

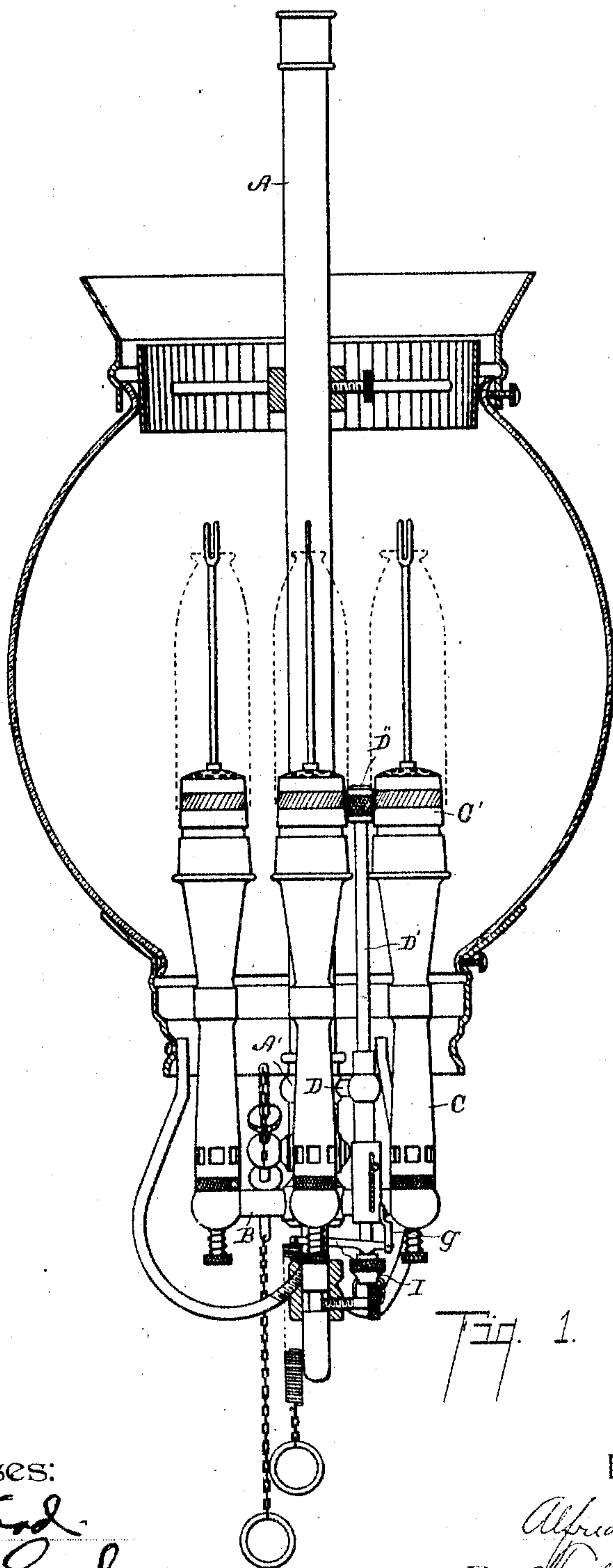
No. 777,023.

PATENTED DEC. 6, 1904.

A. H. HUMPHREY.  
IGNITER FOR GAS LAMPS.  
APPLICATION FILED JULY 31, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

*D. E. Wood*  
*Otto B. Earl*

Inventor,

*Alfred H. Humphrey*  
By *Frederick L. Chappell*  
Att'y.

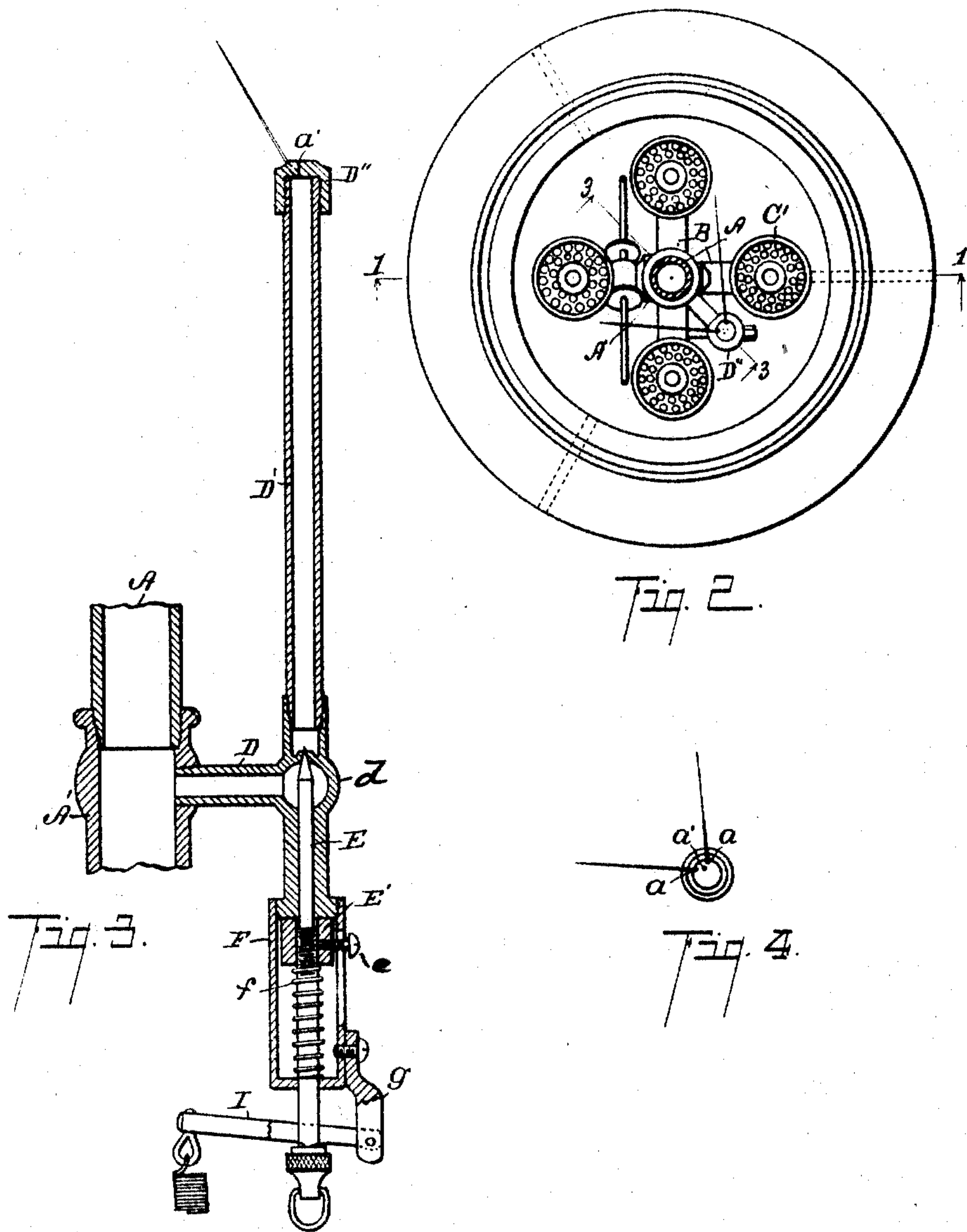
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*Alfred H. Humphrey*  
By *Frederick L. Chappell*  
Att'y.



## UNITED STATES PATENT OFFICE.

ALFRED H. HUMPHREY, OF KALAMAZOO, MICHIGAN.

## IGNITER FOR GAS-LAMPS.

SPECIFICATION forming part of Letters Patent No. 777,023, dated December 6, 1904.

Original application filed April 4, 1901, Serial No. 54,271. Divided and this application filed July 31, 1902. Serial No. 117,782.  
(No model.)*To all whom it may concern:*

Be it known that I, ALFRED H. HUMPHREY, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Igniters for Gas-Lamps, of which the following is a specification.

This invention relates to improvements in pilot-lights for gas-burners.

It relates more particularly to improvements in pilot-lights for cluster burners or lamps having a group of burners arranged about a central support.

It is particularly adapted to use in connection with my improved cluster-lamp illustrated and described in my application for patent executed concurrently herewith, filed July 31, 1902, Serial No. 117,781, although it is adapted for use in other relations.

The object of this invention is to provide an improved pilot-light for cluster or other burners and also an effective means for controlling the same.

Further objects will definitely appear in the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view, partially in section, taken on line corresponding to line 1 1 of Fig. 2. Fig. 2 is a top plan view of the structure appearing in Fig. 1. Fig. 3 is an enlarged detail vertical sectional view taken on line 3 3 of Fig. 2. Fig. 4 is an enlarged plan view of the burner-tip of the pilot-light.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the sectional lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A' is a central bracket or support to

which the remaining parts are secured. This is hollow and is adapted to be secured to a suitable gas-supply pipe by which it is supported, as A. Extending out radially from the lower part of the main bracket or support A' are tubular arms B, on the outer ends of which are burners C, of the Bunsen type, bearing on their upper ends suitable burner-tips, as C'. These parts are arranged as and are preferably the structure described in my concurrent application hereinbefore referred to.

Connected to the bracket A' above the valve which controls the supply of gas to the burners is a horizontal pipe D, on the outer end of which is a T *d*. A small tube D' extends upwardly from this T and has a small burner-tip D'' at the top. The T *d* has a valve-casing and contains a needle-valve E, which extends up through the same into a suitable seat. A collar E' is screw-threaded on this valve and is adjustably held in position by a set-screw, as *e*. A casing F is on the lower end of the T *d*, extending downwardly, and is perforated at its bottom to receive the stem of the valve E. A coiled spring *f* is provided to hold the valve normally upward. The collar E' may be set so that the valve may be actually closed by the upward pressure of the spring or so that it will be left partially open when desired. A lever I, adapted to engage the valve-stem, is supported by a bracket *g*, carried by the casing. Suitable connections are provided from the lever to operate the same. Perforations *a* (see Figs. 3 and 4) point outwardly and upwardly toward the burners of the cluster, so that when the pilot-light is ignited jets are darted toward the burners to ignite the same.

In use the valve E is adjusted so that a small amount of gas passes the same and the jets are left lighted. When the gas is turned onto the burners, the valve E is pulled down and with the additional pressure of gas the jets will shoot across the different burners of the cluster toward which they are directed and ignite the same. When the valve is released, the supply of gas is again cut off to only a sufficient amount to keep the jets burning slightly.

I have illustrated and described my improved igniter mechanism in the form preferred by me on account of its simplicity and effectiveness. I desire to remark, however, 5 that it can be considerably varied in structural details without departing from my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters 10 Patent, is—

1. The combination of a gas-burner with a pilot-light; a needle-valve E for controlling the supply of gas to the same; a screw-threaded collar E' thereon; a set-screw e for setting 15 said collar; a coiled spring f on the stem of said valve; and a sleeve surrounding the same, coacting for the purpose specified.

2. The combination of a gas-burner with a

pilot-light; a needle-valve for controlling the supply of gas to the same; a suitable stop on 20 said valve; a coiled spring f on the stem of said valve; and a sleeve surrounding the same, for the purpose specified.

3. The combination with a plurality of burners, of an igniting device having jet-orifices directed toward the individual burners; 25 means for supplying a limited quantity of gas thereto; and means for increasing the supply of gas to project the jets to the burners for igniting the same. 30

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

ALFRED H. HUMPHREY. [L. s.]

Witnesses:

ETHEL A. TELLER,

OTIS A. EARL.