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1,441,012.

J. O. McKEAN.
TENSION MECHANISM.
FILED APR. 18, 1922.

Fig. 1.

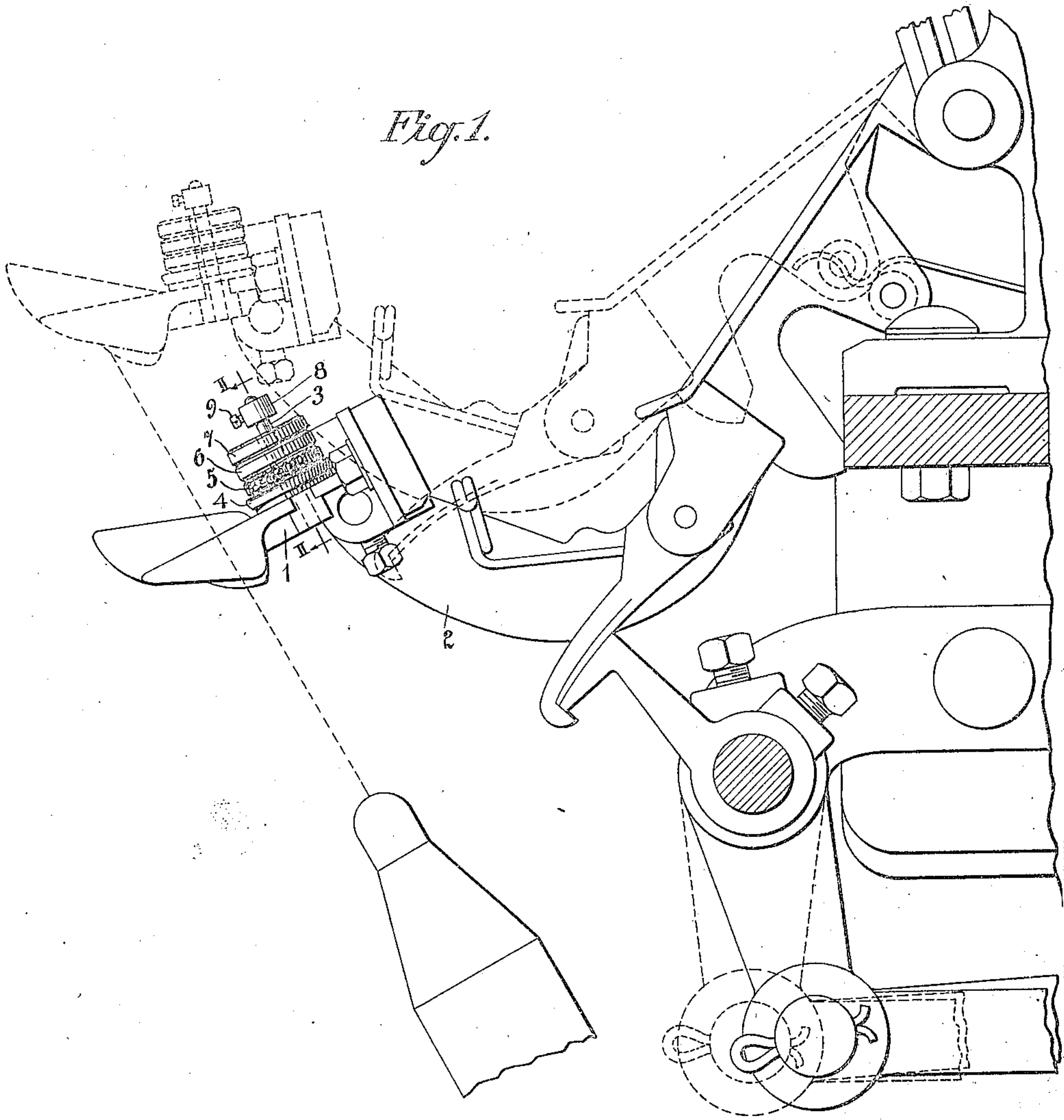
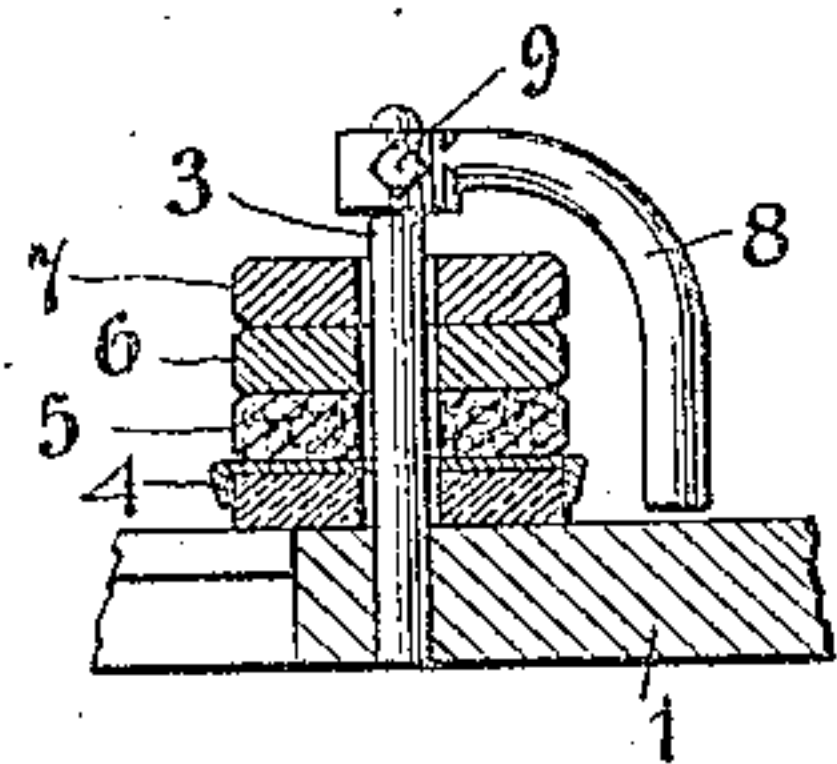


Fig. 2.



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JOHN O. McKEAN, OF WESTFIELD, MASSACHUSETTS, ASSIGNOR TO FOSTER MACHINE COMPANY, OF WESTFIELD, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

TENSION MECHANISM.

Application filed April 18, 1922. Serial No. 555,122.

To all whom it may concern:

Be it known that I, JOHN O. McKEAN, a citizen of the United States, and resident of Westfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Tension Mechanisms, of which the following is a specification.

In gravity operated tension devices there is a tendency of the weighted tension washers to unduly vibrate and jump away from their coacting surfaces because of unevenness in the yarn or of machine vibrations, thereby exerting a hammering action on the threads sufficient to vary the tension thereon and at times to cut the threads. This is especially true where the devices are used in connection with stop motions.

The object of my invention is to eliminate this vibratory tendency on the part of the tension washers, by the interposition of washers composed of some suitable yielding material, such as felt, between the tension washers and their weights.

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

Fig. 1 represents a view in side elevation of a portion of a stop motion with my improved gravity operated tension device applied thereto, the parts being shown in dotted lines in their usual "running position" and in full lines in their "knocked-off" or "stopped" position.

Fig. 2 represents a detail section taken in the plane of the line II—II of Fig. 1, looking in the direction of the arrows.

The tension device includes a suitable support 1, having a thread contact surface, which support is carried by the swinging arm 2 of the stop motion; from which support uprises a pin 3. A gravity operated thread tension washer 4 is loosely mounted on the uprising pin 3, in position to coact with the thread contact surface of the support.

A washer 5 of some suitable yielding ma-

terial, such for instance as felt, is loosely mounted on the pin 3 on top of the tension washer 4. One or more, in the present instance, two tension weights 6 and 7 are loosely mounted on the pin 3 on top of the yielding washer 5. By locating the washer of felt or other suitable yielding material between the tension washer and weights, the vibration of the tension washer is materially reduced and all tendency of the washer to cut the yarn by a hammering action, is eliminated. Furthermore, the noise incident to the operation of the tension device is practically eliminated. These felt or other yielding material washers may also be produced very cheaply, thereby ensuring the objects desired in an inexpensive form.

A threading guard 8 may be removably secured to the top of the pin 3 by a set screw 9.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention; hence, I do not wish to limit myself to the particular embodiment herein shown and described, but

What I claim is:—

1. In a tension mechanism, an element having an unyielding thread contact surface, and a gravity operated tension device arranged to coact therewith, comprising a tension washer, a tension weight, and a washer of yielding material interposed between the tension washer and weight.

2. In a tension mechanism, an element having an unyielding thread contact surface, and a gravity operated tension device arranged to coact therewith, comprising a vertically arranged pin, a tension washer, a tension weight, and an interposed washer of yielding material, all loosely mounted on said pin.

In testimony, that I claim the foregoing as my invention, I have signed my name this 25th day of March, 1922.

JOHN O. McKEAN.