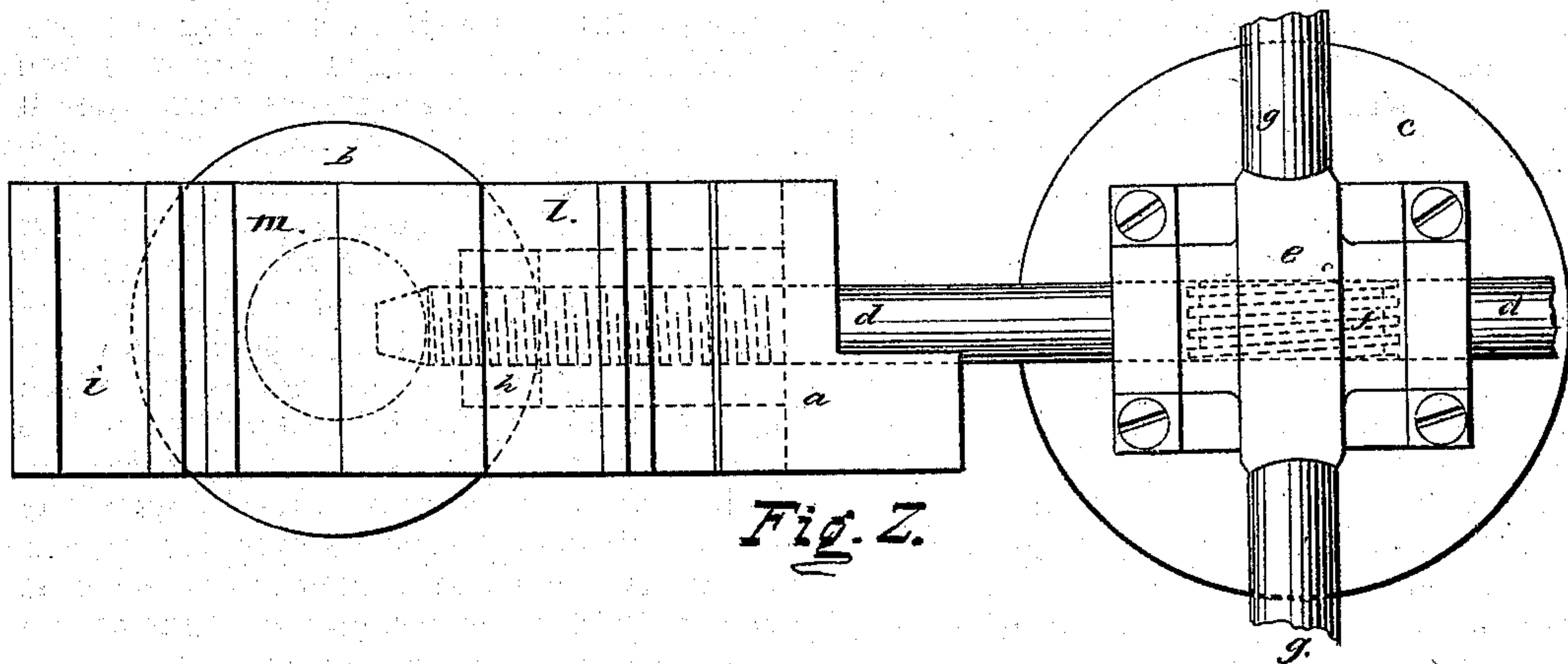
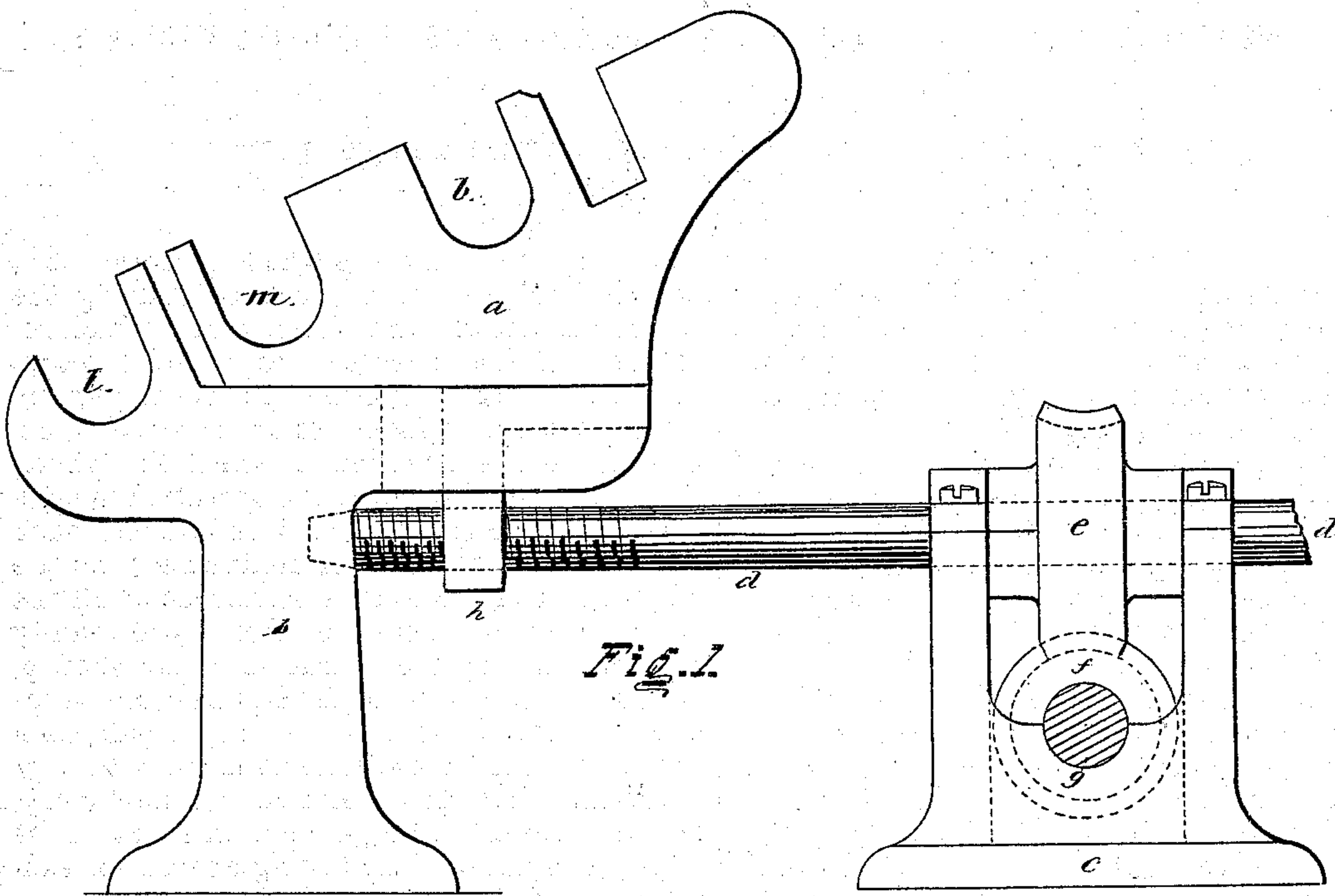


WILLIAM T. CARROLL.

Improvement in Mechanism for Adjusting Roller Stands
in Spinning Machines.

No. 125,661.

Patented April 16, 1872.



Witnesses:

Jesse F. Wheeler.

W. W. Wright.

Inventor:

Wm T. Carroll-

By his atty Carroll D. Wright

UNITED STATES PATENT OFFICE.

WILLIAM T. CARROLL, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR TO
SIMEON S. COOK, OF SAME PLACE.

IMPROVEMENT IN MECHANISMS FOR ADJUSTING ROLLER-STANDS IN SPINNING-MACHINES.

Specification forming part of Letters Patent No. 125,661, dated April 16, 1872.

SPECIFICATION.

I, WILLIAM T. CARROLL, of Woonsocket, in the county of Providence and State of Rhode Island, have invented certain Improvements in Stands for Spinning-Frames, of which the following is a specification:

Figure 1, in the drawing, is a front view of one section of my improved roller-stand, with the mechanical devices operating the same, and Fig. 2 is a top view of the same.

The present invention relates to a certain new and useful means for adjusting and operating roller-stands connected with spinning-frames, self-operating mules, roving machinery, &c., the object of which is to furnish an expeditious and effective means of adjusting the back and middle rolls of the spinning-frame, &c., so as to adapt them to cotton of any length of staple, as well as to improve the yarn spun from cotton of different lengths of staple. My improvement consists of a series of mechanical devices, to be fully explained in due course, so arranged and operated as to allow the several roller-stands connected with a spinning-machine to be instantly adjusted by one and the same operation while the machine is in motion, instead of, as heretofore, requiring the time and labor of two men for several hours, and delaying the action of the machinery while the adjustment of the roller-stand is proceeding.

In the drawing, *b* is one of several roller-stands, which are arranged in pairs in opposite parallel rows at a short distance from each other, on a roller-beam of a spinning or other like machine, and is formed with a bearing, *i*, for holding the front roll. Traveling longitudinally backward and forward in a slot formed in the upper portion of the stand *b* is a sliding frame or stand, *a*, provided with bearings *l m* that hold the back and middle rolls, and has formed on its bottom a lug, *h*, in which works the screw-end of a shaft, *d*, formed with a thread on each end, and connecting each pair of roller-stands *b*. Attached to the shaft *d*, which is supported by a frame, *c*, is a worm-gear, *e*, that engages with a worm, *f*, which is formed on a shaft, *g*, that extends the whole length of the spinning-frame, and connects with the several pairs of roller-stands *b*, and which is operated by a wheel, crank, or any other suitable device.

The operation of my improvement is as fol-

lows: By operating the wheel or crank, &c., the shaft *g* is revolved, thereby causing the worm *f* to actuate the worm-gear *e* which rotates the shaft *d*, the screw-ends of which, working in the lug *h*, operate the sliding frame either forward or backward on the stand *b*, according to the direction in which the wheel, &c., is turned. By the above operation the distance between the front and middle and back rolls is either increased or diminished, and the adjustment of the rolls is performed at all the stands *a* by one operation. For it will readily be seen that, by the operation of the shaft *g*, which connects with all the stands *a*, and actuates the shaft *d* which connects each pair, each and every stand *a* is at once adjusted with very little time and labor; and as the machinery, by the present arrangement, has not to be stopped to allow of the taking apart and readjustment of the parts, as has heretofore been necessary, a very great saving is made in time and labor; and economy is gained in the cost of manufacture, as well as securing the production of a better material. For it is well known to cotton manufacturers that, when it is desired to use a grade of cotton with a staple of different length than that they have been employing, they must either adjust their rollers to suit the staple of cotton, or spin it as it is without regard to the adjustment of the rollers, thereby producing poor yarn. Often the latter course is adopted, owing to the trouble and time required to adjust the rollers by the ordinary methods in use; whereas, by the adoption of my improved mechanism, one man can adjust one hundred machines in less time than two men could arrange one machine by the method heretofore in use; thus obviating the objections above stated.

My adjusting mechanism can be so arranged as to operate the front roll, instead of the back and middle rolls.

Having thus fully described my invention, what I claim, and desire to have secured to me by Letters Patent, is—

1. The adjustable sliding frame or stand *a*, formed with lug *h* and bearings *l m*, and arranged so as to travel longitudinally on the stand *b*, and operated by shaft *g*, worm-gear *e*, worm *f*, shaft *d*, or their mechanical equivalents, substantially as specified.

2. The shaft *d*, formed with screw-threads on each end, and worm-gear *e*, in combination with the sliding stand *a* and shaft *g*, substantially as specified.

3. The shaft *g*, engaging with and operating the shaft *d*, in combination with the stand *a*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM T. CARROLL.

Witnesses:

LELAND D. JENCKES,
LOUIS A. COOK.