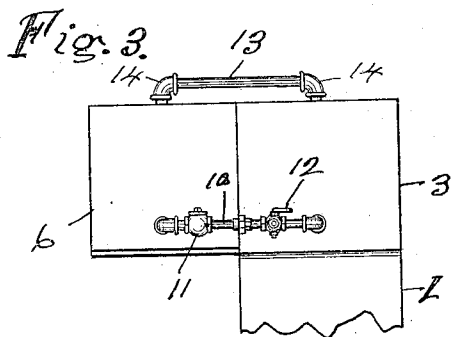
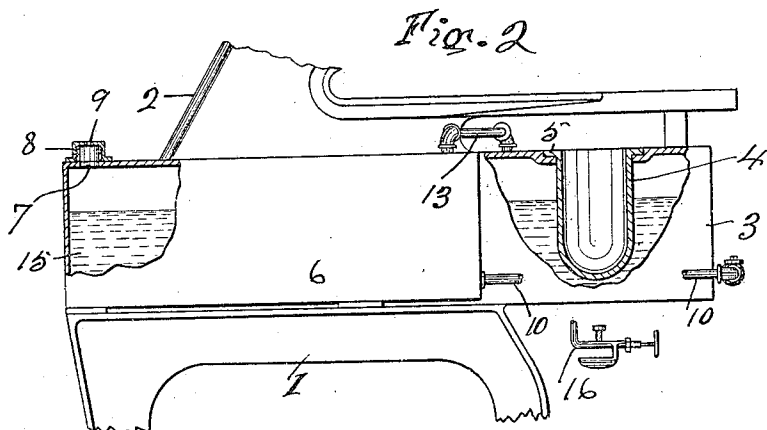
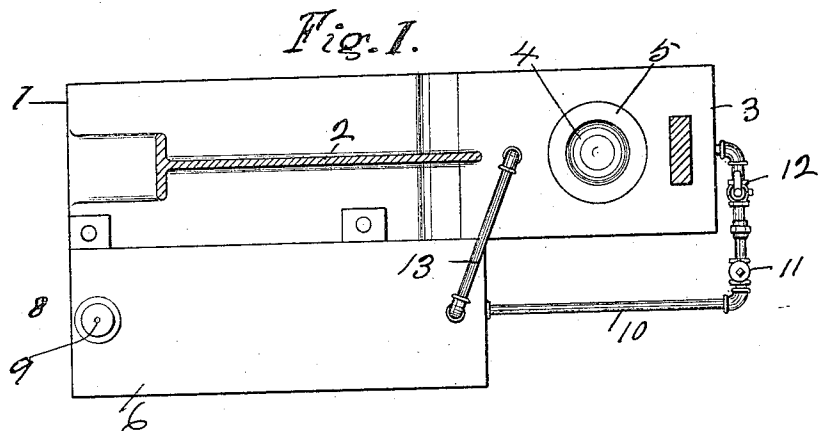


F. M. ALLEN.
WAXING APPARATUS FOR SEWING MACHINES.
APPLICATION FILED FEB. 26, 1909.

Patented Feb. 15, 1910.

949,515.



WITNESSES:

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FRANCIS M. ALLEN, OF BERNE, INDIANA.

WAXING APPARATUS FOR SEWING-MACHINES.

949,515.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed February 26, 1909. Serial No. 480,085.

To all whom it may concern:

Be it known that I, FRANCIS M. ALLEN, a citizen of the United States, residing at Berne, in the county of Adams, in the State of Indiana, have invented certain new and useful Improvements in Waxing Apparatus for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in waxing apparatus for that type of sewing machine employed by saddlers and shoemakers for sewing together layers of leather, as for example the uppers and soles of boots and shoes.

It is well known that in devices of this class the wax containing receptacle is kept hot to liquefy the wax by means of boiling water or steam surrounding the same; that where water is used it soon boils over and runs over the machine and floor, unless the operator gives it constant attention; that cold water must be frequently supplied to compensate for the loss due to evaporation; that this frequent supply of fresh water soon leaves a sediment and incrustation of lime in the water receptacle, which soon seriously interferes with the heating of the water therein, and causes a material loss of heat; that where the operator, by oversight, fails to keep the proper supply of water in the boiler or water chamber the wax becomes overheated, and boils out over its receptacle, and runs over the machine, the work, and the floor; and that where the wax receptacle has been heated by steam instead of water, an expensive coil of pipe has been employed which is supplied with steam from a source of supply entirely disconnected from the waxing apparatus.

The object of my present invention is to provide a comparatively cheap, simple, efficient and reliable waxing apparatus in which the water receptacle or boiler is so connected with a proper condensing chamber through which a constant circulation is maintained that, the overheating of the wax receptacle is avoided, and the difficulties above mentioned are eliminated.

My invention consists of a waxing apparatus in which the boiler is connected at top and bottom with the interior of a steam

condensing chamber in such a manner that a constant circulation of the same body of water, by repeated condensation, is maintained from the condensing chamber to the boiler and return.

The novel feature of my invention resides in the coöperative combination of a condensing chamber with the boiler for the purpose described.

Similar reference numerals indicate like parts in the several views of the drawings in which—

Figure 1 is a plan view of my invention showing the relative arrangement of the water boiler, the wax-pot or receptacle, the steam condensing chamber, and the means for connecting it with the boiler. This view also shows the upper part of the sewing machine in horizontal section. Fig. 2 is a side view of the same showing the wax-pot in vertical central section, and showing one side of the boiler and condensing tank partly broken away. This view also shows the supporting frame of the machine, and the water supply pipe to the boiler partly broken away, and shows a common form of gasolene heater in its usual relation to the boiler. Fig. 3 is a front elevation of the boiler, the condensing tank and the connecting means therefor, the supporting frame being partly broken away.

All parts of my invention are preferably made of suitable metal.

The main supporting frame 1 of the wax-thread sewing machine, on which my invention is employed, is of the usual or other proper form, and has a proper head 2 to support the usual stitching mechanism, not shown. At the usual or other proper point on the frame 1 is fixed a water boiler 3, of common form and proper dimensions, in which an open top wax-pot or receptacle 4 is detachably mounted, preferably suspended by means of an annular flange 5 which engages the slightly sunken adjacent edge of the top of the boiler, Fig. 2. In proper coöperative relation with the boiler 3, preferably on the frame 1, as shown, is fixed the condensing tank 6 of proper contour and dimensions, having an opening 7 in the top thereof, which is normally closed by a screw-cap 8 having a small steam vent 9 in the top thereof. The condenser tank 6 is connected with the bottom of the boiler 3 by a water supply pipe 10 whose ends communicate with the interior of the tank and boiler re-

spectively near the bottom thereof, as seen in Fig. 3. This pipe 10 has a check valve 11 at any suitable point between its ends to prevent the return of water from the boiler to the condensing chamber, and it also has a cock or faucet 12 by means of which the flow of water from the condensing chamber to the boiler can be prevented at pleasure, or the water from the tank can be drawn off if desired. The interior of the boiler at its top is connected with the interior of the condensing chamber near its top by means of the steam pipe 13 having proper unions 14 at its angles, whereby the steam passes freely from the boiler to the condensing chamber which it enters above the body of water 15 therein. The heater 16 may be of any proper form and construction, and is arranged below the boiler as usual, and constitutes no part of my invention.

The operation and manner of employing my invention thus described is obvious, and briefly stated is as follows: The operator supplies the tank 6 with water as required through the opening 7, and the proper water level in the boiler is constantly maintained by the free communication between the boiler and the tank afforded by the pipe 10. When the water boils in the boiler the steam generated thereby passes freely into the condensing chamber of the tank and above the cooler water 15 therein, whereby condensation constantly takes place therein. By this construction it is evident that there is no appreciable loss of water, as it keeps up a continuous circulation in use, whereby boiling over of the water is impossible, and the danger of burning the wax is reduced to a minimum, as the only loss of water is the slight loss of steam through the vent 9 in the cap 8.

Having thus described my invention and

the manner of employing the same, what I desire to secure by Letters Patent is:

1. In a waxing apparatus for sewing machines, the combination of a water boiler; a wax receptacle suspended in the boiler; and a water reservoir connected at its top to the top of the boiler by an always open conduit which communicates with the boiler and the reservoir above the water lines thereof, thereby adapting the upper part of the reservoir for a condenser and the reservoir being connected at its bottom with the boiler by a valve conduit.

2. The combination in a waxing apparatus, of a water boiler; external means for heating the same; a water reservoir directly connected at top and bottom with the boiler; an always open conduit which communicates with the boiler and the reservoir above the water lines thereof, thereby imparting to the reservoir the additional function of a condenser; and a valved conduit for connecting the boiler and reservoir at their bottom.

3. In a sewing machine waxing apparatus a water boiler adapted to be mounted on the sewing machine; a wax heating receptacle detachably mounted in the top of the boiler; in combination with a steam condensing reservoir; an always open conduit which communicates with the boiler and the reservoir above the water lines thereof; and a valved conduit connecting the boiler and reservoir at or near their bottom.

Signed by me at Berne, Adams county, State of Indiana, this 18th day of February, 1909.

FRANCIS M. ALLEN.

Witnesses:

E. COY MARTZ,

WILLIAM STUCKEY.