May 18, 1948. B. A. VAN HYNING 2,441,734

TEST TUBE HOLDER

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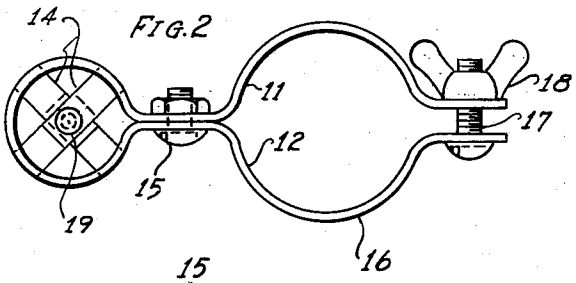


FIG. 2

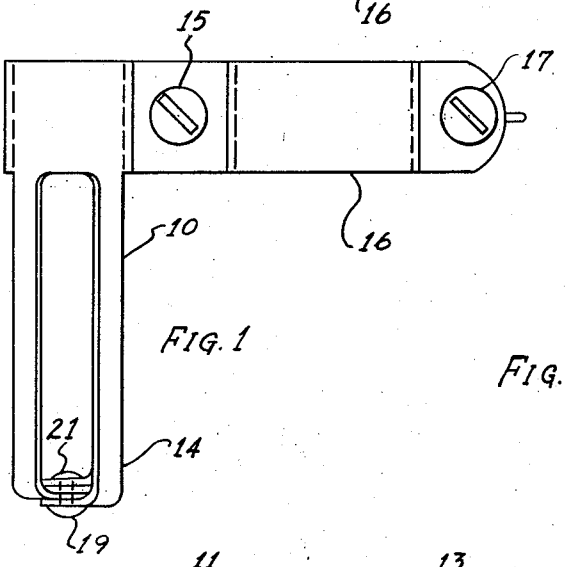


FIG. 1

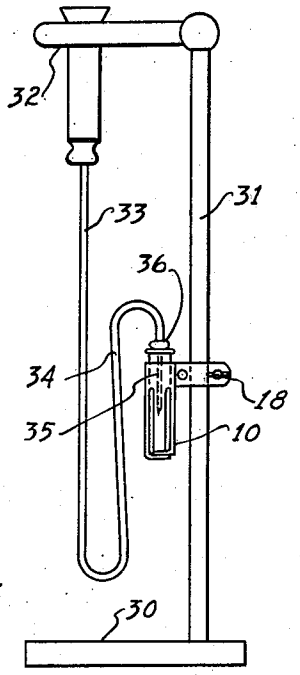


FIG. 3

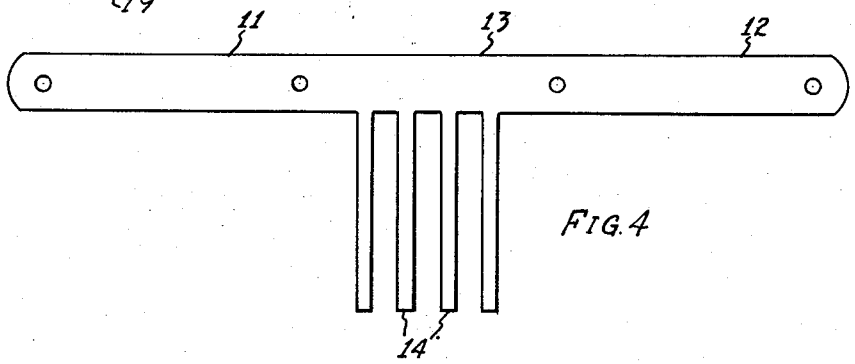


FIG. 4

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TEST TUBE HOLDER

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2 Claims. (Cl. 248—230)

1

In recent years it has been found beneficial to give intravenous injections in surgical and medical cases much more frequently than heretofore. For example, almost every patient who has undergone a major or a semi-major operation, or is undergoing medical treatment of serious or semi-serious character, may be given an intravenous injection. Also, blood transfusions are more common in recent years, often being used to relieve shock. In giving the injection or transfusion, the liquid containing bottle is mounted on a standard and a hose extends from the bottle to a sterile needle. It has been a problem to keep the needle sterile until use. One manner of doing this has been to secure a test tube with adhesive to the standard and to place the needle in the test tube. It is a constant annoyance to mount and remove a test tube in this manner.

Heretofore test tube holders other than adhesive have been provided for laboratory use but these do not readily adapt themselves to use with intravenous injection or transfusion apparatus. Moreover, known test tube holders are often expensive, hard to handle, and are not adapted to the removal of the test tube, as for sterilization, without unclamping.

The general object of this invention is to avoid and overcome the foregoing, and other disadvantages of and objections to known types of test tube holders and to provide a test tube holder of the above type that is particularly adapted to be used in conjunction with intravenous injection and transfusion apparatus.

Another object of the invention is to provide a sturdy, light weight, easily produced test tube holder.

Another object of the invention is to provide an inexpensive, yet strong, test tube holder adapted for adjustable engagement with and support by a standard, which holder has a minimum of parts.

A further object of the invention is to provide a test tube holder which provides a safe receptacle for a test tube that is easily placed therein or removed therefrom.

Another object of my invention is the provision of a test tube holder made from a single sheet metal stamping.

The foregoing and other objects and advantages of the invention, which will be made apparent as the specification proceeds, are achieved, broadly speaking, by the provision of a test tube holder that is formed from a single sheet metal stamping which has a pair of juxtaposed strap

2

portions which are adapted to engage with a standard, and which has a plurality of finger portions extending from a tubular section thereof in closely associated relation; means for securing such finger portions together at their ends to form a basket therefrom; and means associated with the strap portions for securing the holder to a standard.

Reference now is made to the accompanying drawings, wherein:

Fig. 1 is an elevation of a test tube holder embodying the principles of the invention;

Fig. 2 is a plan of the holder of Fig. 1;

Fig. 3 is an elevation of one use of the holder of the invention; and

Fig. 4 is an elevation of a stamping from which the test tube holder of the invention is made.

Attention now is directed to the detailed structure disclosed herein and a test tube holder, generally indicated by the numeral 10, is shown. As a salient feature of the invention, tube holder 10 is formed primarily from a single sheet metal stamping which has strap portions 11 and 12 that are joined together by a center strap section 13 that has a plurality of centrally located, laterally spaced fingers 14 extending normally therefrom. To form the holder 10 from the stamping, the center strap section 13 is first bent to looped or tubular form and retained in that shape by a bolt 15, or equivalent means, which extends through the strap portions 11 and 12 immediately adjacent the center section 13. This, of course, places the strap portions 11 and 12 in juxtaposed relation.

A standard engaging arm or section 16 is formed in the holder 10 by bending opposed sections of the strap portions 11 and 12 in opposite directions to form mated semi-circular or other shaped loops. The ends of the strap portions 11 and 12 are adjustably and removably secured together by conventional clamp means, such as a bolt 17 and wing nut 18.

The test tube holder 10 may be completed by securing the inwardly bent ends 21 of the fingers 14 together by a rivet 19. In all events, the ends 21 are bent in so as to nest together as shown in Fig. 1 either before or after the section 13 is rendered tubular, as desired. The holder 10, it will be noted, provides a good sized tube receiving basket portion into which a test tube can easily be placed, or from which it can likewise be easily removed. Thus the holder 10 is sturdily formed from a single sheet metal stamping and is adapted for ready engagement with a mounting standard by removing the nut 18 and

springing the ends of the strap portions 11 and 12 around the standard.

Fig. 3 shows one illustrative use of the holder embodying the invention and in this instance a standard 30 having a vertically extending arm 31 is provided that positions a container 32 which may contain blood, plasma or other liquid for a transfusion or other intravenous injection. In such case, a flexible hose 33 is secured to the lower end of the container and the other end of the hose carries a sterile needle 35 in association with a plug or stopper 36. The needle 35 on the end of the hose 33 is placed in a sterile test tube 34 carried in the holder 10 and the plug 36 conveniently rests against the mouth of the test tube to seal the tube and needle against movement of foreign matter into the tube thereby better to keep the needle sterile. The holder 10 is set at a predetermined spot on the arm 31 for receipt and retention of the sterilized needle as will be understood. Also, it will be recognized that the basket-like support for the test tube 34 permits it to be lifted out without unclamping anything. This facilitates sterilization of the tube and eliminates any question or danger of clamping the tube too loosely or too tightly.

The holder 10 is easily adjusted vertically of its mounting arm by loosening the nut 18 and sliding the holder to its desired location, after which the nut 18 is tightened to retain the holder in its proper position. As the test tube holder basket and its mounting arm are integrally formed, the unit is sturdy, and requires a minimum of assembly work all of which can be performed by unskilled labor.

The holder 10 may, of course, be formed from any suitable kind of metal, whereas the test tube receiving basket may be of any desired shape or size. Also, the bent ends 21 of the fingers 14 can be secured together by any desired device or, in some instances, merely be physically adjacent each other without any definite securing member.

In accordance with the patent statutes, one complete embodiment of the invention has been

described herein in detail. However, it will be understood that the scope of the invention is not limited to that example given herein, but that modification may be resorted to within the scope of the appended claims.

What is claimed is:

1. A test tube holder comprising a sheet metal stamping having a substantially annular strap portion for engagement with a support and having a plurality of finger portions extending from a tubular portion thereof, said finger portions being provided with end sections which are bent in towards the center of the tubular portion and are nested together, means for securing the nested end sections of said finger portions together for formation of a tube receiving basket, means for retaining said tubular portion in that shape, and means for removably clamping said annular strap portion to a support.

2. A holder for test tubes and the like, said holder being made from a single piece of sheet metal and including an elongated basket-like portion, a strap forming the mouth of the portion, integral fingers extending from the strap, the ends of the fingers being bent over and secured together to form the bottom of the basket-like portion means securing the strap together adjacent the basket-like portion, the ends of the strap being extended and shaped to jointly surround a standard, and means for adjustably clamping the extreme ends of the strap together to secure the holder to a standard.

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