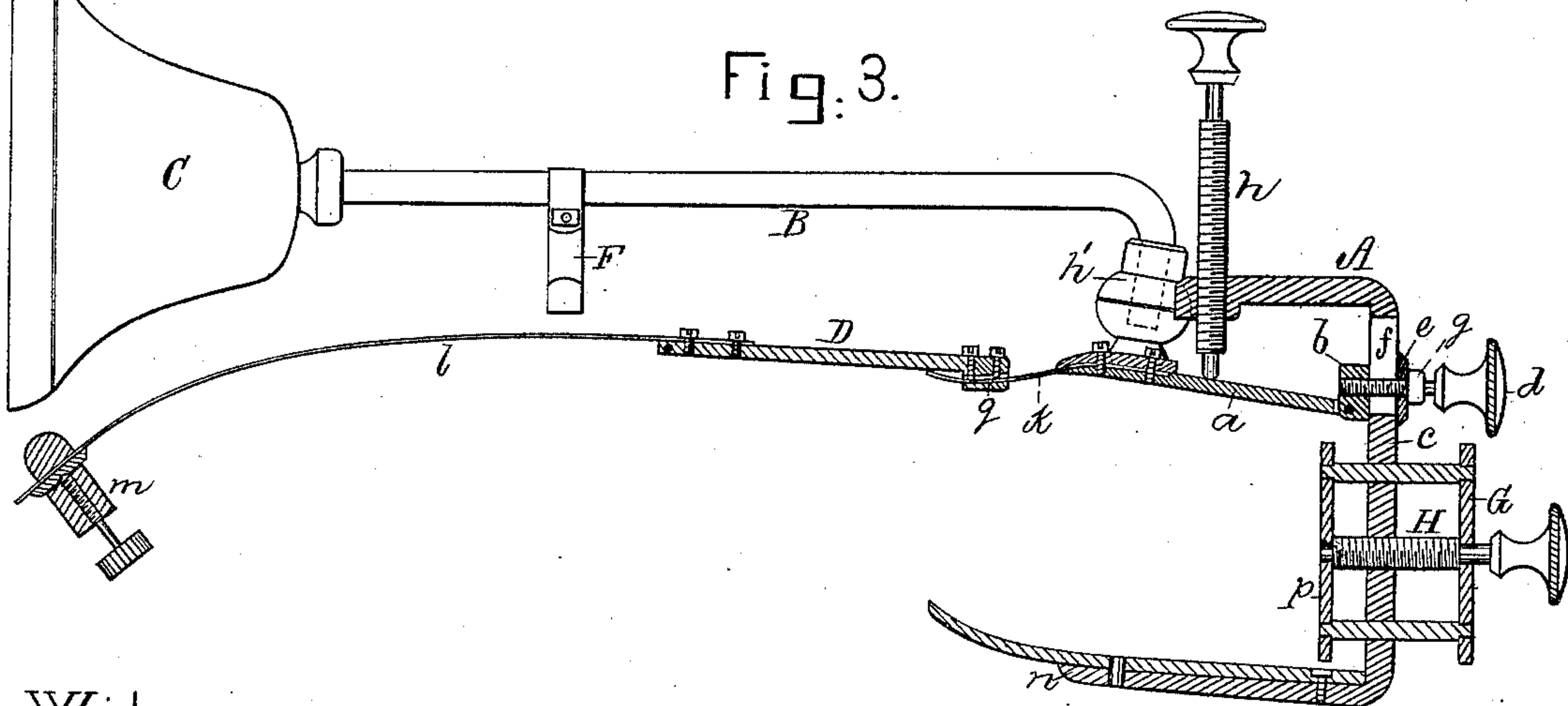
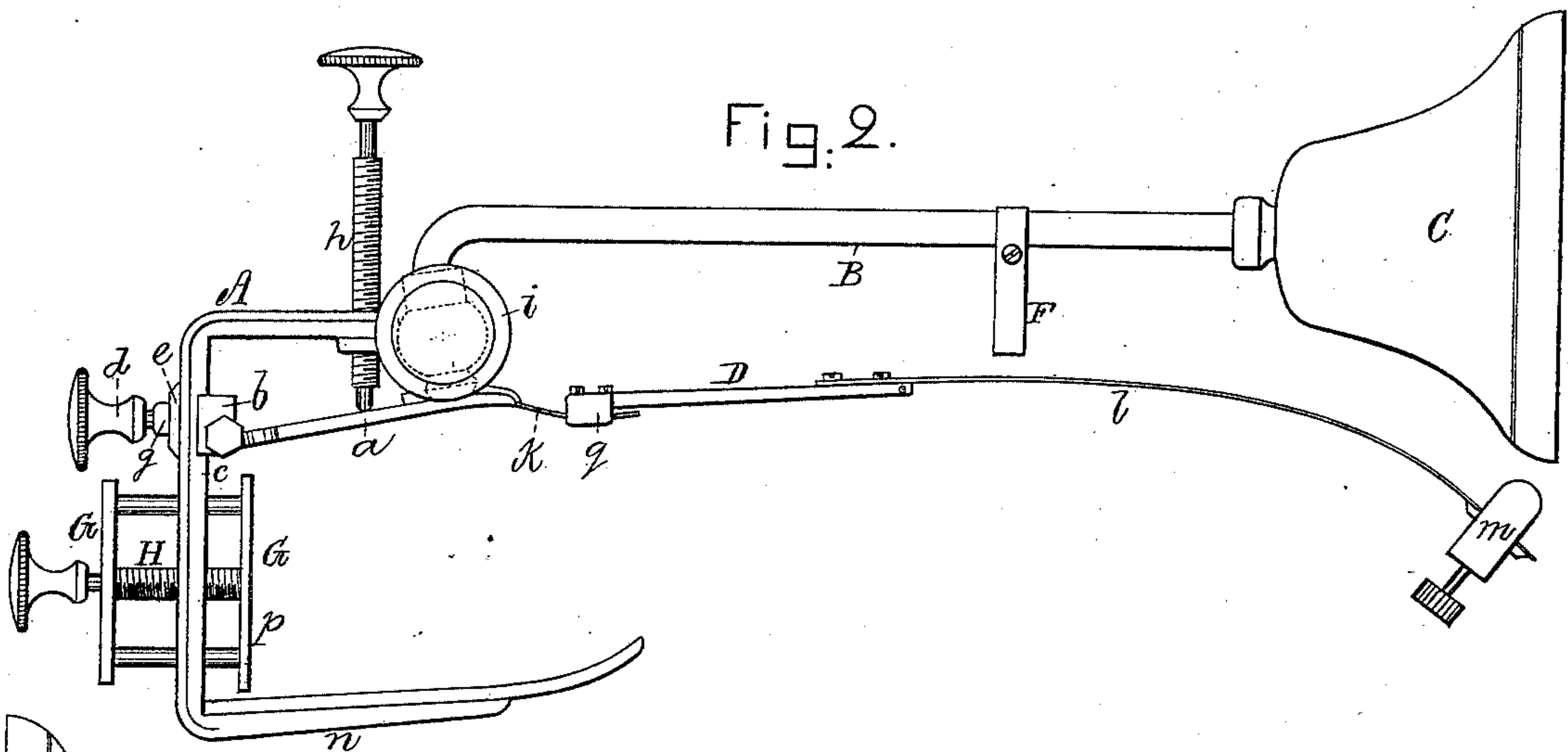
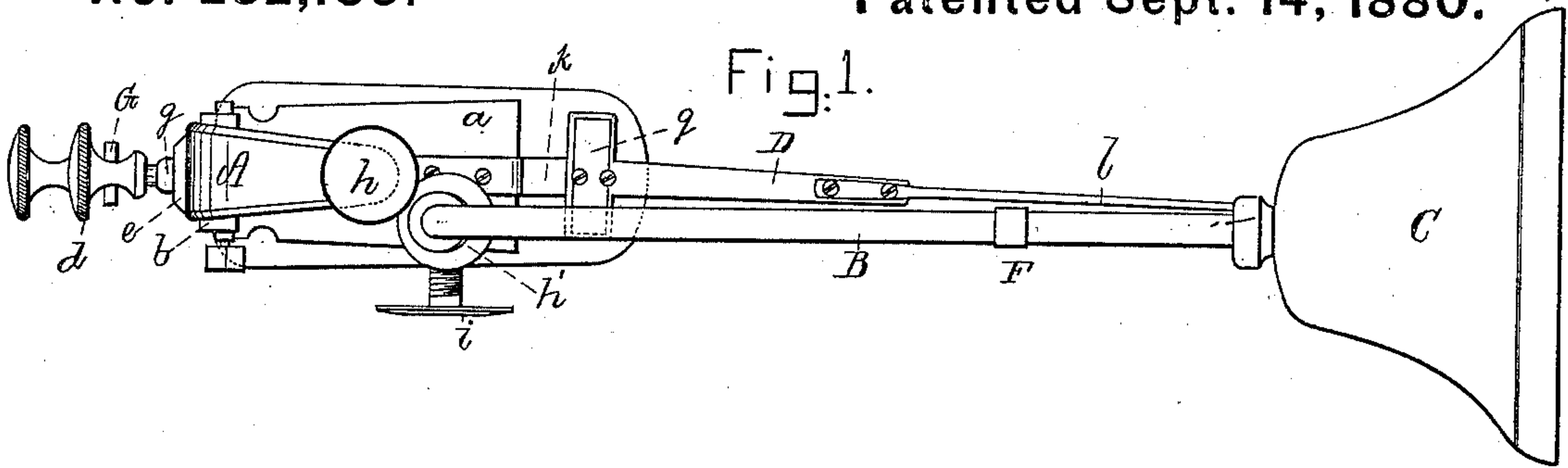


(No Model.)

W. H. H. BARTON.
Sphygmophone.

No. 232,105.

Patented Sept. 14, 1880.



Witnesses:

S. N. Piper,
Wm. W. Lunt.

Inventor:

Wm. H. H. Barton.

by attorney,
R. H. Eddy.

UNITED STATES PATENT OFFICE.

WILLIAM H. H. BARTON, OF WARMOUTH, MASSACHUSETTS.

SPHYGMOPHONE.

SPECIFICATION forming part of Letters Patent No. 232,105, dated September 14, 1880.

Application filed June 28, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. BARTON, of Warmouth, of the county of Barnstable and State of Massachusetts, have invented a new and useful Improvement in Sphygmophones; 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 phonetically indicate the arterial pulsations in the wrist of a person.

The nature of my invention is fully set forth in the claims 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 screwed 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 bell, C.

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 spring, *l*, which goes through and has clamped to it, near its free extremity, a head, *m*. This head and spring constitute an elastic hammer for striking the bell.

A hook, F, so applied to the arm B as to be capable of being revolved thereon, serves, when hooked on the spring *l*, to hold the hammer-head up to the bell.

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 in the abutment and 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 hammer to vibrate and sound the bell 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 abutment and its means of adjustment, though advantageous, are not essential to the instrument. The same may be said with respect to the tongue-slide and its adjusting devices, and also with regard to the bell-stem socket-piece and its clamp-screw, as the bell stem or arm may be otherwise fixed to the tongue.

A sphygmophone constructed as hereinbefore explained will be found to operate very satisfactorily and accurately for phonetically denoting the beats of the pulse of the wrist of a person whether the individual be in good health or suffering from disease.

I claim as of my invention as follows:

1. A sphygmophone, substantially as described, consisting of the wrist-clamp, the hinged tongue, the bell, the elastic hammer, and the wrist-presser, all being constructed and adapted to operate essentially as specified.

2. The combination of the adjustable slide and its clamping devices with the tongue hinged to it, and with the clamp, the bell, the hammer, and the pulse-presser, all being arranged and applied substantially in manner and to operate as specified.

3. The combination of the abutment and its adjusting devices with the clamp, the tongue, the bell, the hammer, and the wrist-presser, all being arranged and applied substantially in manner and to operate as specified.

WILLIAM H. H. BARTON.

Witnesses:

WILLIAM S. FISHER,
DAVID A. NICKERSON.

Correction for Letters Patent No. 232,105.

It is hereby certified that in Letters Patent No. 232,105-dated September 14, 1880, to William H. H. Barton, for Sphygmophones, the domicile of the patentee was erroneously written and printed in said Letters Patent "Warmouth" instead of *Yarmouth*, that the proper corrections have been made in the records of this Office, and that the said correction is hereby made in the Letters Patent.

Signed, countersigned, and sealed this 15th day of October A. D. 1880.

[SEAL.]

See

C. SCHURZ,
Secretary of the Interior.

Countersigned:

E. M. MARBLE,
Commissioner of Patents.