

(No Model.)

2 Sheets—Sheet 1.

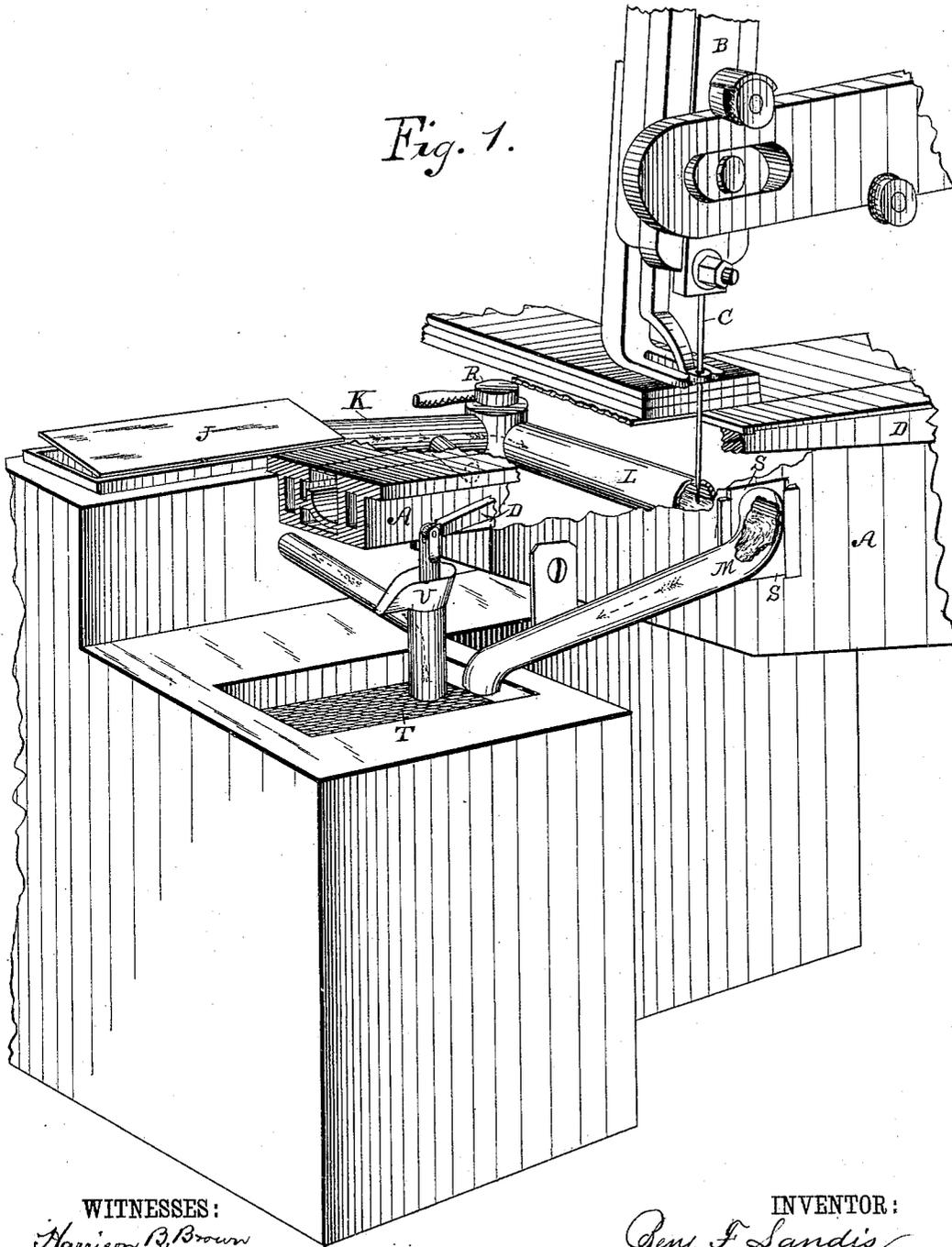
B. F. LANDIS.

SEWING MACHINE WAXING DEVICE.

No. 331,306.

Patented Dec. 1, 1885.

Fig. 1.



WITNESSES:

Harrison, P. Brown
W. X. Stevens.

INVENTOR:

Ben. F. Landis
BY *Munn & Co*

ATTORNEYS.

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Fig. 2.

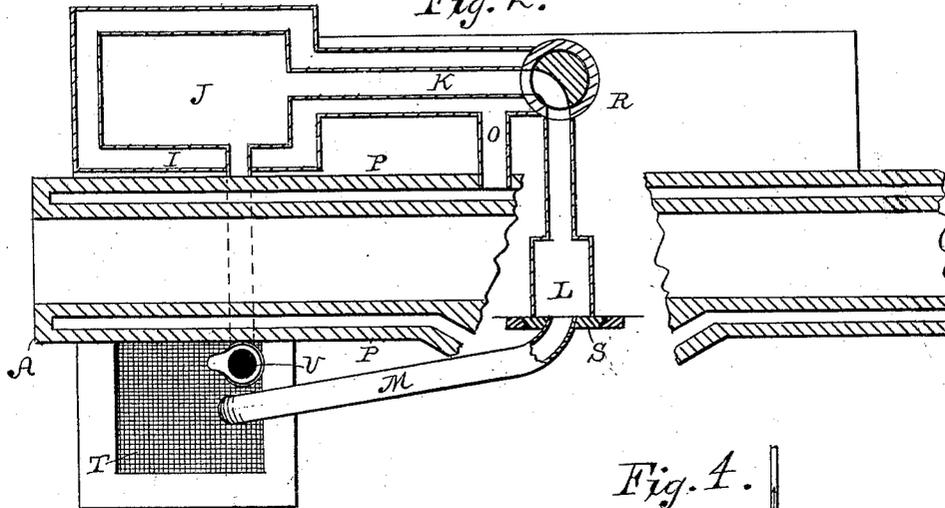


Fig. 3.

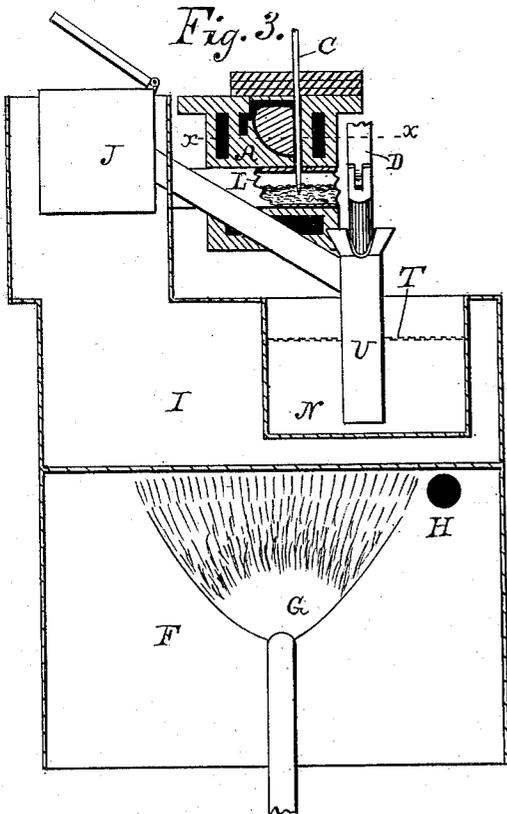
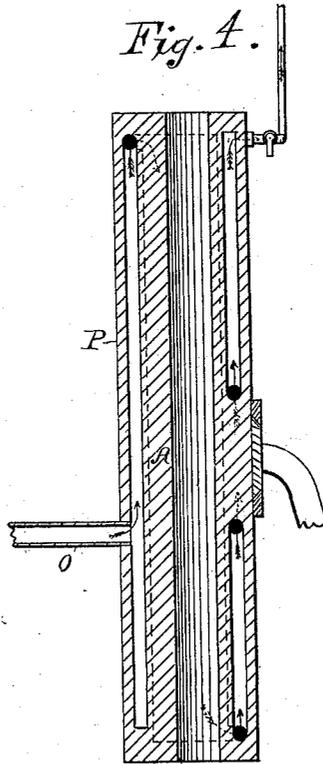


Fig. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

BENJAMIN F. LANDIS, OF ST. JOSEPH, MISSOURI.

SEWING-MACHINE WAXING DEVICE.

SPECIFICATION forming part of Letters Patent No. 331,306, dated December 1, 1885.

Application filed September 17, 1884. Serial No. 143,298. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. LANDIS, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Sewing-Machine Waxing Devices, of which the following is a description.

This invention relates to that class of sewing-machines used for heavy leather work, in which the thread requires to be waxed.

In my own previous applications for patents I have shown devices in which a reservoir of wax may be raised periodically, to allow wax to flow by gravity into a cup in which the end of the needle dips. I have also shown a device in which a pump raises wax directly to the wax-cup without the mediation of a reservoir. There has also been shown in an English patent a wax-reservoir higher than a needle-cup, and a drip-pan lower than the needle-cup, to pass the wax slowly to the cup and from it by gravity; but in this case it is not designed that there shall be any overflow from the needle-cup.

It is intended that the reservoir shall supply only as much wax as is used by the work, the drip-pan being provided for an accidental overflow of wax.

The object of my invention is to keep a continuous stream of wax running from the reservoir to the needle-cup, thence overflowing into a receptacle below by gravity, then to strain the wax of impurities, and finally to return it to the reservoir by mechanical means, thus forming a complete and continuous circulation of the wax, which shall keep all passages clear, and insure perfect waxing of the thread.

The object of my invention is, further, to keep the shuttle-race and needle dip-cup heated by the waste steam after the same has warmed the wax-reservoir.

To this end my invention consists in the construction and combination of parts forming a waxing device for sewing-machines, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view, partly broken away, of my waxing device, showing a portion of a sewing-machine to which it is attached. Fig. 2 is a sectional plan. Fig. 3 is a trans-

verse vertical section of the same, and Fig. 4 is a horizontal section at xx of Fig. 3.

A represents a portion of the body of a sewing-machine; B, the upper arm; C, the needle, and D an arm, which vibrates vertically to raise and lower the feeder.

F is the combustion-chamber of my waxing device, in which heat is produced by any usual process, such as the gas-burner G.

H is a chimney-flue, through which the smoke and other products of combustion are allowed to escape.

I is the water-boiler, which transmits heat to the wax-reservoir J, surrounded therein. This reservoir may be open or closed at the top. It is provided with a conducting-pipe, K, which delivers the melted wax to the cup L, in which the point of the needle dips each stitch to draw wax up into the work.

M is an outlet-pipe leading from the needle-cup to the drip-pan N, which is located inside of the boiler.

O is a steam-discharge pipe leading from the boiler to a jacket, P, which surrounds the shuttle-race at all points where its construction will permit forming one or more steam-passages. This jacket also surrounds the needle dip-cup L, and it finally discharges into any conducting-flue to be carried away. The pipes leading from these passages may be provided with stop-cocks, by means of which the amount of the discharge may be controlled, thereby regulating the heat.

The wax-conducting pipe K is provided with a stop-cock, R, by means of which the amount of wax flowing to the needle-cup may be regulated.

S is a gate fitted to slide water-tight vertically in the side of the cup L, opening the same from the bottom to the top, and serving to regulate the discharge of the wax from the cup by being raised or lowered as the wax runs out near the top of the gate by the pipe M, secured to the gate to rise and fall therewith, and serving to allow any deposit in the bottom of the cup to escape when the gate is entirely open.

T is a strainer, through which the wax passes to free it from any foreign substance—such as bits of thread, leather, dust, &c. This strainer may be made of any suitable material for such purposes. I prefer a fine brass-wire screen.

U is a pump of any usual construction, adapted to force wax from below the strainer T, in the drip-pan, to the reservoir J, thus completing the circuit of the wax and making its circulation continuous.

The pump may be operated by the vibrating arm D or any other suitable part of the machine.

The operation is as follows: Wax being placed in the drip-pan N and water in the boiler I, the fire is lighted. The wax, being made fluid, flows through the strainer and is raised by the pump into the reservoir, whence it is delivered by pipe K into the needle-cup L with any degree of rapidity which the stop-cock R is set to permit. It is the purpose of this construction to keep the wax flowing so rapidly as to clear its passages of all sediment or lumpy obstacles. The wax overflows from the needle-cup, through the conducting-pipe M, onto the strainer T in the drip-pan N. Thus the wax is kept fluid, is strained of gathering impurities, and is circulated around until it is gradually used up, when a little at a time may be added. Thus no part of the wax is allowed to become hard and useless except that which is strained out and will not remelt, and this latter, gathering above the strainer, may have fresh oil or tallow mixed with it to restore it; and my process of circulation of the wax insures the gradual dissolving and mixing of this old sediment to complete its restoration into good wax.

What I claim as my invention, and desire to secure by Letters Patent, is--

1. In a sewing-machine waxing device, a cup fixed in the path of the needle at the lower end thereof, a wax-reservoir located above the level of the said cup, a pipe connecting the two, a drip-pan located below the level of the cup, a pipe connecting the cup and pan, and a pump or equivalent means for raising wax from the said pan to the said reservoir, substantially as shown and described.
2. The combination, with a needle-cup, a wax-reservoir above its level, a drip-pan below, a pump, and pipe-connections, whereby a complete circuit for wax is established, of a strainer located in the path of the wax, substantially as described.
3. The combination of a wax-cup located in a sewing-machine at the lower end of the path of the needle to receive the point thereof, a wax-reservoir located above the level of the cup, and a pipe connecting the reservoir with the cup, substantially as shown and described, whereby wax will flow by gravity from the reservoir directly to the point of the needle, as set forth.

BENJAMIN F. LANDIS.

Witnesses:

W. X. STEVENS,
 SOLON C. KEMON.