H. P. ALDRICH.

Thread Waxing Device for Sewing Machines.

No. 47,912. Patented May 30, 1865.

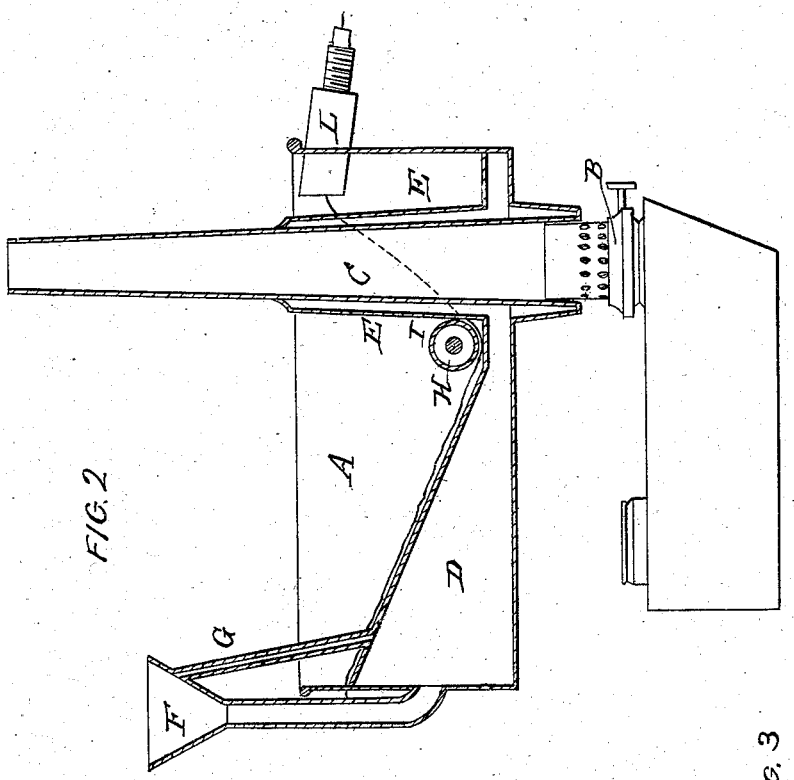

FIG. 2

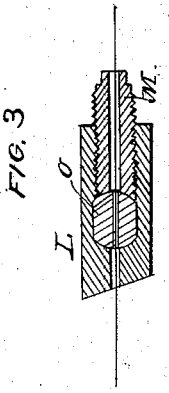

FIG. 3

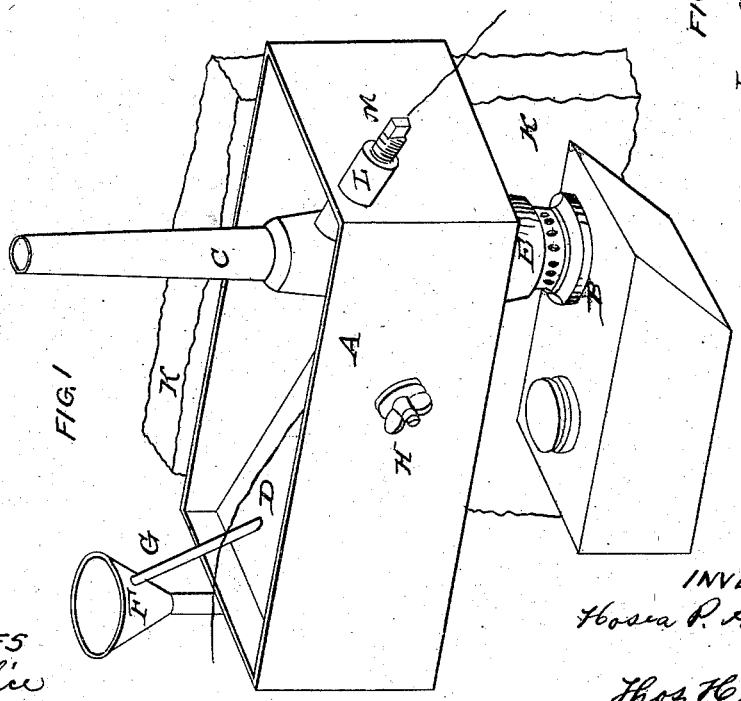

FIG. 1

WITNESSES
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HOSEA P. ALDRICH, OF SPENCER, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND GEORGE JENKS, OF SAME PLACE.

IMPROVEMENT IN THREAD-WAXING DEVICES FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **47,912**, dated May 30, 1865.

To all whom it may concern:

Be it known that I, HOSEA P. ALDRICH, of Spencer, in the county of Worcester and State of Massachusetts, have invented a certain new and Improved Device for Waxing Thread in Shoemaking; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a perspective view of said device for waxing thread. Fig. 2 represents a longitudinal vertical section through the same. Fig. 3 represents a detached view hereinafter to be referred to.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a receptacle, made of metal, in which the wax is melted. It is heated by means of a lamp, B, the burner of which is inserted into the lower end of the chimney C, which latter is also made of metal, and passes through the receptacle A, as represented on the drawings.

To prevent the wax from burning, I provide the lower part of the receptacle A with a water-compartment, D, which is thus interposed between the direct heat of the lamp and the wax, and the temperature of the latter can therefore never exceed the boiling-heat of the water in the compartment D. For the same reason I surround the chimney C to a certain height with a water-jacket, E, which is in connection with the compartment D, and thus the wax is nowhere exposed to the direct action of the heat of the lamp.

The compartment D is filled with water by means of the funnel F, and the air and steam are permitted to escape through the pipe G.

The entire apparatus is to be secured to a sewing-machine used in shoemaking, and may be fastened thereto by means of a bolt, H, which passes through the bolt-tube I, the part K shown on the drawings representing part of a sewing-machine frame.

The thread to be waxed is passed through the receptacle A, in the manner shown on the drawings, passing around the bolt-tube I, which thus serves as a thread-guide to prevent the thread from tangling; but it is essential that after the thread is saturated with wax the surplus wax should be removed and the thread should be compressed, so as to impart to it a certain firmness and smoothness, which renders it easy to pass through the needle and leather. This object I attain by the application of the tube L, through which the thread is passed after it is saturated with wax.

Within the tube L is a hollow screw, M, whose inner end is made concave. The inner socket of the tube L is also made concave, and a plug, O, of india-rubber, which is convex at both its ends, is inserted into the space between the socket of the tube L and the end of the screw M. The india-rubber O is pierced for the passage of the thread through it, and the thread in passing through it is deprived of all superfluous wax, is firmly compressed, rendered smooth, and while still warm is ready for the operator, thus greatly facilitating the work.

It is evident that the force with which the thread is compressed by the india-rubber must depend upon the thickness and strength of the thread, and that it is therefore necessary that the pressure of the india-rubber upon said thread can be regulated. This I effect by making the ends of the india-rubber plug O convex, and when the latter is compressed by operating the screw M, the ends of the india-rubber O are compressed first, and this is very essential, as small knots and other unevennesses in the thread will easily overcome the pressure of the ends, which are thinner than the diameter of the plug, in passing through the india-rubber without causing the thread to break, which would certainly occur if the entire body of the india-rubber should be compressed, as would doubtless be the case if the ends of the india-rubber plug were straight. Thus this apparatus affords great facilities to the operator. He need not pay any attention to the wax while it is heated, for as long as there is water in the tank D the wax cannot be overheated or burned. The bolt-tube I serves as a guide to the thread and prevents it from tangling, and when once the screw M is properly adjusted, the delivery of the thread requires no further attention, and is effected with the same facility as if passing from an ordinary spool, but with the advantage that it is properly waxed, well compressed, has a perfectly smooth finish, and is still warm when used by the operator.

Although I have designed the apparatus principally for use in shoemaking, it may be used to good advantage in all cases where waxed threads are employed—such, for instance, as in harness-making and similar branches of manufacture. By my invention the thread does not have to be spooled, but can be used direct from the ball or skein, thus saving a great deal of time.

Any other yielding substance—such as cork—may be used for the plug O, although I prefer rubber.

Having thus fully described the nature of my invention, what I claim herein as new, and desire to secure by Letters Patent, is—

1. The combination of the wax-receptacle A with the water-tank D, water-jacket E, and chimney C, substantially as and for the purposes described.

2. Attaching the wax-receptacle to the sewing-machine by passing a rod through the hollow tube I, which tube performs the function of a thread-guide for immersing the thread under the surface of the wax, substantially as herein described.

3. The combination of the tube L, india-rubber plug O, and screw M, substantially as and for the purposes described.

4. Making the india-rubber plug O convex at both its ends, in combination with the socket of tube L and that on screw M, substantially as and for the purposes set forth.

5. The application to thread-waxing devices of the tube L, when constructed and operated as and for the purposes described.

HOSEA P. ALDRICH.

Witnesses:

WILLARD RICE,

JOHN M. SEASON.