

C. P. HOLMES.

THREAD WAXING DEVICE FOR SEWING MACHINES.

No. 564,883.

Patented July 28, 1896.

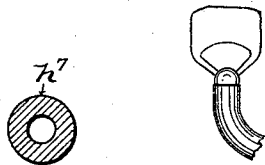
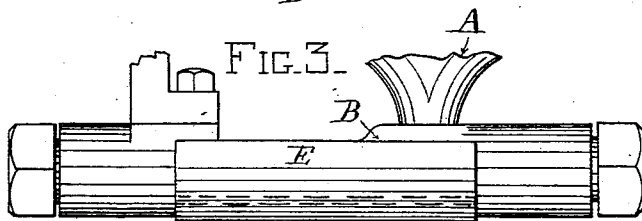
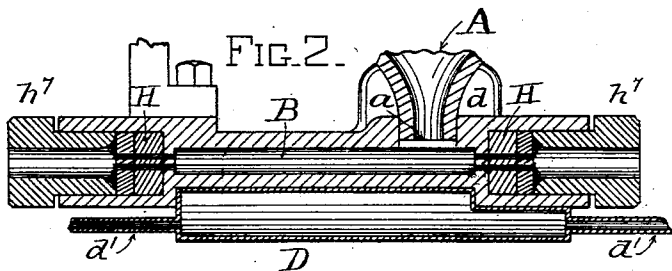
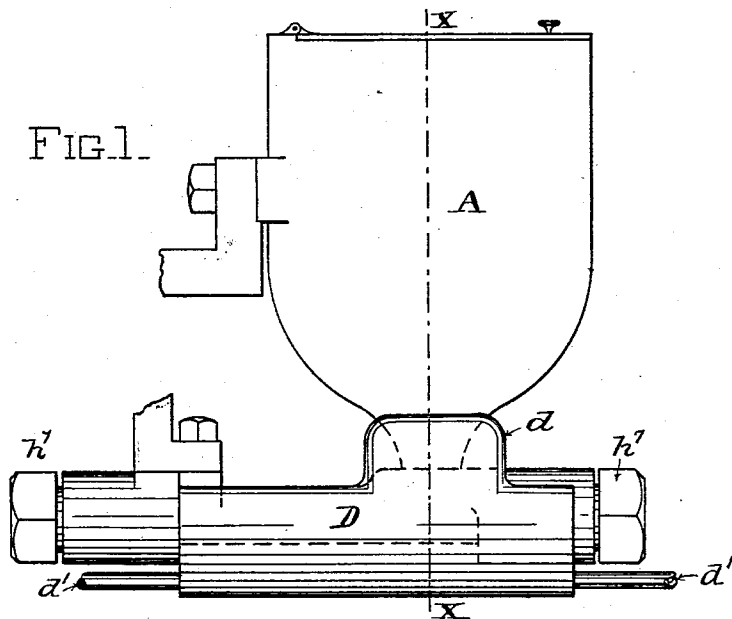


FIG. 5.

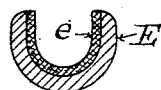


FIG. 6.

WITNESSES.

Fred V. Hart.
Leonard A. Tirrell

FIG. 4.

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Charles P. Holmes
By his Attorney
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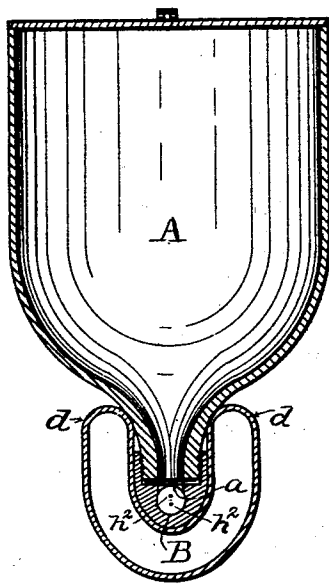


FIG. 7

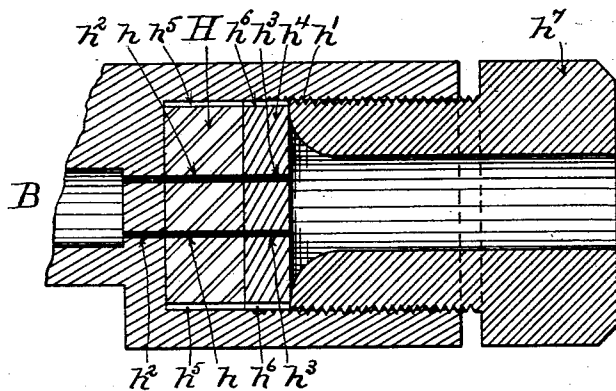


FIG. 8

WITNESSES.

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UNITED STATES PATENT OFFICE.

CHARLES P. HOLMES, OF LYNN, MASSACHUSETTS.

THREAD-WAXING DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 564,883, dated July 28, 1896.

Application filed August 27, 1895. Serial No. 560,648. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. HOLMES, a citizen of the United States, and a resident of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Wax-Pots, of which the following, taken in connection with the accompanying drawings, is a specification.

The present invention relates to improvements in devices of the above class; and it consists of the improvements in the form and arrangement of the wax reservoir and receptacle in which the wax is heated and other features of construction hereinafter more specifically set forth and claimed.

It has been found that the wax commonly used for waxing the thread in the several forms of shoe-sewing machinery, if kept for any length of time at a sufficiently high temperature for use, loses many of its useful qualities, and that such result is particularly marked in the case of wax that has been reheated. For the reasons above set forth it has been found necessary with the wax-pots heretofore provided to clean the pot from time to time of wax that has become practically worthless, causing a considerable waste of material, while the neglect of the operator to remove the old wax renders the work faulty and imperfect.

The object of the present invention is to improve and simplify the construction of devices of this class.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a device embodying the invention. Fig. 2 is a longitudinal section with portion of the reservoir broken away. Fig. 3 is a side view of device embodying a modified form of the present invention with portion of the reservoir broken away. Fig. 4 is a detached sectional view of a portion of the construction shown in Fig. 3. Figs. 5 and 6 are detached views of parts immediately associated with my combined stripper and sealer. Fig. 7 is a sectional view taken on line *x x*, Fig. 1; and Fig. 8 is an enlarged longitudinal section of the stripper and sealer and immediately associated parts.

Similar letters of reference refer to similar parts throughout the several views.

In the drawings, A represents the reservoir, in which is placed a supply of wax and the sides of which are contracted or converge to a port *a*, which communicates with the receptacle B.

B represents the receptacle in which the wax is heated and which is located below the reservoir and projects upon one or both sides of the port *a*, being so arranged that the heat from the projected portions is radiated into the atmosphere without substantially effecting the temperature of the wax in the reservoir A.

In practice I construct the receptacle B of comparatively small diameter and considerably elongated, and by such arrangement of its heating-surface secure the proper temperature of the wax therein, while the wax in the reservoir A is not effected by the heat more than required for the purposes hereinafter stated.

To secure the best results from my improved wax-pot, I find it preferable to keep the wax above the contracted parts of the reservoir A at a temperature below the point of liquefaction, allowing the wax in the contracted parts, or a portion thereof, to become liquefied and flow into the receptacle B to feed the same as the wax therein is taken up by the thread.

To secure the above-suggested results, a steam heating device may be utilized, and I consider the same preferable, as being more easily regulated and securing more uniform results, but the flame of a lamp or gas-jet or any heating device suitable for the purpose may be substituted therefor and fairly good results secured.

I have shown in the drawings a preferred form of a steam heating device, which consists of a steam-jacket D, partially surrounding the receptacle B and provided with the upwardly-extending chambered ears *d d*, which embrace a portion of the contracted parts of the reservoir A. Steam enters the jacket D through one of the pipes *d' d'*, and, filling the chambered ears *d d* as well as the jacket D, passes out through the other pipe.

The chambered ears $d\ d$, connected with the steam-jacket D, insure the melting of sufficient wax in the contracted parts of the reservoir A to feed the receptacle B without overheating the wax in the receptacle B.

I have shown in Figs. 3 and 4 of the drawings a device which I find convenient for preventing the overheating of wax in the receptacle B when heat is furnished by a lamp or gas-jet, such device conveniently consisting of a shield E, of copper or some other suitable material which is a good conductor of heat and which is provided with a lining e , of asbestos or some other suitable material which does not readily conduct heat.

I wish to say in this connection that neither the steam heating device nor the device last described are essential features of the present invention, for it is evident that the same result can be secured by other devices otherwise constructed and directly applied to the receptacle B.

I would say further in regard to the shield E that with some care and skill on the part of the operator in regulating the flame of the lamp or gas-jet the shield E with its lining may be entirely dispensed with and fairly good results secured.

I will now describe my improved form and arrangement of the combined strippers and sealers, the function of which is to regulate the amount of wax taken out of the pot by the thread and to prevent the escape of the heated vapors through the apertures through which the thread enters and leaves the pot and to put a slight tension on the thread in the wax-pot.

My improved strippers and sealers consist of a cushion H, of rubber or other suitable elastic material, in which are one or more passages h for the thread and which is fitted to a chamber h' , formed in an extension of the receptacle B (or a suitable connection thereon) and substantially in line with the wax-chamber in the receptacle B, with which it is connected by one or more thread-passages h^2 . Against the cushion H bears an adjustment-block h^4 , which is fitted to the chamber h' and movable along the same to compress the cushion H, clamping means being provided to hold the block h^4 in the required position to secure the desired compression of the cushion H for the purposes hereinafter stated. The block h^4 is provided with one or more thread-passages h^3 . To provide for the passage of a plurality of threads through the same stripper, a very desirable feature in devices of this class, a series of thread-passages $h^2\ h^2$ are provided, leading from the chamber h' to the wax-chamber, which register with a corresponding series of thread-passages $h\ h$ in the cushion H, which in turn register with the passages $h^3\ h^3$ in the block h^4 . To secure the registration of the thread-passages $h\ h^2\ h^3$ and $h\ h^2\ h^3$, the cushion H and the block h^4 are respectively

provided with projecting feathers $h^5\ h^5$, which engage suitable feather-ways in the walls of chamber h' , or the cushion H and block h^4 are otherwise suitably held from rotation, so that the passages $h\ h^2\ h^3$ and $h\ h^2\ h^3$ will not be thrown out of alinement with each other when the block h^4 is moved to compress the cushion H, as above described.

As shown in the drawings, the clamping means above referred to, whereby the block h^4 is advanced to compress the cushion H and secure it at any desired position, consists of a tubular bolt h^7 , centrally chambered to provide a suitable passage for the thread and externally threaded to engage with corresponding threads formed on the wall of chamber h' , which in the form of my invention shown in the drawings is circular in section. When desired to adjust the stripper and sealer, by turning the bolt h^7 the block h^4 is advanced against the cushion H, compressing the same, and since the cushion is confined the walls of the thread-passages $h\ h$ therein are forced inward, embracing the thread more tightly, thereby removing more of the wax which has adhered thereto, and increasing the tension on the thread and effectually sealing the thread-passages to prevent the escape of the gases from the receptacle B.

The operation of my improved wax-pot has been sufficiently described in connection with the description of the form and arrangement of the several parts as heretofore given.

In addition to the advantages of my improved construction as before noted, attention is called to the fact that the unmelted wax above the contracted portions of the reservoir and the sealing devices above described effectually seal the heating-receptacle, so that the vapors, which carry away many useful properties from the heated wax in other forms of wax-pot, cannot escape, and such properties are therefore retained in the wax.

Having thus described my invention, I desire to say that in view of the state of the art I do not consider the same limited to the specific features as hereinbefore described; but

I claim as novel and desire to secure by Letters Patent—

1. In a wax-pot, the combination with a supply-reservoir, of a receptacle in which the wax is heated and through which the thread passes located below and projecting laterally beyond the reservoir, a feed-port connecting the reservoir and receptacle, and means for heating the receptacle, substantially as described.

2. In a wax-pot, the combination with a supply-reservoir contracted toward its base, of a receptacle in which the wax is heated, and through which the thread passes, located below and projecting laterally beyond the contracted portion of the reservoir, a feed-port connecting the reservoir and receptacle, and means for heating the receptacle, substantially as described.

3. In a wax-pot the combination of a receptacle in which the wax is heated, a reservoir communicating therewith and contracted in parts adjacent thereto, and a steam-jacket
5 partially surrounding the receptacle and provided with projecting chambered portions embracing a portion of the contracted parts of the reservoir, substantially as described.

10 4. In a wax-pot the combination with the receptacle for the heated wax, of a suitable chamber suitably placed with reference thereto, an elastic cushion fitted to the chamber, means for holding said cushion from rotation, an adjusting-block movable along the chamber,

means for holding said block from rotation, 15 and mechanism for moving the adjusting-block along the chamber and clamping the same in any desired position, said block and cushion having a plurality of registering thread-passages leading therethrough, sub- 20 stantially as described.

In testimony whereof I have hereunto set my hand, in the presence of two attesting witnesses, this 17th day of August, 1895.

CHARLES P. HOLMES.

Witnesses:

JOHN H. CASMEL,
EDWARD G. MCMANIK.