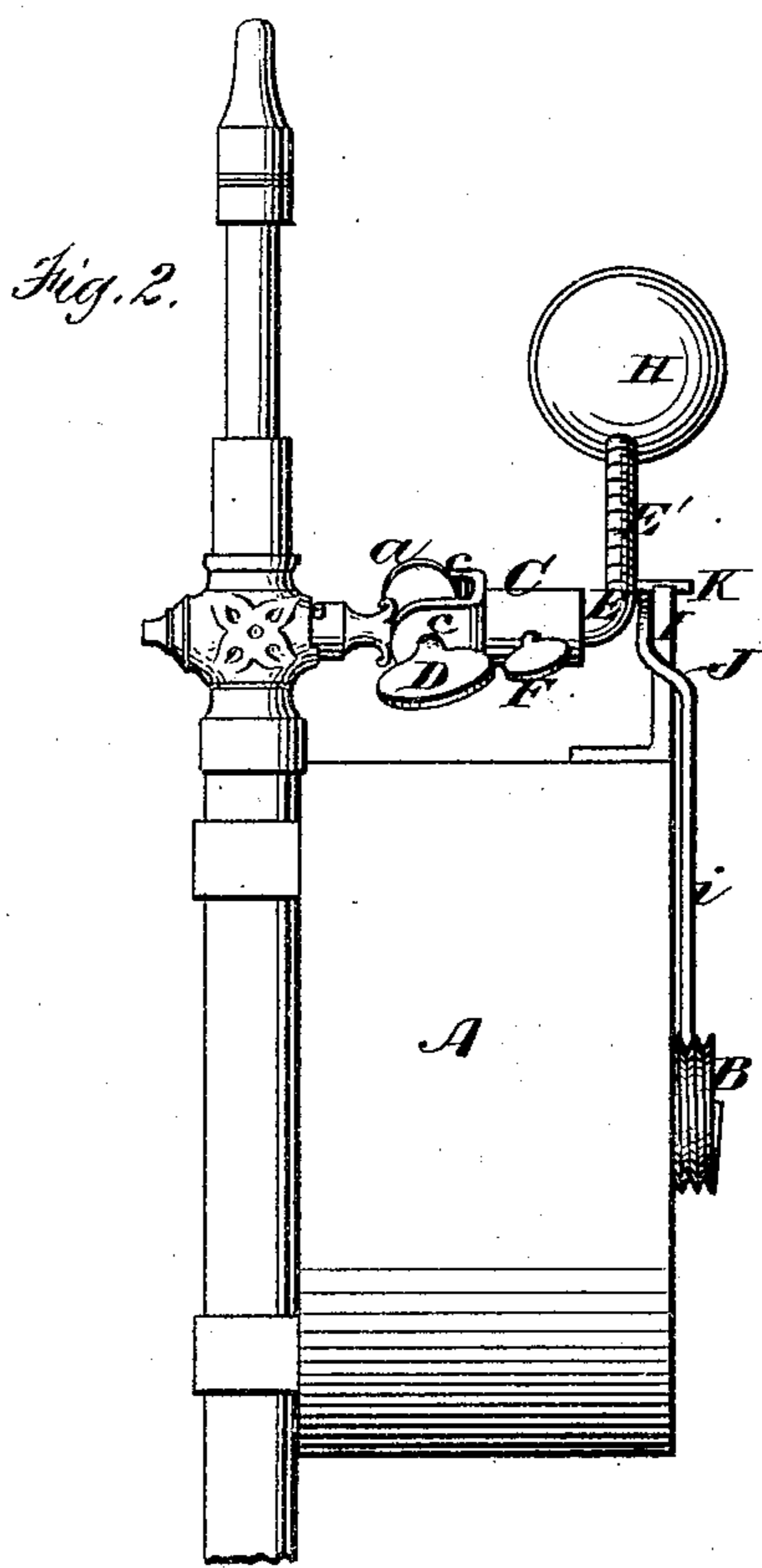
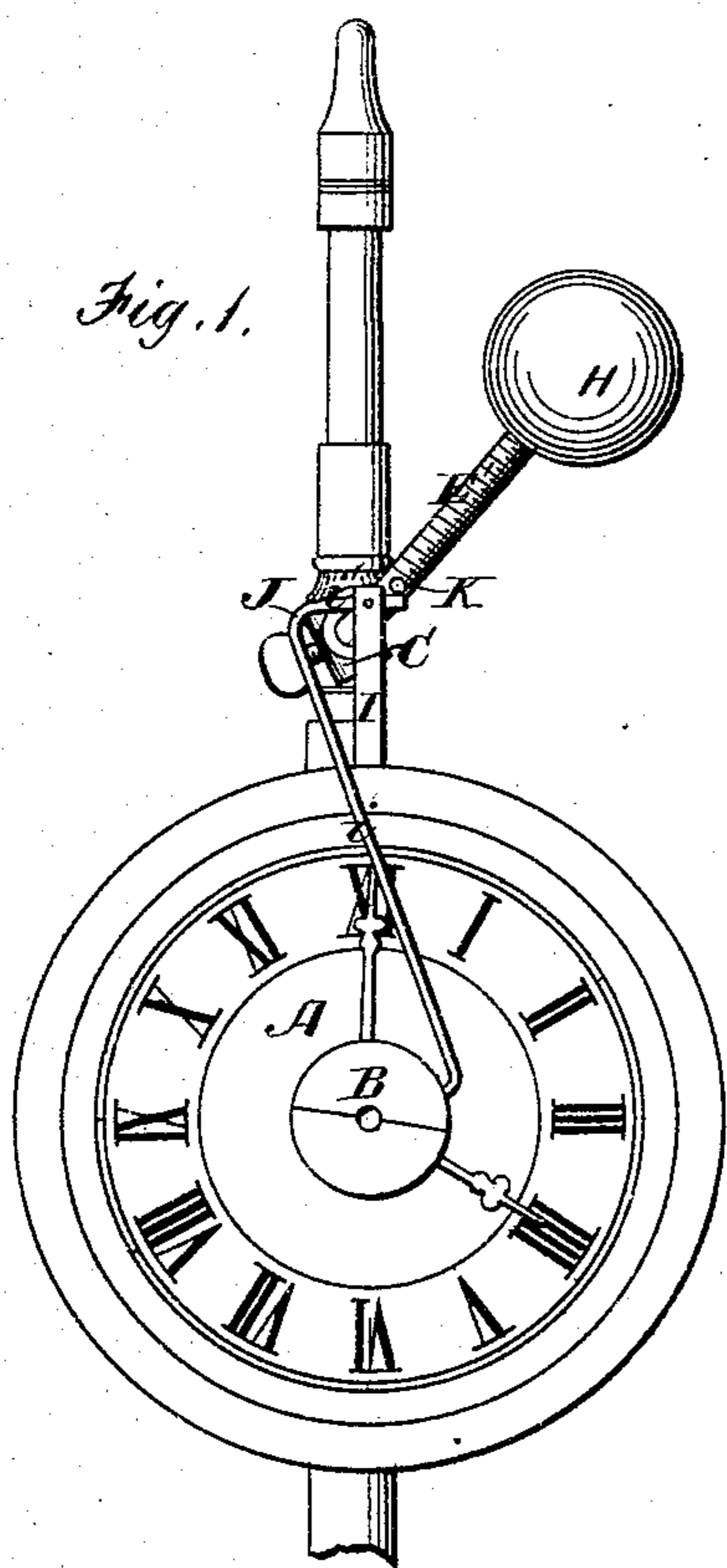


D. M. REYNOLDS.  
Gas-Extinguishers.

No. 145,243.

Patented Dec. 2, 1873.



WITNESSES

*C. F. Brown.*  
*Dr. R. G. Brown.*

By

INVENTOR

*D. M. Reynolds*  
*H. B. Clawson*  
*his Attorneys.*

# UNITED STATES PATENT OFFICE.

DAVID M. REYNOLDS, OF PORT DEPOSIT, MARYLAND.

## IMPROVEMENT IN GAS-EXTINGUISHERS.

Specification forming part of Letters Patent No. **145,243**, dated December 2, 1873; application filed September 24, 1873.

*To all whom it may concern:*

Be it known that I, DAVID M. REYNOLDS, of Port Deposit, in the county of Cecil and State of Maryland, have invented a new and Improved Automatic Gas-Extinguisher; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a front elevation of my invention, and Fig. 2 a side elevation of the same.

Similar letters of reference in the accompanying drawings denote the same parts.

This invention relates to the class of automatic gas-extinguishers in which a clock mechanism is employed to turn the gas-cock at a given time, and thereby dispense with the services of an attendant in extinguishing gas-lights, the invention being especially intended for street-lanterns; and it has for its object to provide a cheap and simple mechanism, adapted to be inclosed in a street-lantern, and to instantaneously and effectually shut the cock at any previously-determined time. To this end my invention consists in an adjustable weighted arm applied to a gas-cock, and connected, by a suitable pivoted catch or trigger, with a threaded disk on the hour-hand shaft of a clock movement, the arm being so arranged that, when elevated, it holds the gas-cock open, and, when released by the trigger and allowed to fall, it closes the cock, as I will now proceed to describe.

In the drawings, A represents an eight-day or other suitable clock attached to the gas-tube of a street-lantern below the cock *a*. On the hour-hand shaft of the clock is a disk, B, provided with a screw-thread on its periphery. C represents a socket attached to the cock *a* by means of ears *c* and a thumb-screw, D, as shown in Fig. 1, the socket projecting horizontally from the cock, and receiving the bent end of a weighted arm, E, which is held by a thumb-screw, F. The main portion E' of the arm E is threaded, and bent at right angles with the socket C, and is provided, on its outer end, with a ball or weight, H, having a screw-threaded orifice, by means of which it is adjustable on the arm. I represents a vertical standard attached to the casing of the clock, and extending somewhat above and outside

of the angle of the arm E. At the upper end of the standard I is pivoted a catch or trigger, J, having the form of a bell-crank lever, with a long arm, *i*, and short arm *i'*. K is a pin projecting from the part E' of the arm E, and bearing on the short arm *i'* of the trigger near its end, as shown in Fig. 1. The long arm *i* of the trigger extends downward to the threaded disk B of the clock, and has its lower end pointed and turned inward, so as to engage with the thread of the disk, against which it is pressed by the weight of the arm E exerted through the pin K on the short arm *i'*.

It will be seen that, when the arm E' is elevated, as shown in Fig. 1, the cock *a* is held open, and the arm is itself held in this position by the engagement of its pin K with the short arm of the catch or trigger as long as the end of the long arm of the latter is engaged with the disk B. The disk making one revolution per diem, it follows that the end of the trigger resting in the thread of its periphery is gradually carried outward until it reaches the termination of the thread, when it is suddenly released, and, in turn, releases the arm E, which swings downward by its own weight, and closes the cock *a*, thereby extinguishing the light. The disk is intended to be suitably graduated, so as to enable the point of the trigger to be so placed as to be released at any desired hour. The thread terminates abruptly in a shoulder on the face of the disk B, and releases the trigger suddenly when the shoulder reaches the latter. The arm E is adjustable in the socket C, and may be so arranged as, when elevated, to hold the cock partially shut off, instead of wide open, thereby regulating the flame.

The adjustable weight H adapts the device to gas-cocks of different degrees of tightness.

In extinguishing street-lamps at daylight the lamp-lighters are obliged to make their rounds the same as in lighting. As each man has a certain number of lamps to extinguish, commonly requiring from one to two hours to attend to, it will be seen that much gas is needlessly consumed, as it is not usual to commence extinguishing until daylight. It is, moreover, a common practice in many cities to economize in the use of gas by extinguishing the lamps after the moon has risen. By my invention

all the lamps in the city can be extinguished simultaneously, or nearly so, thus effecting a saving of gas sufficient in each lamp to cover the expense of the whole apparatus, which, aside from the clock mechanism, is extremely simple and inexpensive.

A clock located in every street-lamp will be found a great convenience to the public.

I am aware that the idea of extinguishing gas by clock-work is not new, and I do not, therefore, claim it broadly; but

What I do claim as new is—

1. The bent arm E E', provided with an adjustable weight, H, and pin K, in combination

with the trigger J and screw-threaded disk B, all arranged, constructed, and operated in the manner and for the purpose set forth.

2. The socket having a cylindrical end, and provided with ears *c c*, in combination with the arm E and thumb-screws L and F, as and for the purposes set forth.

3. In combination with the key *a*, the arm E E' and adjustable weight H, substantially as described.

DAVID M. REYNOLDS.

Witnesses:

D. S. WILSON,

JNO. P. VANNEMAN, Jr.