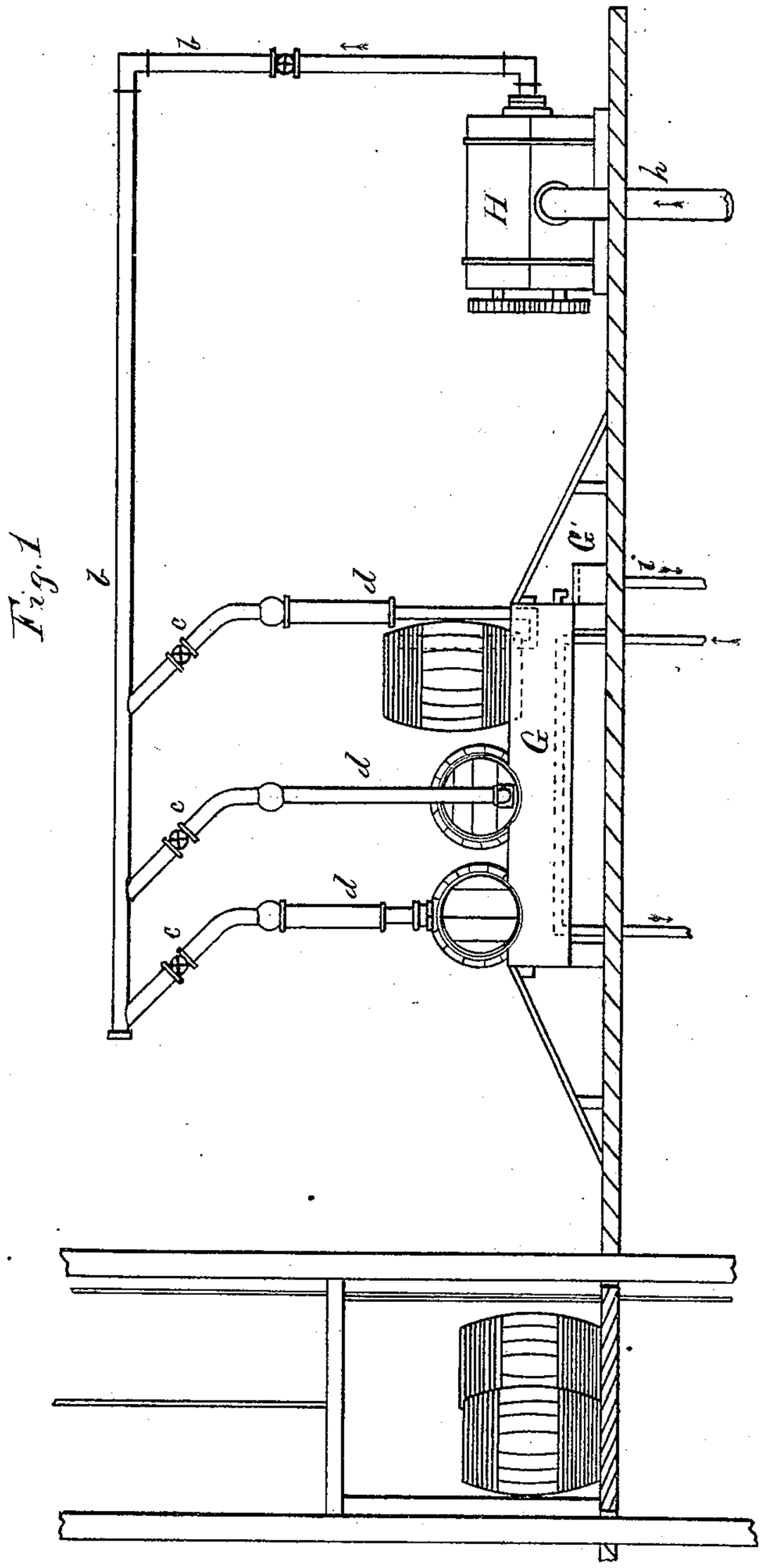
(No Model.) 2 Sheets—Sheet 1.

R. S. JENNINGS.

Apparatus for Removing Lard and Similar Substances from Barrels, &c.

No. 238,592. **Patented March 8, 1881.**

Fig. 1.



WITNESSES

Louis Johnson.
H. W. McNeal

By

INVENTOR

Ralph S. Jennings
E. G. Johnson & Co.
ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

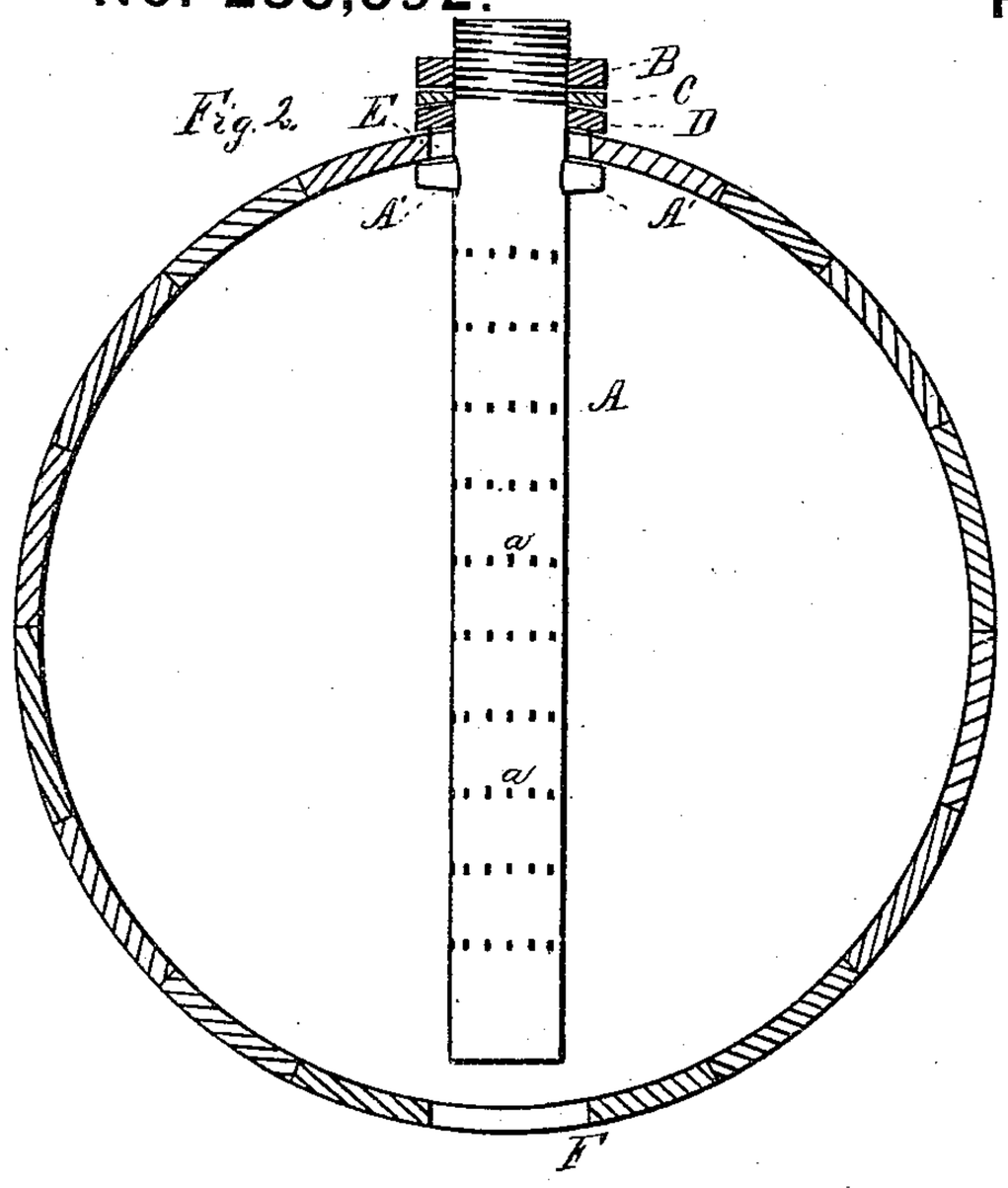


Fig. 3.

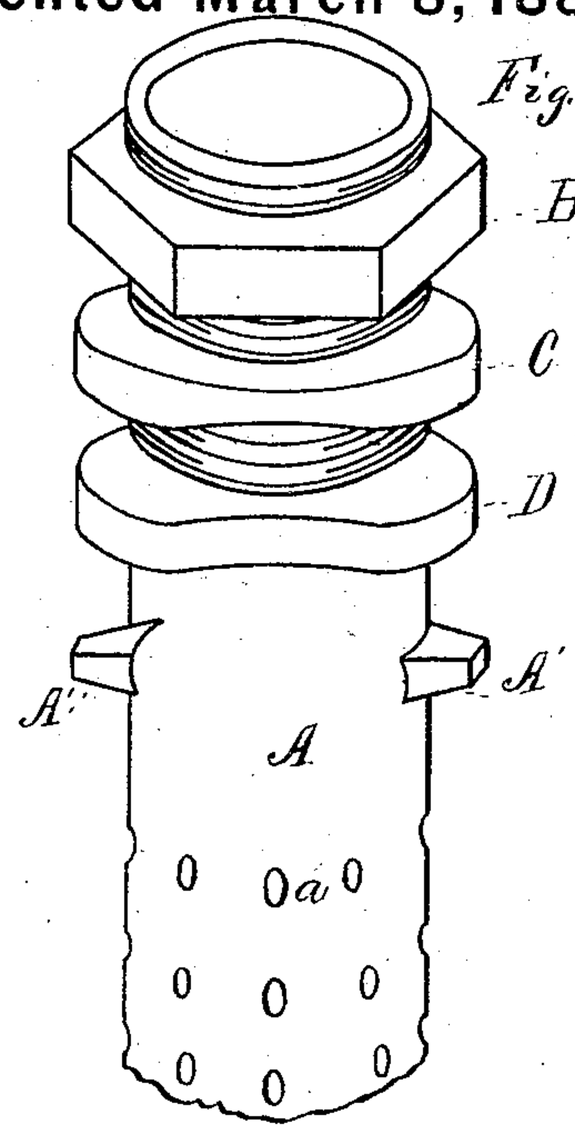
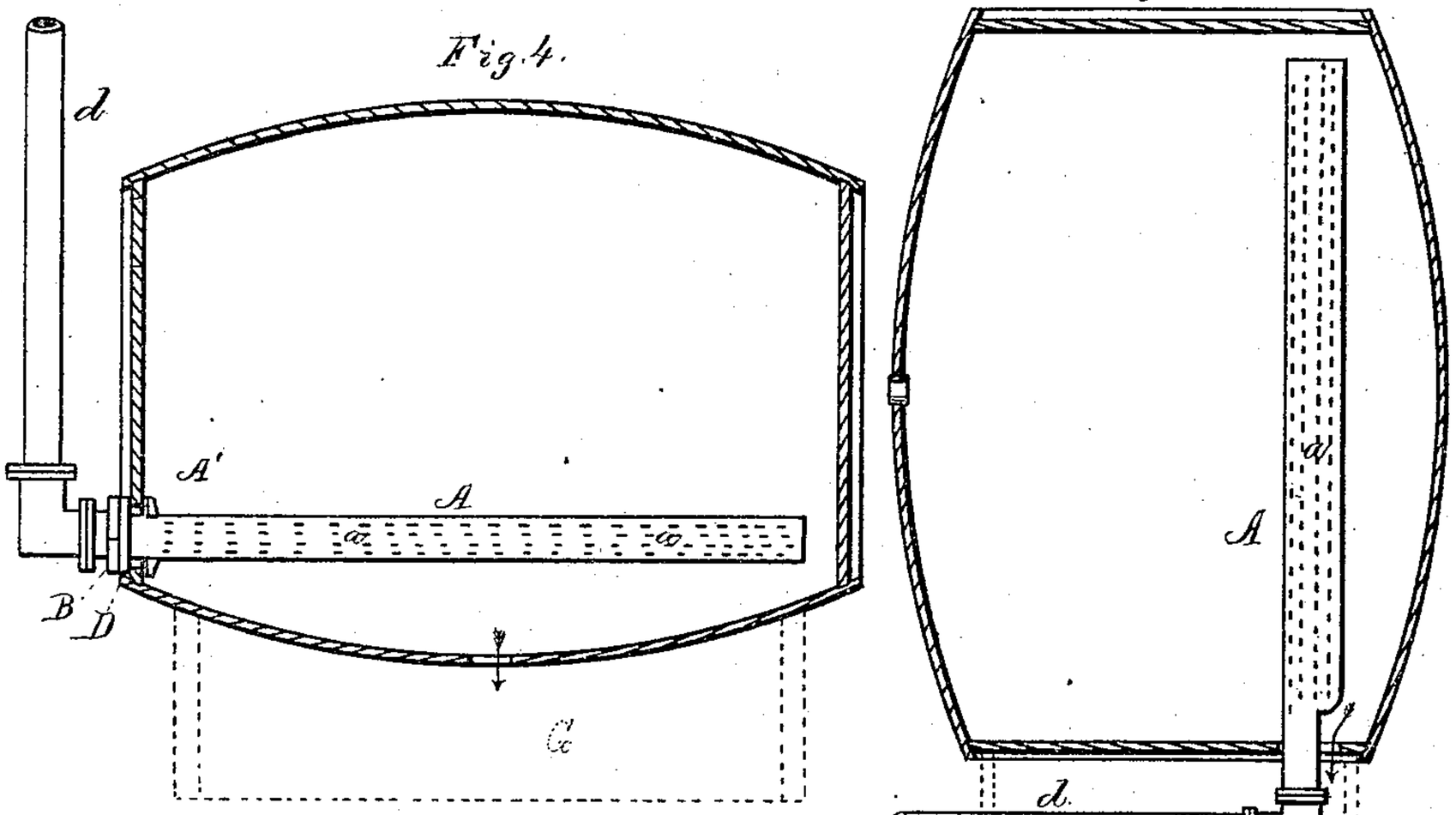


Fig. 5.

Fig. 4.



WITNESSES
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INVENTOR
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UNITED STATES PATENT OFFICE.

RALPH S. JENNINGS, OF BALTIMORE, MARYLAND.

APPARATUS FOR REMOVING LARD AND SIMILAR SUBSTANCES FROM BARRELS, &c.

SPECIFICATION forming part of Letters Patent No. 238,592, dated March 8, 1881.

Application filed June 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, RALPH S. JENNINGS, a citizen of the United States, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Apparatus for Removing Lard and Similar Substances from Barrels, &c., of which the following is a specification.

This invention relates to novel means for removing from barrels, hogsheads, and similar vessels lard, grease, and other like substances by a current of hot air introduced within the same; and it consists substantially of the means of accomplishing the same in a manner whereby the barrels, &c., are kept intact, and cooperage is saved, and the material contained in the barrel is not impregnated with water, as in the old system.

Prior to my invention, when it was desired to remove lard, &c., from barrels, for the purpose of refining the same, the head of the barrel was removed and the lard scooped therefrom to a "hot-box." A considerable quantity of the lard remained in the package, which was removed by placing it with its head downward over the hot-box and introducing within the barrel a jet or jets of steam, thus melting the lard which remained in the package, and at the same time mixing it with water caused by the condensation of the steam.

Among the advantages of my method it will be noticed that the packages or barrels are not mutilated, so as to require extensive cooperage. The lard is not impregnated with water, which has to be removed in refining by careful boiling; also, that there is a great saving of labor.

On the annexed drawings, Figure 1 shows my invention as it may be applied in a refinery. Fig. 2 is a sectional view, which shows the tube A applied to a barrel. Fig. 3 is a perspective view of the hot-air-distributing pipe and its couplings for securing the same within a barrel. Figs. 4 and 5 are modifications of the hot-air-distributing pipe.

In the annexed drawings, A represents a distributing-cylinder of suitable length, and which may be closed or not, perforated at one end. Its diameter is slightly less than the bung-hole E or other opening in the barrel. On its upper end, above the perforations *a a*, are placed two lugs, A′ A′, opposite each other. These lugs are of such a length that they will engage with the under sides of the hole E when the perforated cylinder is placed in the center of the hole.

D is a rubber washer, which is made to conform to the shape of the package at the exterior of the hole in which the cylinder A is inserted. Above this washer, and over the cylinder A, is placed a similarly-shaped plate, C, which upper surface presents a flat surface to the nut B.

When desired to place the perforated tube A within the barrel it is held at an angle of between forty-five and sixty degrees, and when the lugs A′ reach the hole the tube A is pressed against one side of the hole. One of the lugs may then be readily placed within the barrel. The tube is then held in a nearly-vertical position against one side of the bung-hole, when the other lug can be readily put in place. The tube A is then held so that the lugs A′ A′ will engage with the staves, and the nut B is screwed home, thus making a tight joint, which will prevent the egress of hot air or lard from the package through the openings in which the distributing-cylinder is inserted.

In Fig. 1 of the annexed drawings, G represents a hot-box, which is a rectangular tank of a width somewhat less than the length of the package to be emptied, and sufficiently long to receive the required number of packages. In the bottom of this tank is a steam-coil, for the purpose of keeping the lard in a liquid condition, so it will flow into the rendering-tanks or elsewhere, as may be desired.

G′ is a small tank, which is placed between the hot-box G and the exit-pipe *i*, and it is provided with a grating, which will catch and retain such foreign substances as shavings, &c., which may be in the lard or packages.

H is a blowing-engine, which is supplied with hot air by the pipe *h*. The hot air is forced through the pipes *b c d* to the perforated tube A. These pipes are provided with suitable stop-cocks, couplings, and extensible joints, whereby they can be readily attached to the end of the tube A.

Fig. 4 shows a modification of the way of applying the hot-air distributer A, which I may

use when the barrel is provided with a perforation in its head, which perforation is usually made by the inspector. When the barrel is provided with this opening I place the perforated cylinder in a horizontal position in the barrel, which has been previously placed horizontally over the hot-box, and a tight joint is made in the manner hereinbefore described. When the hot air is introduced to the cylinder A the lard will flow in a liquid state from the bung-hole into the hot-box.

Fig. 5 shows another modification of the hot-air-distributing cylinder, which I may use when it is desirable to place the barrels in a vertical position over the hot-box. This cylinder may be of the same size as the hole which the inspector makes in the end of the barrel, with the exception of one end, which is provided on one side with a shoulder, which reduces the size of the cylinder and allows a portion of the hole to be left open, so that the lard can flow from the barrel when it has been reduced to a liquid state. This cylinder is provided with suitable couplings, &c., which will hold it in an upright or vertical position in the barrel. With this form of hot-air distributer it is not necessary to remove the bung from the barrel.

My invention, in practice, may be used substantially as follows: The hogsheads or barrels are placed in position over the hot-box and the perforated distributing-cylinder is inserted in the desired hole, which may be in the end or side of the barrel. The distributing-cylinder is then coupled to the barrel and to the hot-air supply-pipe, and a current of hot air is forced within the distributing-cylinder, which impinges through the perforations upon the contents of the barrel, thus melting the lard and causing it to flow in a liquid state into the hot-box free from water.

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

In combination with a blowing-engine, a hot-air supply-pipe, connecting-pipes with couplings, and a detachable perforated tube, for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

RALPH S. JENNINGS.

Witnesses:
E. W. THOMAS,
H. W. MCNEAL.