

(No Model.)

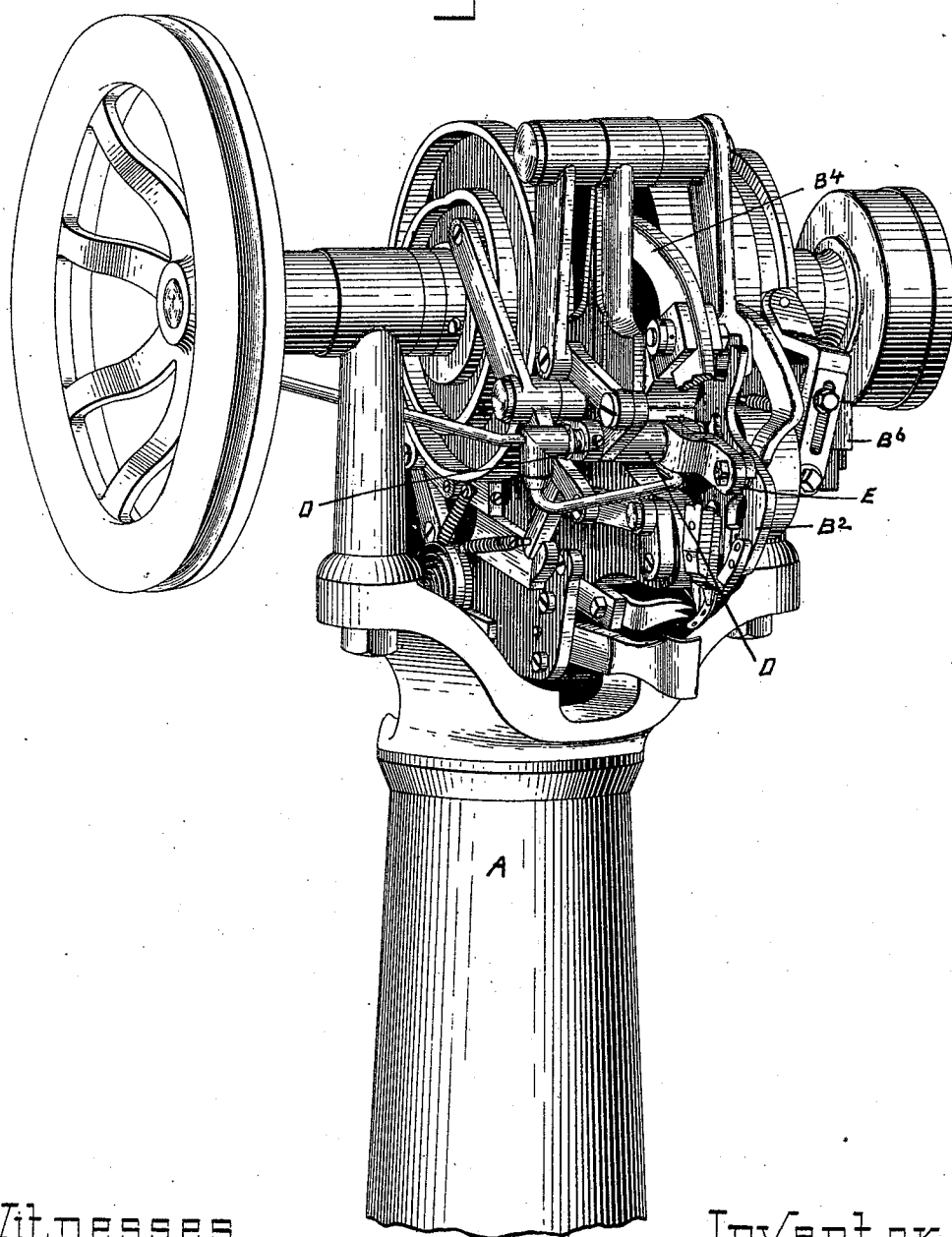
2 Sheets—Sheet 1.

O. E. BROWN.
WAX THREAD SEWING MACHINE.

No. 499,414.

Patented June 13, 1893.

Fig 1.



Witnesses.
John F. Nelson.
F. M. Brown.

Inventor.
Otis E. Brown
by his Attorneys
Brown Bros

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

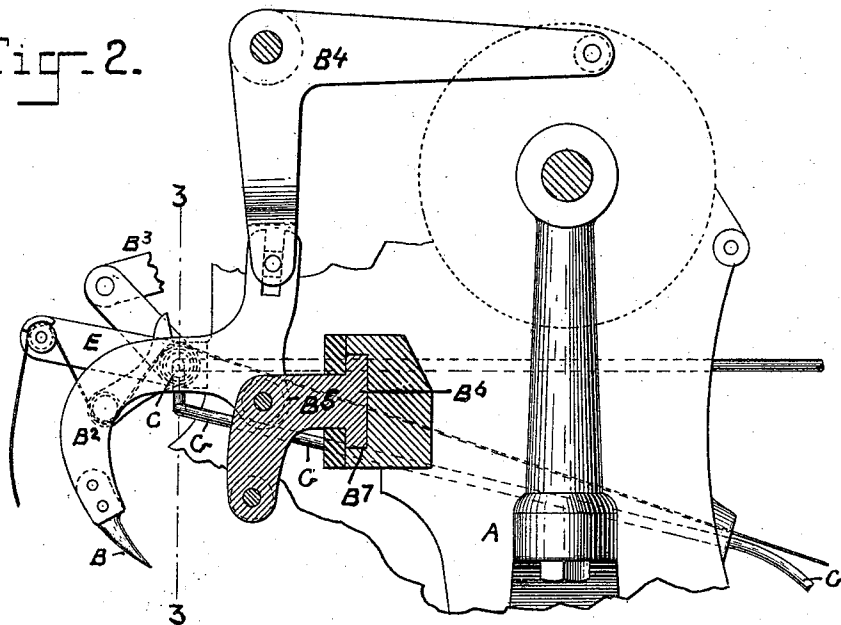
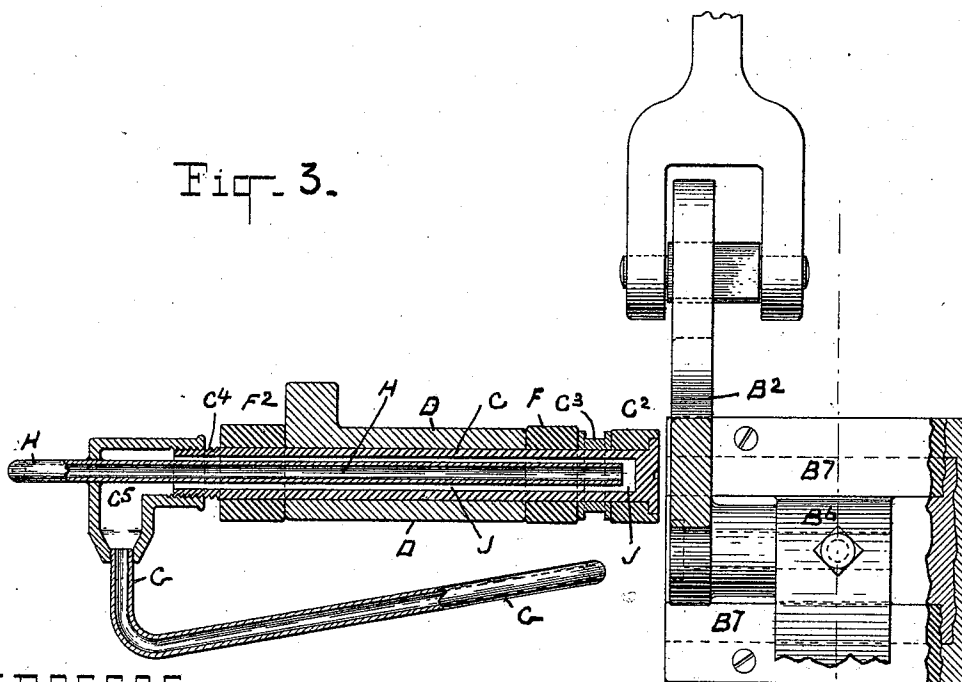


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

OTIS E. BROWN, OF BROCKTON, ASSIGNOR TO HENRY A. PEACH, OF
RANDOLPH, MASSACHUSETTS.

WAX-THREAD SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 499,414, dated June 13, 1893.

Application filed March 23, 1893. Serial No. 467,230. (No model.)

To all whom it may concern:

Be it known that I, OTIS E. BROWN, a citizen of the United States of America, and a resident of the city of Brockton, in the county of Plymouth and State of Massachusetts, have invented a certain new and useful Improvement in Wax-Thread Sewing-Machines, of which the following is a full, clear, and exact description.

This invention relates to wax thread sewing machines and to their adaptation for heating the wax thread and thereby keeping it soft and pliable for its manipulation by the ordinary or other suitable mechanism for making the stitches.

The invention, in substance, consists of a hollow shaft, having means at its opposite end-ports, to confine against endwise movement a sleeve carrying the take-up arm of the machine, a detachable cap, suitable to close said shaft at one end, and a detachable chambered nipple suitable to close said shaft at its other end, a steam escape pipe leading off from one side of said nipple, in combination with a steam inlet pipe leading through said nipple and into and along, and of less diameter than said hollow shaft, but open thereto and terminating therein near to its said cap closed end and, all so that steam properly entered into and through said inlet pipe is thereby entered into said shaft at its said cap closed end and allowed thence to pass toward the opposite end of said shaft there to escape through the escape steam pipe, the whole resulting in securing the heating of said shaft, the take-up arm turning on it, and the wax thread carried and controlled by said arm as in the making of the several stitches by the usual operation of said arm and the other suitable stitch making devices of waxed thread sewing machines.

In the drawings, forming part of this specification, Figure 1 is a perspective view of a wax thread sewing machine, the usual construction of the well known Goodyear wax thread sewing machines, except as the same is varied by the contrivances of this invention. Fig. 2 is in part a transverse vertical section and side view of the stitch forming mechanism. Fig. 3 is an enlarged vertical, longitudinal, sectional view, line 3—3, Fig. 2, of the

special features of this invention and other parts in line therewith.

In the drawings, A represents the post or standard of the machine referred to and carrying at its upper end portion the various working parts for sewing purposes, using a wax thread, some of which parts will be referred to by letter in order to distinguish them, while the same except as hereinafter particularly stated form no part of this invention.

B is the awl, and B² is the awl arm. This awl arm is oscillated through a connecting arm B³ connected at one end to it and at the other end to a bell-crank B⁴, by the movement of which the awl is properly oscillated as desired. The awl-arm B² works on a bracket-projection B⁵ of a horizontal slide B⁶ adapted to move on a guide-way B⁷, toward and away from one end of a fixed horizontal shaft C, exteriorly surrounded by and making a bearing for a sleeve D, carrying the take-up arm E, all so far as well known. Under this invention, however, said shaft C is hollow or tubular from end to end and at its end toward said awl-arm slide B⁶ it is closed by a detachable cap C², at one side carrying a loose peripherally grooved thread-roller C³, beyond which is a fixed collar F on the tubular shaft C followed by the sleeve D of the take-up-arm E, in turn followed by another fixed collar F² at the end C⁴ of the hollow shaft opposite to its end closed by cap C² as aforesaid. The shaft end C⁴ has a chambered nipple C⁵, screwed or suitably attached thereto, and from one side of which leads a steam escape-pipe G as particularly appears hereinafter.

H is a tube leading through the end of the nipple and thence along the length of, but of less diameter than the hollow shaft C, and terminating near its screw-capped end and there opening to its chamber J about and surrounding the tube H and within the shaft C. This tube H is for the passage of steam and entering therefrom into the chamber of the tubular shaft near its cap closed end, to thence pass through the shaft to its end connected with the steam escape-pipe G, to be, by it, conducted as may be desired, as for instance, to the wax-pot. Steam entered into and passing along the tubular shaft of the take-up arm

all as described secures the heating of said shaft, said take-up arm and the thread carried by said arm and to the most perfect and practical degree, and in the most advantageous manner, all as is obvious, without particular mention.

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

10 In a waxed thread sewing machine, in combination, the take-up-arm, a sleeve forming part of said arm and rocking on a fixed hollow stationary shaft, means confining said take-up arm against endwise movement on
15 said shaft, a cap closing one end and a thim-

ble closing the other end of said shaft, a steam inlet tube of less diameter and passing into, lengthwise of, and opening to said shaft, near one of its ends, and a steam escape tube in communication with the opposite and closed 20 end of said hollow shaft, substantially as described, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OTIS E. BROWN.

Witnesses:

F. M. BIXBY,
THOS. J. NAWN.