No. 860,677. PATENTED JULY 23, 1907.

D. LEMOINE.

SPINNING SPINDLE.

APPLICATION FILED NOV. 6, 1906.

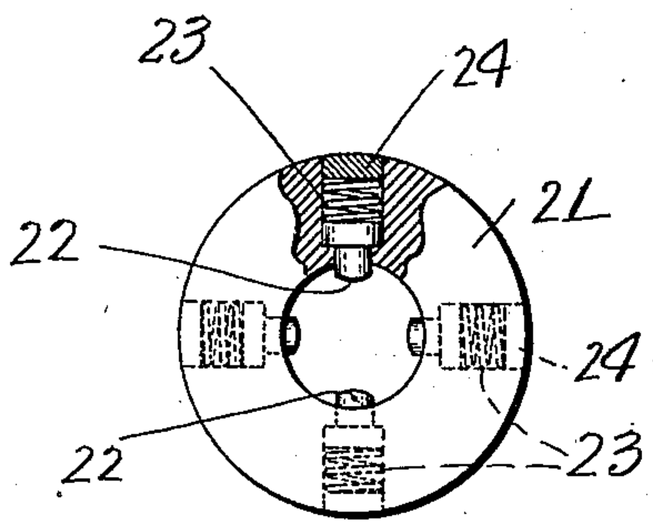

Fig. 2.

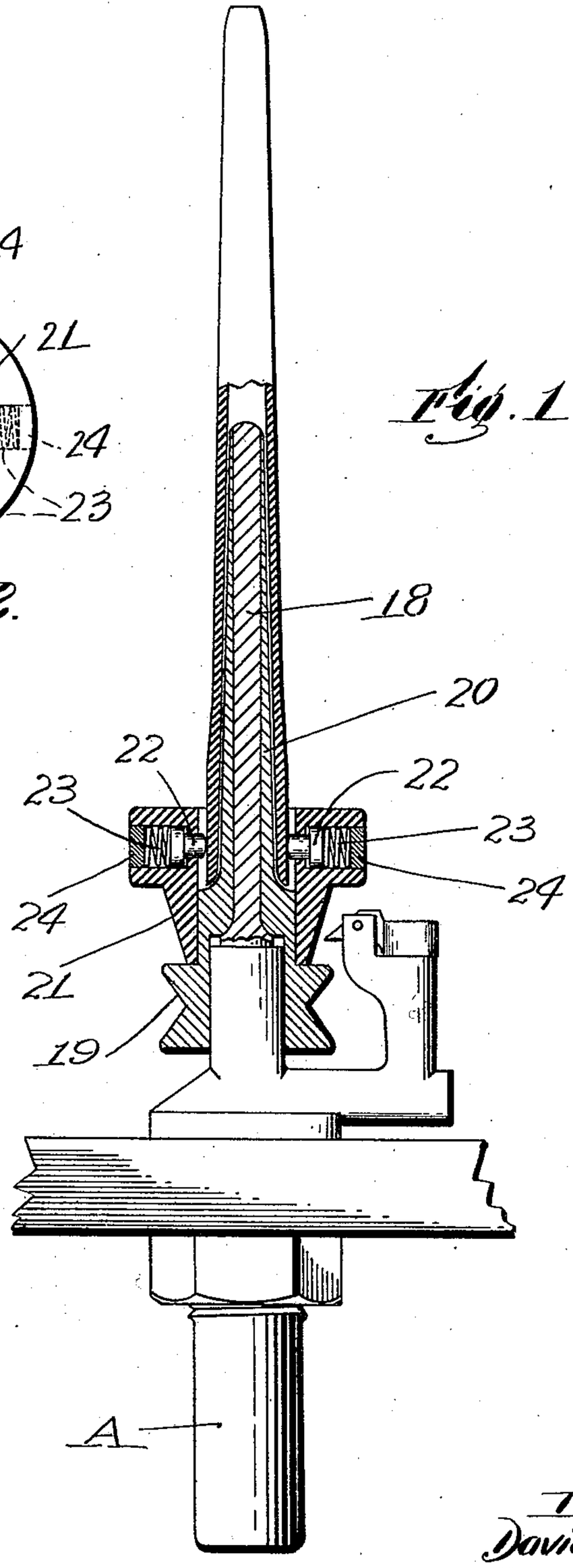

Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

DAVID LEMOINE, OF FISHERVILLE, MASSACHUSETTS, ASSIGNOR TO HIMSELF, ADOLPHUS J. SOUCY, OF WORCESTER, MASSACHUSETTS, AND JOHN WARD, OF WHITINSVILLE, MASSACHUSETTS.

SPINNING-SPINDLE.

No. 860,677. Specification of Letters Patent. Patented July 23, 1907.

Original application filed December 22, 1904, Serial No. 237,876. Divided and this application filed November 6, 1906. Serial No. 342,304.

To all whom it may concern:

Be it known that I, DAVID LEMOINE, a citizen of the United States, residing at Fisherville, in the county of Worcester and State of Massachusetts, have invented a new and useful Spinning-Spindle, of which the following is a specification.

This application for patent is a division of my prior application filed December 22, 1904, Serial No. 237,876.

The object of this invention is to improve the ordinary spinning spindle, particularly with respect to the way in which the bobbin is held thereon and also with respect to the bearings and the balancing of the spindle.

A spinning spindle made according to my invention is shown in the accompanying sheet of drawings forming a part of this specification.

In the drawing, Figure 1 is a sectional elevation of a spinning spindle embodying my improvements, and Fig. 2 is a plan view partly in section of the bobbin gripping cup.

Referring to the drawings and in detail, 18 designates the blade. This is made out of steel and hardened and ground, and the upper tapered part of the same is made slightly smaller than usual. Then fitted on the same is a whirl 19 which has an extending jacket or thin sleeve 20 which is bored out so that the upper tapered portion of the blade can be forced into the same. This jacket or sleeve 20 extends to the tip of the blade and forms the bobbin engaging or supporting surface. The whirl and jacket are preferably made in one piece and are roughly finished before the blade is forced into the same. The jacket or sleeve 20 is then accurately finished off. This will make a balanced and true spindle. This has been claimed in my above mentioned application.

21 designates a bobbin clamping cup which is forced onto the combined jacket and whirl. This cup has four holes drilled at right angles to each other, the inside ends of the holes being smaller than the main portions thereof. Fitting in these holes are plungers 22 which have projecting ends extending through the reduced portions of the holes. Springs 23 are arranged to bear on the plungers, and the outside of the ends of the holes are closed by plugs 24 which are forced into the holes.

By this construction when a bobbin is placed upon the spindle the lower end thereof can be forced down into the bottom clamping cup so that the plungers thereof will tightly grip and hold the same. It will be seen that the plungers are arranged to act inwardly and independently of each other, whereby the bobbin will be tightly and accurately held even if irregular in shape.

By the arrangements before described a balanced spindle is provided which can be run at high speed, and in which the bobbin will be clamped and held tightly as the yarn is wound thereon.

The details and arrangements herein described may be varied by a skilled mechanic without departing from the scope of my invention as expressed in the claims.

Having thus fully described my invention, what I claim and desire to secure by Letters-Patent is:—

1. A spinning spindle comprising a blade, a combined whirl and jacket secured thereto, a bobbin clamping cup secured to the jacket, and having inwardly acting bobbin-clamping plungers.

2. A spinning spindle comprising a combined whirl and jacket, the jacket being adapted to support the bobbin in contact with its outer surface, and inwardly extending spring-pressed plungers mounted above and supported by the whirl for clamping the bobbin against the jacket.

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

DAVID LEMOINE.

Witnesses:
HERBERT F. HALL,
ARTHUR E. SEAGRAVE.