

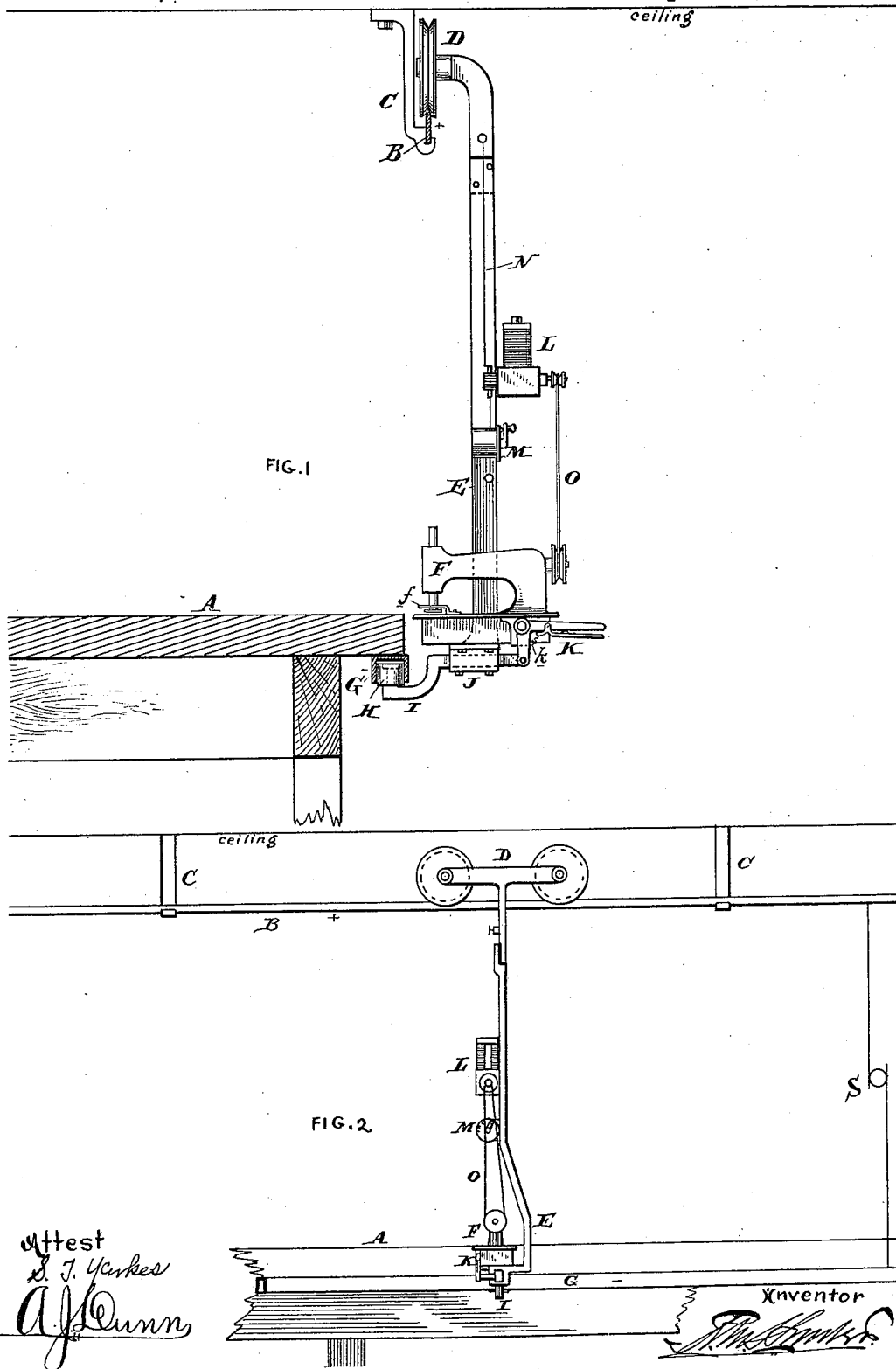
(No Model.)

R. M. HUNTER.

APPARATUS FOR HOLDING AND SEWING FABRICS.

No. 460,508.

Patented Sept. 29, 1891.



UNITED STATES PATENT OFFICE.

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APPARATUS FOR HOLDING AND SEWING FABRICS.

SPECIFICATION forming part of Letters Patent No. 460,508, dated September 29, 1891.

Application filed November 1, 1890. Serial No. 370,049. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH M. HUNTER, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Apparatus for Holding and Sewing Fabrics, of which the following is a specification.

My invention has reference to apparatus for holding and sewing fabrics; and it consists of certain improvements, which are fully set forth in the following specification, and shown in the accompanying drawings, which form a part thereof.

My invention, forming subject-matter of this application, (Case 179,) embodies certain improvements in the application of electricity to operate a movable sewing-machine especially designed for sewing long lengths of fabric arranged upon a table, and comprehends an overhead railway, from which is suspended a carriage supporting an electrically-actuated sewing-machine, adapted to be conveyed parallel to the edge of the fabric-supporting table, and guided with respect thereto by means of a suitable guiding device arranged in connection with the said table adjacent to the sewing-machine. The electric motor is preferably carried upon the carriage and receives current from the overhead railway, which forms the positive conductor of the circuit, the lower or guide rail arranged upon the table acting as the return-circuit.

Another portion of my improvement comprehends a sewing-machine supported from a railway above the table, and adapted to be moved bodily to and from the edge of the table, combined with means for adjusting the said sewing-machine laterally with respect to said edge of the table for compensating for all irregularities in the alignment of the edge of the fabric arranged upon the table when being sewed. This construction is equally adapted to a machine of this class whether the sewing-machine be operated by electric or mechanical power. The same electric motor which operates the sewing mechanism of the sewing-machine also acts through the feed-motion mechanism of said sewing-machine to cause the travel of the carriage and sewing-machine upon the railway and over the edge of the fabric which is being sewed.

In the drawings, Figure 1 is a cross-section of an electric sewing-machine and appendages embodying my improvement, and Fig. 2 is a front elevation of same.

A is the table and may be of any desired length. In practice it is about forty feet in length.

B is a rail arranged near the ceiling, and is secured thereto by means of brackets C. D is a carriage having grooved wheels running upon the said rail B, and is provided with a downwardly-extending frame E, which supports at its lower end a sewing-machine F, having the cloth-plate on a line with the upper edge of the table A. The sewing-machine is provided with a guide *f*, under which the edges of the fabric to be sewed pass and are held while being acted upon by the feed-motion mechanism and needle of the said machine. The overhead rail B is arranged parallel with the edge of the table A, so that the sewing-machine F may travel along parallel to said edge.

L is an electric motor which is carried by the frame E of the carriage D, and is mechanically connected by a transmitting-belt O with the shaft of the sewing-machine.

The under edge of the table A is provided with an inverted channel-rail G, in which the roller H works. The roller H is journaled upon transversely-adjustable frame I, supported in guides J on the frame E, and this frame I may be adjusted laterally with respect to the sewing-machine by means of the bell-crank lever K, having a locking device consisting of a pawl and detent *k*. The guide-roller H and its connection with the frame E insures the sewing-machine traveling parallel to the edge of the table A, and by adjusting the lever K the lower end of the frame E and the sewing-machine F may be adjusted laterally with respect to the edge of the table. In this movement these parts swing about the rail B as an axis.

The rail B connects with the positive pole of the source of electric power S and acts as the positive conductor, while the channel-rail G acts as the return-conductor and connects with the negative pole of the said source of electric power.

The carriage D is insulated from the de-

pending frame E, and is connected with the electric motor electrically by a motor-circuit N, which includes the electric motor L and the rheostat M, and connects with the frame
 5 E. The current passes thence through the parts J I H to the return-conductor G.

In practice I prefer to place the rail B in such position with respect to the sewing-machine that there will be a tendency of the
 10 sewing-machine to move toward the table A by the action of gravity, which tendency is counteracted by the action of the roller H against one of the lateral faces of the rail G.

It will be seen that while the electric motor L operates the needle of the sewing-machine to sew the fabric it is also employed to operate the ordinary feed-motion mechanism of said sewing-machine, and thereby cause the carriage and the sewing-machine to move
 20 longitudinally with respect to the edge of said table when in the act of sewing the fabric.

I do not limit myself to the mere details of construction, as these may be modified in various ways without departing from the principles of my invention.

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

30 1. The combination of a long stationary table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage running upon said railway, having a depending portion, a sewing-machine secured to said depending portion and arranged in line with the edge of the table and movable along the edge thereof, and an electric motor for operating the same.

40 2. The combination of a table upon which the fabric to be sewed is placed, a railway independent of the upper surface of and arranged at a higher elevation than the table and parallel thereto and leaving a space between the railway and table, a carriage running upon said railway, having a depending portion, a sewing machine secured to said depending portion below the railway and arranged in line with the edge of the table, an
 50 electric motor supported by the said carriage and mechanically connected with the sewing-machine for operating the same, and guiding devices between the lower end of the depending frame and the table for holding the sewing-machine against lateral movement during
 55 its longitudinal movement.

3. The combination of a table upon which the fabric to be sewed is placed, a railway independent of the upper surface of and arranged at a higher elevation than the table
 60 and parallel thereto, a carriage running upon said railway, having a depending portion, a sewing-machine secured to said depending portion below the railway and arranged in line with the edge of the table, an electric motor supported by the said carriage and mechanically connected with the sewing-machine for operating the same, guiding devices between the lower end of the depending frame and the table for holding the sewing-machine against lateral movement during its longitudinal movement, and adjusting devices for adjusting the said sewing-machine laterally with respect to the edge of the table.

chine for operating the same, guiding devices between the lower end of the depending frame and the table for holding the sewing-machine against lateral movement during its longitudinal movement, and adjusting devices for adjusting the said sewing-machine laterally with respect to the edge of the table.

4. The combination of a long stationary table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage running upon said railway, having a depending portion below the railway, and a
 80 sewing-machine secured to said depending portion and arranged in line with the edge of the table.

5. The combination of a table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage running upon said railway, having a depending portion, a sewing-machine secured to said depending portion below the railway and arranged in line with the edge of the table, guiding devices between the lower end of the depending frame and the table for holding the sewing-machine against lateral movement during its longitudinal movement, and adjusting devices for adjusting said sewing-machine laterally with respect to the edge of the table.

6. The combination of a table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage supported upon said railway, having a depending portion to which a sewing-machine is attached, a sewing-machine supported by said carriage below the level of the railway and moved parallel to the said table, a guide-rail secured to said table, and a mechanical connection between the said guide-rail and the depending portion of the carriage, whereby the sewing-machine is prevented from swinging laterally.

7. The combination of a table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto and leaving a space between the railway and table, a carriage supported upon said railway, having a depending portion to which a sewing-machine is attached, a sewing-machine supported by said carriage at a lower level than the railway and moved parallel to the said table, a guide-rail secured to said table, and a mechanical connection between the said guide-rail and the depending portion of the carriage, whereby the sewing-machine is prevented from swinging laterally, and adjusting devices for adjusting the said sewing-machine and depending portion of the carriage laterally with respect to the guide-railway.

8. The combination of a table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage supported upon said railway, having a depending portion to which a sewing-machine is attached,

a sewing-machine supported by said carriage and moved parallel to the said table, a guide-rail secured to said table, a mechanical connection between the said guide-rail and the depending portion of the carriage, whereby the sewing-machine is prevented from swinging laterally, an electric motor to operate the sewing-machine, supported by the carriage, an electric circuit including the electric motor and connecting electrically and respectively with the elevated rail and the guide-rail on the table, and a source of electrical energy connecting with the said rails.

9. The combination of a table upon which the fabric to be sewed is placed, a railway arranged at a higher elevation than the table and parallel thereto, a carriage supported upon said railway, having a depending portion to which a sewing-machine is attached, a sewing-machine supported by said carriage and moved parallel to the said table, a guide-rail secured to said table, a mechanical connection between the said guide-rail and the depending portion of the carriage, whereby the sewing-machine is prevented from swinging laterally, an electric motor to operate the sewing-machine and supported by the carriage, an electric circuit including the elec-

tric motor and connecting electrically and respectively with the elevated rail and the guide-rail on the table, a regulator arranged in the electrical circuit for controlling the speed of the motor, supported by the carriage, and a source of electrical energy connecting with the said rails.

10. The combination of a table, an elevated railway arranged above the table so as to leave a space between the table and the railway, a carriage running upon said railway and supporting a sewing-machine at the plane of the table below the railway, a sewing-machine secured to said carriage below the railway, a guide-rail secured to the table, a roller running against said guide-rail, a frame to which said roller is journaled, and an adjustable connection between said frame and the sewing-machine, whereby the latter may be adjusted laterally with respect to the edge of the table.

In testimony of which invention I have hereunto set my hand.

R. M. HUNTER.

Witnesses:

ERNEST HOWARD HUNTER,
A. J. DUNN.