

(No Model.)

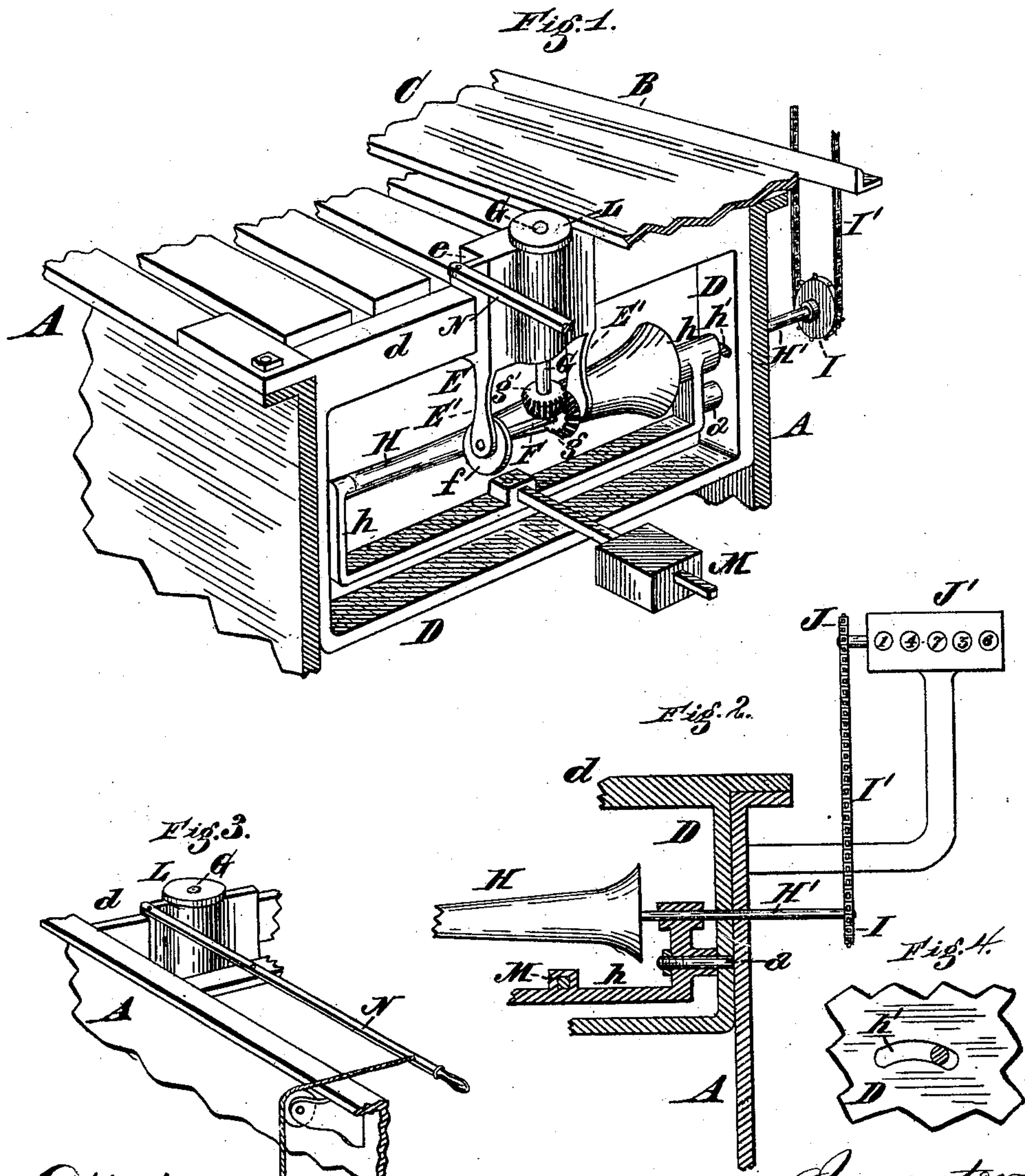
2 Sheets—Sheet 1.

J. R. THOMAS.

MEASURING AND REGISTERING DEVICE FOR PLANING MACHINES.

No. 299,878.

Patented June 3, 1884.



Attest
Jno. E. Stiles.
Jno. E. Jones

Inventor.
John R. Thomas.
by Wood & Bond
his Attorneys &c.

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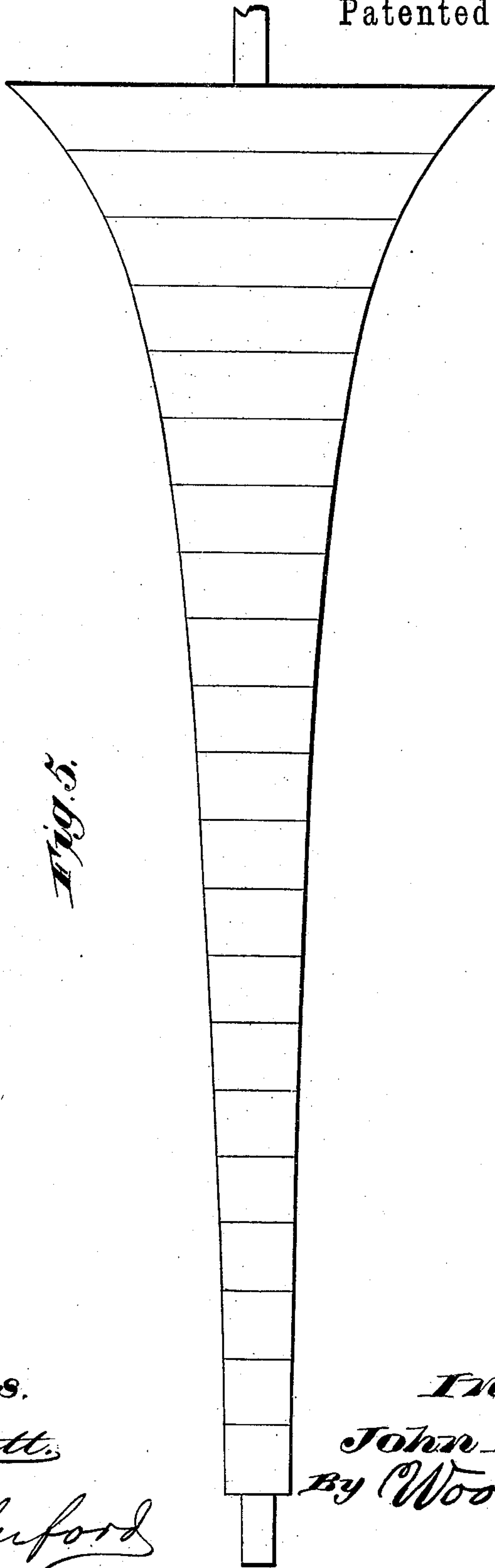


Fig. 5.

Witnesses.

Robert Consett.

J. A. Rutherford

Inventor.

John R. Thomas.

By Wood & Boyd

Attys.

UNITED STATES PATENT OFFICE.

JOHN R. THOMAS, OF CINCINNATI, OHIO, ASSIGNOR TO THE CORDESMAN & EGAN COMPANY, OF SAME PLACE.

MEASURING AND REGISTERING DEVICE FOR PLANING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 299,878, dated June 3, 1884.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. THOMAS, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Measuring and Registering Devices for Planing-Machines, of which the following is a specification.

My invention consists of a surface lumber-registering measure adapted to be used as an attachment to a planing-machine, and adapted to automatically register the square surface-feet of lumber passing through the planer, all of which is fully explained in the description of the accompanying drawings.

Figure 1 is a perspective view of my improvement attached to a planing-machine. Fig. 2 is a central vertical section of the same, partly in elevation. Fig. 3 is a perspective view in section, showing the weighted lever. Fig. 4 is a detail view of the slotted frame. Fig. 5 represents a diagram of the form of curve given to the roller.

A represents the frame of an ordinary surface-planer.

B represents the guide, against which the edge of the board or lumber is pressed, and it may be adjustable, if desired.

C represents a piece of lumber passing through the planer.

D represents the frame of the measuring device; *d*, a cross-bar forming a part of the frame, which serves as ways for a laterally-adjustable mechanism working thereon.

E represents a sliding adjustable hanging journal-bracket, which is provided with ears *e*, which fit over the ways *d* and slide thereon.

E' E' represent downwardly-projecting arms rigidly attached to the bracket E, and through the lower end of which is journaled a shaft, F.

f represents a friction-roller keyed upon said shaft; *g*, a beveled gear keyed upon shaft F, and meshing with bevel *g'*, which is keyed upon a vertical shaft, G, journaled in the bracket E.

H represents a tapering roller affixed to a shaft and journaled in a U-shaped swinger-hanger, *h*, which is attached to the frame D by a stud-axle, *a*.

H' represents the shaft or journal of the roll-

er H. This shaft is extended laterally through a slot in the frames D and A, *h'* representing the segmental slots pierced in said frames D and A, so as to allow the shaft H' to move laterally as the bearings *h* are vibrated.

I represents a chain or sprocket wheel; I', a drive-chain passing over chain-wheels I and J, which are keyed upon the shaft of the registering mechanism. J' represents such mechanism properly inclosed in a dial-case. I do not deem it necessary to describe or show the registering mechanism, as various known kinds of registers may be used.

L represents a friction-pulley keyed upon the shaft G, the periphery of which is made to press firmly against the edge of the lumber being planed, so that the travel of its peripheral face shall exactly correspond with that of the lumber against which it is in frictional contact, thereby driving shaft G and its gear *g'*, and the bevel *g* revolving the shaft F and its friction-pulley *f*, the periphery of which is in contact with the tapering roller H.

M represents a weighted arm attached to the oscillating U-shaped hanger *h*, holding the taper roll H in frictional contact with the face of the pulley, thereby revolving the roll H, with its shaft and chain-wheel H' I. A lateral adjustment of the pulley *f* along the surface of the roll H changes the speed of chain-wheel I, owing to the tapering form of the said roll. The friction-roller *f* drives the roll H at a slower speed when it is in frictional contact with the larger diameter of the roll H, and increasing correspondingly as it is adjusted to bear against the smaller circumference. The taper of roll H is therefore made to decrease from right to left progressively, so as to increase the speed of the roll correspondingly, so as to record the surface-measure of each lineal foot planed, the edge of which lumber drives the friction-pulley L, and through it and its transmitters the register J'. For example, since the shaft of roller H operates the register to record the square feet of lumber of varying widths passed through the mill, it must travel at a speed relative to the speed of the roller L, which works against the edge of the lumber, so as to indicate the square feet of

different widths. The speed of the roller H must be much slower for registering the square feet of a three-inch piece as compared to one, say, one-half a foot in width, and still at proportionally less speed for a piece, say, one foot in width. As this decrease in speed is not constant, a taper roll will not measure as accurately as desired. By calculating the proper diameter of roller H for measuring lumber three inches in width, and then for four inches, then for five inches, and so on for every inch up to twenty-four inches, and representing these diameters by lines of proper relative lengths, and then connecting them transversely by lines touching the ends of these short lines, the trumpet shape of the roller is obtained, which is the preferred form, as illustrated by a diagram, Fig. 5. It is obvious that various modes of operating and adjusting the friction-roller L against the edge of the board may be adopted.

N O represent a weight and lever for holding the pulley L against the edge of the board. It also serves as an adjusting-lever to move the mechanism mounted on bracket E out or in to allow the ready introduction of lumber to the planer. Various other means may be employed to hold the friction-pulley f in contact with the taper roll H without departing from the essential features of my invention.

I do not wish to limit my claims to the particular mode of constructing or arranging the details of my lumber-meter. Thus, instead of a chain-wheel, I, a gear-wheel might be employed, and various other modifications of this nature might be adopted without departing from the general principles of my invention.

I claim—

1. A lumber-meter having a taper roll driven by an adjustable roller in frictional contact therewith, and which is in turn driven by a frictional roller traveling in contact with the lumber passing through the machine, substantially as herein set forth.

2. A lumber-meter operated by means of a taper friction-roller driven by an adjustable friction-roller, in combination with a registering apparatus driven by a transmitter on the shaft of the taper roller, substantially as herein set forth.

3. A lumber-meter adapted to be attached to the frame of a planer and operated by means of a roller in frictional contact with the lumber, which roller transmits motion to a second roller laterally adjustable with and driving a taper roll, the shaft of which taper roll transmits motion to a counting apparatus which registers the surface-feet of the lumber passing through the machine, substantially as herein set forth.

4. A lumber-measure having a taper roll, H, driven by the frictional contact of a pulley which is made laterally adjustable thereto, so as to increase or decrease the speed of the shaft of the taper roll to record the surface-measure of varying widths of lumber planed, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN R. THOMAS.

Witnesses:

JNO. E. JONES,

ADOLPH GLUCHOWSKY.