

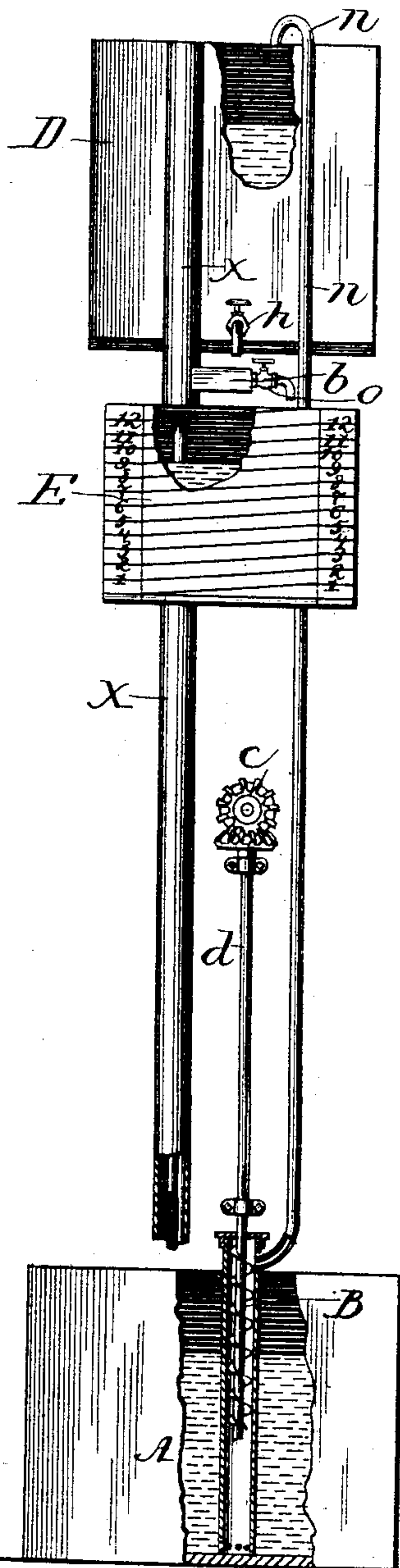
(No Model.)

J. CARDONA.  
CLEPSYDRA.

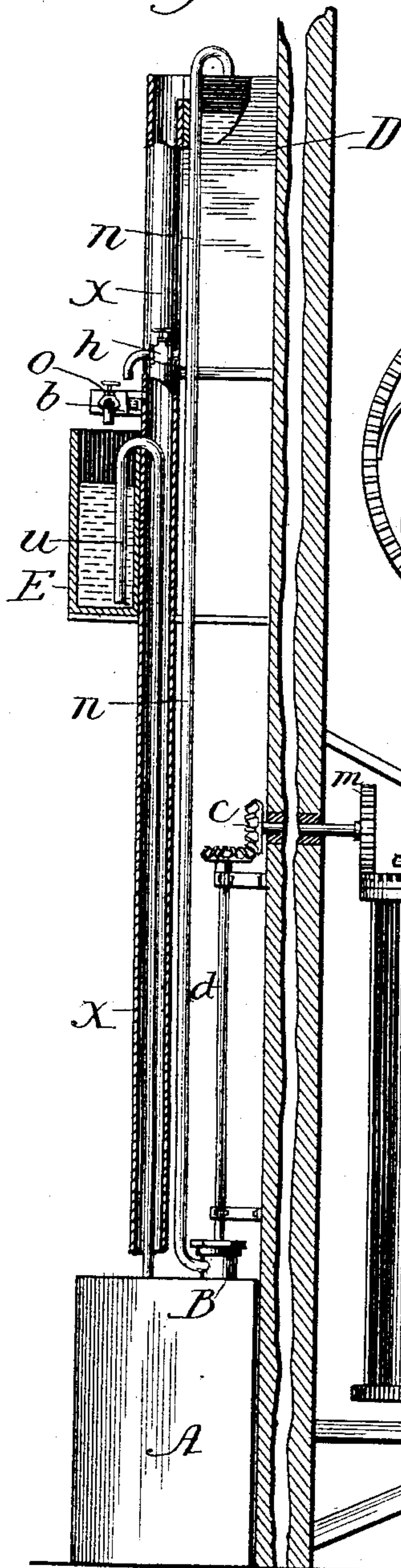
No. 387,614.

Patented Aug. 7, 1888.

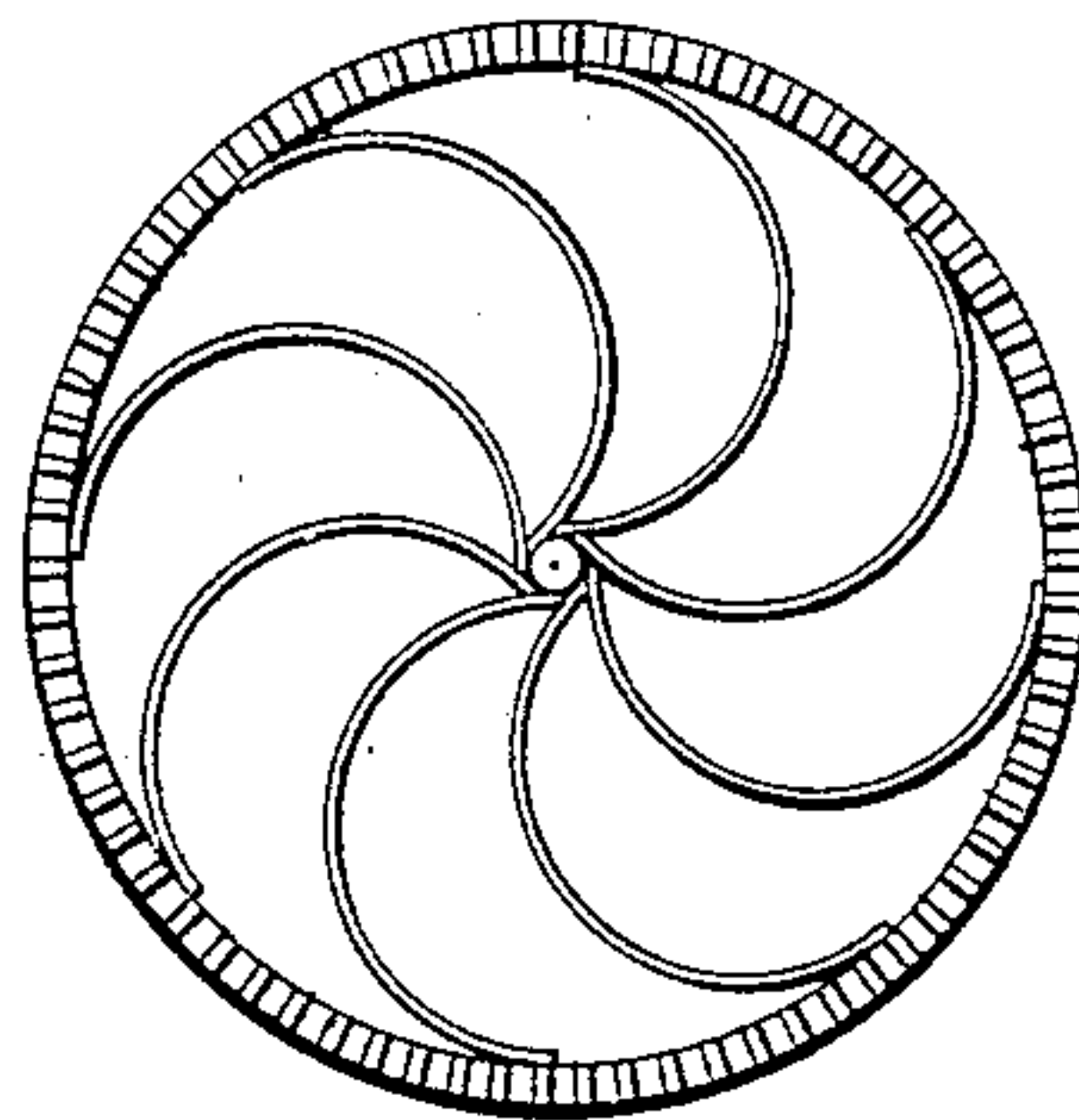
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*Frank Blanchard.*  
*Fred Gerlach.*

*Inventor:*

*Joseph Cardona,*  
*by H. C. Hunsbarger,*  
*att'y.*



# UNITED STATES PATENT OFFICE.

JOSEPH CARDONA, OF CHICAGO, ILLINOIS.

## CLEPSYDRA.

SPECIFICATION forming part of Letters Patent No. 387,614, dated August 7, 1888.

Application filed April 4, 1888. Serial No. 269,638. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH CARDONA, a citizen of the United States, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Automatic Time-Indicator, in which the pressure of water or other liquid is used to mark time by the elevation and depression of the liquid. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the device in proper position. Fig. 2 is a vertical section of the entire device as shown attached to a building. Fig. 3 is a sectional view of the revolving fan.

Similar letters refer to similar parts throughout the drawings.

I place a vessel, A, filled with water or other liquid, in a position to suit my purpose on the inside of any building or wherever it may be desired to be placed. Into the vessel A is inserted the pump B, operated by means of an ordinary revolving fan, C, placed outside of the building, or where it is exposed to currents of air. The fan C has on its perimeter, at one end, *s*, a cog or gear wheel, which engages with the gear-wheel *m* on a horizontal shaft, *a*, on the opposite end of which is a bevel gear-wheel, *e*, which engages with a similar wheel on the vertical shaft or rod *d*, which operates the pump B. By means of the pump B the liquid in the vessel A is raised through the tube *n* and discharges into the reservoir D. A waste pipe or overflow, *x*, with its mouth near the top of the reservoir, is used to carry the surplus of the liquid back into the vessel A. At the bottom of the reservoir D is placed a faucet, *h*, properly gaged, which acts or serves as a feeder by discharging into a receiving vessel or trough, *b*, which is also supplied with an overflow-pipe, *g*, which discharges into the

waste-pipe *x*, above described. From the receiving-vessel *b* the liquid, having at this point a constant and even pressure, is again discharged by the faucet O, which serves as a regulator by limiting the quantity discharged per minute or hour into the dial-box E, Fig. 1, which has a transparent face, and has marked thereon at regular spaces on both sides of the dial-plate from the bottom upward the hours 1 to 12 and the half-hours and minutes by means of graduated diagonal lines—as, for instance, when the liquid rises to the numeral 1 and passes beyond it the graduated diagonal line running from the figure 1 on the one side of the dial-plate to figure 2 on the other side or end will indicate the period of time between the hours 1 and 2, and this is repeated until the liquid rises to 12, when the dial-box is automatically emptied by the siphon *u*, which discharges into the waste-pipe *x* the liquid returning to the vessel A. This process is repeated indefinitely. The dial-box is filled and discharged every twelve hours.

I am aware that the measurement of time by means of water or liquids has been known for centuries, and I do not claim it as my invention; but

What I do claim as new, and desire to secure by Letters Patent, is—

As an automatic time-indicator, the combination of the revolving fan C, the pump B, the gear-wheels *m*, shaft *a*, bevel gear-wheels *e*, vertical shaft *d*, the vessel A, the tube *n*, reservoir D, the waste or overflow pipe *x*, the discharging-faucet *h*, receiving vessel or trough *b*, the gaged feeding-faucet *o*, the dial-box E, and siphon *u*, as and for the purpose above set forth.

JOSEPH CARDONA.

Witnesses:

H. C. HUNSBERGER,  
MAX KANTROWITZ.