(No Model.)

# J. & R. S. DAWSON.

## SPINNING AND TWISTING MACHINERY.

No. 575,463. Patented Jan. 19, 1897.

FIG. 1

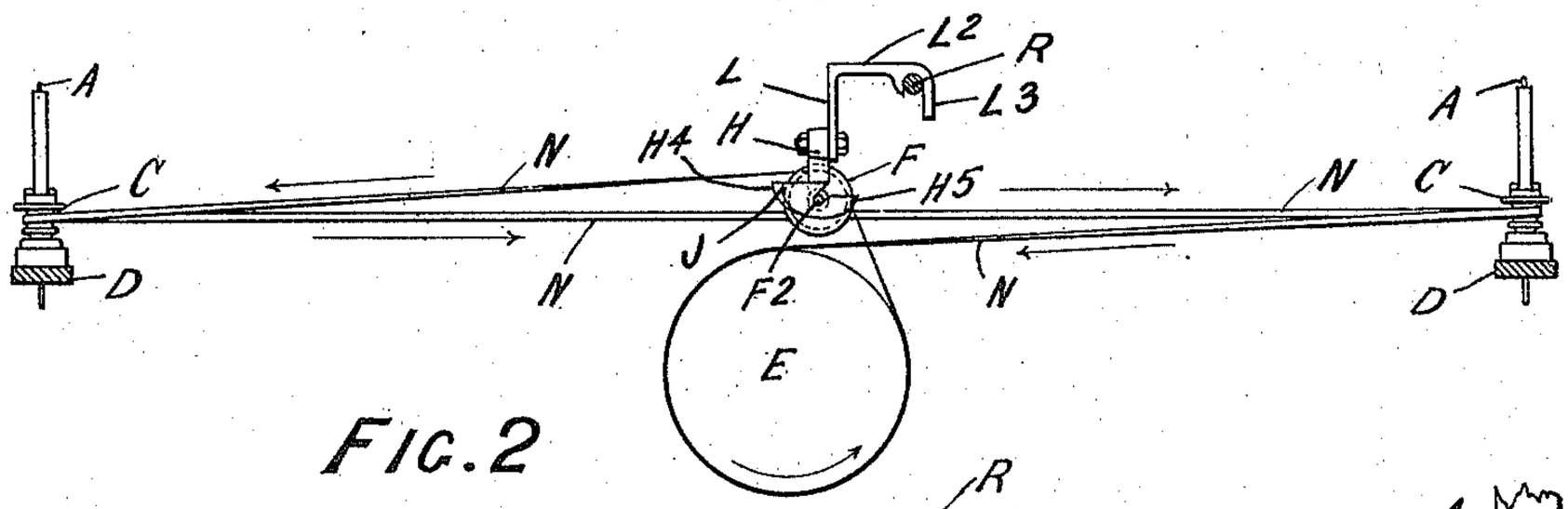



FIG. 2

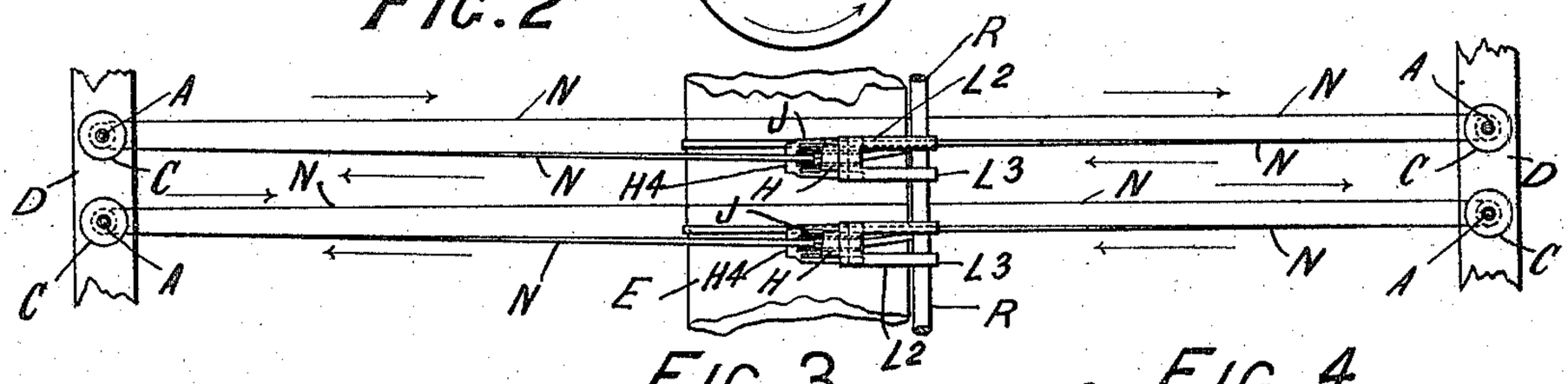



FIG. 3

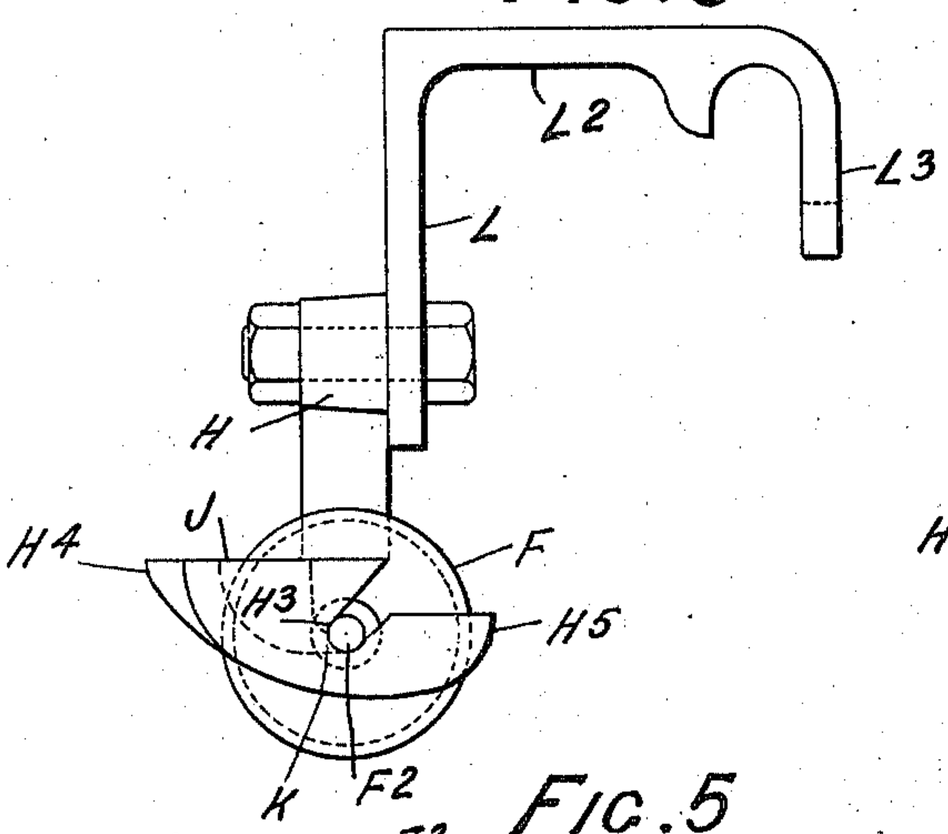



FIG. 4

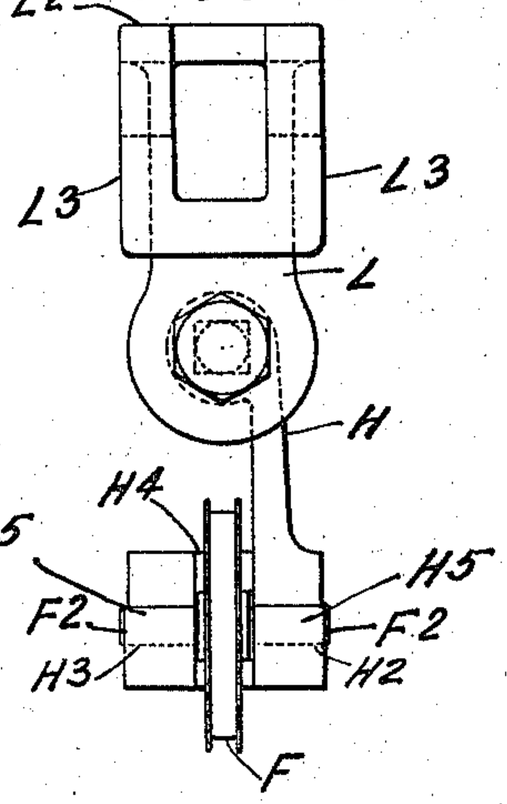
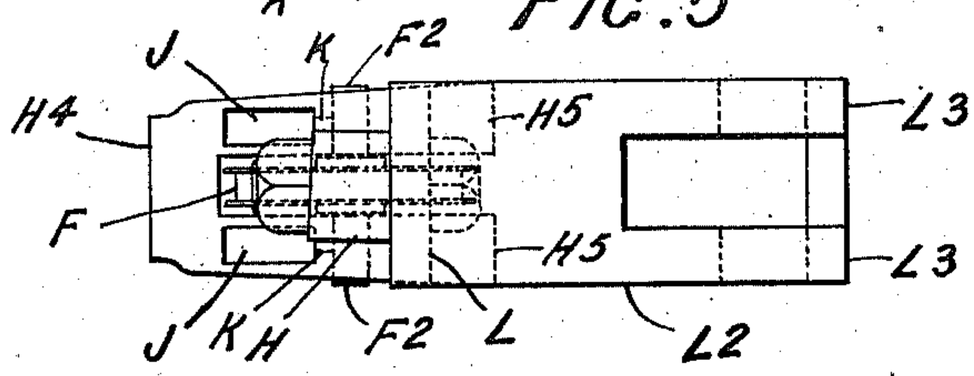



FIG. 5




Witnesses:
E. J. Hyde.
C. E. Buckland.

Inventors:
John Dawson, and
Robert S. Dawson, by
Harry R. Williams
Atty.

# UNITED STATES PATENT OFFICE.

JOHN DAWSON AND ROBERT SOUTHWORTH DAWSON, OF BRADFORD, ENGLAND.

## SPINNING AND TWISTING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 575,463, dated January 19, 1897.

Application filed April 17, 1896. Serial No. 587,922. (No model.) Patented in England October 3, 1894, No. 18,691, and May 14, 1895, No. 9,481.

*To all whom it may concern:*

Be it known that we, JOHN DAWSON and ROBERT SOUTHWORTH DAWSON, subjects of the Queen of England, residing at Bradford, England, have invented certain new and useful Improvements in Spinning and Twisting Machinery, (for which we have obtained Letters Patent in England, No. 18,691, dated October 3, 1894, and No. 9,481, dated May 14, 1895,) of which the following is a specification.

This invention relates to that class of machinery for spinning and twisting fibrous material in which tension-pulleys supported by pendent brackets or castings are employed to regulate the tension of the driving bands or tapes, and its primary object is to utilize the weight of the said bracket and the tension-pulley carried thereby to keep the said bands or tapes at the tension required and thus dispense with the tension-weight. For this purpose we loosely suspend each bracket considerably on one side of the vertical plane passing through the axis of the tension-pulley it bears, that is to say, the bracket is suspended from a rod or other support not directly above the position normally occupied by the tension-pulley when in use, but off at the side in the direction in which the band passes around the tension-pulley. By this arrangement the bracket and tension-pulley naturally tend to swing down and rest beneath the point of suspension of the bracket, which keeps the band or tape that passes around the tension-pulley at the tension required.

In the accompanying sheet of drawings, Figure 1 represents a cross-sectional view of such portions of a spinning-frame as are necessary to illustrate the application of our improvements, which are shown in side elevation. Fig. 2 represents a plan view of the same. Fig. 3 is an enlarged side elevation of the bracket and tension-pulley. Fig. 4 is an edge view of same, and Fig. 5 is a plan view of said bracket and tension-pulley.

The spindles A, the whirls C, the lifter-plate D, and the cylinder E are of the usual type.

The tension-pulleys F and the brackets H, in which they are mounted, are connected in the usual way to the pendent piece L, which is made with an angle, so that the part $L^2$ extends practically horizontal, and this part is provided with claws $L^3$, adapted to be hooked onto the rod R and be suspended thereby. The length of the band or tape N is such that each bracket is kept approximately in the position shown in the views in relation to the rod R. Consequently the weight of the bracket and its tension-pulley, which normally tend to swing down beneath the point of suspension, keeps the tape at the required tension, and a tension-weight is not required.

The brackets H preferably have tallow-cups J J cast in them, which communicate by means of the ducts K K with the bearings $H^2$ and $H^3$, in which the arbor $F^2$ of the pulley F is mounted. The bearing $H^3$ is formed in the part $H^4$, which extends around the back of the roller F, and thus does not interfere with the passing of the tape N on or off the roller. The bracket is provided with projections $H^5$ $H^5$ in front of the bearings, which extend beyond the periphery of the roller to prevent the tape N from slipping off the roller.

We claim as our invention—

In spinning and twisting machinery, in combination, an angular tension-bracket having a part adapted to extend practically horizontal with a bearing near the outer end of this part and a part adapted to extend practically vertical with a bearing near the lower end of this part, a support loosely connected with the bearing near the end of the horizontal part of the bracket, and a tension-pulley supported by the bearing near the end of the vertical part of the bracket, substantially as described and for the purpose specified.

In testimony whereof we have hereunto set our hands in the presence of the two subscribing witnesses.

JOHN DAWSON.
ROBERT SOUTHWORTH DAWSON.

Witnesses:
SAMUEL A. DRACUP,
DAVID NOWELL.