July 15, 1952 J. E. COOK 2,603,184

FROG HOLDER

Filed March 21, 1950

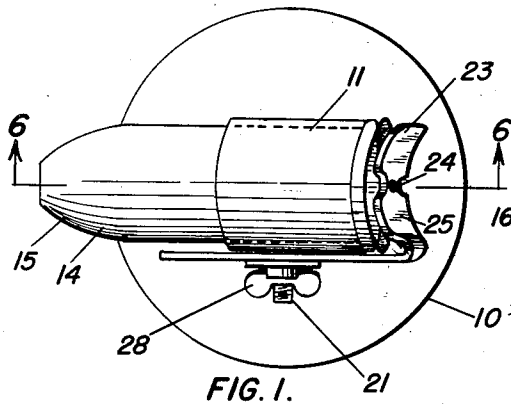


FIG. 1.

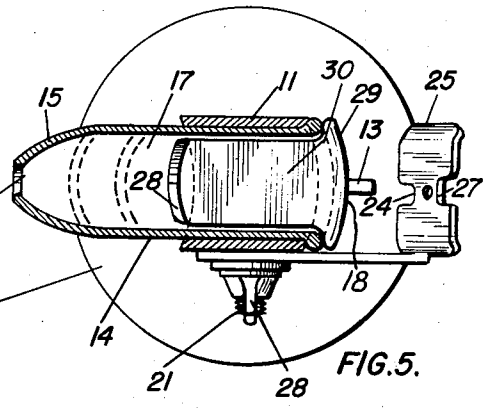


FIG. 5.

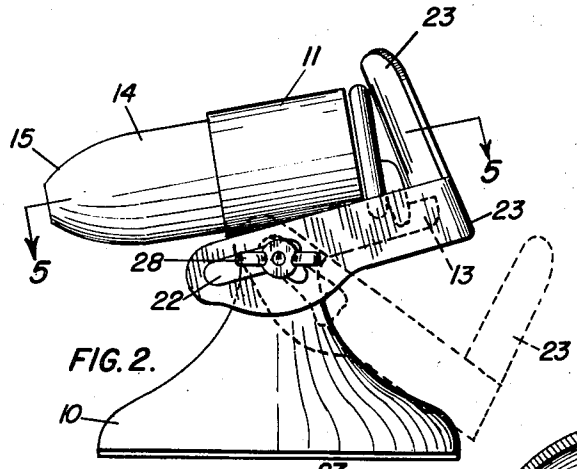


FIG. 2.

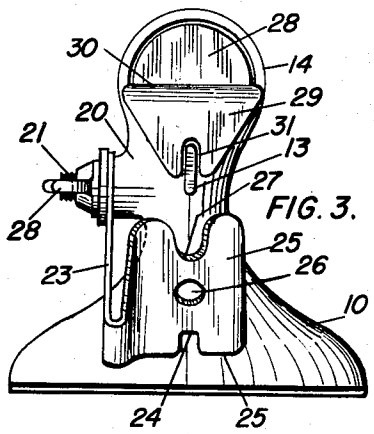


FIG. 3.

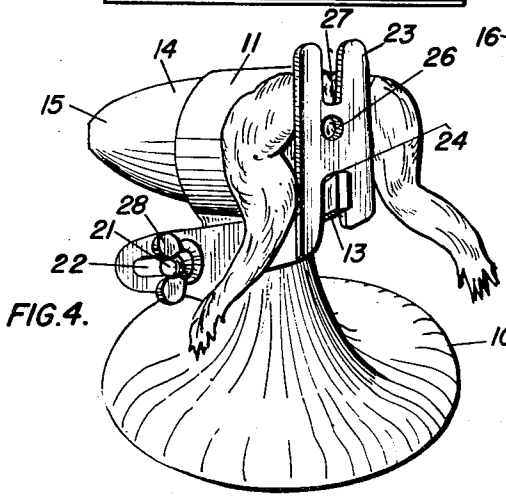


FIG. 4.

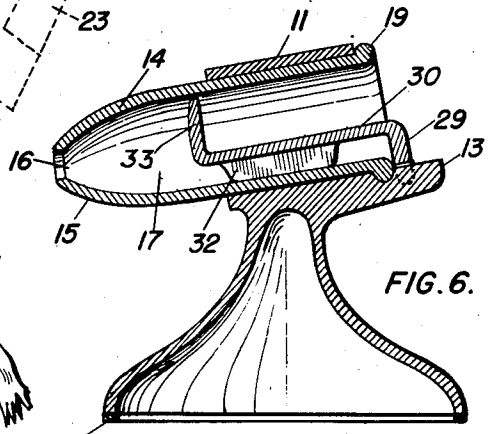


FIG. 6.

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FROG HOLDER

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3 Claims. (Cl. 119—96)

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This invention relates to laboratory equipment and more particularly to devices for holding frogs in position for inoculation purposes.

The usual method of holding frogs for injection and inoculation purposes involves the use of the operator's hands and a towel. This method has not proven satisfactory because the activity of the frog, the unevenness of his body and uncertainty of his behavior, make him a somewhat difficult subject to handle. This affects the experiments or uses to which the frog is put, because a sudden and unexpected movement on his part could interfere with the accuracy of the injection and the resultant effect of the test. In this invention, a device is provided in the form of a barrel in which the frog is inserted and made comfortable, and at the same time, positioned so that the inoculation may be performed with accuracy in a convenient and expeditious manner.

It is therefore an object of this invention to provide a new and improved frog holder that will avoid one or more of the disadvantages and limitations of the prior art.

Another object of the invention is to provide a new and improved frog holder that will permit the handling of a frog for inoculation purposes in a convenient and secure manner.

A further object of the invention is to provide a new and improved frog holder that will have features of adjustability for various sizes of frogs.

Other objects of the invention will be evident as the latter is further disclosed.

For a better understanding of the invention and the objects thereof reference is made to the accompanying drawings, which indicate a particular form of the invention by way of example. The claims emphasize the scope of the invention.

In the drawings:

Figure 1 is a plan view of a frog holder, embodying this invention;

Figure 2 is a side elevation of Figure 1;

Figure 3 is an end view of Figure 2;

Figure 4 is a view in perspective showing a frog positioned in the holder;

Figure 5 is a sectional view taken along line 5—5 of Figure 2; and

Figure 6 is a sectional view taken along line 6—6 of Figure 1.

Similar reference characters relate to the same parts throughout the figures.

In the drawings is shown a particular form of frog holder. It consists of a base 10 enlarged at the bottom and tapering arcuately to the top portion where it is joined to cylindrical and hol-

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low-barrel holder 11. The holder 11 is preferably integral with the base proper and tilted downwardly from the back to the front at a slight angle. This angle is normally about 8° but may be varied to suit.

An extending web 13 projects at the rear and lower portion of the barrel holder 11 and is flat, to serve as a guide for a barrel 14.

In the barrel holder 11, is placed the barrel 14 tilted at the angle mentioned. The barrel is hollow and cylindrical for the greater part of its length and then tapered into a bullet shell form at its front portion 15, wherein an opening 16 is provided to ventilate the interior chamber 17 of the barrel. The barrel fits closely in the holder and is guided therein by the web 13 as it engages into a slot 18 provided in the enlarged rolled rim 19 terminating at the larger and open end of the barrel. A boss 20 at the side of the base 10 is tapped and drilled for a bolt 21. This bolt 21 passes through an L-shaped slot 22 in an L-shaped bracket 23 and holds the latter to the side of the base. The bracket 23 may be swung on the bolt 21 when loose and raised until a slot 24 at its lower edge fits and rests on the web 13. When in this position the concave tailgate 25 formed on the bracket closes the open end of the barrel 14 and aligns a circular hole 26 in it with the axis of the barrel. It also has a slot 27 above the hole 26 extending down vertically when the tailgate is in position on the barrel. The bracket by reason of the slot 22 and bolt 21 enables the tailgate 25 to be adjusted backward and forward on the barrel. A shelf or insert 30 of the form indicated in Figure 6 is inserted in the chamber 17 and the live frog placed on it. It has a front lip 33 bent up from it and subject to placement in front of the orifice 16 so the frog can secure sufficient air for it to breathe. At the rear of the shelf or insert is an oppositely bent lip 29 having a slot 31 extended from the lower edge to engage on the web 13 and be held in position thereon. The shelf is rectangular in form and bridges across the circular interior 17 of the barrel, so as to provide a flat floor for the frog to rest on. The lip 29 provides a convenient surface against which the frog can be pressed while being handled. The frog is placed on the shelf, head facing downwardly towards the orifice. The rear legs of the frog project beyond the back of the barrel and the rear of the frog is clamped between it and the tailgate 25 so it cannot escape therefrom. The wing nut 28 on bolt 21 is tightened so the frog is held there securely, but still has enough room provided for breathing purposes

and his natural motions. The injection is then made in the rear of the frog to suit the test to be made. The shelf or insert **30** can be made with an underweb **32** to raise or lower it and adapt itself to a smaller size of frog. In this way the holder can be used for various sizes of frogs without changing the size of the barrel.

The holder is simple in structure but does the work previously required of several persons, since the holding and placing of the frog previously had been a difficult and uncertain task. It takes the individual frogs conveniently.

To operate, place the frog holder on the table with the tailgate **25** and large opening of the barrel **14** away from the operator, with the adjusting nut **28** on the operator's right; then loosen nut **28**, and push tailgate **25** forward until it drops down, leaving opening of the barrel free for the frog to be inserted.

Determine the particular frog you wish to inject and then select the shelf or insert that will reduce the opening in the barrel to accommodate that particular size frog. (Frogs weighing upwards of 200 grams require no shelf or insert.) Put the frog head-first, belly downward into the barrel, and adjust the tailgate between the frog's legs, leaving sufficient space between the tailgate and the end of the barrel so that the frog's thigh and cloaca are visible.

Pass the left hand around and in front of the holder and using a clean dry cloth or towel, grasp the left hind foot of the frog and while holding it firmly, make the injection with the right hand.

With the small frogs, use the shortest shelf or insert—with medium frogs, the medium size shelf or insert—and with the large frogs, the longest shelf or insert.

The barrel **14** and/or its front portion **15** and the shelf **30** may be made of transparent plastic or other transparent material so the frog and its movements and reactions can be studied during the injection or inoculation period.

While but one general form of the invention is shown in the drawings and described in the specification, it is not desired to limit this application for patent to this particular form, as it is appreciated that other forms of construction could be made that would use the same principles and come within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. An animal holder comprising a base terminating in an upper holding portion, said portion having an internal cylindrical barrel holder therein, a barrel element slidably mounted within said holder, said barrel element having a restricted opening at its front end to admit air within the barrel element, and an open rear end to receive the forward part of the body of an animal with its hind legs protruding outwardly of the barrel element, a bracket, means for pivotally and adjustably mounting said bracket on the base, said bracket extending rearwardly from the said means towards the open rear end of the barrel element, and a tail gate integral with said bracket and extending upwardly therefrom, said tail gate being adapted to contact the hind legs of the animal and restrain its body within the barrel element.

2. An animal holder as set forth in claim 1 wherein the means for pivotally and adjustably mounting the bracket on the base consist of a boss at one side of the base, a bolt threaded in said boss, the bracket having an L-shaped opening receiving the bolt during pivotal and adjusting movement of the bracket, and a nut on the bolt to secure the bracket in its selected position.

3. An animal holder as set forth in claim 1, in combination with an insert within the barrel element to receive the forward portion of the body of the animal and means for supporting the insert on the base, said means consisting of a web projecting from the lower rear portion of the holder, said insert having a rear, downwardly bent lip and a slot therein engaging the aforesaid web.

JAY E. COOK.

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