

No. 775,363.

PATENTED NOV. 22, 1904.

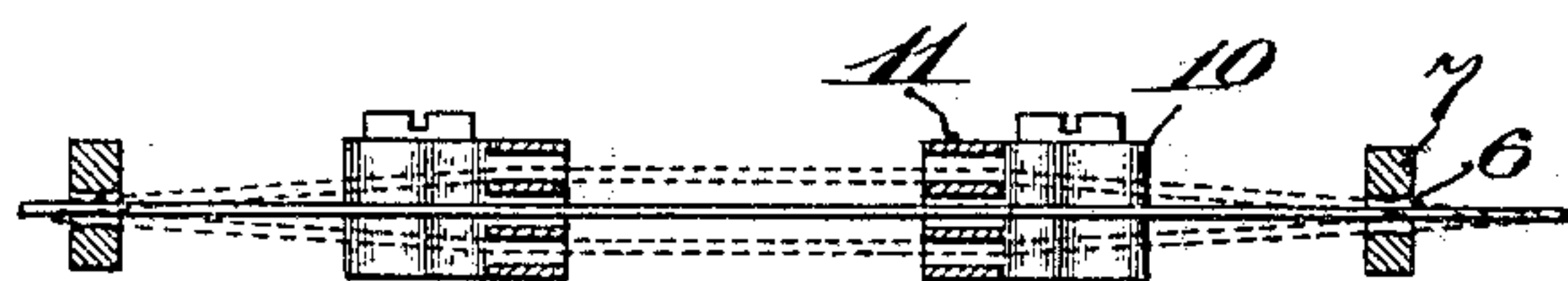
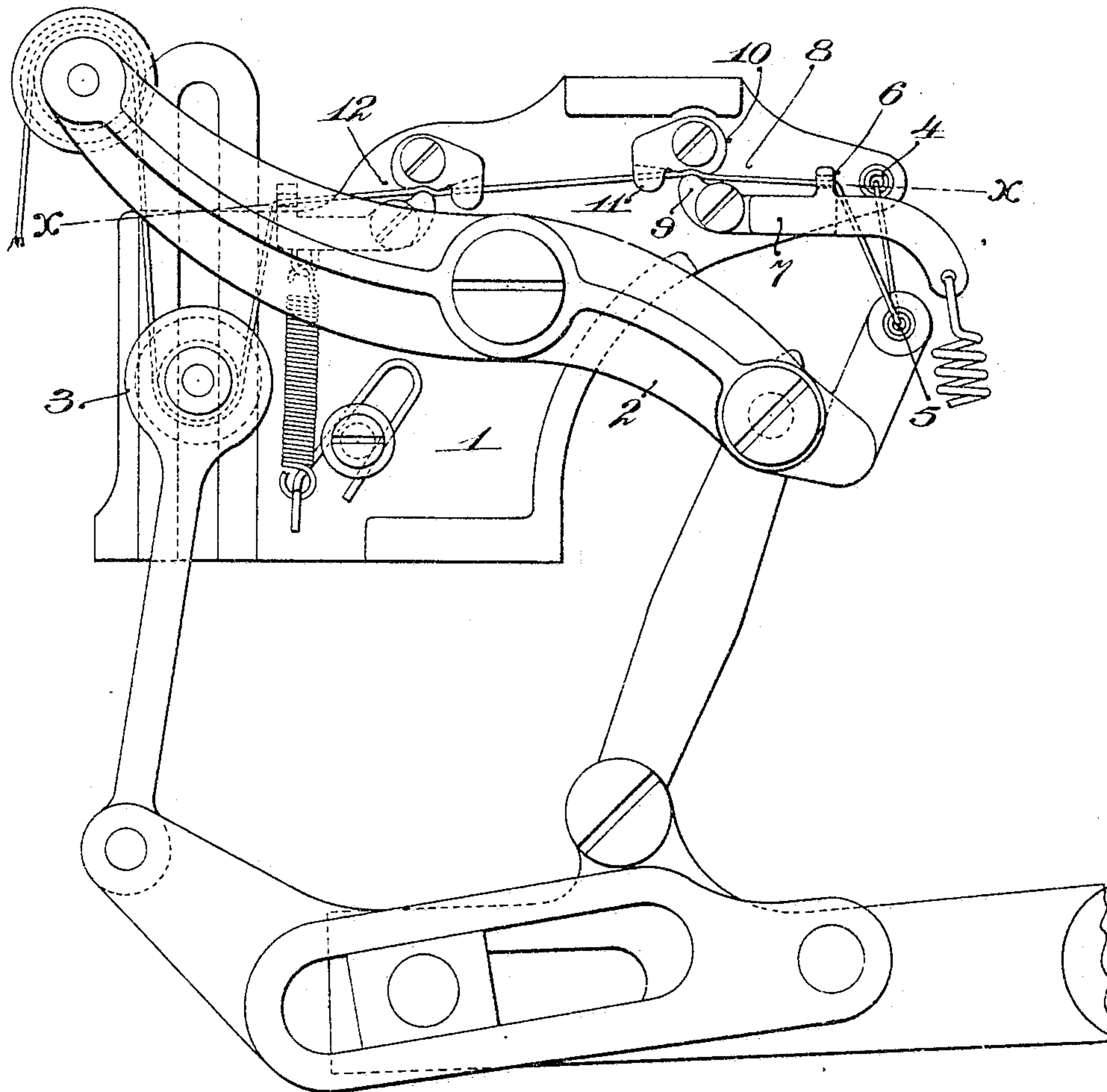
H. A. DODGE.

THREAD CLAMP FOR WAX THREAD SEWING MACHINES.

APPLICATION FILED JUNE 8, 1904.

NO MODEL.

*Fig. 1.*



*Fig. 2.*

*Witnesses*

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# UNITED STATES PATENT OFFICE.

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## THREAD-CLAMP FOR WAX-THREAD SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 775,363, dated November 22, 1904.

Application filed June 8, 1904. Serial No. 211,596. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY A. DODGE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Thread-Clamps for Wax-Thread Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in thread-clamps for wax-thread sewing-machines. In wax-thread sewing-machines as ordinarily constructed thread-clamps are employed to clamp the thread at two places, the one to prevent the pulling off of thread from the supply during the operation of the take-up and the other to prevent the pulling back of thread from the needle during the operation of the pull-off. These thread-clamps commonly consist of a pivoted lever provided with an eye at one end and at its opposite end a curved face which coöperates with a concaved-faced thread-block. The pull upon the lever exerted by the thread causes the shorter end of the lever to press the thread with force against the thread-block, and thereby to clamp and hold the same between the parts. In sewing-machines the thread under the influence of the thread-guides and the position of the thread-eye in the thread-clamping lever tends to run constantly over a certain portion of the surfaces of the end of the lever and the thread-block. This causes an excessive wear to occur upon the particular portions of the thread-block and the end of the lever which are engaged by the thread, and in a very short time the wear is so considerable that the efficiency of the device is impaired and the renewal of the parts is necessitated. These parts being made of hardened steel are expensive to make and to renew; and the object of the present invention is to reorganize and improve thread-clamps for wax-thread sewing-machines in order to distribute the wear over the surfaces normally intended to engage the thread,

thereby greatly to increase the life of the parts and the efficiency of the devices as thread-clamps.

To the above end the present invention consists of the thread-clamp hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a portion of the sewing-machine illustrated in Letters Patent to Campbell, No. 374,936, illustrating the thread-clamps of the present invention as applied to that machine; and Fig. 2 is a section taken on the line X X, Fig. 1, and looking in the direction of the arrows—that is to say, it is a horizontal section shown in bottom plan.

The present invention is not limited in its application to sewing-machines of the type illustrated in the said patent, as it may be employed in other forms of sewing-machines.

The take-up standard 1 corresponds to the standard 7 of the said patent. The take-up and pull-off lever 2, the auxiliary take-up truck 3, and actuating mechanism for these parts are illustrated herein merely for the purpose of showing the general operative relation in which the thread-clamps of the present invention are employed. The lead of the thread extends from the eye 4 through the eye 5 of the lever 2, thence through the eye 6 of the lever 7 of the pull-off thread-clamp, (indicated in a general way by the reference character 8.) The thread then passes between the smooth face of the clamping end 9 of the lever 7 and the smooth concave face of the thread-block 10 and then between two of the depending fingers 11, secured to or formed integral with said thread-block 10. Thus the thread passes along through the thread-clamp, (indicated in a general way by the reference character 12, being the take-up thread-clamp,) and over the take-up trucks or pins. The two thread-clamps 8 and 12 are identical in construction. The wearing-surfaces of the thread-blocks and the clamping-levers are made considerably wider than would be necessary in case the thread passed between them in one position only. In order that several separate positions may be provided for the thread and



in order that the thread may occupy these positions alternatively, guiding means are provided for guiding the thread to either position at will. These guiding means in the illustrated embodiment of the invention comprise a series of projections between which the thread passes. The thread-block 10 is provided with four downwardly-extended fingers 11. (Shown in section in Fig. 2.) By laying the thread between two of these fingers its line of passage over the thread-block 10 is determined. Thus, as indicated in Fig. 2, the thread may pass through the thread-clamps along the line indicating the thread in full lines, or it may pass along either of the lines indicated in dotted lines. The line of passage of the thread over the thread-blocks is thus determined by the downwardly-extending fingers projecting from the thread-blocks, and in use while it may be often desirable to lay the thread every time in a certain one of the passages it is considered that the preferred mode of use will be to lay the thread in whatever passage between two fingers 11 it hap-

pens to fall in, where it will remain until the machine is again threaded, when the thread may fall either in the same or a different passage.

Having thus described the invention, what is claimed is—

A thread-clamp for wax-thread sewing-machines, having, in combination, a smooth-faced clamping member and a smooth-faced thread-block, having thread-engaging clamping-surfaces of width sufficient to afford several separate positions for the passage of the thread herebetween, and means independent of the clamping-surfaces for guiding the thread in either of such positions to distribute the wear over the wearing-surfaces, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY A. DODGE.

Witnesses:

HORACE VAN EVEREN,  
FARNUM F. DORSEY.