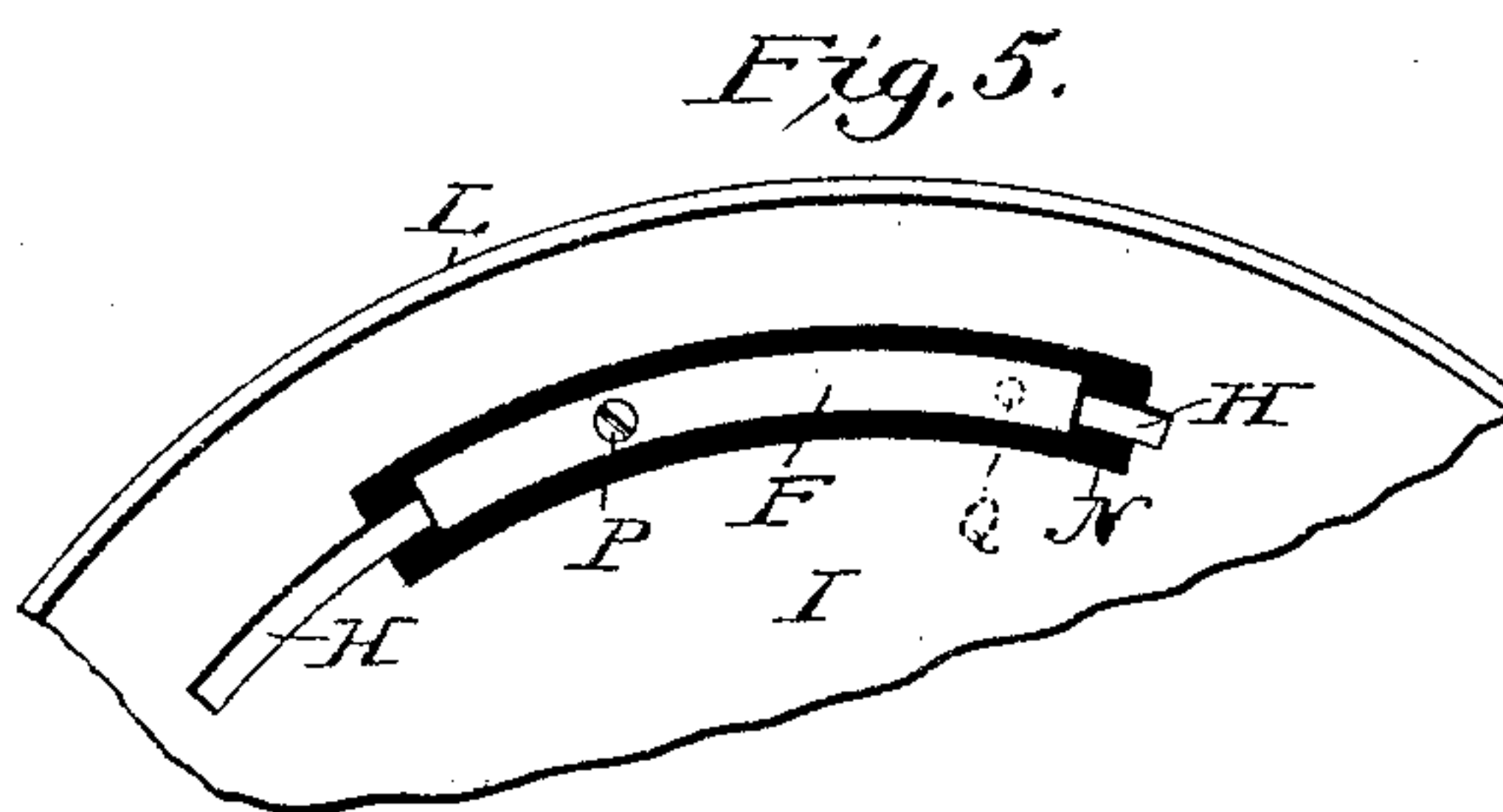
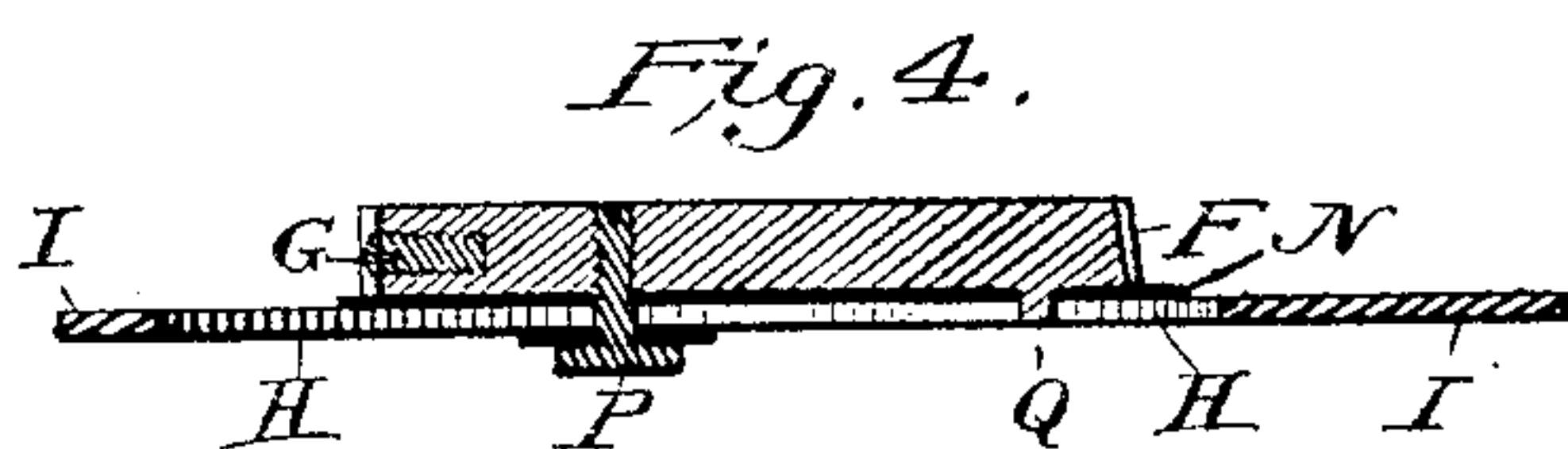
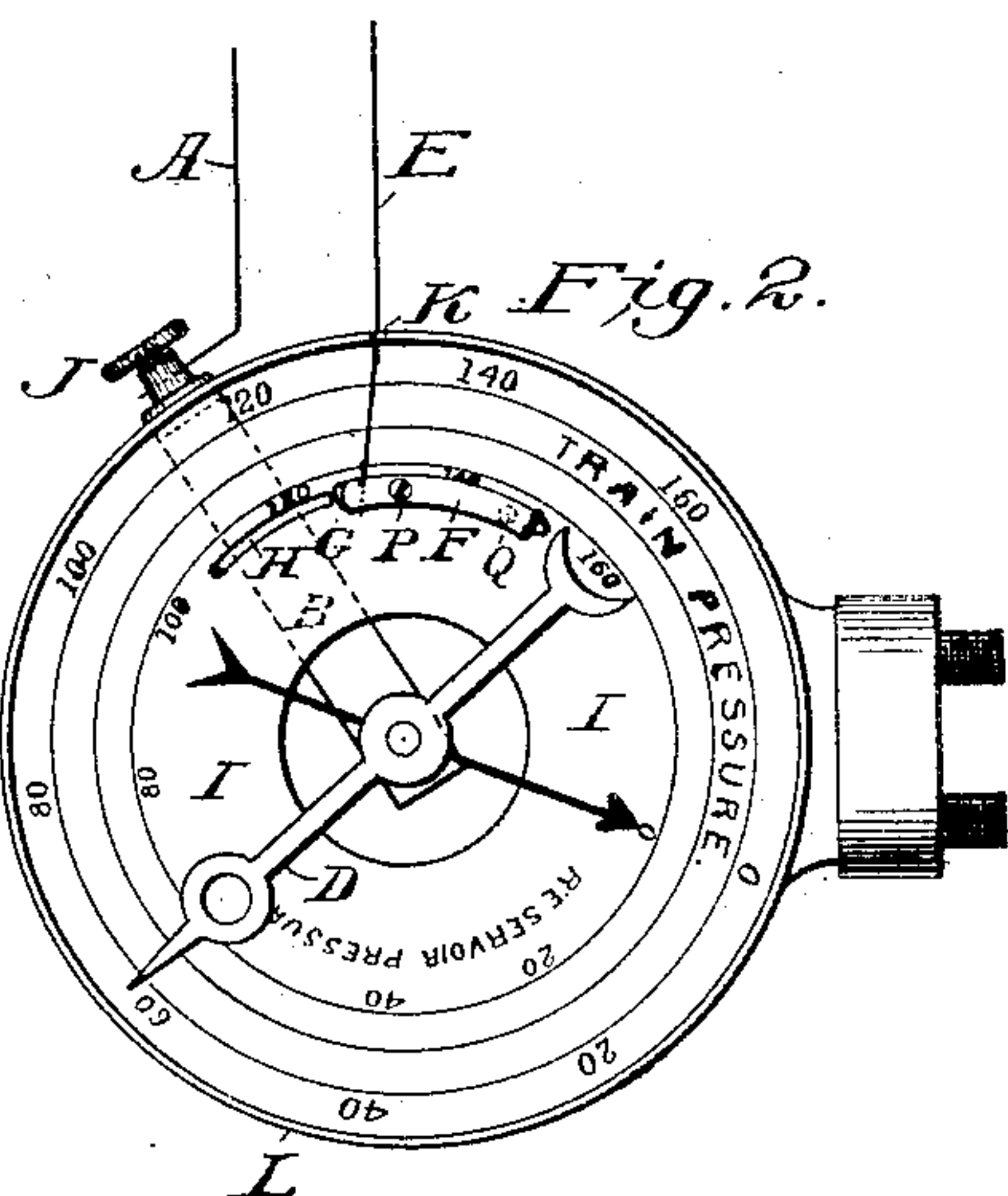
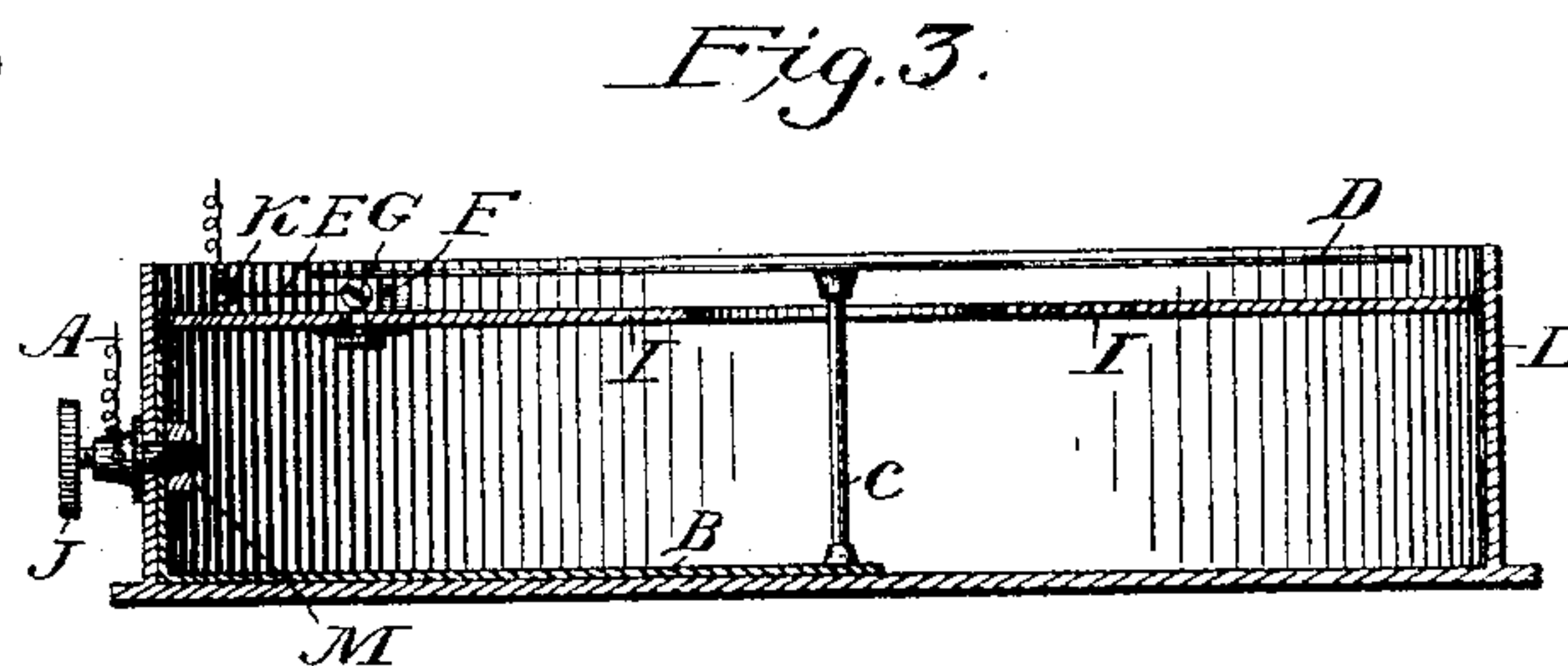
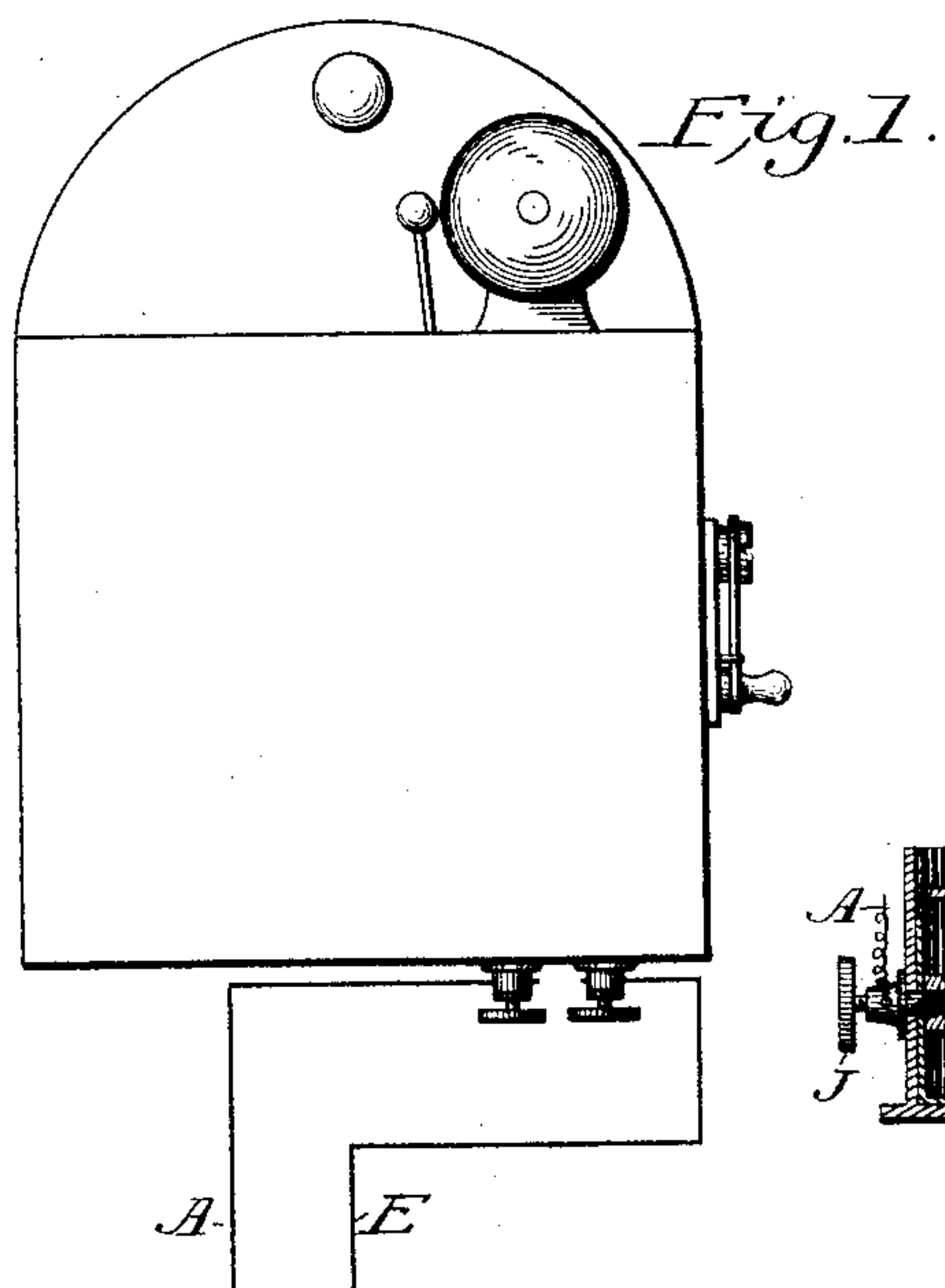


(No Model.)

W. A. STAFFORD.  
GAGE ALARM.

No. 533,241.

Patented Jan. 29, 1895.



Witnesses

*W. H. Minner*  
*R. R. Hood*

Inventor:

*Walter A. Stafford*

# UNITED STATES PATENT OFFICE.

WALTER A. STAFFORD, OF MEADVILLE, PENNSYLVANIA.

## GAGE-ALARM.

SPECIFICATION forming part of Letters Patent No. 533,241, dated January 29, 1895.

Application filed April 17, 1894. Serial No. 507,932. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER A. STAFFORD, a citizen of the United States, residing at Meadville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Attachment to an Air-Brake Gage, whereby the engineer on a locomotive is notified by the ringing of a bell when his brake pressure has run too low for instant and effective service, of which the following is a specification.

The engineer's attention with watching his road, his steam and his water gages, sometimes forgets his air brake gage and in an emergency may find himself powerless for want of "train pressure" to stop his train, and a smash follows. To avoid this possible neglect, is the object of my invention; and to attain this object I use an electric battery in connection with an air brake gage, as illustrated in the accompanying drawings, in which—

Figure 1 is an electric bell and battery. Fig. 2 is a face view of a Westinghouse air brake gage, fitted with my alarm attachment. Fig. 3 is a sectional view of Fig. 2 cut through the middle (somewhat enlarged). Fig. 4 is an enlarged side of segment F with a section of the dial face I, with insulating tape N, between. Fig. 5 is a top view of Fig. 4, showing also, the slot H in the dial plate, along which F may be adjusted to give an alarm at different degrees of pressure, as may be desired.

Similar letters refer to similar parts throughout the several views.

To the inside of the shell L I run a piece, or strip of thin sheet copper B, down the side and along the bottom to the center. (See dotted lines B in Fig. 2 and sectional lines B in Fig. 3.) The nut M, secures, and connects B and the post, and its binding screw to the side of L. On its other end at the center, the post C is planted. I have left out of the drawings the gear that is connected with this post C, whereby the index pointer is oper-

ated, as I wish only to show how the index D is positively charged by the battery. Now, when the index is fitted on the top of C, and the wire A is secured by the binding screw J, the pointer D is positively charged. On the top of the dial plate I, I fit a short segment of copper F just thick enough to slide under D, as it swings round over it with a light friction. F can be moved to any point along the slot H, and fixed by the screw P, and short stud Q. (See Figs. 4 and 5.) The screw P is slotted at its point, in order to be set or loosened from the top and must not reach above the top surface of F, as D must have a free sweep over it. Interposed between F, and I, is a piece of insulating tape, as well as between the head of P, and I. Now the wire E being insulated, is passed through the hole K, in the rim of L, just on a line with the top of I, has its naked end thrust through a hole in F near one end, and is secured thereto by the screw G. This completes the device.

When the index points to 60 (see Fig. 2) the other end of the pointer will have slipped onto F, which will close the circuit, and at once the bell will ring and continue to ring till higher pressure is indicated by D.

The battery and bell should be placed within easy ear-shot of the engineer, no matter how remote the gage may be. This device can be applied to steam or other pressure gages.

Any wet, or dry cell battery of sufficient power, will answer my purpose.

What I claim is—

A gage having a dial face with a curved slot therein, a segment having a stud and screw working in the slot, a pointer and electric connections for the segment and pointer, substantially as described.

WALTER A. STAFFORD.

Witnesses:

THOS. S. MINNISS,  
ADAM HECKMANN.