

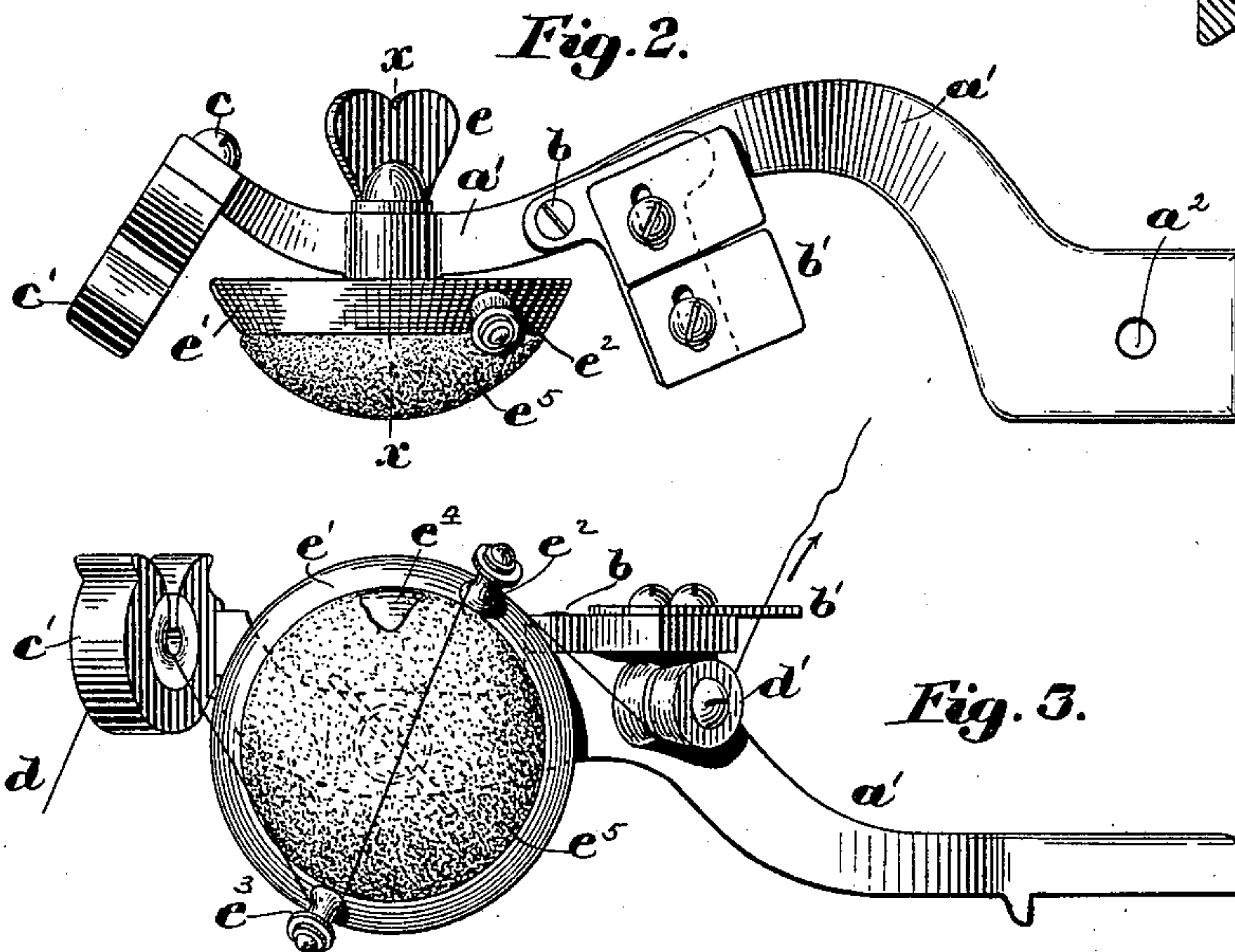
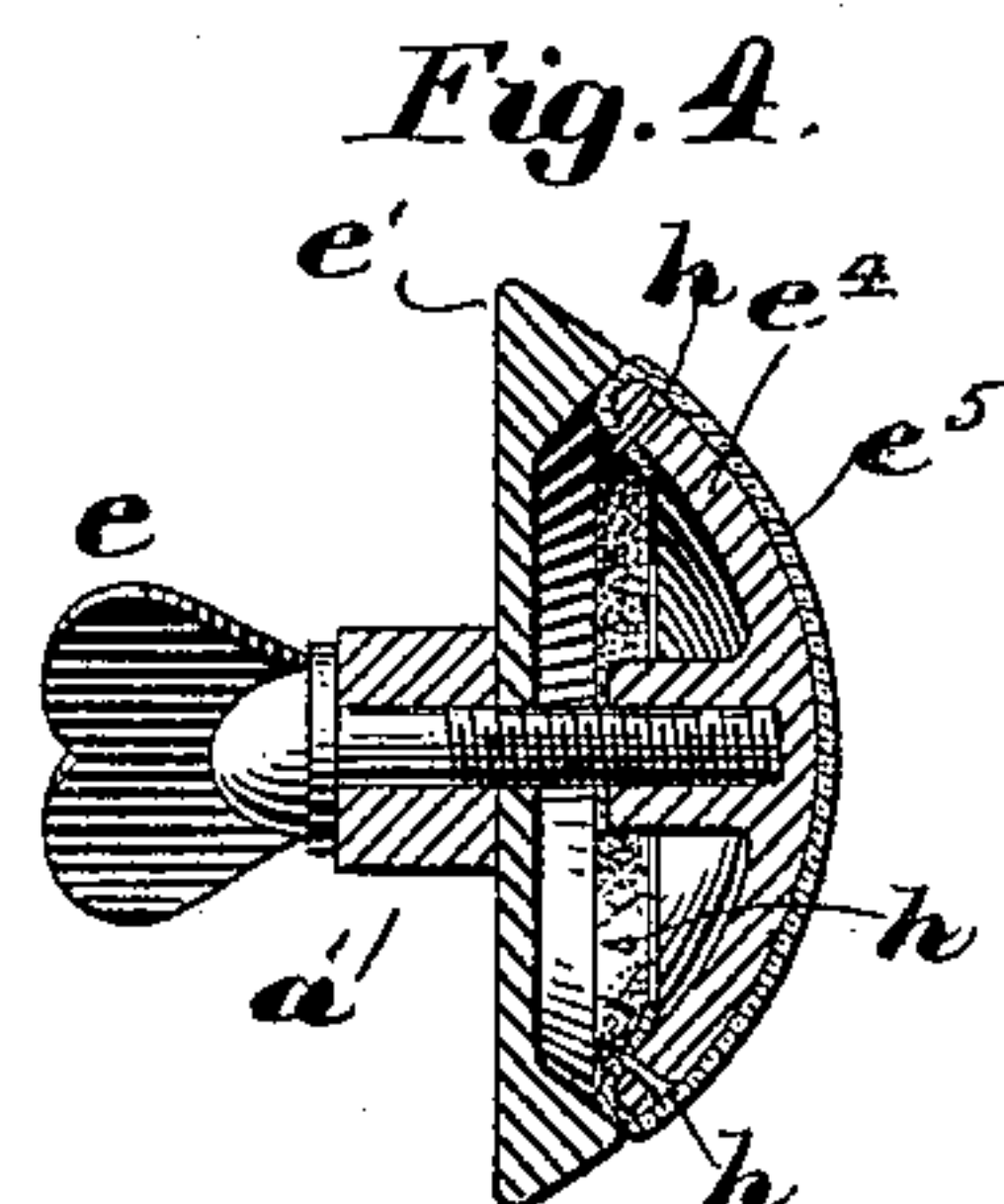
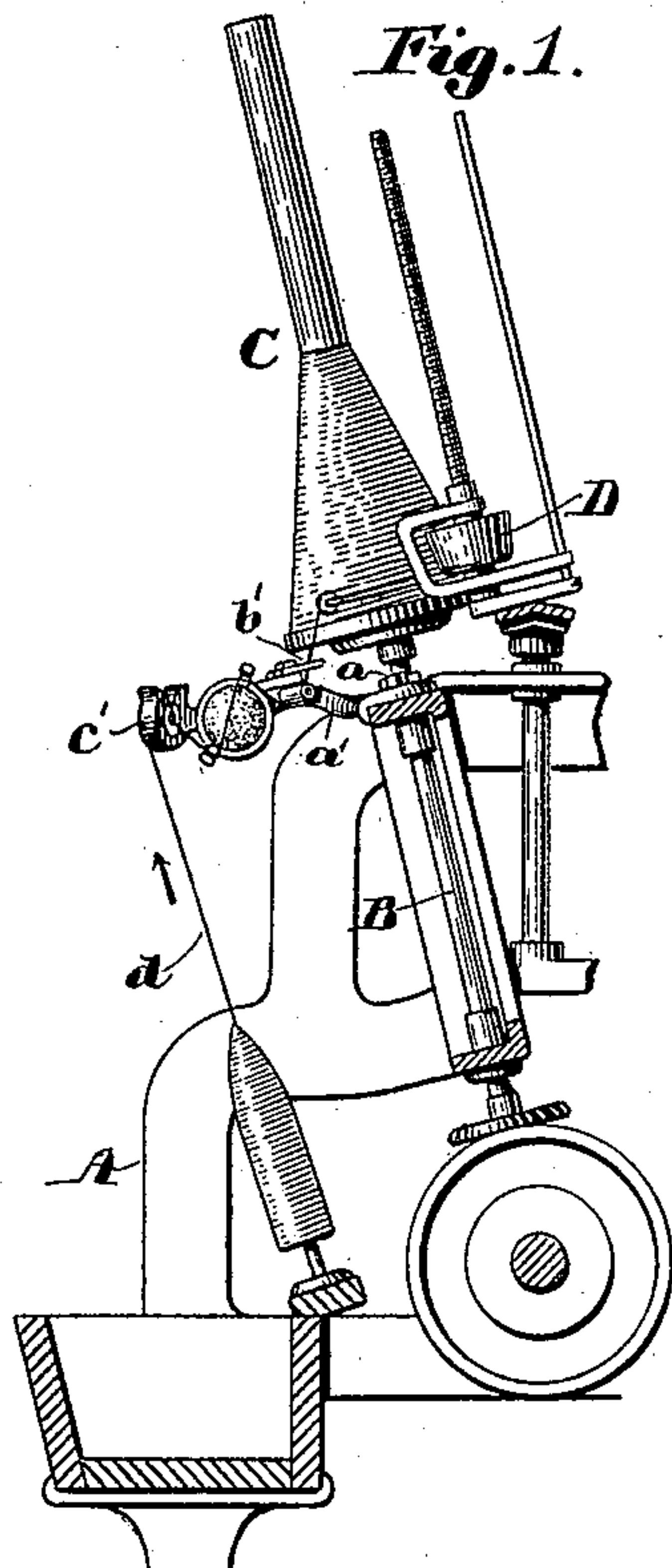
No. 614,268.

Patented Nov. 15, 1898.

W. D. HUSE.
THREAD TENSION DEVICE.

(Application filed Jan. 10, 1898.)

(No Model.)



Witnesses:
Walter E. Lombard.
Edward H. Allen.

Inventor:
Warren D. Huse,
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UNITED STATES PATENT OFFICE.

WARREN D. HUSE, OF LACONIA, NEW HAMPSHIRE.

THREAD-TENSION DEVICE.

SPECIFICATION forming part of Letters Patent No. 614,268, dated November 15, 1898.

Application filed January 10, 1898. Serial No. 666,194. (No model.)

To all whom it may concern:

Be it known that I, WARREN D. HUSE, of Laconia, county of Belknap, State of New Hampshire, have invented an Improvement in Thread-Tension Devices, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object a production of a novel thread-tension device, I having shown my improved device as applied to a bobbin-winding machine, substantially such as represented in United States Patent No. 624,570, dated February 23, 1897.

15 Figure 1 shows part of a bobbin-winding machine with my improved tension device applied thereto in connection with the usual thread-guide. Fig. 2 is a top or plan view of the tension device, its supporting-arm, and the usual thread guide and clearer. Fig. 3 is a face view of the parts shown in Fig. 2, and Fig. 4 is a section in the line x of Fig. 2.

20 The framework A, the bobbin-carrying spindle B, the bobbin C, carried thereby, and the roller D, bearing on the thread wound on the bobbin, it being raised automatically as the bobbin is filled with thread, are and may be all as common to said patent.

30 The fixed frame A has attached to it by a suitable screw a an arm a' , said screw passing through the hole a^2 . This arm has connected to it by a screw b a thread clearer or scraper b' , composed of two adjustable plates or blades, and the arm also has attached to it by a screw c a thread-guide c' , open at one side for the reception of the thread d . The thread previously passing through the clearer passes under an antifriction-roll d' .

40 Between the thread-guide and the clearer the arm a' is provided with a hole in which is inserted the threaded shank of a thumb-screw e , said shank receiving upon it at one side of said arm an annular base e' , having attached to it a plurality of thread-guides e^2 e^3 , and this base has a concavity at one side, in which is placed a metallic or other button e^4 , covered with a jacket e^5 , composed, preferably, of some woven or fibrous material, to exert friction upon the thread, said button being laid into the concaved side of the base, a threaded portion at the center of the button

receiving the threaded shank of the thumb-screw, the rotation of the thumb-screw forcing the covered button closely into the concaved face of the base, and when the thumb-screw is turned up tight, holding the base and button firmly in any desired position, so that the thread-guides e^2 and e^3 may be held normally in any position with relation to the opening in the thread-guide and to the surface of the thread-guide d' , rotation of said base and its thread-guides e^3 e^4 causing the thread to be thrown out of line with relation to the thread-guides c' d' , thus wrapping the thread more or less about the guides e^2 e^3 , the greater the angle in the thread passing between the thread-guide c' to the clearer and thread-guide d' the greater the tension on the thread, and vice versa, greater or less angle in the thread passing from the thread-guide c' to the clearer, the greater the angle the greater the tension, and vice versa.

A tension device of the kind herein represented acts, besides controlling the tension on the thread, to cause the loose fibers extending from the thread to be laid all in the same general direction, said tension device acting in advance of the clearer to remove some of the objectionable projections on the thread.

I have herein shown my improved tension device as applied to a thread-winding machine; but it may be used to advantage in any class of machines wherein it is desired to produce tension by the device and at the same time wipe it as it is traveling into position to be used. To enable this yielding or thread-wiping surface to be better secured to the button, the rear side of the button is provided with a series of pins or projections h , upon which the edges of the cloth are hooked prior to forcing the button into the concaved side of the base.

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

1. An arm provided with two thread-guides c' d' , combined with a tension device located between said thread-guides and consisting essentially of a rotatable base having a plurality of thread-guides and presenting a wiping-surface, the rotation of said base causing the thread to be wound more or less about

the thread-guides carried by it, to thereby vary the tension on the thread; and means to fix said base in any desired position according to the tension required, substantially as described.

5 2. In a tension device, a base having a concave at one side and provided with a plurality of thread-guides, combined with a button having a screw-threaded opening at its center and covered with fibrous material, and means to force the said covered button into the concaved face of the said base, to operate, substantially as described.

10 3. In a thread-tension device, a button hav-

ing a convexed face and provided with a screw-thread and with a series of pins, combined with a cloth or fibrous surface fitted to said convexed surface and impaled on the said pins, and a base against which the rear side of said button is forced and held, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WARREN D. HUSE.

Witnesses:

EDMUND LITTLE,
GEO. P. MUNSEY.