

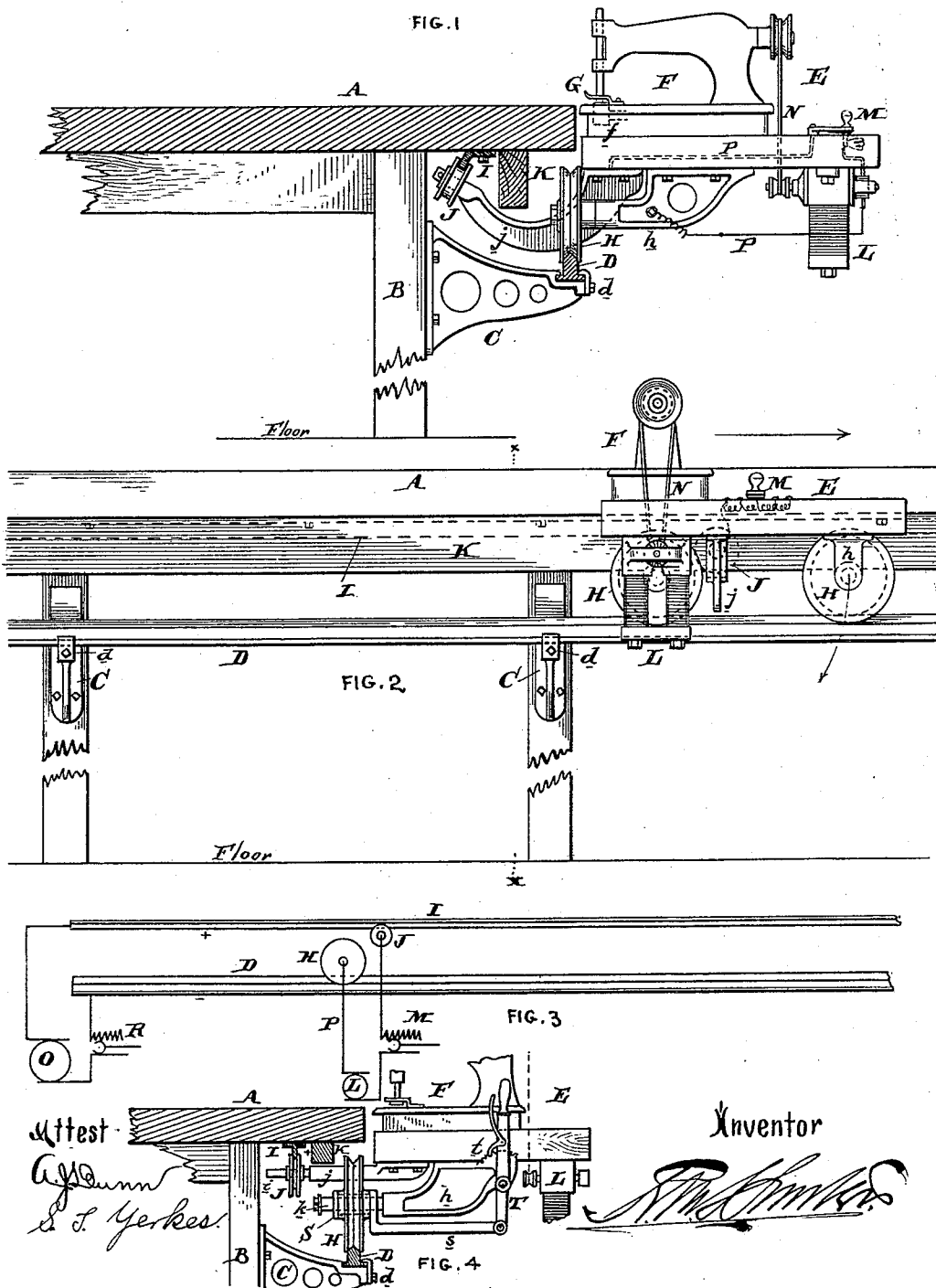
(No Model.)

R. M. HUNTER.

APPARATUS FOR HOLDING AND SEWING FABRICS.

No. 460,506.

Patented Sept. 29, 1891.



# UNITED STATES PATENT OFFICE.

RUDOLPH M. HUNTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
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## APPARATUS FOR HOLDING AND SEWING FABRICS.

SPECIFICATION forming part of Letters Patent No. 460,506, dated September 29, 1891.

Application filed October 13, 1890. Serial No. 367,942. (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 electric sewing-machines especially adapted to sewing of carpets; 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.

This application (Case 177) embodies certain features wherein the sewing-machine is carried upon a traveling carriage adapted to move upon a railway supported along the under edge of a long table or frame, upon which table or frame the carpet or fabric to be sewed is laid or stretched. The sewing-machine is operated by an electric motor, which, through the action of the feed mechanism of the said sewing-machine, causes the carriage holding the sewing-machine and motor to be bodily moved along the railway to follow the edge of the fabric. The carriage is provided with two sets of supporting-wheels, one of which sets presses upon the upper surface of one rail and the other upon the under surface of the second rail. A source of electric energy connects with the two rails, and through the respective wheels the current is collected therefrom and delivered to the electric motor through a suitable regulator.

Another improvement forming part of my present invention relates to the arrangement of the carriage upon its wheels so that the entire carriage with the motor and sewing-machine may be adjusted laterally with reference to its direction of travel, whereby the machine may be moved to or from the edge of the table and with respect to the fabric which is supported thereon. The carriage is made to move along the railway-tracks in such a manner as to exert great leverage for the purpose of pressing the supporting-wheels in opposite directions to make positive contact with the respective rail conductors. The entire carriage and sewing-machine may be laterally ad-

justed during the travel of the machine without in the least interfering with the function of the sewing-machine while sewing the fabric.

The invention is equally adapted to all kinds of sewing where long strips of material are to be united by their edges—such, for instance, as carpets, awnings, sails, &c.

My invention also comprehends minor details of improvement, which are fully set forth hereinafter, and shown in the accompanying drawings, in which—

Figure 1 is a cross-section through the table and railway on line *xx*, Fig. 2, and shows my improved electric sewing-machine applied thereto. Fig. 2 is an elevation of the same. Fig. 3 is a diagram illustrating the construction and arrangement of the electric circuits; and Fig. 4 is a view similar to Fig. 1, showing the carriage arranged for lateral adjustment upon its supporting-wheels.

A is the table, which may be made in any suitable manner and is supported upon suitable supporting legs or frames B. This table in practice would be made about forty feet in length, but might be made longer, if desired. To the legs of the table are secured brackets C, upon which are supported a V-shaped rail D, which is clamped in place by means of the clamps *d*. Secured to the under part of the table is a second rail I, which may be formed of a T-rail or of an angle-iron, and this latter rail may be shielded by a depending wooden stringer K to prevent accidental touching of the said rail I. The rail I acts as a positive conductor and has connection with one pole of the generator O or source of electric supply, and the other rail D connects with the opposite pole of said generator or source of electric supply and acts as the return-conductor.

The resistance changer or regulator R may be employed in the main circuit to control the amount of current passing to the conductors I D.

It is quite evident that the rail D might be the positive conductor and the rail I the negative, if so desired.

E is the carriage and is provided with the brackets *h*, upon which are journaled the two

grooved wheels H, which rest upon the V-shaped rail D, and also with an intermediate arm or bracket *j*, upon which is journaled the grooved wheel J, running upon the rail

5 I. The brackets *h* and *j* are insulated from each other and are respectively connected with the terminals of the conductor P, which includes a resistance changer or regulator M, carried by the carriage E, and also the elec-  
10 tric motor L.

F is the ordinary sewing-machine, preferably of the kind known as the "Union Special," which is provided with a very heavy feed mechanism, and said sewing-machine is  
15 operated by the electric motor through a transmitting-band N.

G is the fabric-guide, secured to the sewing-machine so that the edges of the fabric are guided in the proper position for passing under the needle and in the right connection with the feed mechanism *f*. The operation of the feed mechanism upon the fabric causes the entire carriage and its appendages to travel upon the railway. By this construction  
20 of railway-tracks the conductors and tracks are located where they are out of the way of danger and form no obstruction to the operator. The rails are preferably both arranged back of a vertical plane through the  
30 edge of the table.

It is often desirable that the sewing-machine may be adjusted laterally to follow any irregularity in the edges of the fabric to be sewed when said fabrics are of very heavy material and are supported or stretched upon  
35 the table in such a manner that they are not readily shifted thereon, and to accomplish this I form the brackets *h* and *j* with long axles *k* and *i*, respectively, in Fig. 3, upon  
40 which the wheels are journaled. The wheel J is loosely sleeved upon the axle *i*, and the wheels H are journaled upon a sleeve S, which slides upon the axle *k* and may be adjusted by means of a link *s*, a lever T, and a locking-detent mechanism *t*. The lever T is fitted to the bracket *h*, and it is evident that by moving said lever the carriage  
45 E may be shifted bodily upon the wheels H and J and with it the electric motor and sewing-machine. This shifting may be performed while the machine is in operation and is under the control of the operator, who may be walking along with the traveling machine.

In the construction herein set out the cloth-plate of the sewing-machine is on a level with  
55 the upper surface of the table, so that the fabric may extend from the table upon the cloth-plate machine in a proper position to be acted upon by the feed mechanism.

By locating the main portion of the carriage E with the motor and sewing-machine to one side of the rails the weight thereof is brought to bear upon the respective rails with considerable leverage to positively exert good electrical contact with the respective rails which  
65 form the conductors. Furthermore, this arrangement enables me to locate the rails back

of the edge of the table and within a space bounded by a vertical plane through the edge of the table.

I do not limit myself to the mere details of construction, as they may be modified without departing from the principles of the invention.

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

1. In an apparatus for supporting and sewing fabrics, the combination of a table, two rails arranged upon said table below its upper surface, a traveling carriage having supporting-wheels, part running upon the upper side of one of the rails and part running upon the under side of the other of the rails, a sewing-machine secured to and moving with the carriage, an electric motor upon the carriage to operate the sewing-machine, a source of electric energy, circuits connecting the source of energy with the respective rails, and an electric circuit secured to the carriage, including the electric motor, and having its terminal electrically connecting, respectively, with the wheels running upon the two railway-tracks.

2. In an apparatus for supporting and sewing fabrics, the combination of a table, two rails arranged upon said table below its upper surface, a traveling carriage having supporting-wheels, part running upon the upper side of one of the rails and part running upon the under side of the other of the rails, a sewing-machine secured to and moving with the carriage, an electric motor upon the carriage to operate the sewing-machine, a source of electric energy, circuits connecting the source of energy with the respective rails, an electric circuit secured to the carriage, including the electric motor, and having its terminal electrically connecting, respectively, with the wheels running upon the two railway-tracks, and shifting mechanism for moving the carriage and sewing-machine laterally upon the supporting-wheels.

3. In an apparatus for supporting and sewing fabrics, the combination of a table, two rails arranged upon said table below its upper surface, a traveling carriage having supporting-wheels, part running upon the upper side of one of the rails and part running upon the under side of the other of the rails, a sewing-machine secured to and moving with the carriage, an electric motor upon the carriage to operate the sewing-machine, a source of electric energy, circuits connecting the source of energy with the respective rails, an electric circuit secured to the carriage, including the electric motor, and having its terminal electrically connecting, respectively, with the wheels running upon the two railway-tracks, shifting mechanism for moving the carriage and sewing-machine laterally upon the supporting-wheels, and a lock to lock the said carriage in its shifted position upon the said wheels.

4. In an apparatus for supporting and sew-

ing fabrics, the combination of a table having a horizontal supporting-surface for the fabric, a railway arranged parallel to the edge of the table and at a lower level than its supporting-surface, a traveling carriage 5 provided with supporting-wheels movable upon said railway and located wholly to one side of the table, a sewing-machine secured to the carriage and movable therewith and 10 having its cloth-plate substantially on a level with the surface of the table, and laterally-movable guides between the carriage and supporting-wheels for the purpose of moving the sewing-machine laterally with respect to the 15 supporting-wheels, whereby the sewing-machine may be moved to follow the edge of the fabric being sewed.

5. In an apparatus for supporting and sewing fabrics, the combination of a table having a horizontal supporting-surface for the fabric, a railway arranged parallel to the edge of the table and at a lower level than its supporting-surface, a traveling carriage 20 provided with supporting-wheels movable upon said railway and located wholly to one side of the table, a sewing-machine secured to the carriage and movable therewith and having its cloth-plate substantially on a level 25 with the surface of the table, adjustable mechanism for laterally adjusting the carriage and the sewing-machine upon the supporting-wheels, and a locking mechanism to lock the carriage in its adjusted position 30 upon the wheels, whereby the sewing-machine may be caused to travel at various desired positions with respect to the edge of the table to follow the edge of the fabric being 35 sewed.

6. In an apparatus for holding and sewing fabrics, the combination of a table having a horizontal surface for supporting the fabric, a railway arranged along one side of the table and supported directly upon it, so as to form no obstruction to access to the table, a 45 laterally-projecting traveling sewing-machine support having wheels adapted to run upon the railway and move the sewing-machine parallel to the edge of the table, means to adjust said sewing-machine support laterally with respect to its wheels, and a sewing-machine secured to the laterally-adjustable 50 support, whereby it may be moved to or from the edge of the table, and having its cloth-plate in substantially the same horizontal plane as the supporting-surface of the table. 55

7. In an apparatus for supporting and sewing fabrics, the combination of a table, a rail arranged immediately under the table and projecting downward, supporting-brackets 60 projecting laterally from the under portion of the table, a rail supported by said brackets at a lower elevation than the first-mentioned rail, a traveling carriage having supporting-wheels, part of which are adapted to run upon 65 one face of one rail and part upon the opposite face of the other rail, a sewing-machine

supported upon the carriage, and an electric motor upon said carriage mechanically connected to operate the sewing-machine.

8. In an apparatus for supporting and sewing fabrics, the combination of a table, a rail arranged immediately under the table and projecting downward, supporting-brackets projecting laterally from the under portion of the table, a rail supported by said brackets 75 at a lower elevation than the first-mentioned rail, a traveling carriage having supporting-wheels, part of which are adapted to run upon one face of one rail and part upon the opposite face of the other rail, a sewing-machine 80 supported upon the carriage, an electric motor upon said carriage mechanically connected to operate the sewing-machine, a source of electrical energy connecting with the respective rails, and an insulating depending shield 85 projecting downwardly from the table to shield the upper rail.

9. In an apparatus for supporting and sewing fabrics, the combination of a table with two electric conducting or contact rails immediately below the upper part of the table and at a distance from the floor and located within the space bounded by a vertical plane through the edge of the table, an electrically-propelled sewing-machine adapted to travel parallel to the edge of the table, and a supporting-carriage for the sewing-machine, provided with electrical contacts traveling in contact 95 with the respective contact-rails.

10. In an apparatus for supporting and sewing fabrics, the combination of a table with two electric conducting or contact rails arranged immediately below the upper part of the table and at a distance from the floor and located within the space bounded by a vertical plane through the edge of the table, a depending insulating-shield to shield one of the rails against exposure or accidental contact, an electrically-propelled sewing-machine adapted to travel parallel to the edge of the table, and a supporting-carriage for the sewing-machine, provided with electrical contacts traveling in contact with the respective contact-rails. 105

11. In an apparatus for supporting and sewing fabrics, the combination of a table with two electric conducting or contact rails immediately below the upper part of the table and at a distance from the floor and located within a space bounded by a vertical plane through the edge of the table, and an electric sewing-machine and carriage supported upon said railway and located on the opposite side of the said vertical plane. 115

12. In an apparatus for holding and sewing fabrics, the combination of a table having a horizontal surface upon which the fabric to be sewed is placed, a railway arranged parallel to the table and at a lower level than its upper surface, a carriage running upon said railway 125 and having its body or frame laterally adjustable upon the wheels resting upon the rails 130

of the railway, and a sewing-machine located  
wholly to one side of the edge of the table and  
secured to the adjustable body or frame of  
the carriage, whereby the sewing-machine  
5 may be propelled over the railway adjacent  
to the edge of the table and adjusted later-  
ally with respect thereto.

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

R. M. HUNTER.

Witnesses:

ERNEST HOWARD HUNTER,  
A. J. DUNN.