T. LIDBERG.

HOLDER AND CARRIER FOR BLOOD PIPETTES.

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1,340,660.

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Fig. 1.

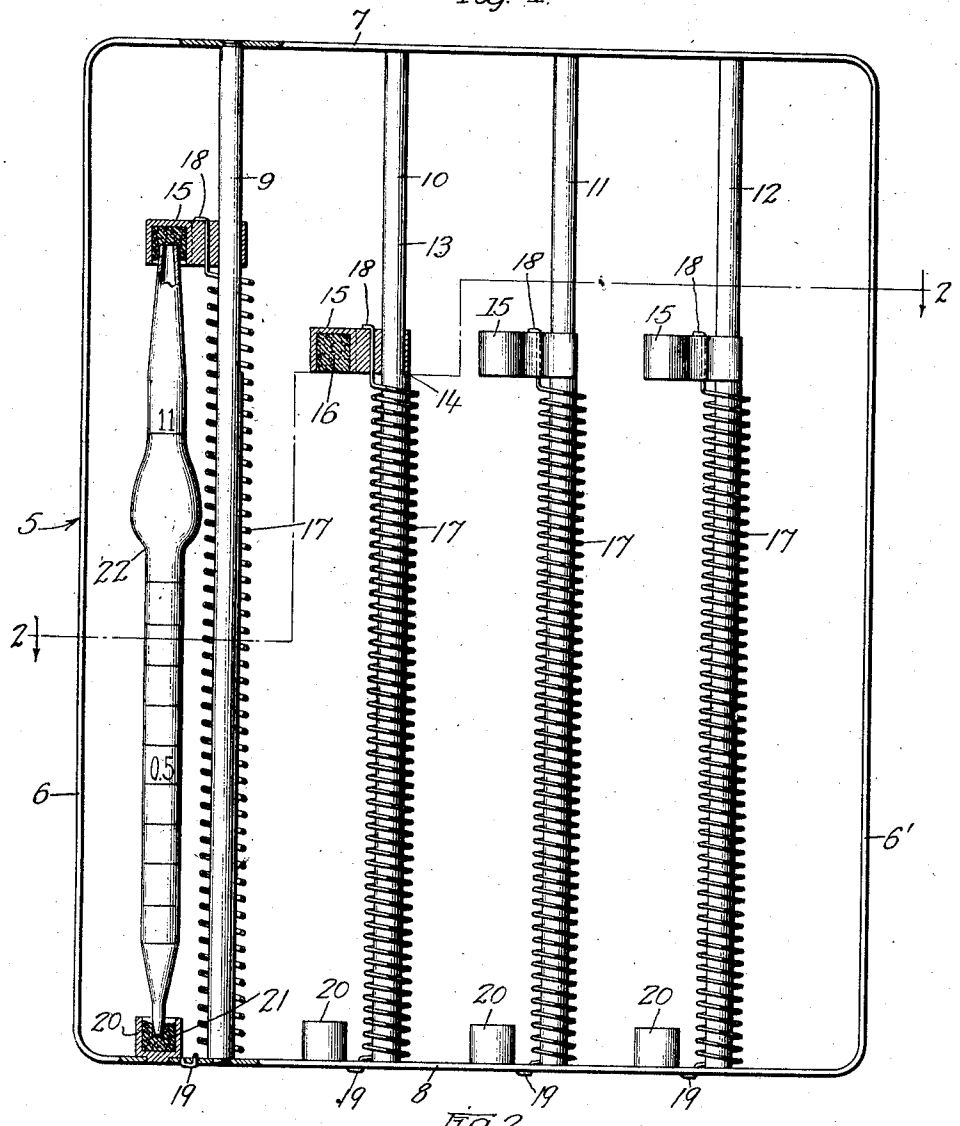
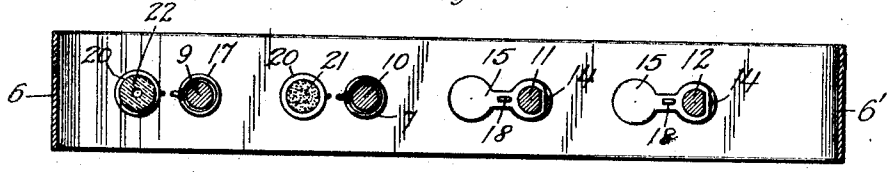


Fig. 2.



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HOLDER AND CARRIER FOR BLOOD-PIPETTES.

1,340,660. Specification of Letters Patent. Patented May 18, 1920.

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To all whom it may concern:

Be it known that I, TIODOLF LIDBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Holders and Carriers for Blood-Pipettes, of which the following is a specification.

The invention relates to improvements in devices for closing, holding and carrying open end pipettes.

The object of the invention is to provide a device for closing, holding and carrying open end pipettes, in which the pipette or tube may be quickly inserted and easily withdrawn; which will protect the fragile tube against danger of being broken; which will effectively close both ends of the tube to prevent loss of its contents; which will readily compensate for variation in length of tubes; which may be made to accommodate a plurality of tubes and which is light, compact and durable.

Other, further and more specific objects of the invention will become readily apparent to persons skilled in the art from a consideration of the following description when taken in conjunction with the drawings, wherein:—

Figure 1 is an elevation of the holder and carrier.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

In both views the same reference characters are employed to indicate similar parts.

5 is a rectangular metal frame, which may be of any width, composed of a strip 6 that extends to both sides and ends. Between the ends 7 and 8 of the frame, and properly spaced apart are one or more rods, such as 9, 10, 11 and 12, which are parallel with the side members of the frame and with each other, and which are secured at their respective ends to the end members 7 and 8 of the frame. The rods are flattened for a portion of their length on one of their sides, as at 13, to provide a shoulder 14. They are shown to be round in cross section and on each of the rods movable on the flattened part is a vertically sliding head 15, having a socket within which a yielding substance, such for example as sponge rubber 16, is inclosed. The head freely moves over the rod and the flattened portion prevents the head from rotating. Connected to the head is a helical spring 17, as at 18. The spring surrounds the rod and is connected to the bottom member 8 of the frame, as at 19. A socket 20, containing rubber 21, similar to the rubber cushion 16, in the head 15, is located in vertical alinement with the head 15 at the bottom of the respective rods. The springs 17 tend to hold the heads 15 in their depressed positions, as shown by the unengaged rod at the right side of Fig. 1. A pipette 22, or glass tube, open at its ends, is held in vertical position, parallel with the rods, having its lower end inserted in the socket 20 and its upper end closed by the cushion in the socket 15 of the head. The head is raised and the spring 17 is somewhat extended upon the insertion of the pipette, as shown to the left in Fig. 1, and the resiliency of the spring tends to hold the cushions 16 and 21 in the respective sockets, in intimate contact with the open ends of the pipette. This operates to hold the pipette well within the frame 5 and to maintain both ends of the pipette closed. To remove the pipette it is only necessary to lift the head 15 until the upper end of the pipette is clear, whereupon it is lifted from the socket 20, whereupon the head 15 will descend on its respective rod, until it encounters the shoulder 14, where it will remain until again required.

In the drawings I have shown accommodations for four pipettes. It is, of course, to to understood that any other number may be employed, or a frame may be made for the accommodation of a single pipette.

The device is very convenient for use by surgeons by whom the pipettes are employed for carrying samples of blood for analysis, and the like.

The coöperation of the rubber cushions with the springs, while yieldingly holding the pipettes in place and closing their ends, protects them against any sudden jar or vibration to which the device as a whole may be subjected in transit, or otherwise, and at the same time the open ended pipettes are hermetically sealed. Of course, if the pipettes were open at one end, only, the device may be used with equal convenience, as the other or open end would be closed, by the means shown, when inserted within the carrier.

Having described my invention, what I claim is:—

1. A device of the character described having in combinative association a frame; a rod connected at its ends to the top and bottom members of the frame; a head slidable

on one end of the rod; a socket carried by the head, having a yielding material therein; another, similar socket fixed to the other end of the frame and a spring for yieldingly moving the head from one end of the rod toward the socket at the other end.

2. A device of the character described having in combinative association a frame; a plurality of parallel spaced apart rods connected at their ends to the top and bottom ends of the frame; a head, slidable on one end of each of the rods; a socket carried by each head having a yielding material therein; another similar socket for each head fixed to the other end of the frame and a spring, wound about each of the rods, for yieldingly moving the respective heads from one end of its rod toward the coöperating socket at the other end thereof.

3. A device of the character described having in combinative association a rod; a head slidable on one end of the rod; means to prevent rotation of the head; a yielding material carried by the head to seal one end of a pipette; a similar material at the other end thereof, and a spring wound about the rod connected to the head and at the lower end of the rod to yieldingly hold the sealing means in contact with the ends of the pipette to be inserted between said means.

In testimony whereof I hereunto subscribe my name.

TIODOLF LIDBERG.