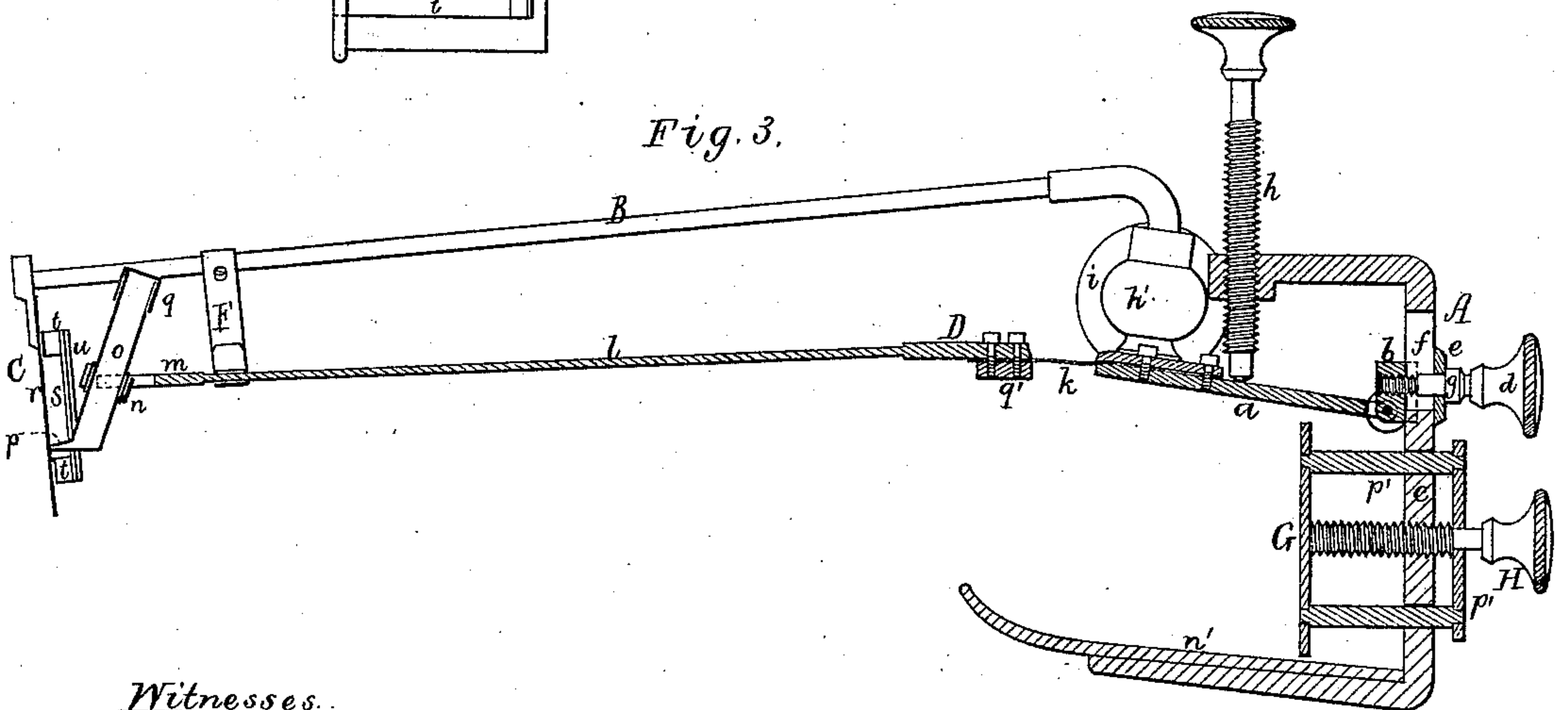
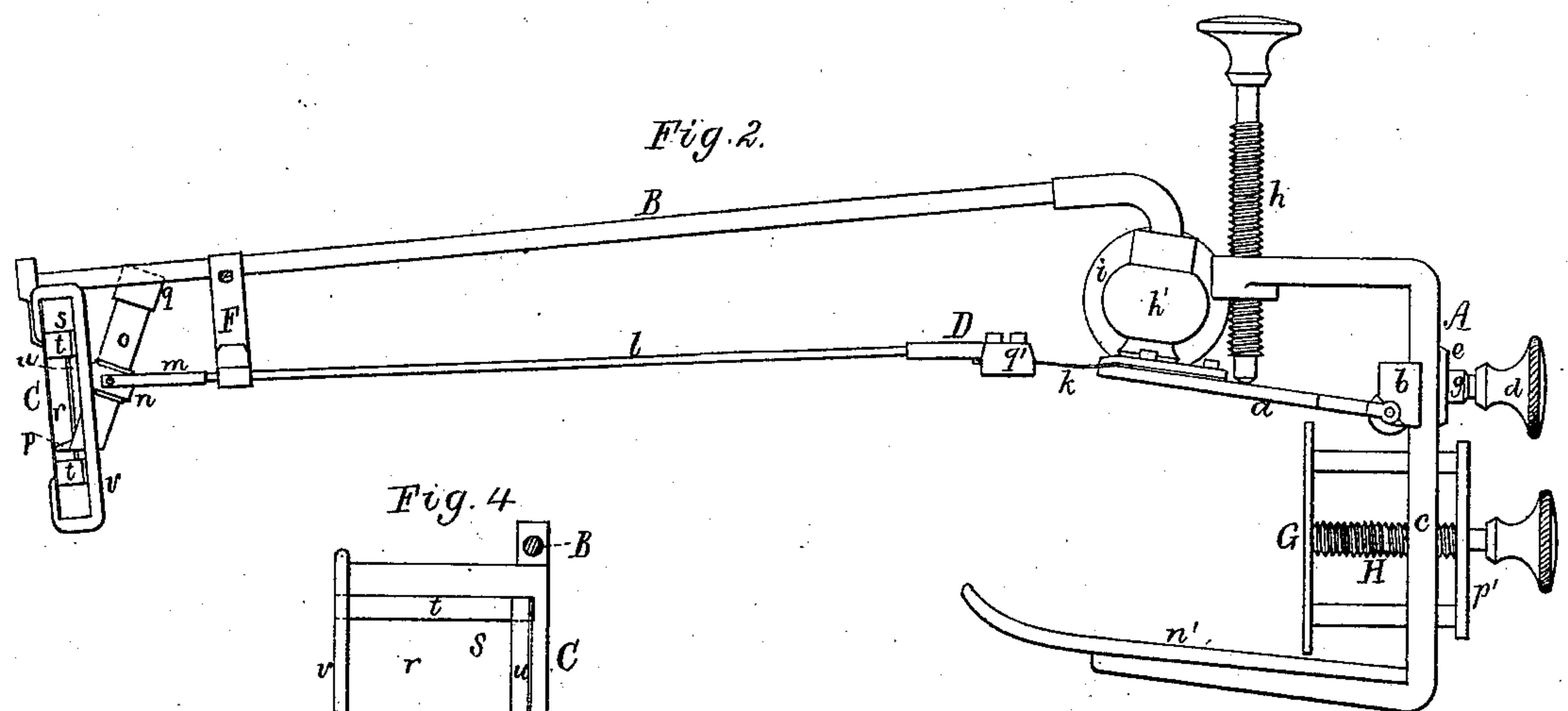
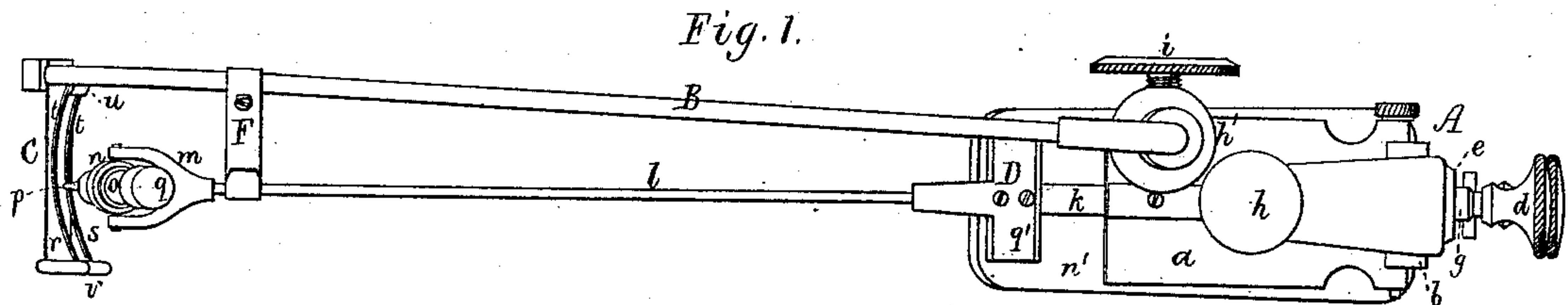


(No Model.)

W. H. H. BARTON.
Sphygmograph.

No. 237,947.

Patented Feb. 22, 1881.



Witnesses.

S. N. Piper
C. B. Pratt

Inventor.

Wm. H. H. Barton.
by R. H. Eady atty.

UNITED STATES PATENT OFFICE.

WILLIAM H. H. BARTON, OF YARMOUTH, MASSACHUSETTS.

SPHYGMOGRAPH.

SPECIFICATION forming part of Letters Patent No. 237,947, dated February 22, 1881.

Application filed November 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. BARTON, of Yarmouth, in the county of Barnstable, of the State of Massachusetts, have invented a new and useful Improvement in Sphygmographs; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a longitudinal section, of an instrument containing my invention, the object of it being to graphically indicate the arterial pulsations in the wrist of a person.

The nature of my invention is fully set forth in the claim hereinafter presented.

In the said drawings, A, denotes a screw-clamp, provided with a movable tongue, *a*, which, as shown, is hinged to an adjustable slide, *b*, that is so adapted to the upright *c* of the clamp as to be capable of being moved up or down thereon. Such slide is provided with means of clamping it to the said upright—such being a clamp-screw, *d*, and a disk, *e*—arranged as shown. The screw goes through the disk and a slot, *f*, in the upright, and screws into the slide, the screw having a shoulder, *g*, to bear against the disk.

The screw *h* of the clamp A works against the upper surface of the tongue *a*. The said tongue is provided with a socket-piece, *h'*, erected upon it as shown, and having a clamp-screw, *i*, for confining in the socket a long arm, B, carrying at its outer end a strip-of-paper supporter, C, which consists of a plate, *r*, and an elastic presser, *s*, the latter being composed of two bow-springs, *t t*, connected at their free ends by a bar, *u*, and at their other ends to an arch-piece, *v*, projecting from the plate, as shown, an inner side view of the plate and presser being shown in Fig. 4.

An inelastic T-piece or artery-presser, D, is connected at its inner end with the tongue *a* by a short metallic spring, *k*, such presser having projecting from it at its outer end a long rod, *l*, which terminates at its outer end in or is provided with a forked head, *m*, that has arranged within it and pivoted to it a ring, *n*, through which slides an ink-reservoir, *o*, pro-

vided at its lower end with a small projecting nose or educt, *p*. The said ink-receiver has a screw-cap, *q*. The ring for supporting the ink-receiver is pivoted to the fork as a gimbal-ring is to its supporter, so as to enable the educt *p* to be borne against the strip of paper—which it will be by the excess of weight of the part of the receiver which is above the ring over that of the part which is below the ring.

A hook, F, applied to the arm B so as to be capable of being revolved thereon, serves, when hooked on the rod *l*, to support it and hold it from dropping too far away from the arm.

Furthermore, there is to the clamp A an adjustable abutment, G, which is adapted to slide toward and away from the upright *c*, and between the base part *n'* and the tongue *a* of the clamp, such abutment being fixed to a carrier, *p'*, and provided with an adjusting-screw, H, which screws into the upright and revolves on the abutment and in its carrier *p'*. By means of the adjustable abutment and tongue-slide and their clamping devices the clamp A can be properly adapted to the wrist of a person, so as to bring the head *q'* of the presser directly over the artery of the wrist, the screw *h* being used to force the presser down sufficiently for the pulsations of the artery to cause the marking-instrument to vibrate or move up and down at each of such pulsations.

In placing the instrument on the arm of an individual the wrist should enter the clamp and the back of the wrist should rest on the base of the clamp. The tongue of the clamp should rest on the front of the wrist and the head of the presser should be directly over the artery—the tongue and abutment being adjusted as the size of the wrist may require to bring the presser into its proper position with respect to the artery.

The apparatus hereinbefore described may be considered as an improvement on that patented by me September 14, 1880, except that my present instrument is for graphically instead of phonetically indicating the pulsations of the artery of the wrist of a person.

On a strip of paper being inserted endwise in the supporter C and drawn through it at a regular velocity, whether by manual or me-

chanical power, the marking part of the instrument while in vibration, as set forth, will trace in ink on the strip of paper a serpentine line showing the successive beats of the pulse.

5 I claim as my invention as follows, viz:

In the sphygmograph, as described, the strip-of-paper supporter and the marker, arranged

and combined, as set forth, with the arm B and the spring *b*, adapted to the wrist-clamp and presser, as specified.

WILLIAM H. H. BARTON.

Witnesses:

AZARIAH ELDRIDGE,
E. DEXTER PAYNE.