

without disconnecting the gauge, so that the modification shown in Fig. 742 is introduced. Here the ends are both free, the communication with the boiler being made about in the centre of length of the spring.

The Allen steam-gauge, Fig. 743, consists of a coiled or volute spring, separated from the boiler by an elastic diaphragm covering its steam side. Attached to the centre of the spring is a rod, which by suitable mechanisms actuates the index.

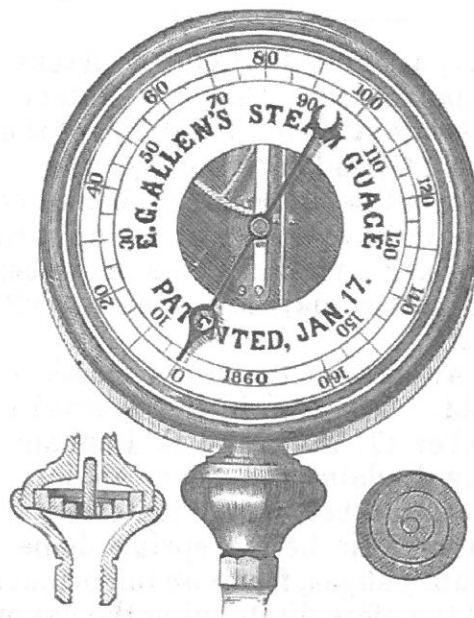


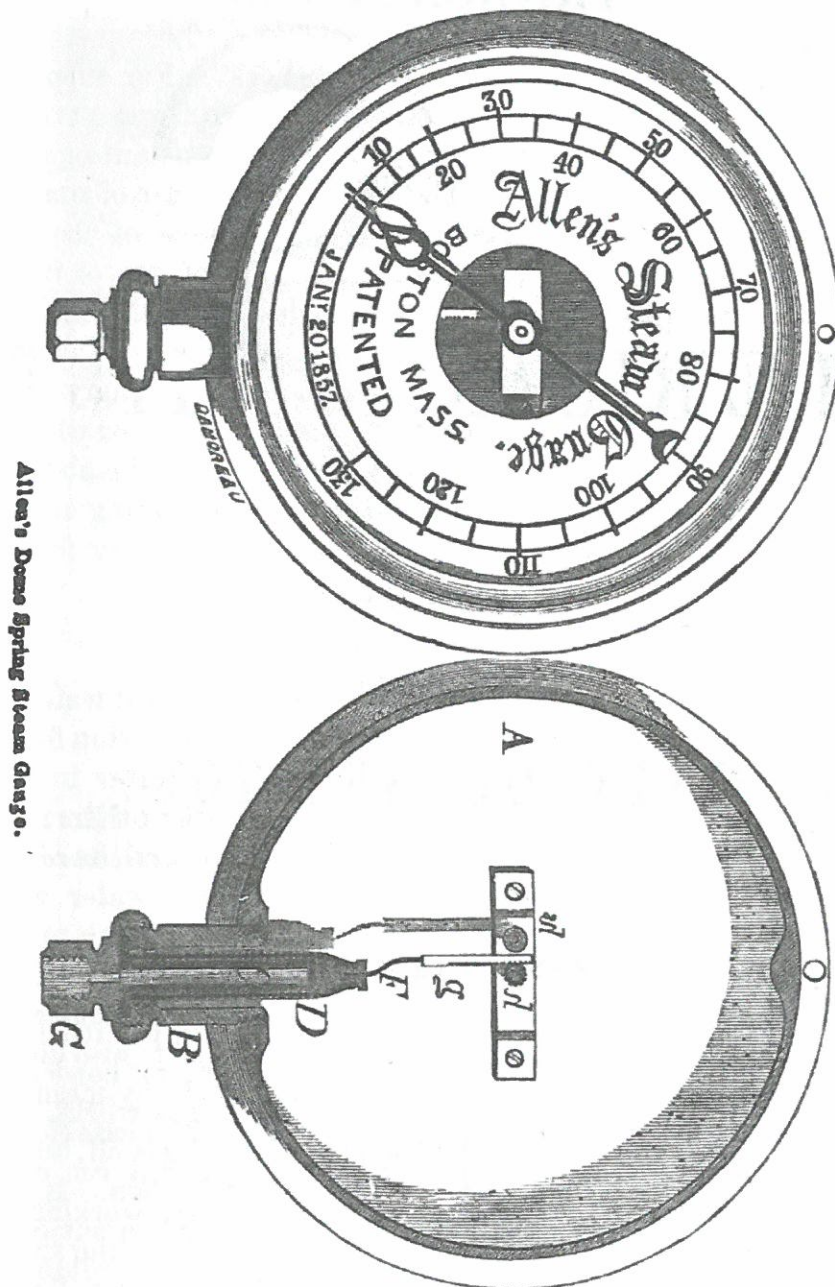
Fig. 743. Allen Steam-gauge.

BOSTON STEAM GAUGE CO. - purchased by
Ashcroft Valve 1892

The steam-pressure acts so as to change the surface of the spring from a cone to a plane. The Ashcroft improved Allen gauge has this spring for low pressures and a supplementary spring for higher pressures, the latter spring being in use only when the pressure is high. This gauge is graduated by trial.

The Schaeffer steel diaphragm steam-gauge, Fig. 744, has a corrugated steel diaphragm upon which the pressure is exerted. Any movement of this surface is communicated to the index. This gauge is similar in action to an aneroid barometer.

The Edson pressure-recording gauge, Figs. 745 and 746, "consists of a metal base *A*, enclosing beneath it a tempered diaphragm *C*, so arranged that when the fluid enters the space *D* between the spring and the cap *E*, forming the chamber, the



Allen's Dome Spring Steam Gauge.

Dome Spring Steam Gauge.

Boston Steam Gauge Co., E. G. Allen, agent, Boston, Mass. A, is the case. B, the cylinder, that holds the moving power. D, the dome, or closed top spring, consisting of closely wound steel wire, held at the bottom by being screwed into cylinder B, thus leaving the spring free from friction. C, is a tube or lining of vulcanized rubber inside of the spring D. F, connecting wire from spring to rack. g, the rack. h, the strap which holds the rack and pinion. G, the packing screw and coupling.

[A silver medal awarded.]

[AM. INST.]

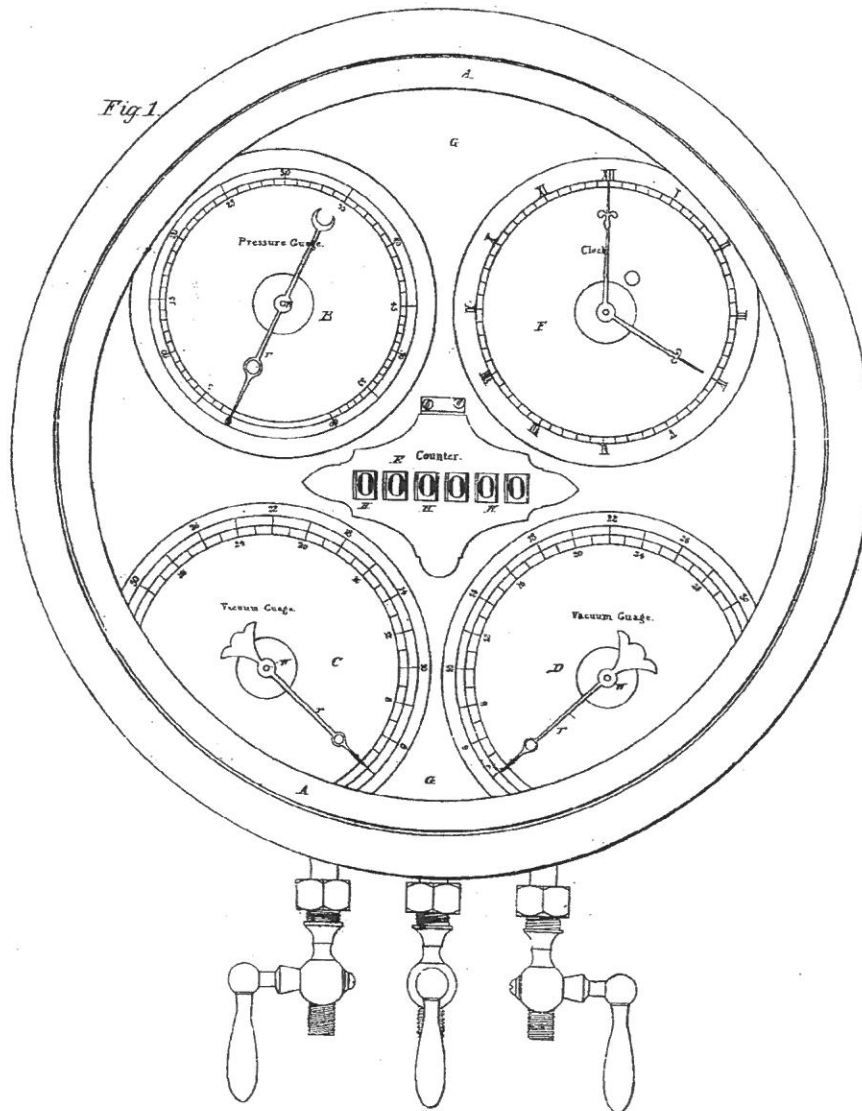
E. G. ALLEN.

2 Sheets,—Sheet 1.

Pressure Gage.

No. 26,152.

Patented Nov. 22, 1859.



Witnesses
Robert G. Allen
Albert W. Brown

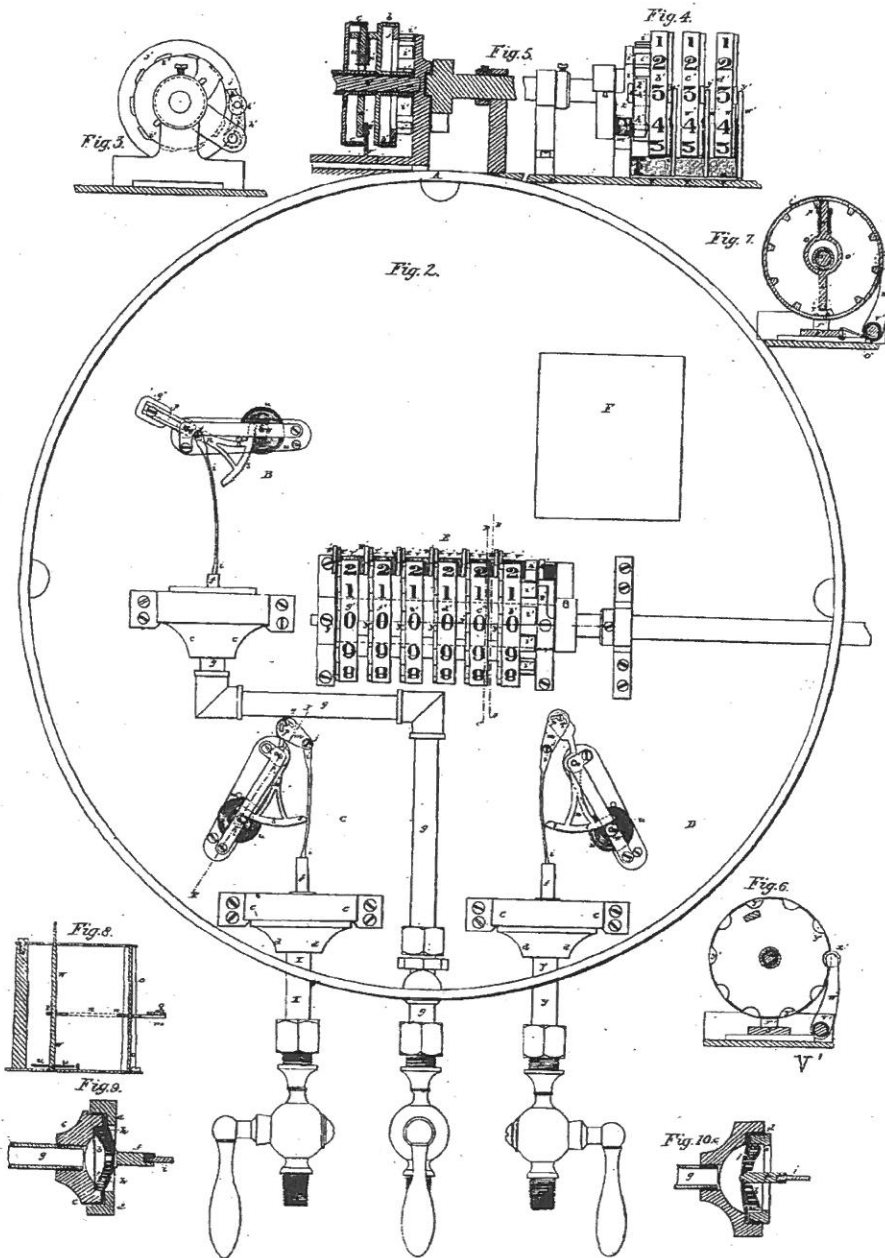
Inventor
E. G. Allen

E. G. ALLEN.

Pressure Gage.

No. 26,152.

Patented Nov. 22, 1859.



Witnesses:
Robert Allen
Albert H. Kram

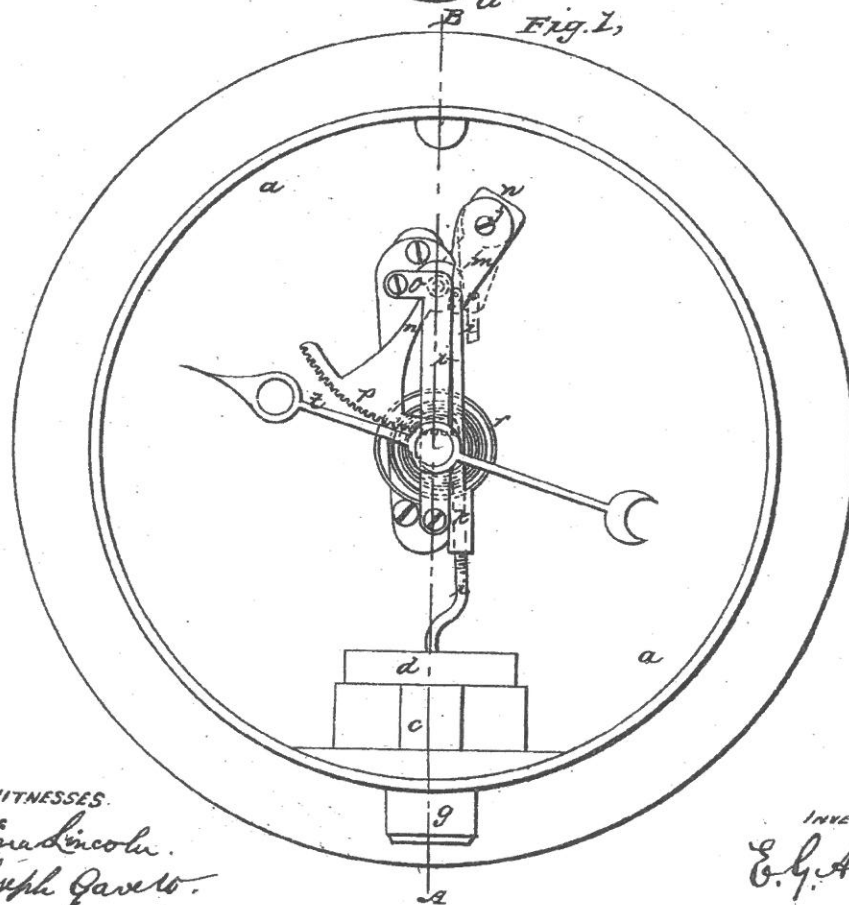
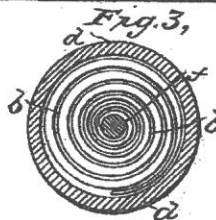
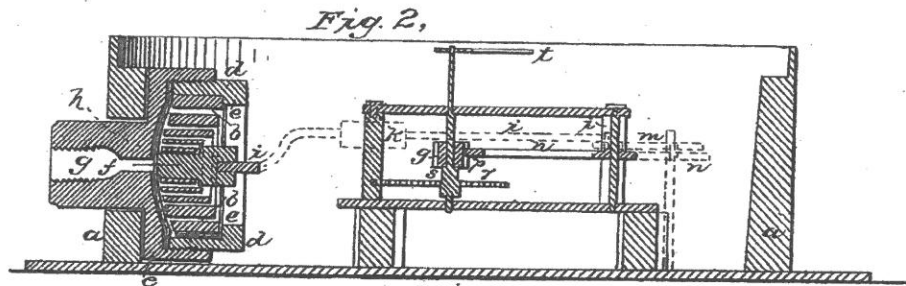
Inventor:
E. G. Allen

E. G. ALLEN.

Steam Gage.

No. 18,526.

Patented Oct. 27, 1857.



WITNESSES.
Chas. Lincoln.
Joseph Gaveto.

INVENTOR
E. G. Allen.

E. G. ALLEN.
Pressure Gage.

No. 16,428.

Patented Jan. 20, 1857.

