

C. Green.
Spinning Machinery.

Nº 2,333.

Patented Aug. 31, 1858.

Fig. 1.

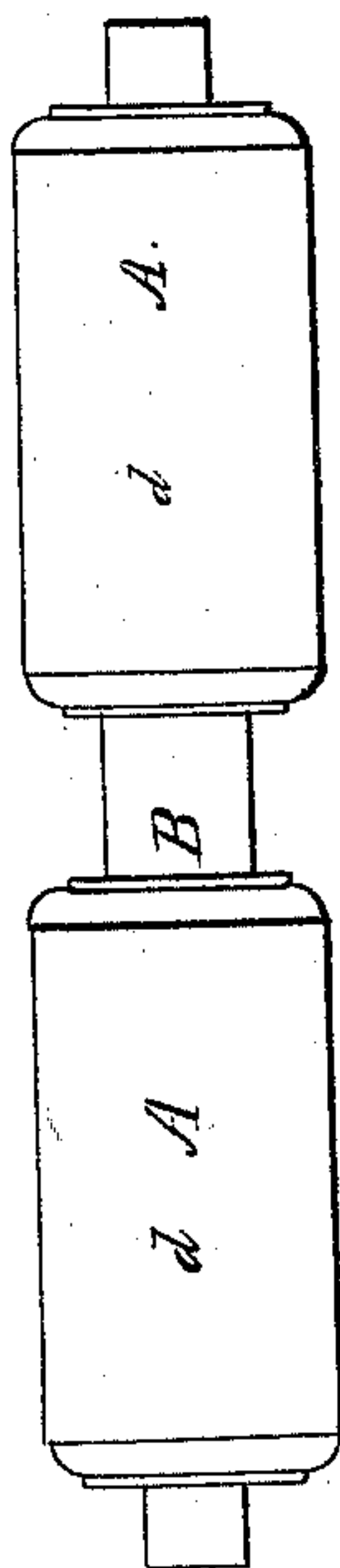


Fig. 2.

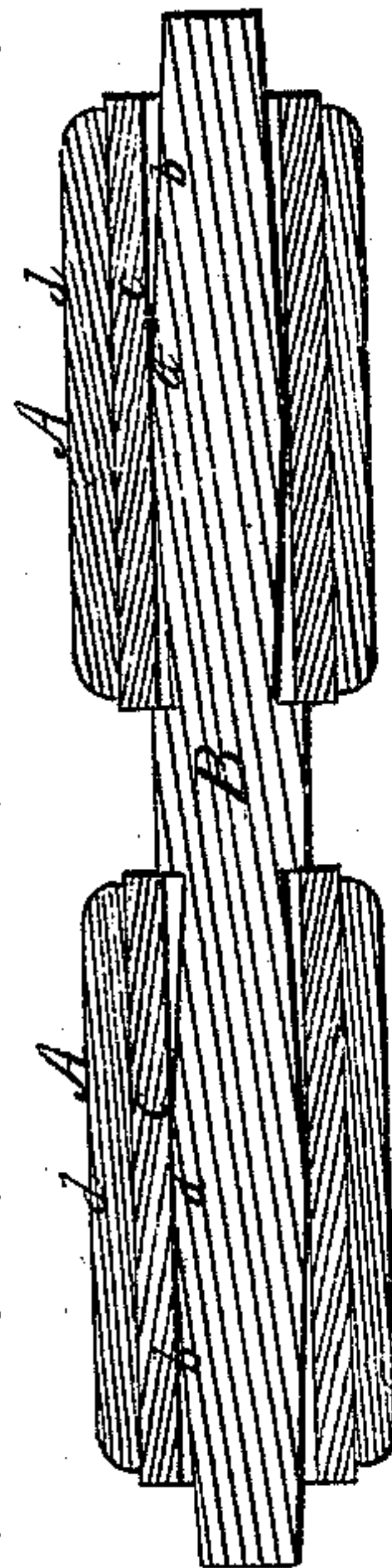
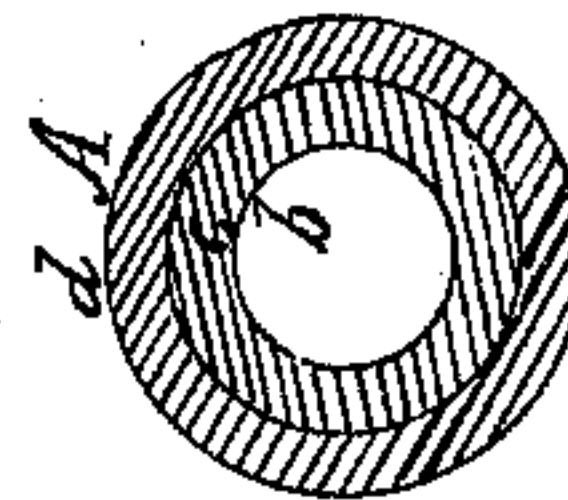


Fig. 3.



Fig. 4.



UNITED STATES PATENT OFFICE.

CHARLES GREEN, OF SALEM, MASSACHUSETTS.

TOP ROLLER FOR SPINNING MACHINERY.

Specification of Letters Patent No. 21,333, dated August 31, 1858.

To all whom it may concern:

Be it known that I, CHARLES GREEN, of Salem, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Spinning Machinery; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings.

My invention or improvement has reference to the top rollers of the system of drawing rollers of a spinning machine used for drawing and twisting cotton or other fibrous substance, and the nature of the said invention consists in the application of each top roller to its spindle in such manner as to enable the roller to rotate and rock or tilt on the spindle, and for the purpose of attaining one or more new and useful results as hereinafter mentioned. By such an application of the roller to its spindle, important advantages are gained. In the first place, the friction induced by the rotary motion of the roller is very much diminished in comparison to what it is when the roller is made fast to the spindle and the latter rotates with the roller. In the second place, the roller can accommodate itself to the bottom roller or the yarn while passing between the two. In the third place the improvement effects a great saving in lubricating material in comparison to what is required when the roller and spindle rotate together. In the fourth place, each roller turns independently of that one next to it and on the same spindle, and thus is not governed in its movement in any manner by the rotary motions of the latter. In the fifth place, the liability of the roller to pack with or wind up the yarn is greatly reduced, and in case of the occurrence of such, the removal of the yarn from the roller is more easily effected, than when the roller is fastened to the spindle.

Of the said drawings, Figure 1, is a side view of two top rollers and their spindle.

Fig. 2, is a longitudinal section of the same. Fig. 3, is a side view of the spindle, while Fig. 4, is a transverse section of one of the rollers.

In such drawings, A, A, are the two top rollers, and, B, their spindle.

That part, *a*, of the spindle on which a top roller is placed is formed longer in diameter in its middle part than it is at its extremities and it tapers each way from its middle as shown in Figs. 2, and, 3.

The top roller is constructed tubular or with a cylindrical bore or bearing, *b*, to receive the part, *a*, of the spindle. In making the top roller, it may consist of a short metallic tube, *c*, covered with a coating, *d*, of leather or other suitable material or materials, the diameter of the bore of the tube corresponding with or being a little greater than the greatest diameter of the part, *a*, of the spindle on which the roller is to work.

When the spinning machine is in operation, the top roller will revolve on the spindle, which will be stationary, and besides revolving on the spindle the top roller will be at liberty to rock or tip either way in a longitudinal direction. By being supported only at the middle of the part, *a*, the bearing surface is very small and the bore of the roller becomes not only a convenient reservoir or place for retaining oil for the lubrication of the rubbing surfaces, but a means of protecting the rubbing surfaces from dirt or fibrous filaments.

I claim—

The application of a top roller of a spinning machine to its spindle so as to be capable of rocking and rotating thereon substantially in manner and for the purpose hereinbefore specified.

In testimony whereof I have hereunto set my signature.

CHAS. GREEN.

Witnesses:

THOS. M. SAUNDERS,
JAMES KIMBALL.