

(No Model.)

F. B. CHASE.
APPARATUS FOR WINDING WIRE.

No. 485,256.

Patented Nov. 1, 1892.

FIG. 1.

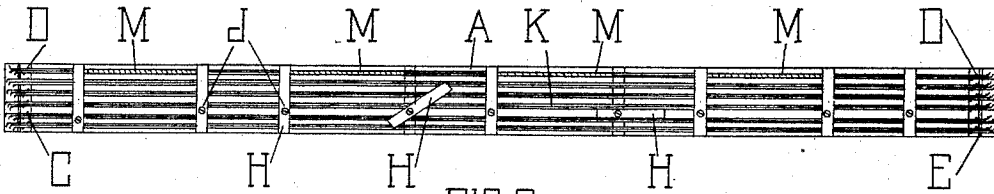


FIG. 2.

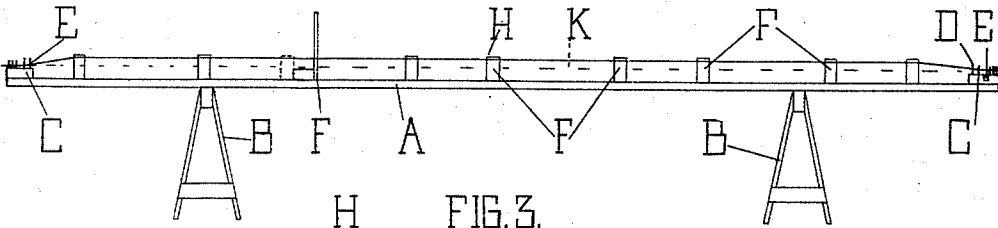


FIG. 3.

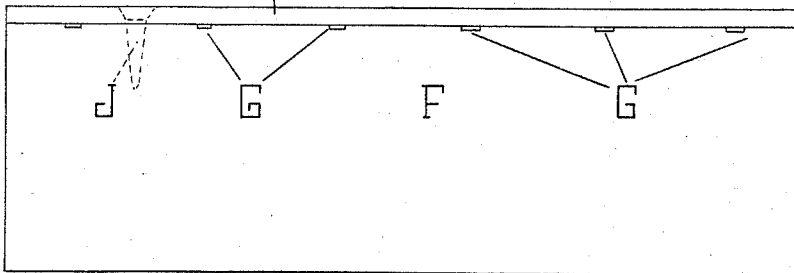


FIG. 4.

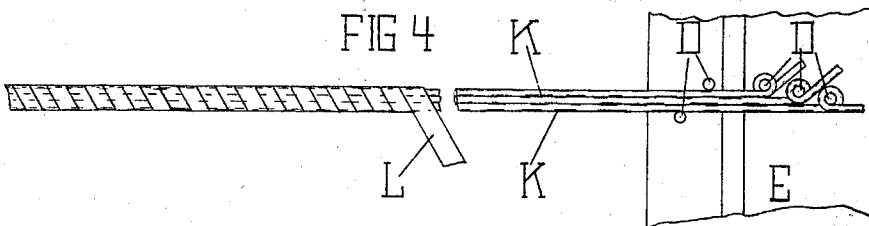


FIG. 5.

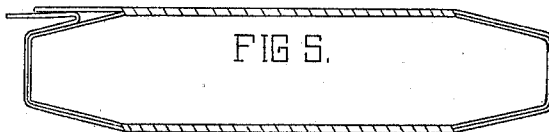
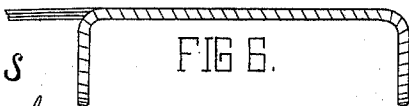


FIG. 6.



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APPARATUS FOR WINDING WIRE.

SPECIFICATION forming part of Letters Patent No. 485,256, dated November 1, 1892.

Application filed January 4, 1892. Serial No. 417,002. (No model.)

To all whom it may concern:

Be it known that J, FRANK B. CHASE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Devices for Making Armature - Coils, of which the following is a specification.

My invention relates to devices for forming coils for dynamo-electric-machine armatures and the like, and has for its object to provide convenient means for making a flat conductor or tape conductor from a series of round conductors by suitably bringing them and fixing them together and for making a suitable coil for an armature. It is illustrated in the accompanying drawings, wherein—

Figure 1 is a plan view of the device with the wires stretched. Fig. 2 is a side view of the same. Fig. 3 is a side view of one of the stretching-bridges. Fig. 4 is a detail plan view of a tape in the process of formation and the means for securing the ends of the wire. Fig. 5 is a view of the coil, showing the untaped ends. Fig. 6 is a view of a coil bent into shape and taped at the ends.

Like parts are indicated by the same letters in all the figures.

A is a base-board or table separated by the legs B B and having at either end the transverse ribs C C, upon which the pins D D are fastened, and which is provided with the longitudinal groove E. Lying loosely upon the table is a series of stretching-bridges F F, with transverse grooves G G, of a suitable size to receive the tape or series of wires when laid side by side. H is a cover for such grooves, pivotally attached by the pin J to one end of the block.

K K are a series of suitably-insulated wires, which are tightly stretched from the pins D D on one side to the similar pins on the opposite side and are passed between the two inner pins D D, which thus serve as a sort of guide to bring them together in the proper relation.

The device here shown is calculated to produce a tape having three wires lying side by side in the same plane, and the pins could be made removable and adjustable to accommodate the device to wires of every size or to tapes having a greater or less number of wires. When the wires have been so stretched as to

form a series of wires lying together in groups of three, side by side, they are further stretched by raising up under them into vertical position the stretching-bridges, each being brought into such position that one of the series of wires lies in each of the grooves G G. The cover H is then turned round into a position transverse to the wires and longitudinal to the bridge, so that the wires are securely held in position. The wires thus stretched and held in close relation may be shellacked, and by moving the stretching-bridges it is possible to shellac them to any degree and in sections or throughout the whole length of the tape, as may be desired. It is also desirable, at least in some instances, to tape over the wires, which is done by means of the tape L, which is wrapped around them in suitable quantity and suitably secured. The whole device is then left to dry and is easily removed by reversing the operations above described. The ends of the wires are detached by cutting across through the groove E, when the completed tapes suitably formed may be removed and the fragments of wire may be detached from the pins D, and the machine is ready for another application of wire. The taping is often preferably done in sections, as indicated in Fig. 1, where the sections M M M are shown as taped or bound, and when this is desired the stretching-bridges will be erected in suitable positions to serve as guides to indicate the limits of the taping.

The completed coil is shown in Fig. 5, and it is preferably arranged as there shown. The taped section M constitutes the top of the coil and the untaped or free ends being left loose, so as to permit of their being bound in any desired manner in application to the armature.

I claim—

1. The combination of a suitable support with a wire-securing device at the ends, arranged in such manner as that a series of wires may be stretched across such support in parallel width and in close proximity to each other, and stretching-bridges loose on such support and adapted to be turned up on edge, and thus to stretch the wires, and grooves across the stretching-bridges of the right width to exactly receive the series of wires so placed side by side, and pivoted covers on

such bridges, whereby the wires may be securely held in such grooves.

2. A combination of a support with the ribs at either end, a wire-securing device on such
5 ribs, arranged so that wires may be stretched from rib to rib and arranged in parallel groups in the same plane with and in close proximity

to each other, and a groove across such bridge, whereby the wires may be conveniently cut at the ends when the process is completed.
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