

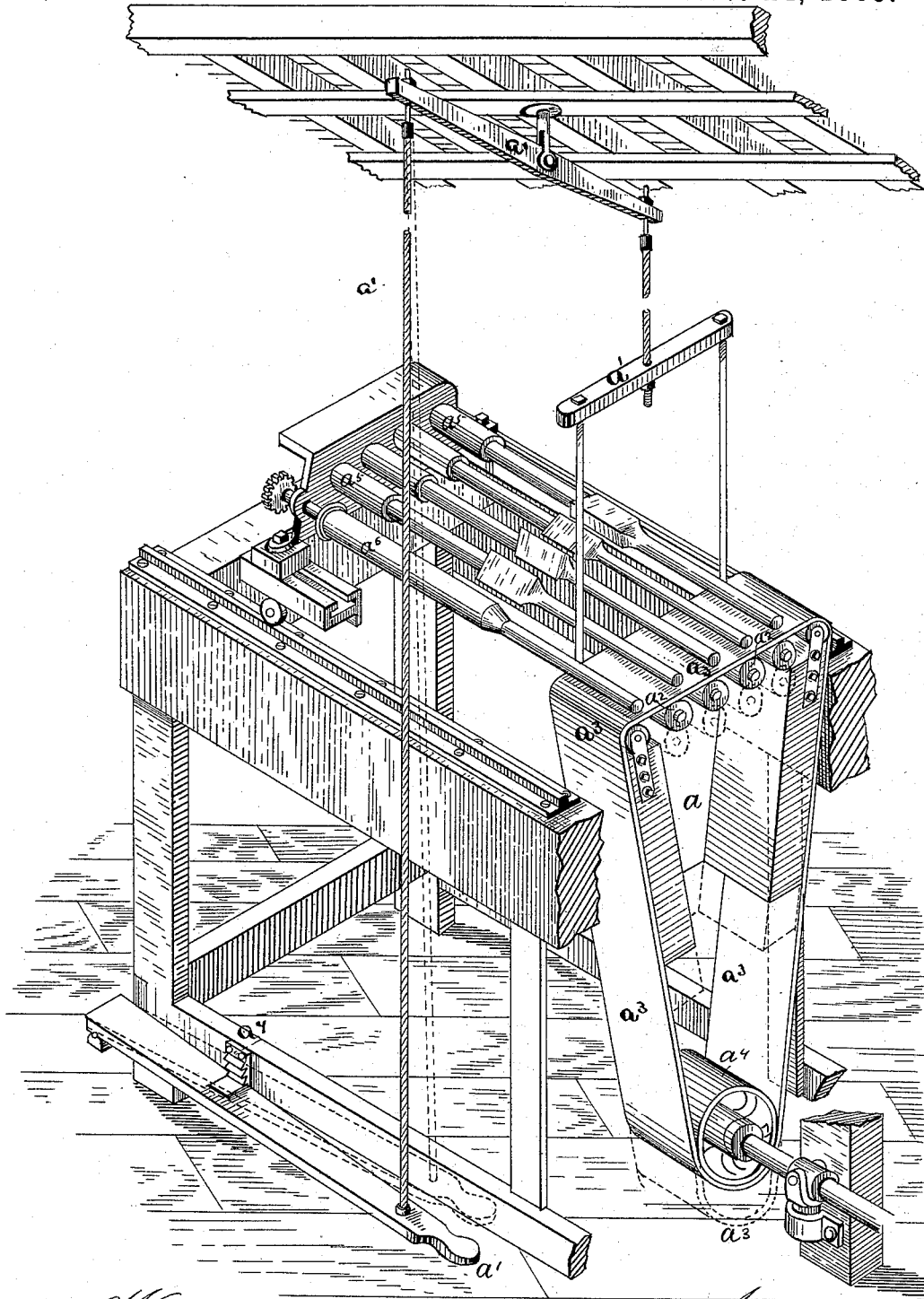
(No Model.)

J. M. GILBERT.

POLISHING MECHANISM FOR TURNING LATHES.

No. 330,890.

Patented Nov. 24, 1885.



Witnesses.  
Fred L. Noughton  
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# UNITED STATES PATENT OFFICE.

JAMES M. GILBERT, OF PUTNEY, VERMONT.

## POLISHING MECHANISM FOR TURNING-LATHES.

SPECIFICATION forming part of Letters Patent No. 330,890, dated November 24, 1885.

Application filed October 20, 1884. Serial No. 146,051. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. GILBERT, of Putney, in the county of Windham and State of Vermont, have invented a new and useful Polishing Mechanism for Turning-Lathes, of which the following is a specification.

My invention relates to that class of turning-lathes which are used for cutting out from wood blanks spokes and other articles irregular in form, the object of it being to provide the means on the lathe of giving the article turned or cut out a smooth finished surface; and it consists in a vertically-sliding frame carrying an abrasive apron or belt, a series of rolls supporting the apron or belt placed in a horizontal plane under the work to be effected, with suitable devices for driving the abrasive apron or belt and raising and lowering the whole to bring the moving abrasive belt up against or lower it from the work. These devices are suitably placed and sufficiently secured between and below the side pieces of the lathe.

The lathe to which I have applied my invention is more or less generally known as the "Cylinder Lathe," and is so constructed that it will turn or cut out from blanks of wood several spokes or other articles at the same time in the form of a pattern fixed in the lathe for the purpose of guiding the cutters. The blanks of wood to be cut or turned revolve in the machine each on its axis, and the cutting-knives also revolve, their edge striking the blank and cutting away all the wood outside of the line of the outer form of the pattern.

The drawing annexed shows a partial perspective of the cylinder lathe (the cutting-knives and other points not essential to the illustration of my invention being omitted) with my improvement attached.

$a$  is a vertically-sliding frame moving in guides (not shown) affixed to the frame of the lathe, supporting and carrying a series of revolving cylinders,  $a^2$ , over and upon which an endless apron or belt coated on the outside with abrasive substance passes and rides.

$a^3$  is a lever and its connections, by which the frame  $a$ , carrying the endless apron, is raised to a working position. When this lever

is released, the frame  $a$  descends by its own weight.

$a^2$  indicates the rotating cylinders over and upon which the endless apron passes and rides. These cylinders are supported by and revolve upon studs fixed in the frame  $a$ , and rotate with the traveling motion of the endless apron.

$a^3$  is an endless apron or belt, which passes over and rides upon the rotating cylinders  $a^2$  and around a driving-pulley conveniently placed and fixed on or near the bottom of the frame of the lathe, by which pulley motion is imparted to it. The outer surface of this endless apron or belt is covered with sharp sand or other suitable abrasive material affixed to it by any suitable cement or glue. This apron is shown in working position, and the dotted lines show its position when the vertically-sliding frame is lowered and the driving-pulley released.

$a^4$  is the driving-pulley, which imparts motion to the endless apron  $a^3$ .

$a^5$  indicates the several revolving spindles of the lathe, upon and to which the blanks of wood to be cut or turned are affixed, and spokes upon them, which revolve with the spindles.

$a^6$  is the pattern by which the revolving cutters are guided so as to give the desired shape to the article turned or cut on the lathe.

$a^7$  is a device for securing the lever  $a^3$  and its connections for raising the vertically-sliding frame  $a$  and the revolving cylinders  $a^2$  in their working position.

The cutting-knives of the lathe, having no immediate relation to the devices which constitute my improvement, are not shown in the drawing.

When the lathe is put in operation, the lever  $a^3$  is depressed, so as to raise the vertical sliding frame  $a$ , with its rotating cylinder  $a^2$  and the abrasive endless apron  $a^3$ , up to the working position, so that the apron  $a^3$  will engage the driving-pulley  $a^4$  and be carried forward by it, with its outer surface in contact with the abrading-surfaces of the several spokes being turned on the lathe. The apron  $a^3$  being flexible and in some degree elastic, it will conform to the shape of one side of the spoke, and by the action of the abrasive sub-

stance on it smooths and finishes the surface of the spoke, so that when the turning of it is completed it is finished and ready for use.

I claim as new and my invention—

5 The above-described improvement in polishing mechanism for turning-lathes, consisting of the vertically-sliding frame *a*, the abrasive apron or belt *a*<sup>3</sup>, and the series of rolls *a*<sup>2</sup>, in

combination with suitable devices for driving the abrasive apron or belt and for raising and lowering the frame *a*, all substantially as described. 10

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Witnesses:

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