

H. J. WENZEL.

Apparatus for Transmitting Chronometric Motion.

No. 148,637.

Patented March 17, 1874.

Fig. 1.

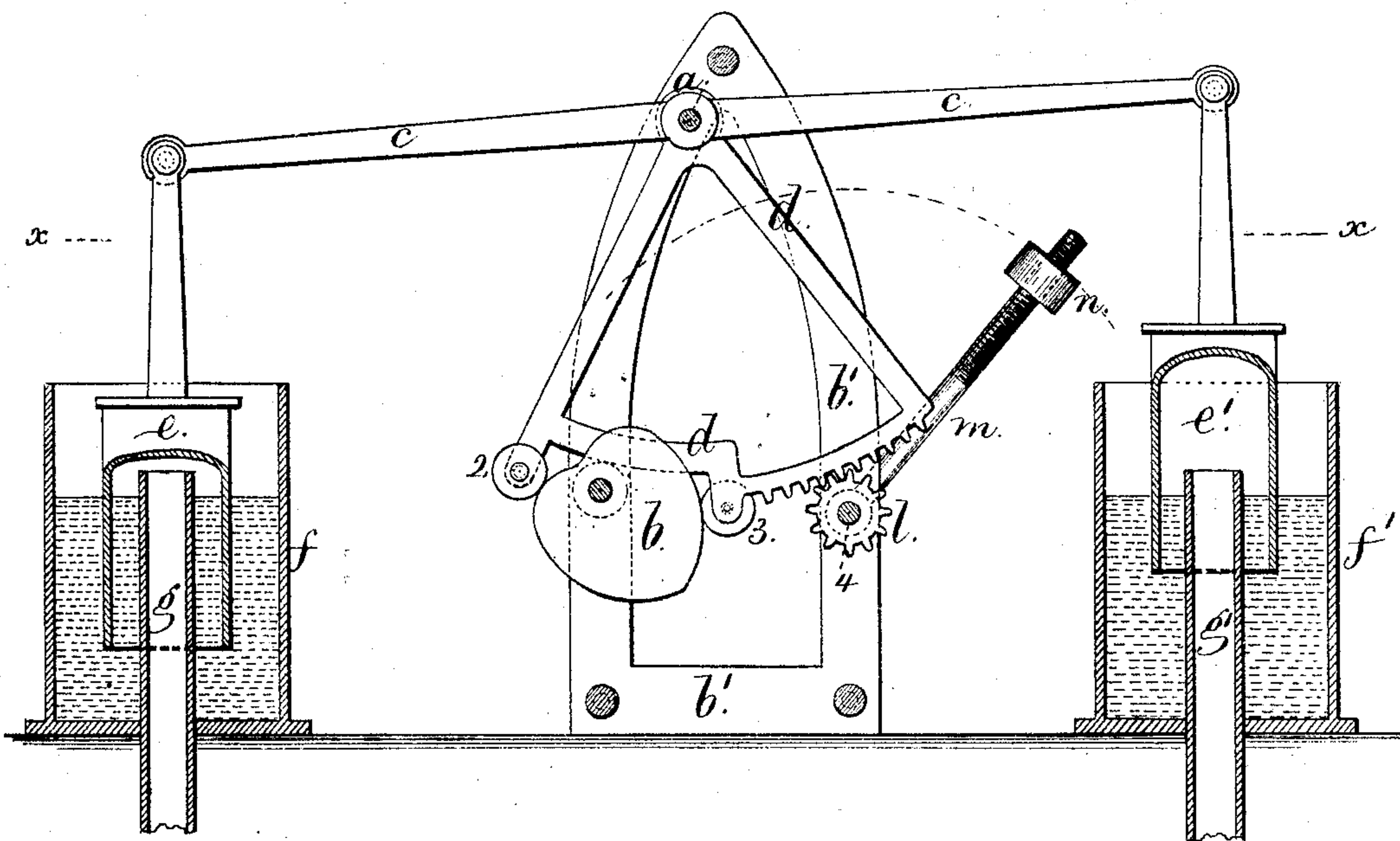
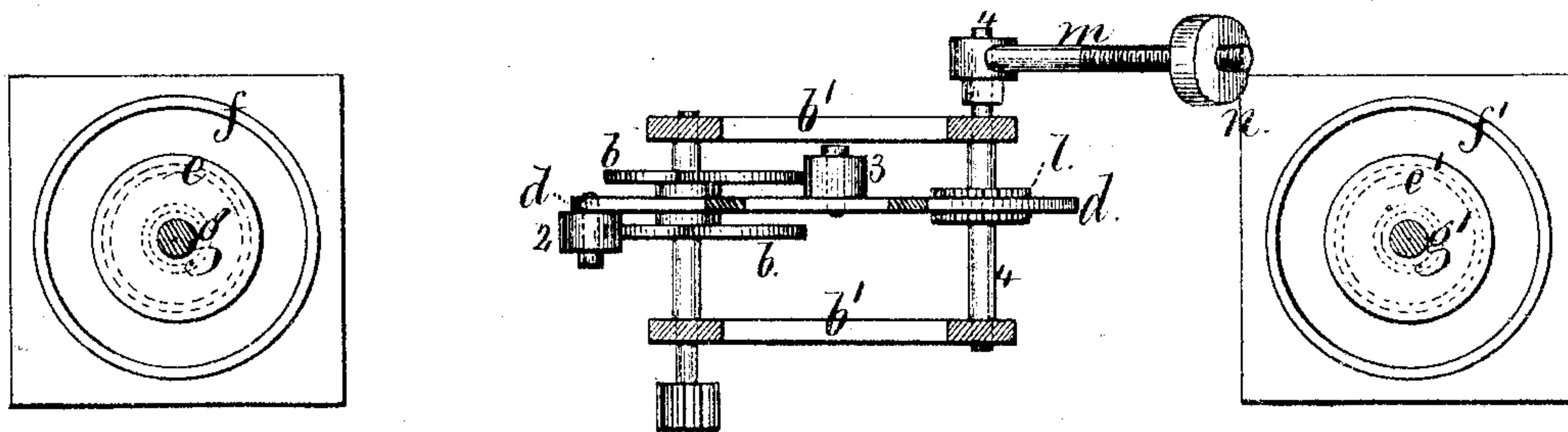


Fig. 2.



Witnesses

Charles Smith
Geo. C. Finckney

Inventor

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per Lemuel W. Ferrell

att'y

UNITED STATES PATENT OFFICE.

HERMANN J. WENZEL, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN APPARATUS FOR TRANSMITTING CHRONOMETRIC MOTION.

Specification forming part of Letters Patent No. **148,637**, dated March 17, 1874; application filed September 25, 1873.

To all whom it may concern:

Be it known that I, HERMANN JULIUS WENZEL, of San Francisco, in the State of California, have invented an Improvement in Transmitting Time Movements to Distant Dials, of which the following is a specification:

In Letters Patent No. 140,661, granted to me, a lever, *c*, with cylinders *e e'*, suspended at the ends, is employed, in connection with cups *f f'*, containing liquid, to transmit atmospheric pulsations to a distant apparatus that is moved by such atmosphere, and operates the dial mechanism.

In that patent, the action of the lever and clock movement is equalized by vessels *k* upon the lever *c*, connected by a tube.

My present invention is an improvement upon the aforesaid apparatus; and consists in a lever and variable weight applied in connection with the clock mechanism so as to equalize the action of the mechanism, and this weighted lever can be made to counterbalance any number of cups and cylinders, so that the apparatus can be varied to suit the largest or smallest number of connected clocks.

In the drawing, Figure 1 is a section of the cups and cylinders and equalizing mechanism, and Fig. 2 is a sectional plan of the same at the line *x x*.

The cups *f f'*, cylinders *e e'*, tubes *g g'* are substantially the same as in the aforesaid patent, and a reference is hereby made to the same for a description of the mechanism that is acted upon at the distant dial, by the air that is moved through the pipes *g g'*, by the cylinders *e e'* as they are alternately raised and depressed by the lever *c*. The lever *c* is upon a fulcrum, *a*, in a suitable frame, *b'*, and to that lever the

quadrant or arc *d* is connected. The heart-cams *b* are revolved by the motor or clock movement, and operate, upon the rollers 2 and 3, to swing the lever *c* and move the cylinders *e e'* up and down. The arc *d* is provided with teeth to rotate the pinion *l* and its shaft 4, and swing the lever *m* first one way and then the other, and upon this lever *m* is a movable weight, *n*. As the clock-work is raising one cylinder, *e*, and depressing the other one, *e'*, the action of the air which has been compressed aids in raising the weighted lever *m*, and, as it passes the vertical position, it aids in forcing the other cylinder *e'* down, and compressing the air and forcing it to the distant-dial apparatus. By adjusting the position of the weight *n* upon the lever *m*, the action thereof can be rendered equal, or nearly so, to the reaction of the atmosphere and cylinder that is being immersed, and thereby the motor-clock will be relieved from inequality of strain.

This device is more easily varied than that in aforesaid patent, so that an apparatus that is made for use with three dials can be adjusted if an additional dial is added, instead of requiring a change in the apparatus.

I claim as my invention—

The lever *m* and adjustable weight *n*, in combination with the arc *d*, lever *c*, cylinders *e e'*, cups *f f'*, and the actuating-cam *b*, substantially as and for the purposes set forth.

Signed by me this 20th day of September, 1873.

HERMANN J. WENZEL.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.