

(No Model.)

D. P. GERMAN.
SPINNING MECHANISM.

No. 510,909.

Patented Dec. 19, 1893.

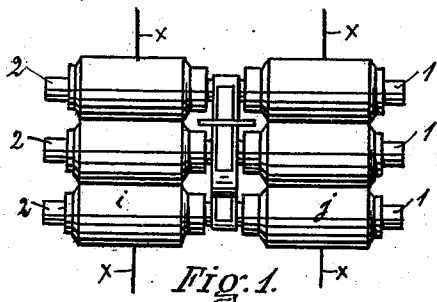


Fig. 1.

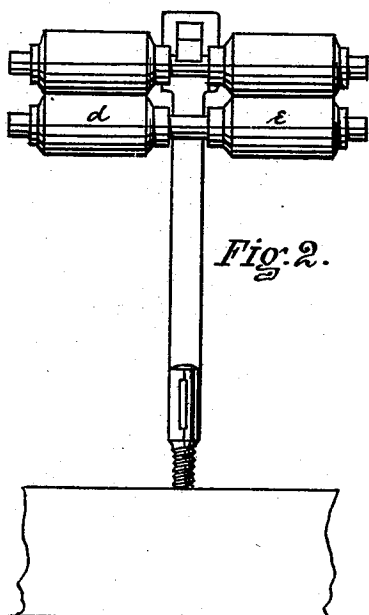


Fig. 2.

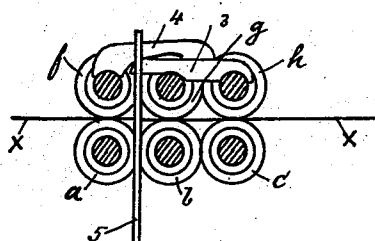


Fig. 3.

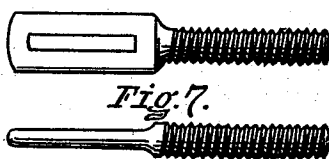
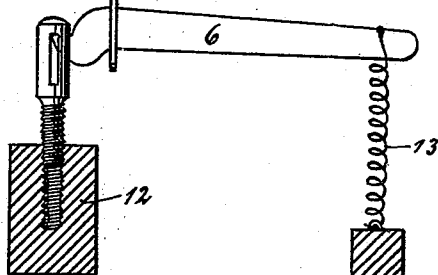


Fig. 5.

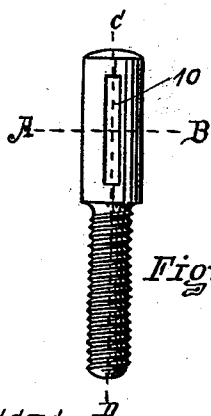


Fig. 6.



Fig. 7.

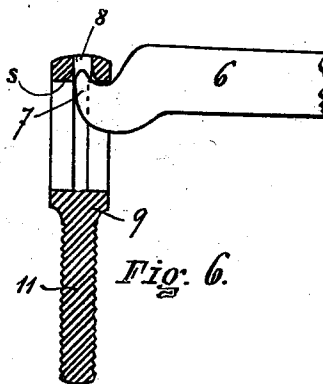
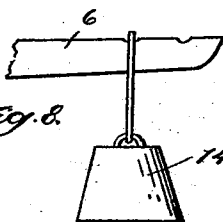


Fig. 8.

WITNESSES.

Rich. A. George
G. A. Gaymard

Fig. 8.



INVENTOR.
David P. German,
By Virley & Robinson,
Attys,

UNITED STATES PATENT OFFICE.

DAVID P. GERMAN, OF NEW HARTFORD, NEW YORK, ASSIGNOR TO JEROME B. GERMAN, OF SAME PLACE.

SPINNING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 510,909, dated December 19, 1893.

Application filed February 13, 1893. Serial No. 462,041. (No model.)

To all whom it may concern:

Be it known that I, DAVID P. GERMAN, of New Hartford, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Spinning Mechanism; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

My invention relates to an improvement in devices particularly adapted to spinning machines.

In the drawings which accompany and form a part of this specification, and in which similar letters and figures of reference refer to corresponding parts in the several views, Figure 1 shows a plan view of a set of three rollers for drawing the yarn in a spinning machine in the usual manner. Fig. 2 shows a front elevation of the same rollers in connection with the pressure mechanism by which the upper rollers are held against the lower rollers in gripping the thread to draw the same. Fig. 3 shows a cross section of the roller journals in connection with a side view of the mechanism for pressing the upper rollers on to the lower rollers. Figs. 2 and 3 are shown in connection with sections of the frame of the machine, the greater portion of the frame being omitted as unnecessary details. Fig. 4 shows the improved fulcrum piece for the lever which exerts the pressure to hold the rollers together and which constitutes my present invention. Fig. 5 shows a cross section of the fulcrum piece on line A—B of Fig. 4. Fig. 6 shows a vertical central section of my improved fulcrum piece on line C—D of Fig. 4 in connection with a portion of the lever. Fig. 7 shows a side and edge view of the old form of fulcrum piece. Fig. 8 shows a detail in which a weight is substituted for a spring for operating the lever.

Referring more particularly to the reference numerals and letters in a more specific description of the device *a*, *b* and *c* are rollers mounted in fixed bearings on the frame and having faces *d*, *e* adapted to engage the thread

as *x* to be drawn and which faces are preferably covered with leather or some other similar material.

Mounted on top of the rollers *a*, *b* and *c* are rollers *f*, *g* and *h*. These rollers are mounted in adjustable bearings or between guiding walls which engage on the journals 1 and 2 of each roller and hold the rollers in place on top of each of the lower rollers. The rollers *f*, *g* and *h* are each provided with faces *i* and *j* coinciding with the faces *d* and *e* of the lower rollers and adapted to engage the threads to be drawn in the operation of spinning or otherwise.

Between the faces *i* and *j* of the upper rollers engage movable bearing blocks 3 and 4; the block 3 bearing on the journals of two of the rollers and the block 4 on the journal of one of the rollers and on the block 3 between the two journals of the other rollers, whereby pressure is exerted on all of the rollers by the stirrup 5. The stirrup 5 is engaged at the lower end by lever 6 so as to draw down on the stirrup and press the upper rollers on to the lower rollers. The fulcrum end of the lever 6 is provided with a nose 7 which has an upward turn at its end adapted to enter axial opening 8 in the upper end of the fulcrum piece 9 while the nose itself is received in one of the four vertical slotted openings 10 provided in the head of the fulcrum piece 9. The fulcrum piece 9 is provided with a screw thread 11 by means of which it is secured in the frame bearing or other suitable support 12, and by means of which the fulcrum piece may also be adjusted. On the swinging end of the lever may be attached a spring as 13 for holding down the lever and pressing the upper rollers onto the lower rollers. The opposite end of the spring 13 from that attached to the lever may be attached to the frame or any other suitable support. The spring 13 may be entirely dispensed with, and a weight, as shown at 14 in Fig. 8 substituted therefor.

The operation of the device is too obvious to warrant description; it is sufficient to say that the difficulty of these devices as heretofore made, is that the material above the nose 7 wears and cuts out, and that in adjusting the fulcrum piece it is necessary to give a complete or half turn, as otherwise the lever

cannot be placed in position. In the present construction, the fulcrum piece may be adjusted minutely by removing the end of the lever and giving the fulcrum piece a quarter
5 turn, or more by quarters as is required. Further than this, there are four times the amount of wear as there are four shoulders as shown at s on which the lever engages and
10 piece is useless. The nose 7 of the arm engaging in the opening 8 in the fulcrum piece also prevents lateral movement of the lever and holds the lever always in the same position with the same length of arm between the
15 fulcrum point and the weighted point.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a lever having a nose or projection, and a fulcrum piece having
20 transverse stop or openings at angles to each other to receive the end of the lever, and a recess or opening above the transverse slots for receiving the nose or projection, substantially as set forth.
- 25 2. The combination of a lever having an up-

wardly turned nose or projection on its fulcrum end and a fulcrum piece having a screw threaded stem, and a head having transverse slots for receiving the end of the lever, and a recess or depression at the intersection of the
30 slots to receive the nose or projection on the lever, substantially as set forth.

3. The combination with a suitable support, of a fulcrum piece having means of adjustment bodily with reference to the support,
35 and having an opening in the axial line thereof, and radial slots or openings from the axial opening to the exterior, the end portion of the body at the upper end of each radial opening serving as a fulcrum, and a lever having
40 a fulcrum end adapted to be placed in either of the radial openings, with a projection adapted to engage in the axial opening, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

DAVID P. GERMAN.

Witnesses:

W. E. GIFFORD,
S. GERMAN.