R. E. MERCER.

SPHYGMOMANOMETER.

APPLICATION FILED OCT. 2, 1909.

998,916.

Patented July 25, 1911.

Fig. 3

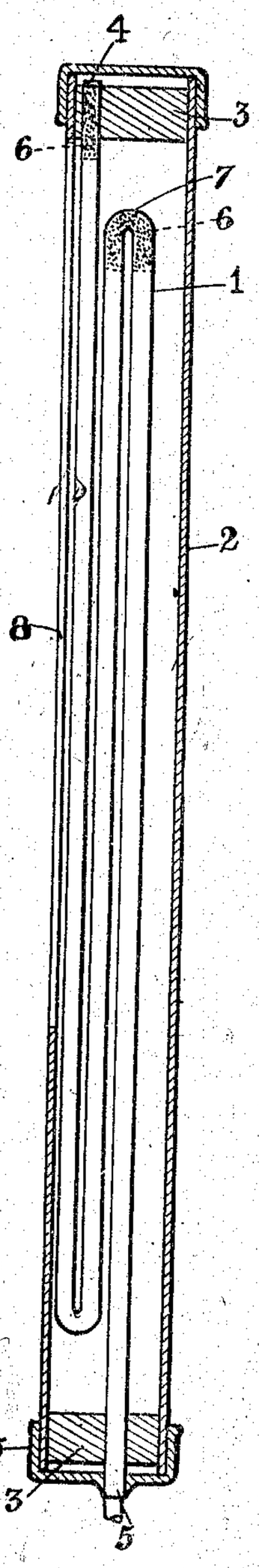
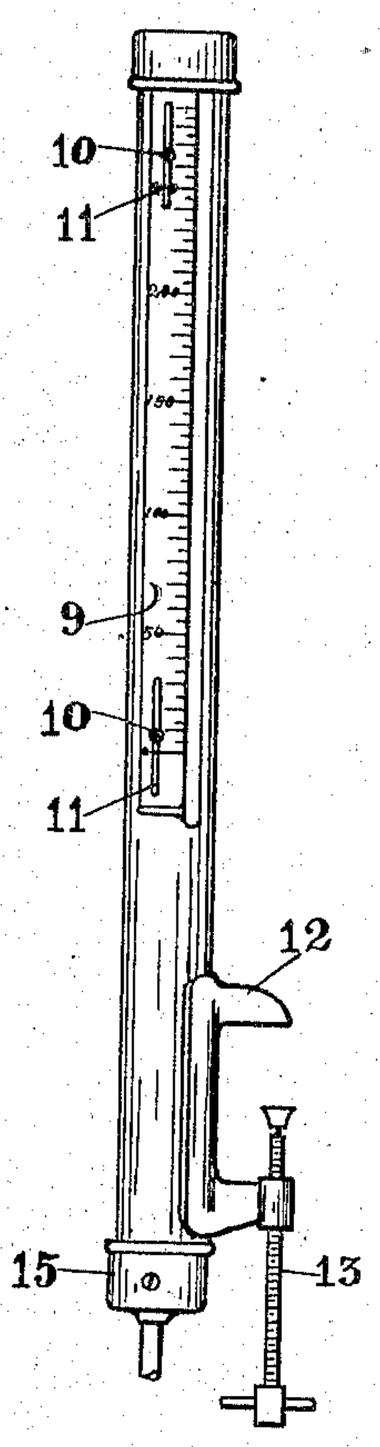


Fig. 2



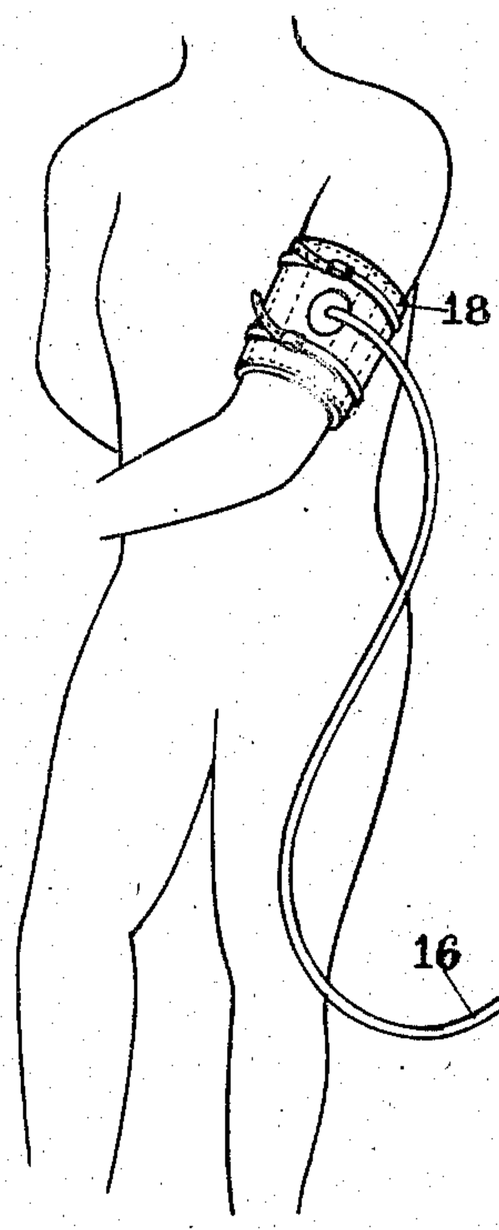
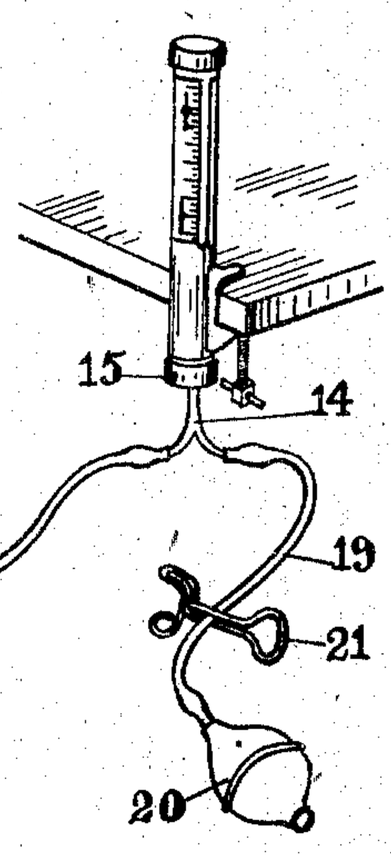


Fig. 1



Witnesses

G. M. Shannon.

L. E. McGrann

Inventor

RICHARD E. MERCER

By

Attorneys

UNITED STATES PATENT OFFICE.

RICHARD E. MERCER, OF DETROIT, MICHIGAN.

SPHYGMOMANOMETER.

998,916. Specification of Letters Patent. Patented July 25, 1911.

Application filed October 2, 1909. Serial No. 520,734.

To all whom it may concern:

Be it known that I, RICHARD E. MERCER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sphygmomanometers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a plethysmograph and more particularly to an arrangement thereof whereby a portable apparatus is obtained suitable for a physician's use outside the office or laboratory.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a view of an apparatus embodying the invention, in operative position. Fig. 2 is a view in elevation of a gage. Fig. 3 is a view in longitudinal section, enlarged, of the gage.

As herein indicated, a manometric or U-tube 1 with one arm bent back on itself, is secured in a cylindrical casing 2, as by corks 3 through which the upper, open end 4 of the indicating arm and the lower extremity 5 of the bent arm are thrust. Porous plugs 6 of cotton or like material adapted to retain mercury or other liquid in the tube while permitting free passage of air, are loosely inserted in the open end 4 and the upper bend 7 of the bent arm, to prevent the mercury escaping when the instrument is not in vertical or operative position. A view opening 8 is formed in the casing along the indicating arm of the tube, and a strip 9 on which a scale is placed, is adjustably secured adjacent the opening, as by screws 10 passing through longitudinal slots 11 in the strip. A lateral bracket 12 or the like, formed or secured on the casing 2, with a clamping screw 13, is provided for securing the gage in upright position on a table, chair or other suitable support. A Y or T 14 on the extremity 5 of the manometer tube which extends through the lower casing cap 15, has one of its branches connected by a flexible hose 16 to an inflatable lining of a compress 18 of leather or like suitable material. The latter is adapted to be buckled or otherwise fastened around a limb of a patient. The other arm of the T 14 is connected by a suitable hose 19 to an air-bulb 20, pump or like means for inflating the compress lining, a pinch cock 21 or the like preventing leakage from back pressure through the bulb or pump.

In operation, the scale is adjusted with its zero mark at the level of the mercury in the upright manometer tube, the compress is strapped in place and the lining inflated. Until the compress has completely shut off the circulation in the member, the pulse may be readily counted by observing the periodic fluctuations in the rising manometer level. When the fluctuations cease, the gage registers the pressure in the arterial system.

The chief feature of the invention lies in its portability, the construction of the manometer column or tube in the gage enabling the user to readily pack it for carriage.

Obviously, changes in the details of construction may be made without departing from the spirit of the invention, and I do not limit myself to any particular form or arrangement of parts.

What I claim as my invention is:—

1. In a sphygmomanometer, a cylindrical casing provided with a view slot, a manometer tube therein one of whose arms is bent on itself and extends below the casing, retaining plugs in the tube arms, a longitudinally adjustable scale on the casing adjacent the view slot, and clamping arms on the casing.

2. In a sphygmomanometer, a cylindrical casing provided with a view slot, a manometer tube therein one of whose arms is bent on itself and extends below the casing, retaining plugs in the tube arms, a longitudinally adjustable scale on the casing adjacent the view slot, clamping arms on the casing, and a T on the lower end of the extended arms.

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

RICHARD E. MERCER.

Witnesses:
C. R. STICKNEY,
A. M. SHANNON.