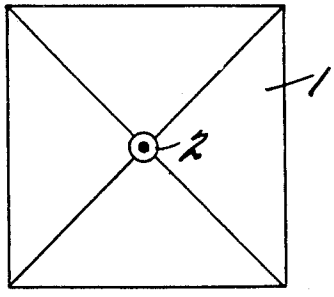



FIG. 5.




INVENTOR

William Berry

BY Parker Cook

ATTORNEY

Patented Jan. 20, 1953 2,626,387

# UNITED STATES PATENT OFFICE

2,626,387

## DEVICE FOR COLLECTING EQUINE URINE SPECIMENS

William Berry, Absecon, N. J.

Application July 10, 1951, Serial No. 236,015

3 Claims. (Cl. 340—244)

1

My invention relates to new and useful improvements in a device for collecting equine urine specimens.

In some of the States in which there is horse racing, it is the practice, and sometimes mandatory, to make an urinalysis of the winning horse of each race, so that if the horse has been drugged or even given a sedative, it will show in the urinalysis, after which an investigation may be made to determine what penal or exemplary action should be taken.

At present, the common procedure is to have someone connected with the stables wait with a bucket until such time as he can collect a specimen from the horse. Also, bags and other receptacles have been tried to be attached to the horse so that it will prevent someone's just standing around waiting for the horse to urinate. Sometimes this takes three or four hours, particularly if there is some person around the stall; and it may happen that the person waiting will not be present at the time of the urination, and the specimen is lost.

An object of my invention, therefore, is to provide a mechanical device wherein the winning horse may be led in to a stall specially fitted with a sterile receptacle fitted in a special form of tank or container in a drain to receive the specimen; and thus there will be no chance of loss, regardless of whether or not there is an attendant there at the time of urination.

Still another object of the invention is to provide a signal means connected with the sterile receptacle, so that a light will light up in the stall and the attendant can see it, even from a distance, and know that he can then go in to the stall and remove the sterile jar containing the urine specimen. At the same time, there is a light that will light in the office so that, if necessary, the office can notify the attendant in the stable to collect the specimen.

Another object of the invention is to provide a device for collecting equine urine specimens, and wherein the upper portion of the device may be locked and only opened by a special wrench, so that there may be no substitutions or any other unethical interference with the specimen.

Still another object of the invention is to provide at least ten of these drains all wired to the office, so that as each winner comes in from, usually, eight races, each one may be put in one of these fitted stalls; while two additional stalls may be so fitted for other horses than the winners.

With these and other objects in view, the invention consists in certain new and novel ar-

2

rangements and combinations of parts as will be hereinafter more fully described and pointed out in the claims.

Referring now to the drawings, showing a preferred form,

Fig. 1 is a vertical section, showing part of the floor of a stall and drain with my improved device for collecting equine urine specimens,

Fig. 2 is a top plan view of the cover for the device,

Fig. 3 is a horizontal section taken on line 3—3 of Fig. 1,

Fig. 4 is a diagrammatic view of the wiring installation, and

Fig. 5 is a top plan view, showing the sloping floor of the stall with the central drain.

Referring now for the moment to Figs. 1 and 5, there is shown the inwardly sloping floor 1 of the stall or stable, while centrally of the floor 1 is the drain 2. This drain 2 has the outlet 3. The upper portion of the drain 2 is generally made of concrete while the lower portion of the drain 2, that is, at the outlet 3, has therein the usual pipe 4.

Fitted within the drain 2, as may be seen in Fig. 1, is a metal tank or housing 5, which is preferably made of cast iron, although it may be made of bronze, the tank 5 generally being cylindrical in form, with an opening 6 at the bottom of the tank 5 registering with the aforementioned pipe 4.

The tank 5 is imbedded or fitted within the concrete of the drain 2 and is provided with a removable cover 7 that extends flush with the top of the drain 2. This cover 7 should be relatively strong, and has a central opening 8 that is fitted with a heavy wire screen 9, which should be strong enough to withstand the weight of the horse, if he should rest one foot on the screen.

The cover 7, as also may be seen in Fig. 2, has the small nibs or lugs 10, positioned opposite each other, so that the cover 7 may be grasped, when it is desired to raise the same.

This perforated metal cover 7 is also fitted with an arm 11 fitting under a lug 11*a*, to the left of Fig. 1, and the small box-like chamber 12 near its periphery, as also may be seen in Figs. 1 and 2, into which projects a threaded arm 13, so that the nut 14 may be fastened therein; and, as may be seen in Fig. 2, I make this nut 14 a five-sided nut rather than the ordinary square nut or hex-nut, so that it will necessitate a special wrench to remove the nut 14 and thus lift the cover 7 from the tank 5. In other words, I have provided a means for locking the cover 7

after it is once in place, and I have provided a form of lock so that only an authorized person with a special wrench can remove the cover 7.

Formed on the under-surface of the cover 7, as may be seen in Fig. 1, and directly under the screen 9, is a funnel-shaped section or portion 15 that merges with the cylindrical lower portion 16.

The purpose of this funnel-shaped portion 15 is so that the urine will be directed to a sterile jar 17. The jar 17 rests on a plate 18, shown in detail in Fig. 3, which is shortly to be referred to; and this plate 18 in turn rests on the lugs 19 formed around the inner periphery of the lower portion of the tank 5.

Referring now more specifically to the plate 18, it will be seen that it has the outer rim 20 and the cut-away portions 21, leaving the central portion 22 and the spider arms 23. Also formed on each of the spider arms 23 may be seen the encompassing lugs 24 to prevent the jar 17 slipping from its set position.

Thus, it will be seen, as far as the specification has proceeded, that the cover 7 has a centrally screened opening 9, while the plate 18 has the central solid portion 22 and the cut-out portions 21. The plate 18 is made in this manner so that any of the overflow from the jar 17 will readily flow through the openings 21 in the lower plate 18 and down in to the drain pipe 4.

Also, after the jar 17 has been filled and removed, the stall may be washed out with a hose, and the water will run through the screened opening 9 in the cover 7, and then thoroughly wash the plate 18 to thus keep the tank 5 and its cover 7 and inner portions clean.

*Signalling arrangement*

In Figs. 1, 3 and 4, I have shown an electrical arrangement for signalling the office and for signalling an attendant near the stall that the jar 17 has been filled and is ready to be removed.

In Fig. 1, there will be seen a switch box 25 secured within the tank 5, with an upper arm 26 and a lower arm 27 extending up through an opening 21 in the plate 18, so that the jar 17 may rest on this upper arm 26, the strength of this spring arm 26 being such that the empty jar 17 will not compress the arm 26, so that there will be no electrical contact formed.

However, when the jar 17 is partially filled, or filled, the additional weight of the urine will cause the spring arm 26 to contact with the arm 27, thus closing a circuit to light the signal lamps, as will be mentioned shortly.

Also in Fig. 1, there may be seen the metal conduit 28 that will be placed in the ground so that the lead-in wires *a* and *b* may be connected with the switch box 25.

It is to be understood that other forms of switches might be used, or they might be placed differently within the tank 5, the one shown being for the purpose of illustration.

Referring to Fig. 4 for the moment, there is shown the lead-in wires *a* and *b* from a power source; and I have simply shown lights for five stalls and the office light, but, as heretofore mentioned in the specification, inasmuch as there are generally eight races, there will be at least eight wired drains, and preferably ten.

In the diagrammatic illustration shown in Fig. 4, from the lead-in wire *a* there is a switch *c*, which switch *c*, it will be remembered, comprises the two arms 26 and 27. There is the light *d* that may be fastened to the outside of a stall (not shown), and the light *e* which is to be in the office. The circuit is then completed through the wire *f* down to the lead-in *b*. The additional switches *g*, *h*, *i* and *j* are wired in exactly the same manner; and a description of one and the light is a description of all.

Thus, when the horse is in any of the stalls and urinates, the extra weight of the jar 17 will light the respective signal lights on the stall and also in the office.

From the foregoing, it will be seen that an attendant with the proper wrench may unlock the cover 7, place a sterile jar 17, which has been kept in a sterilizer, within the tank 5, and rest it on the plate 18 and one of the spring arms 26, and then lock the cover 7.

After the horse urinates, a light, as heretofore mentioned, will show in the office and in the stall, and the proper attendant may loosen the nut 14, remove the cover 7, and remove the jar 17, so that the veterinarian may make the urinalysis. The stall may then be washed down with a hose, although any overflow will have passed through the openings 21 in the plate 18. Then another sterile jar may be placed in position, the cover locked, and the procedure repeated.

In the beginning of the specification, it was mentioned that the device was especially adapted for race tracks, where specimens had to be taken.

It will also be understood that it may be used by veterinarians, in a stall or stable of their own, where it is desirable to make a urinalysis of a horse or other animal.

It will also be seen that when used at a race track, it will save many hours of the grooms' or attendants' time waiting around to collect a specimen.

In some instances the stalls are locked, but whether a stall is locked or not, by locking the cover 7, it's only possible to remove the cover 7 with a special wrench.

Finally, it will be understood that I might use a different form of lock on the cover 7, and I do not wish to be limited to the form of switch shown, or its position.

Many slight changes might be made without departing from the spirit and scope of the invention.

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

1. In a device for collecting equine urine specimens for analysis, including a tank adapted to be located in a stable drain, a cover for said tank, said cover having a centrally located screened opening, a supporting plate mounted near the bottom of the tank, said plate provided with openings around its inner periphery, a sterile jar, for catching the urine, supported on said plate; the bottom of the said tank provided with an opening and adapted to be connected to said drain, whereby an overflowing of the jar with urine will let the excess urine pass through said openings in said plate and down in to said drain, together with an electrical switch extending beneath said jar, an electrical circuit having a lamp therein, and said switch being depressed to light said lamp when the said jar is filled or partially filled with urine.

2. In a device for collecting equine urine specimens for analysis, including a tank adapted to be located in a stable drain, a cover for said tank, said cover having a centrally located screened

opening, a supporting plate mounted near the bottom of the tank, said plate provided with openings around its inner periphery, a sterile jar, for catching the urine, supported on said plate; the bottom of the said tank provided with an opening and adapted to be connected to said drain, whereby an overflowing of the jar with urine will let the excess urine pass through said openings in said plate and down in to said drain; together with an electric circuit having two lamps therein, one adapted to be placed in a stall and the other adapted to be placed in an office, an electric switch in the circuit, and the said switch being actuated by said urine jar when the same is filled or partially filled with urine.

3. In a device for collecting equine urine specimens for anlysis, including a removable sterile iar for catching the urine, said jar adapted to be



located in a drain of a stall; electrical means, including a circuit, a lamp and a switch, the said switch closing the circuit when said jar is filled or partially filled with urine; and means for locking the jar against unauthorized removal.

WILLIAM BERRY.

## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 401,409 | Brown | Apr. 16, 1889 |
| 1,207,950 | Longino | Dec. 12, 1916 |
| 2,501,762 | Davis, Jr. | Mar. 28, 1950 |
| 2,528,056 | Henry | Oct. 31, 1950 |