No. 861,075. PATENTED JULY 23, 1907.

E. ATWOOD.

COMBINED WINDING BOBBIN AND SPINDLE.

APPLICATION FILED DEC. 12, 1904.

Fig. 5.

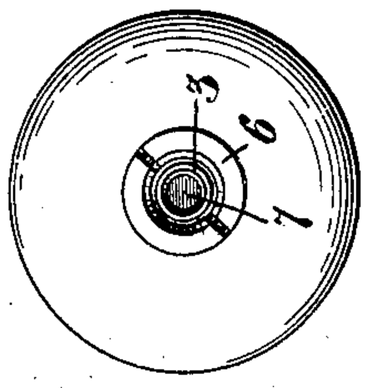


Fig. 4.

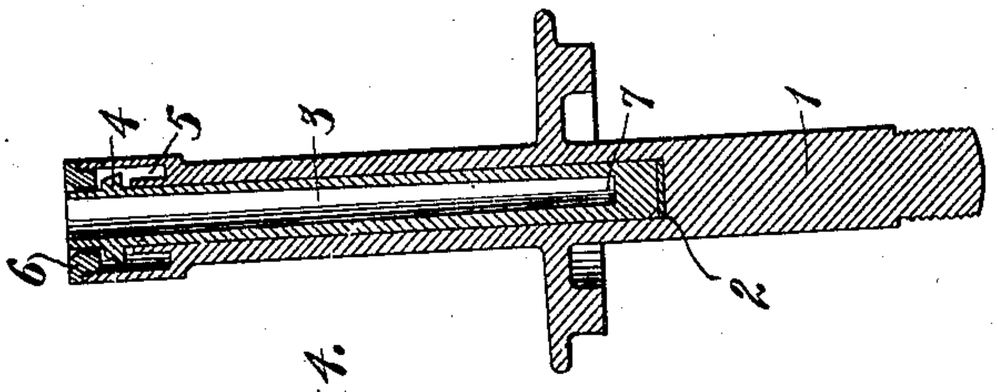


Fig. 3.

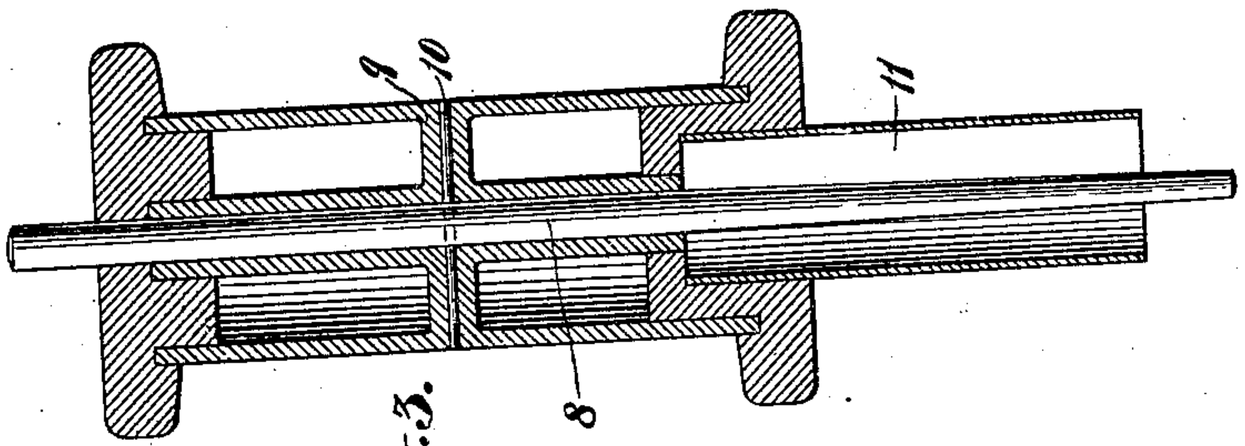


Fig. 6.

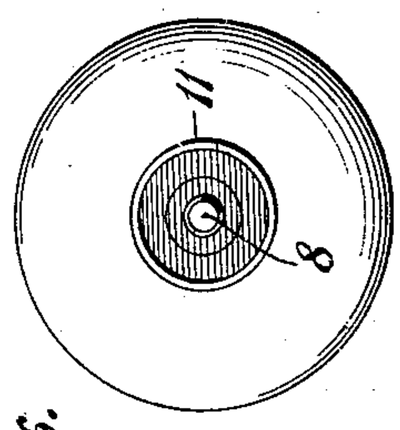


Fig. 2.

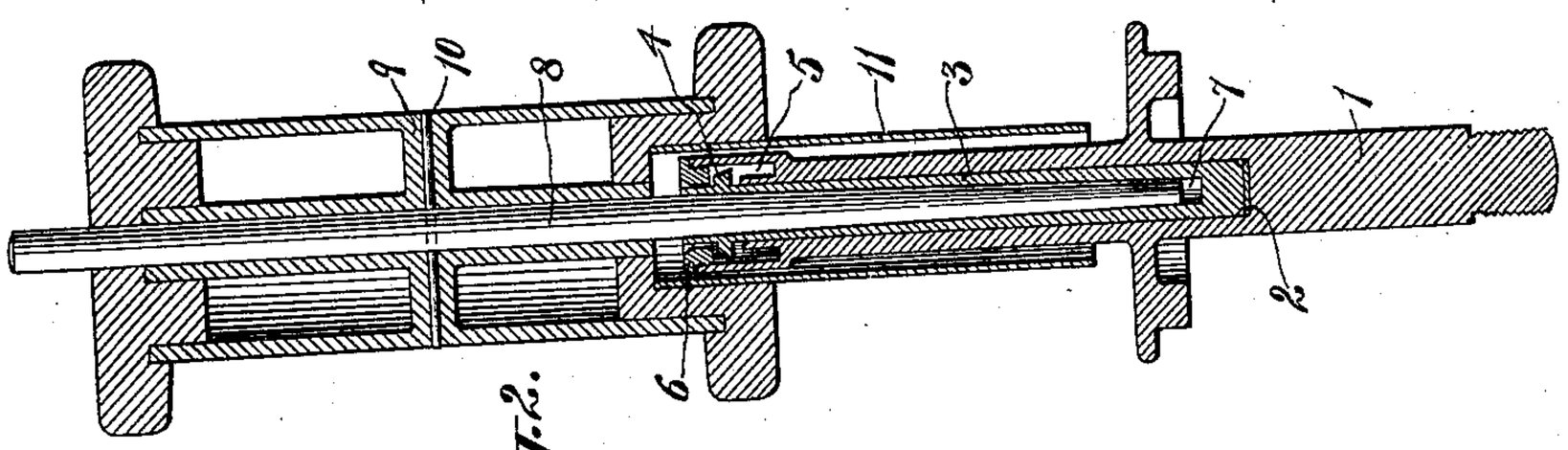
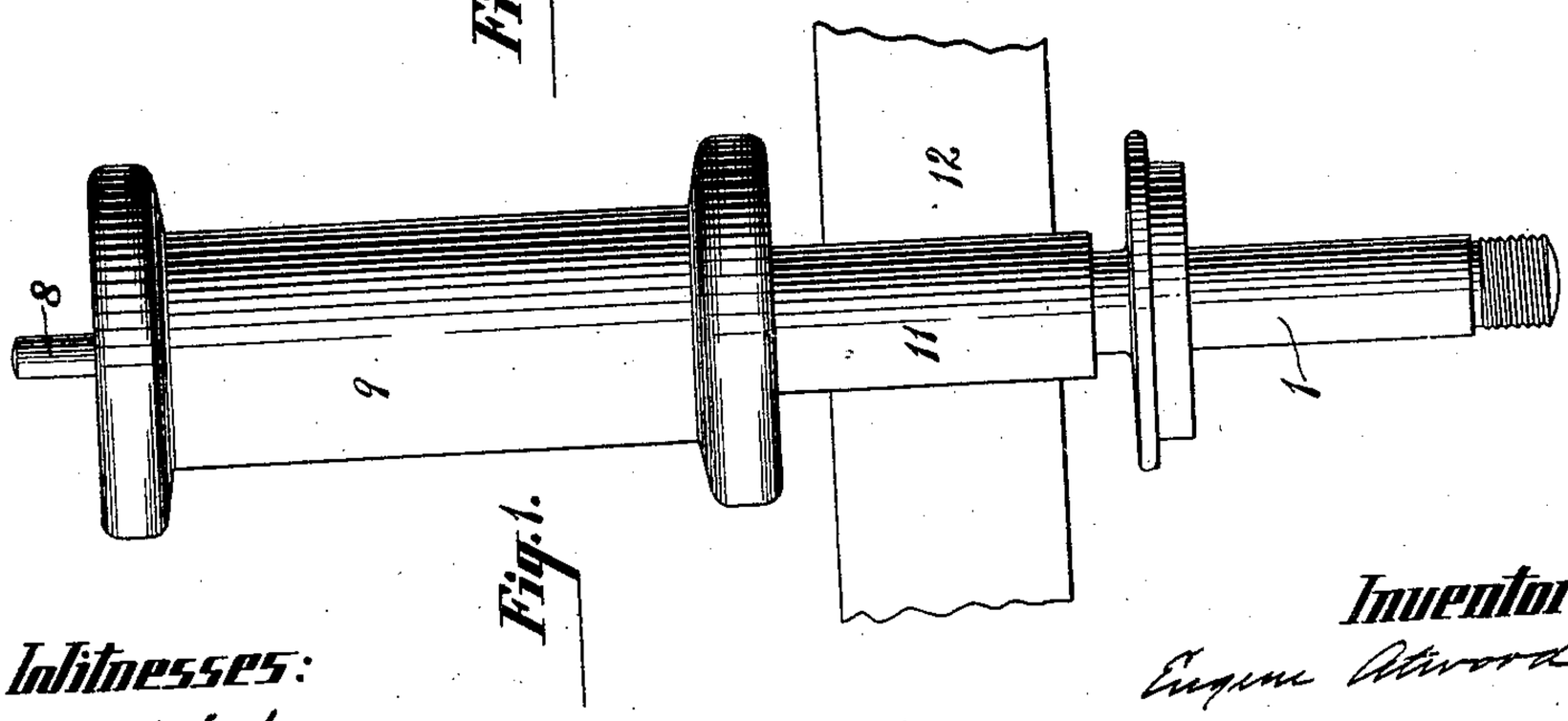


Fig. 1.



Witnesses:

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EUGENE ATWOOD, OF STONINGTON, CONNECTICUT.

COMBINED WINDING BOBBIN AND SPINDLE.

No. 861,075. Specification of Letters Patent. Patented July 23, 1907.

Application filed December 12, 1904. Serial No. 236,537.

To all whom it may concern:

Be it known that I, EUGENE ATWOOD, a citizen of the United States, and a resident of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in a Combined Winding Bobbin and Spindle, of which the following is a specification.

The object of my present invention is to provide a device in which the winding bobbin is provided with a whirl arranged to engage the driving belt of a spinning machine, which whirl, at the same time, serves as the driving head of the bobbin when the bobbin is being wound, preparatory to its use in connection with the spinning machine.

A further object is to provide a device in which a separable spindle is utilized, one portion, viz; the socket member of the spindle, being rotatably mounted in its tubular bolster and the other member, viz; the blade member of the spindle being permanently carried by the winding bobbin, the two members of the spindle being arranged to be frictionally locked to each other when the bobbin is used in connection with the spinning machine.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Figure 1 represents in side elevation a bolster, bobbin and spindle, Fig. 2 is a vertical central section through the same, Fig. 3 is a similar view of the combined bobbin, spindle blade and whirl removed from the bolster and socket member of the spindle, Fig. 4 is a similar view of the said bolster and socket member of the spindle, Fig. 5 is a top plan view of the bolster and the socket member of the spindle, and Fig. 6 is an inverted plan view of the combined bobbin, spindle blade and whirl.

The tubular bolster herein illustrated is denoted by 1 and its vertical recess by 2.

Within the vertical recess 2 of the bolster is rotatably mounted the lower or socket member 3 of my improved spindle, which socket member is provided near its top with a peripheral flange 4 located in the enlarged recess 5 at the top of the bolster 1. This socket member 3 of the spindle is held against unintentional removal from the bolster 1 by a locking ring 6 which has a screw threaded engagement with the top of the said bolster above the flange 4 on the socket member 3 of the spindle. This socket member 3 of the spindle is provided with a flaring socket 7 for the reception of the tapered end of the upper or blade member 8 of the spindle.

The relation of the flaring socket of the member 3 and the tapered end of the member 8 of the spindle is such that when the blade is inserted into the socket it will be locked by friction so that the two members of the spindle will rotate together in the recess 2 of the bolster.

The winding bobbin is denoted by 9 and may be made of any well known or approved construction. This bobbin is permanently fixed on the blade member 8 of the spindle, in the present instance by means of a cross pin 10.

A hollow whirl 11 is permanently united to one end of the bobbin, which whirl is of sufficient diameter to embrace the upper portion of the bolster 1 when the bobbin is in use in connection with the spinning machine. This whirl may be used as the driving head of the bobbin, when the same is being wound on the winding machine, and, when the bobbin is used in the spinning machine, the whirl is arranged to be engaged and driven by the driving belt of the said spinning machine. A fragment of the driving belt of the spinning machine is shown in the accompanying drawings and is denoted by 12.

It will be seen that a device constructed and arranged as herein described, materially lessens the work involved in the handling of the bobbins as it obviates the necessity of the bobbins being placed upon winding spindles in the winding machine and then removed therefrom and placed upon the blades of the spinning spindles in the spinning machine. Furthermore, the double use of the whirl carried by the bobbin is of extreme importance.

What I claim is:—

In combination, a tubular bolster, a spindle socket member rotatably mounted therein, a spindle blade member arranged to be removably locked to the socket member by friction, a winding bobbin permanently fixed on the blade member and a hollow whirl of cylindrical form permanently united to one end of the bobbin and surrounding the spindle blade member, said whirl also being arranged to surround the spindle socket member when the two members are in their locked position.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 21st day of November 1904.

EUGENE ATWOOD.

Witnesses:
C. H. COWAN,
E. E. BRADLEY.