

A. F. EELLS.
BILGE-WATER ALARM.

No. 184,851.

Patented Nov. 28, 1876.

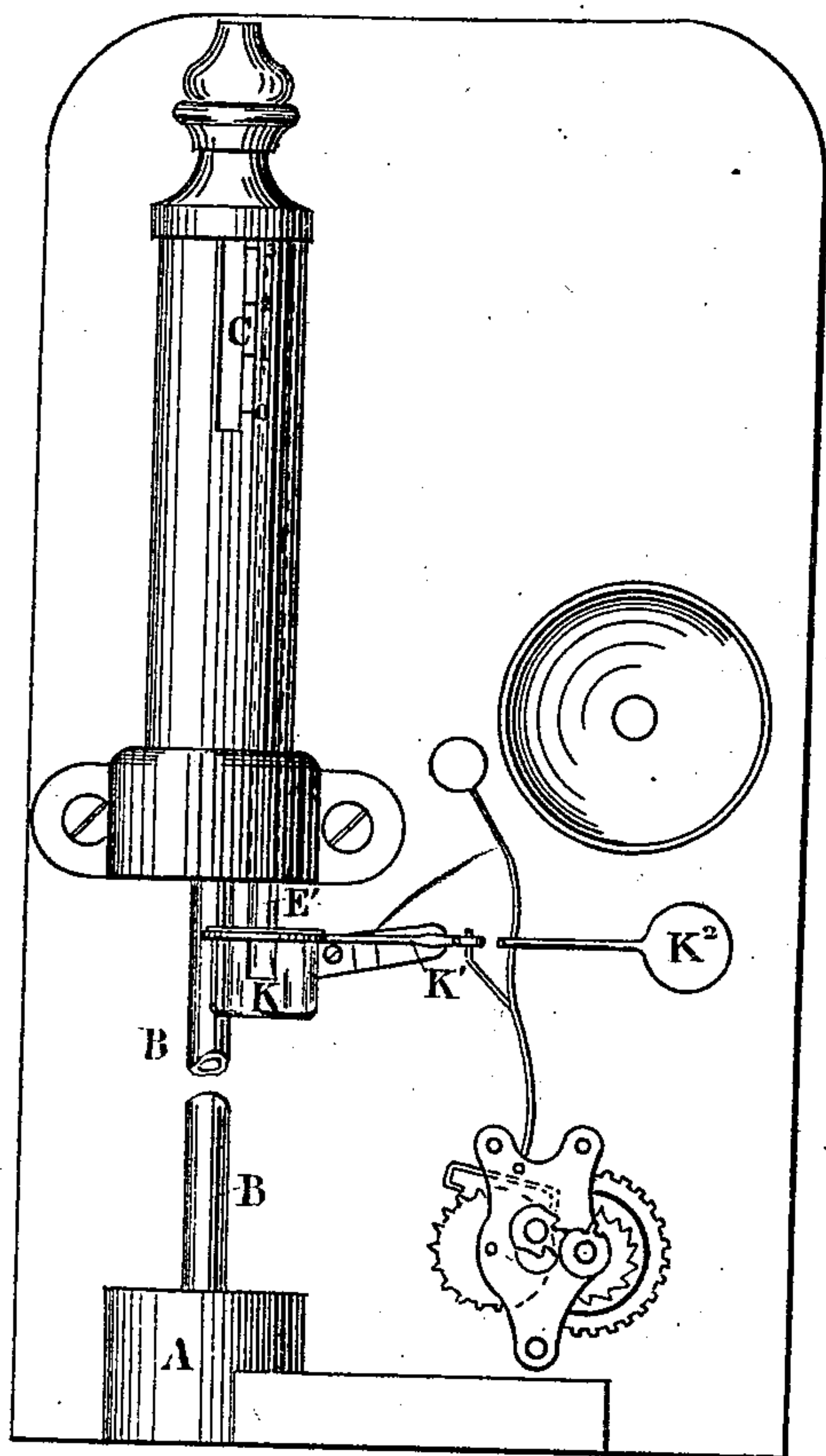


Fig. 1.

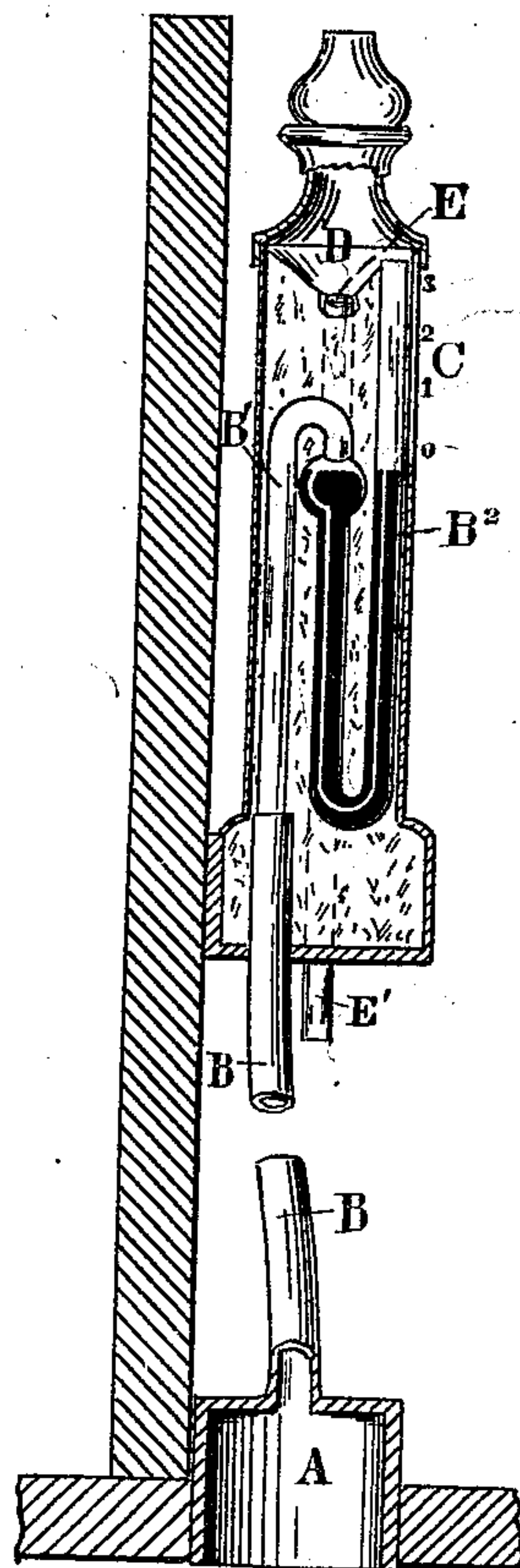


Fig. 2.

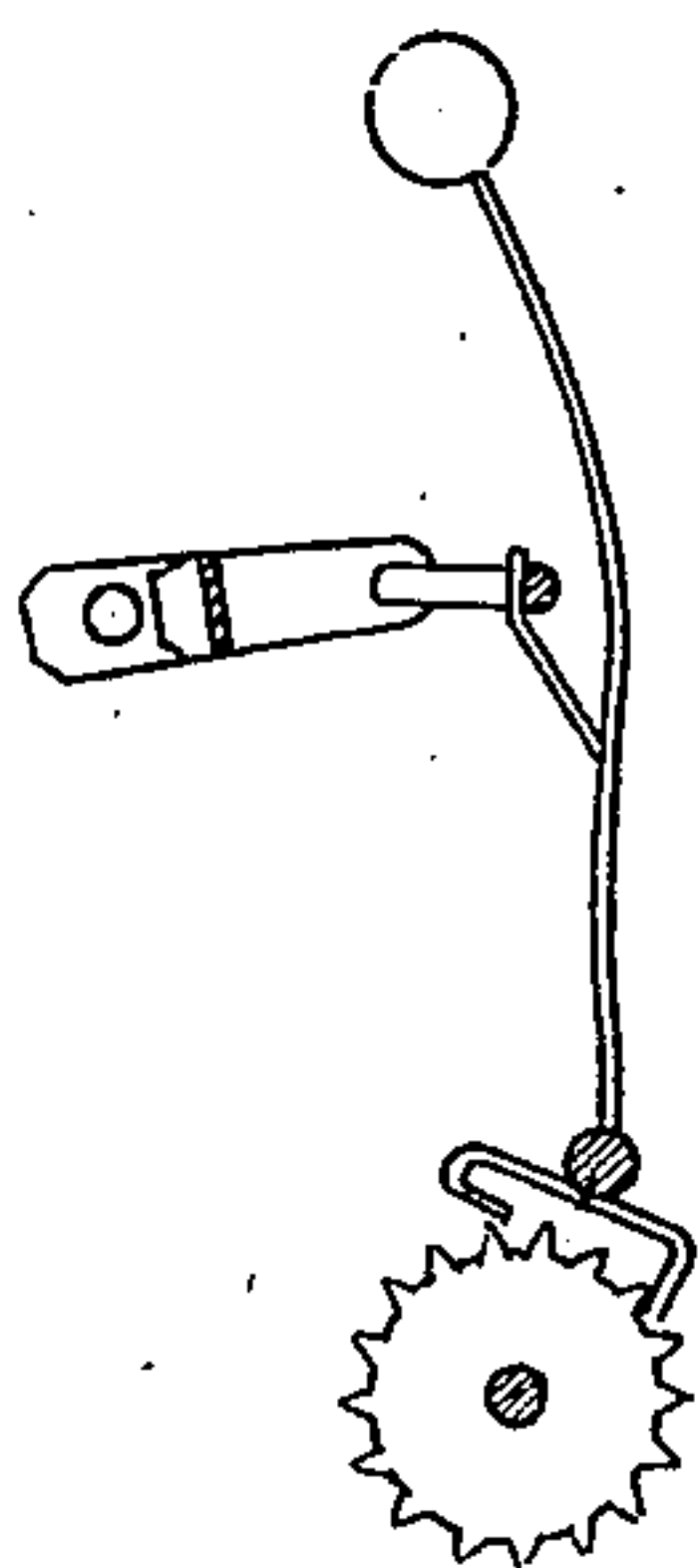


Fig. 3.

WITNESSES

Franklin Parker.
A. H. Bump

INVENTOR

Albert F. Eells.

UNITED STATES PATENT OFFICE.

ALBERT F. EELLS, OF BOSTON, MASS., ASSIGNOR OF A PART OF HIS RIGHT
TO SAMUEL C. LOUD, W. H. DOLE, AND F. B. DOLE, OF SAME PLACE.

IMPROVEMENT IN BILGE-WATER ALARMS.

Specification forming part of Letters Patent No. 184,851, dated November 28, 1876; application filed
October 23, 1876.

To all whom it may concern:

Be it known that I, ALBERT F. EELLS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Bilge-Water Alarm-Gages, of which the following is a specification:

My invention relates to a device for indicating, by a mercury-column and a graduated scale, the amount of leakage in the bilge of a ship, also to a device for giving an alarm when the leakage-water has reached a certain height in the ship; and consists in combining, with an alarm device and a mercury-column, a tube which extends to the hold of the ship, and terminates in a bell or water-chamber, the mouth of which opens downward, so that when the water rises above it, pressure is produced within the pipe, said pressure being transmitted to the mercury-column, and through the overflow of the mercury to the alarm device.

This device is not confined to ships' use, but may be applied to a variety of uses.

Figure 1 is an elevation of my invention. Fig. 2 is a vertical cross-section of the same. Fig. 3 shows a part of the let-off device.

In this device, A represents a fixed water bell or chamber, having its open end downward, as shown in Fig. 2. To the upper part of this bell I attach the air-pipe B, which communicates with the mercury-siphon B¹ B², Fig. 2. The ascending arm B² of the siphon

terminates in the cup or receptacle D, from which a pipe, E E', leads to the counterpoise-cup K of the alarm-device let-off.

This alarm device will be found fully described in Letters Patent of the United States granted to me, and dated August 22, 1876, No. 181,323, entitled "Improvement in Fire-Alarms."

The operation of my device is as follows: When water begins to accumulate in the bilge it will flow upward into the bell or chamber A, and thus exert a pressure on the air in the bell A and tube B. This pressure will be transmitted to the mercury in the siphon B¹ B², and cause the mercury to ascend the arm B², and thus indicate on the graduated scale C the amount of water in the bilge. A continued rise of water in the bilge will cause the mercury in B² to overflow into the cup D, and thence through the pipe E E' to the counterpoise-cup K of the alarm device, and thus give the alarm.

I claim as my invention—

The combination of the water bell or chamber A, pipe B B, siphon B¹ B², cup D, and pipe E E' with the let-off device K K¹ K² of the alarm mechanism, all operating together substantially as described, and for the purpose set forth.

ALBERT F. EELLS.

Witnesses:

FRANK G. PARKER,
A. HUN BERRY.