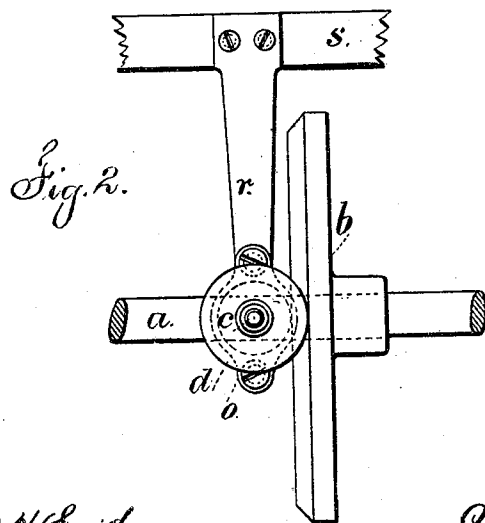
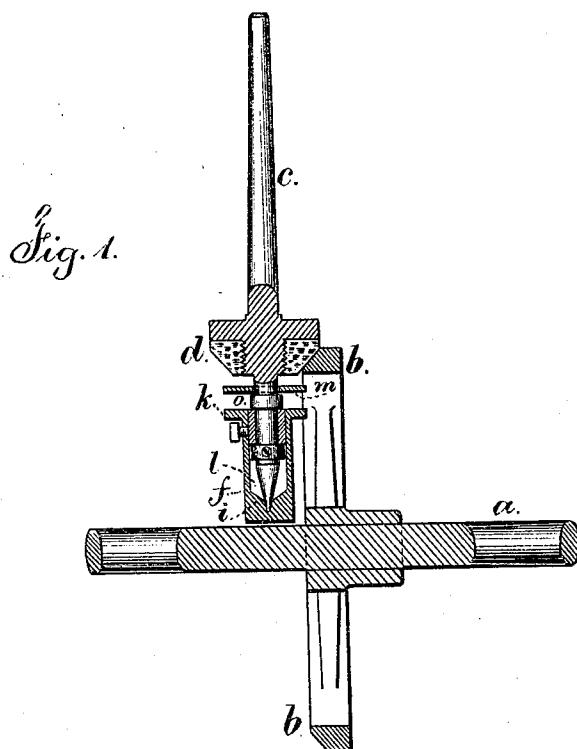


**T. WRIGLEY.**  
**MEANS FOR DRIVING THE SPINDLES OF SPINNING-MACHINES.**  
 No. 179,496. Patented July 4, 1876.



*Witnesses*

*Chas H. Smith  
 Harold Arrell*

*Inventor*  
*Thomas Wrigley.*  
*per Lemuel W. Lowell*  
*Atty.*

# UNITED STATES PATENT OFFICE.

THOMAS WRIGLEY, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN MEANS FOR DRIVING THE SPINDLES OF SPINNING-MACHINES.

Specification forming part of Letters Patent No. **179,496**, dated July 4, 1876; application filed February 28, 1876.

*To all whom it may concern :*

Be it known that I, THOMAS WRIGLEY, of Paterson, in the county of Passaic and State of New Jersey, have invented an Improvement in Spinning-Machines, of which the following is a specification:

This improvement relates to the means for driving the spindle, and to the socket for holding the lower end of said spindle.

I make use of a friction-wheel with a beveled face acting against the beveled surface of leather upon the spindle, to rotate the same, and the lower end of the spindle is received into a tubular bearing, having at the lower end a step and at the upper part a bearing for the spindle, so that a receptacle is formed between the two bearings for oil or similar material, and the bearing for the spindle is at the end of a yielding or spring arm that insures a proper contact between the friction-wheel and pinion.

In the drawing, Figure 1 is a vertical section of the spindle and its wheel; and Fig. 2 is a plan of the same.

The driving-shaft *a* is mounted in suitable bearings, and revolved by suitable power. It extends the entire length of the range of spindles, and is provided with a wheel, *b*, adjacent to each spindle, and the surface of such wheel *b* is beveled. The spindle *c* is provided with a conical leather pinion, *d*, that runs by contact with the surface of the wheel *b*, and the upper part of the spindle is adapted to receive the bobbin or spool, as usual. The lower part of

the spindle passes into the tubular socket *f*, in which is the bottom step or bearing *i*, and upper bearing or box *k* for sustaining the spindle, and between these is the oil-chamber *l*. The spindle is kept from being lifted, in pulling off the bobbin, by a collar, *o*, that may be below the forked plate *m*, or it may be within the oil-chamber, provided the bearing *k* is movable and held in the socket *f* by a set-screw.

By this construction the belts heretofore usually employed are dispensed with, and the parts are rendered very durable and efficient.

The tubular sockets *f* are each connected with the outer end of a yielding arm, *r*, that is attached at its opposite end to the horizontal bar *s*, so as to cause the surfaces of the friction-wheel and pinion to remain in contact with the friction necessary to insure the rotation of the spindle, and the tubular socket *f* may be adjusted vertically in the arm *r*, to insure the proper frictional contact.

I claim as my invention—

The yielding arm *r*, tubular socket *f*, bearings *i* *k*, and spindle *c* in combination with the beveled friction-wheel *b* and beveled pinion *d*, substantially as set forth.

Signed by me this 24th day of February, A. D. 1876.

THOMAS WRIGLEY.

Witnesses:

GEO. T. PINCKNEY,  
CHAS. H. SMITH.