

No. 709,831.

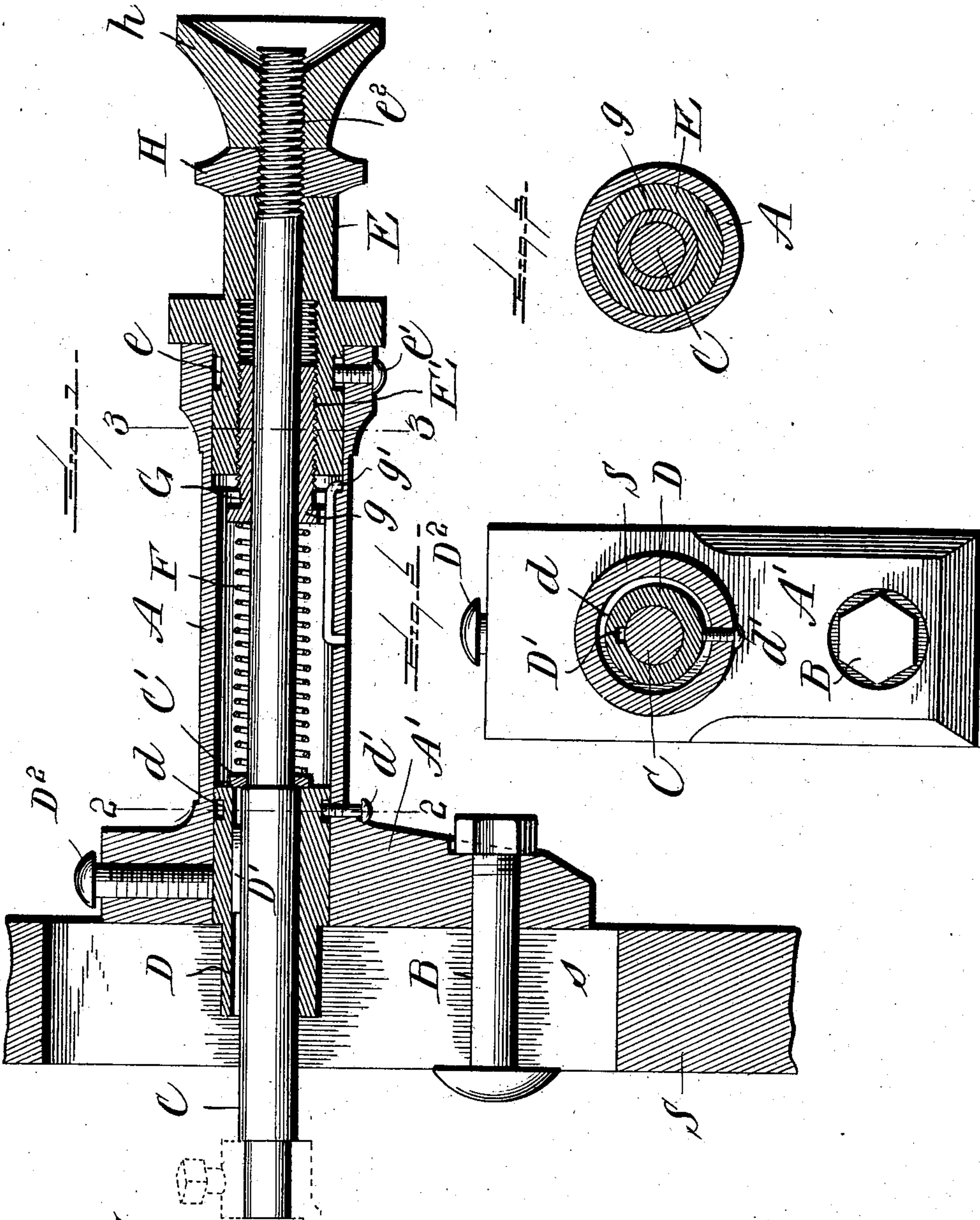
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B. A. STEWART.

BUR WHEEL SUPPORT FOR KNITTING MACHINES.

(Application filed Apr. 7, 1902.)

(No Model.)



WITNESSES

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BUR-WHEEL SUPPORT FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 709,831, dated September 23, 1902.

Application filed April 7, 1902. Serial No. 101,828. (No model.)

To all whom it may concern:

Be it known that I, BURTON A. STEWART, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Bur-Wheel Supports for Knitting-Machines; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is an improvement in supports or holders for the burs of knitting-machines; and its principal object is to produce a simple, easy-acting, and reliable bur-support which will be capable of all necessary adjustments to secure the bur in desired working position under normal operating positions and in which the tension of the spring by which the bur is held up to its work can be accurately and easily adjusted, so as to permit the bur to yield when a knot or bunch in the thread is passing and will then return the bur immediately to proper position. Subsidiary objects are to protect the operative parts from exposure, to reduce the number of moving parts, and to reduce the cost of construction.

The invention consists, first, in the novel devices for permitting rotary adjustment of the shaft carrying the bur; second, in the novel devices for regulating and adjusting the tension of the shaft-controlling spring, and, third, in other details of constructions and combinations of parts, as hereinafter described with reference to the accompanying drawings and summarized in the claims.

In the the drawings, Figure 1 is a longitudinal vertical section through the holder. Fig. 2 is a detail transverse section on line 2 2, Fig. 1; and Fig. 3 is a transverse section on line 3 3, Fig. 1.

S represents part of one of the ordinary stands or uprights of a knitting-machine to which the bur-holders are attached.

A represents the tubular body of the holder, having a head A' at one end, through which is tapped a bolt B, engaging a vertical slot s in the standard and adjustably securing the holder thereto, with the body A projecting substantially at right angles to the support. Through this holder extends a shaft C, on the

inner end of which is fixedly supported in any suitable or usual manner the bur T, which is indicated in dotted lines in the drawings, the particular construction of bur and the connection between the bur and shaft C forming no part of present invention.

The shaft C is supported in a sleeve D in the front end of the body A and in a sleeve E in the rear end of the body. Sleeve D is rotatably secured in the body by means of an annular groove d, engaged by a screw d', tapped through a properly-located aperture in the body. Sleeve E is also rotatably secured in the other end of the body by a screw e', engaging an annular groove e in the sleeve. Thus both sleeves D and E are rotatably secured within the body, but are not permitted to move longitudinally therein. The sleeve E and shaft C are rotatable independently; but the shaft is splined to sleeve D, as shown at D', so that these parts must rotate together if at all; but the shaft C is free to reciprocate or move longitudinally independently of and through both sleeves D and E.

The sleeve D is employed in adjusting the inclination of the bur or the angle at which it is to operate relatively to the support S. This adjustment is effected by turning the shaft C on its axis until the bur is in the desired position, and then sleeve D is locked by means of a screw-bolt D², tapped through a suitable opening in head A' and bearing against the outer surface of sleeve D, binding the same in the position to which it was brought by the rotative adjustment of the shaft C.

In order to keep the shaft C projected to hold the bur properly up to its work while the machine is operating under normal conditions, a coiled spring F is placed on the shaft C within the body A, said spring bearing at one end against a collar C' on the shaft and at the other against the inner end of a cylinder G, which is loosely journaled on the shaft, said cylinder being threaded externally and engaging an internally-threaded portion E' of the sleeve E, so that by rotating the latter the cylinder G will be telescoped in or out of sleeve E.

The tension of the spring is adjusted by simply rotating sleeve E on its axis, cylinder

G moving in or out according to the rotation of sleeve E. To prevent cylinder G rotating, a notch *g* on the end of the cylinder engages a longitudinal rib or spline *g'* in the body A, as shown.

The rear end of shaft C projects through sleeve E and is threaded, as shown at *e*², and on this end is tapped an adjusting-nut H and a jam-nut *h*, by means of which the projection of the bur from the support is adjusted and controlled in the usual manner.

The construction and operation of the several parts are evident from the drawings. To rotatively adjust the shaft C, it is only necessary to loosen bolt D², turn the shaft C to desired position, and then set bolt D² down hard on sleeve D. To regulate the projection of the bur from the standard, nuts H *h* are adjusted in the usual manner. To regulate or change the tension of spring F, sleeve E is rotated left or right, according as it is desired to increase or lessen the tension of the spring. By loosening bolt D² and withdrawing screws *d' e'* the shaft, sleeve, nut, and cylinder and springs can be withdrawn from the body for inspection.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. In a bur-holder for knitting-machines, the combination of the body, the bur-holding shaft extending therethrough, a rotatable sleeve surrounding the shaft, a threaded cylinder engaging said sleeve, and a spring interposed between a stop on the shaft and the said cylinder, substantially as specified.

2. In a bur-holder for knitting-machines, the combination of the body, the bur-supporting shaft extending therethrough, a rotatable internally-threaded sleeve in the end of the body, a threaded cylinder within said

sleeve, and a spring interposed between a stop on the shaft and the said cylinder; with means for rotatively adjusting and locking said shaft, and devices for regulating the forward projection of said shaft, substantially as described.

3. In a bur-holder for knitting-machines, the combination of the body, rotatable sleeves journaled in the front and rear ends thereof, a bur-holding shaft extending through and supported in said sleeves, the front sleeve being non-rotatable on the shaft, but the rear sleeve rotatable thereon, and means for locking the front sleeve; with a threaded cylinder on the shaft engaging a threaded portion of the rear sleeve, a spring interposed between said cylinder and a stop on the shaft, and means for adjusting the forward projection of the shaft, substantially as described.

4. In a bur-holder for knitting-machines, the combination of the standard, the body adjustably secured thereto, rotatable sleeves journaled in the front and rear ends of the body, and means for preventing longitudinal movement of said sleeves; with a bur-holding shaft extending through and supported in said sleeves, and rotatable with the front sleeve, a setting-bolt for locking the front sleeve; a threaded cylinder on the shaft within the body engaging a threaded portion of the rear sleeve, a spring interposed between said cylinder and a stop on the shaft, and means for adjusting the forward projection of the shaft, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BURTON A. STEWART.

In presence of—

EDMUND S. WHEELER,
JAMES S. WHEELER.