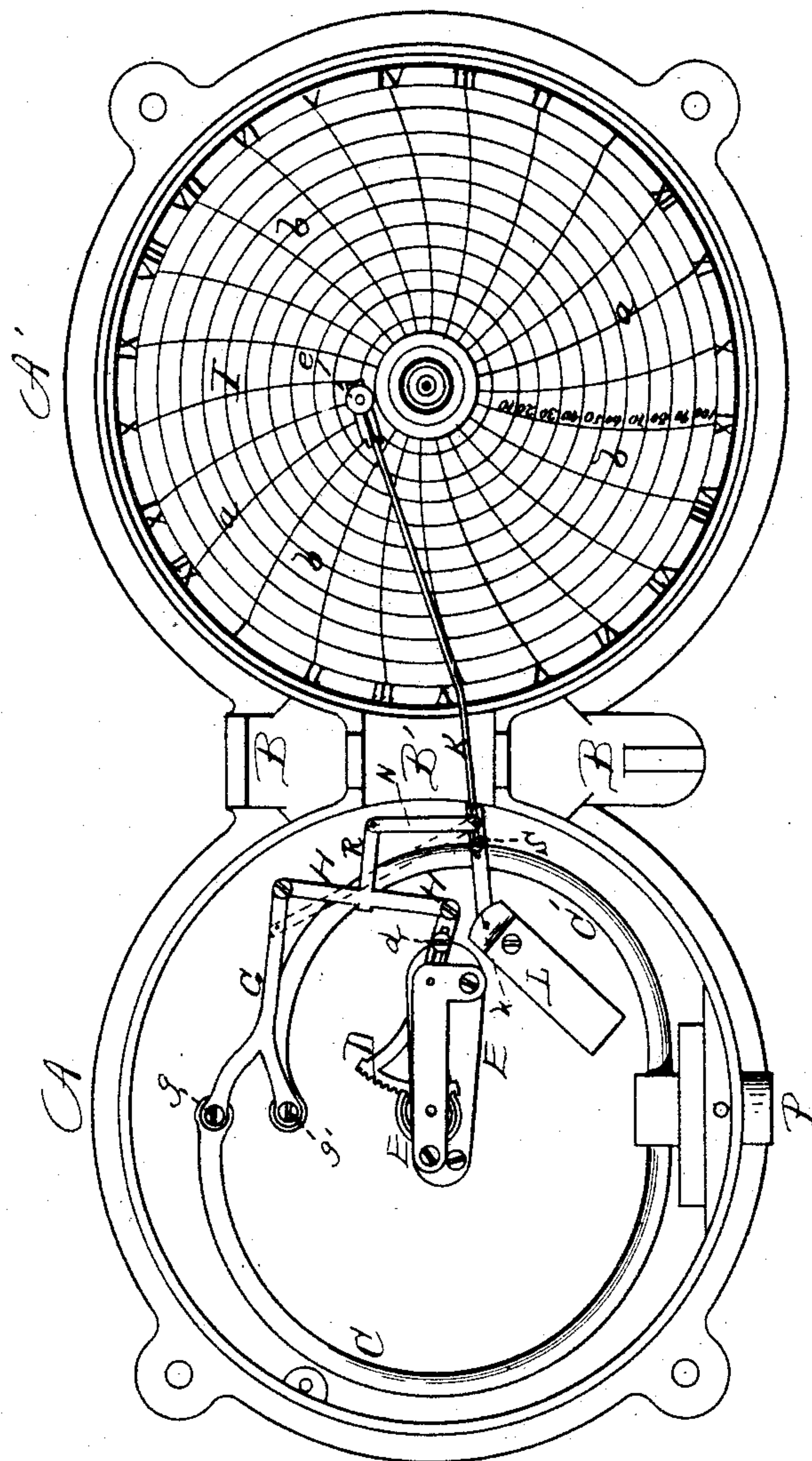


(No Model.)

F. A. JONES.  
RECORDING PRESSURE GAGE.

No. 287,686.

Patented Oct. 30, 1883.



WITNESSES

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# UNITED STATES PATENT OFFICE.

FLORENTINE A. JONES, OF NEW YORK, N. Y.

## RECORDING PRESSURE-GAGE.

SPECIFICATION forming part of Letters Patent No. 287,686, dated October 30, 1883.

Application filed June 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, FLORENTINE A. JONES, of the city, county, and State of New York, have invented new and useful Improvements  
5 in Recording Pressure-Gages, of which the following is a specification.

This improvement relates to gages for showing the extent and variations of pressure in steam-boilers, cylinders, or other vessels con-  
10 taining air, gas, liquid, or other fluids.

The accompanying drawing shows a plan view of my improved recording pressure-gage with the dial of the gage-box removed.

A and A' are boxes secured to each other by  
15 the connection B, which has a passage, B', for the accommodation of the connecting mechanism.

In place of the ordinary Bourdon tubular spring, which has been heretofore used in the  
20 gage-box, I employ the double tubular spring C C', acting on the same general principle as the usual Bourdon spring. This spring may be integral, receiving through a single aperture the steam from the hollow plug P, or the  
25 parts C and C' may be separate, each connecting with said plug P.

E is the ordinary mechanism of a steam-gage, consisting, essentially, of a segmental rack, D, pivoted near its rear end at *d*, and  
30 meshing into a pinion carrying a pointer. (Not shown in the drawing.)

G is a bifurcated lever, having its branches pivoted at *g g'* to the parts C C' of the spring, and connected with the rack D by a link, H,  
35 pivoted to said rack and bifurcated lever. Thus the spring C C' imparts motion to the mechanism E, which gives movement to the pointer, showing, in connection with the dial, the steam-pressure.

I is a dial rotated by a clock-movement, and having upon its surface twenty-four radial curved lines, *a*, corresponding with the number of hours in a day, and a certain number of concentric circles, *b*, corresponding with the  
45 pressure indicated upon the dial of the steam-gage.

K is a lever, crooked for convenience, and pivoted at *k* to the standard L, so as to freely swing back and forth, and provided at its free  
50 end with the marker *e*.

N is a connecting-rod pivoted to the lever K, and to the rigid projection R, immovably secured to the link H.

S is a slot in the lever K, by means of which the point of attachment of the rod N may be  
55 changed at will.

In operation, as steam or other fluid enters the double hollow spring or springs C C' through the plug P, the pressure on the inner surface of the spring or springs causes expansion, forcing the free ends of the parts apart,  
60 or contraction, drawing said free ends toward each other as the pressure is greater or less; and this movement is communicated by means of the bifurcated lever G, link H, rigid pro-  
65 jection R, and rod N to the lever K, thus causing the pencil *e* to vibrate with the movement of the double spring, and with the pointer on the dial of the steam-gage, and give a delineation of the pressure and the time of any change  
70 therein on the dial I, which is arranged to rotate once in twenty-four hours.

The connecting mechanism between the spring and the lever K may be subjected to various modifications, one of which is indicated  
75 by the broken lines V, which represent a link connecting directly the lever G and lever K.

The double Bourdon spring, bifurcated lever G, and link H, connecting the latter with the rack D, are not novel in this invention.  
80

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a recording pressure-gage, the combination of the following elements, viz: the double tubular spring or springs C C', suitably secured therein, a multiplying delineating-lever  
85 extending to the recording-surface, and suitable intermediate mechanism, whereby motion is transmitted from said spring or springs  
90 to said lever, substantially as and for the purpose set forth.

2. In a recording pressure-gage, the combination of the following parts, viz: a suitably-secured double tubular spring or springs, C C',  
95 the bifurcated lever G, the link H, provided with the rigid projection R, rack D, link N, lever K, provided with an indicating or delineating device, and a suitable surface for the recording of the pressure, all arranged and  
100 constructed substantially as and for the purpose described.

FLORENTINE A. JONES.

Witnesses:

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