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G. L. CLARK ET AL.

ELECTRIC WIRING MACHINE

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INVENTORS

BY

ATTORNEY
To all whom it may concern:

Be it known that we, GEORGE L. CLARK and CLARENCE H. TIRADO, of the United States, residing at Norfolk, in the county of Madison and State of Nebraska, have invented certain new and useful Improvements in Electric-Wiring Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain new and useful improvements in electric wiring machines particularly designed to be used to facilitate the installation of large, stiff, rubber-covered insulated copper wire as required in the placing of switches, lights, receptacles, etc., in homes, factories and public buildings.

This wiring is generally done as knob and tube work or by placing the wire in conduit. In making these installations it is necessary to unreel the wire from a coil and thread the wire through a porcelain tube placed in a hole bored through the joist or pulling it into the conduit. As the wire is placed on the market at the present time in coils, it is necessary to place the coil of wire on the floor, some distance away from the work. We have found that it is impossible to take wire from these coils laying on the floor without getting kinks in the wire, or getting the wire twisted or tangled. This is especially true when two or more wires are taken from separate coils at the same time and brought into the same opening.

With the use of the present invention the difficulty of tangled wires is avoided as the wire is reeled off of spools as needed in a straight and natural position.

Another object is to provide the wire with graduations whereby the electrician may readily determine the amount of wire used on a given job.

A further object of the invention is to provide a wiring machine of the above kind which provides a convenient means for carrying the wire from one point to another so that the wire cannot become tangled, soiled or damaged.

With the above general objects in view, and others that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a substantially central longitudinal vertical sectional view of a wiring machine constructed in accordance with the present invention;

Figure 2 is a vertical transverse sectional view taken substantially upon line 2—2 of Figure 1;

Figure 3 is a top plan view of the device shown in Figure 1;

Figure 4 is a fragmentary perspective view of one of the end doors and its friction brake member.

Referring more in detail to the several views, the present invention embodies a substantially rectangular casing 5 with vertically swinging end doors 6 having their lower edges hinged at 7 to the bottom of the casing 5. A central partition 8, preferably made of two thicknesses of material, as shown so as to be of extreme durability and strength, divides the casing into two like compartments 9 and 10, and a spindle 11 is arranged longitudinally and centrally of the casing 5 in a horizontal position with its central portion mounted in the partition 8. This spindle is preferably held against longitudinal displacement so that the extreme end edges of the spindle will be maintained in the same vertical plane transversely of the casing as the end edges of the side walls of the casing, by means of collars 12 suitably secured on the spindle and engaging opposite sides of the partition 8. Any conventional form of latch may be provided for holding the end doors 6 in a closed position.

A reel 13 is removably positioned upon each end of the spindle 11 so that each compartment of the casing contains a reel and each reel has the large, stiff, insulated wire 14 wound thereon, one strand of the wire 100 being provided for each spool or reel. These reels are of such length as to extend from the partition to the adjacent end door so that said door will retain the adjacent reel upon the spindle and the reel or spool will be prevented from turning too freely upon the spindle, by means of a friction brake member 15 fastened to each end door.
and bearing against the adjacent end of the adjacent reel or spool. This brake element preferably consists of a resilient strip of metal with one end fastened against the inner face of the door and with its other end extending inwardly to engage the adjacent spool.

The top wall of the casing 5 is provided with openings in which are fitted porcelain bushings 16 through which the wire may be threaded for convenience in dispensing the wire from the spools as required. These bushings are located in a vertical plane to one side of the spindle 11 so that the wire will pass outwardly through the casing in a ready and most desirable manner. Also, to suit the requirement of special cases, the wire may be taken out through one of the side walls of the casing through the provision of further porcelain bushings 16 secured in suitable openings in one side wall of the casing in a horizontal plane above the spindle 11. In order to permit convenient carrying of the device from place to place, the top wall of the receptacle has a handle 17 suitably hinged thereto by means of a retaining plate 18 which is riveted or otherwise secured to the casing.

In operation, the end doors 6 are released and swung downwardly so as to permit ready access to the ends of the spindle 11, and then the required spools of wire are placed upon said spindle in the compartments 9 and 10, the end doors 6 then being swung upwardly and latched in closed position, after the ends of the wire have been threaded outwardly through the desired ones of the bushings 16 or 16'. The desired amount of wire is then readily used by removing the wire from the casing by simply exerting a pull on the outer end of the wire. It will be seen that when the wire has been entirely used from the spools, they may be readily replaced by new spools containing full amount of wire.

From the foregoing description it will be seen that the wire will be reeled off of the spools as needed in a straight and natural position so that the wire cannot become twisted or tangled and as the unused wire which is outwardly of the casing may be readily reeled thereinto, there is no danger of causing damage to or soiling of the unused wire when carrying the device from place to place.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

It will be seen that the chambers 9 and 10 may be formed of separate units such as would be produced if the device in Figure 1 had its top, bottom and front and rear walls severed in a vertical plane between the two thicknesses of wall of the partition 8 with the spindle 11 also severed in this plane. With such a construction the machines may be placed on the market in single units holding only one spool of wire, and if the user of the device desires to use a double unit he can bolt two of the single units together.

What is claimed is:

1. In a wiring machine of the class described, a rectangular casing having hinged end doors and provided with a central transverse partition lying parallel with the doors when closed, said partition dividing the casing into a pair of adjacent compartments to which access may be had upon opening of said end doors, a horizontal spindle arranged centrally and longitudinally of the casing with its central portion passing through the partition and adapted for the reception of spools of wire upon the ends thereof so that one spool of wire will be located in each compartment, and friction brake elements carried by the end doors arranged to bear against the adjacent ends of the spools when said doors are closed for preventing turning of the spools too freely upon the spindle, said casing having outlet openings for the wire from each spool.

2. In a wiring machine of the class described, a rectangular casing having hinged end doors and provided with a central transverse partition lying parallel with the doors when closed, said partition dividing the casing into a pair of adjacent compartments to which access may be had upon opening of said end doors, a horizontal spindle arranged centrally and longitudinally of the casing with its central portion passing through the partition and adapted for the reception of spools of wire upon the ends thereof so that one spool of wire will be located in each compartment, and friction brake elements carried by the end doors arranged to bear against the adjacent ends of the spools when said doors are closed for preventing turning of the spools too freely upon the spindle, said casing having outlet openings for the wire from each spool.

3. In a wiring machine of the class described, a rectangular casing having hinged end doors and provided with a central transverse partition lying parallel with the doors when closed, said partition dividing the casing into a pair of adjacent compartments to which access may be had upon opening of said end doors, a horizontal spindle arranged centrally and longitudinally of the casing with its central portion passing through the partition and adapted for the reception of spools of wire upon the ends thereof so that one spool of wire will be located in each compartment, and friction brake elements carried by the end doors ar-
ranged to bear against the adjacent ends of the spools when said doors are closed for preventing turning of the spools too freely upon the spindle, said casing having outlet openings for the wire from each spool, said spindle being substantially of the same length as the length of the receptacle and having means engaging opposite sides of the partition to prevent longitudinal displacement of the spindle from its operative position, the outer ends of said spindle being free and unsupported.

4. In a wiring machine of the class described, a rectangular casing having hinged end doors and provided with a central transverse partition lying parallel with the doors when closed, said partition dividing the casing into a pair of adjacent compartments to which access may be had upon opening of said end doors, a horizontal spindle arranged centrally and longitudinally of the casing with its central portion passing through the partition and adapted for the reception of spools of wire upon the ends thereof so that one spool of wire will be located in each compartment, and friction brake elements carried by the end doors arranged to bear against the adjacent ends of the spools when said doors are closed for preventing turning of the spools too freely upon the spindle, said casing having outlet openings for the wire from each spool, one opening for the outlet of the wire from the casing being provided in the top wall for each compartment and another opening being provided in the side wall of the casing for each compartment, and anti-friction bushings fixed in said openings.

5. In a wiring machine of the class described, a rectangular casing having a hinged end door, a horizontal spindle arranged centrally and longitudinally of the casing and adapted for reception of a spool of wire, and a friction brake element carried by the end door and arranged to bear against the adjacent end of the spool when said door is closed for preventing turning of the spool too freely upon the spindle, said casing having an outlet opening for the wire from the spool.

In testimony whereof we hereunto affix our signatures.

GEORGE L. CLARK.
CLARENCE H. TIBADO.