No. 659,882. Patented Oct. 16, 1900.

G. L. WEAVER.

SPOOL FOR ELECTROMAGNETS.

(Application filed Apr. 30, 1900.)

(No Model.)

Fig. 1.

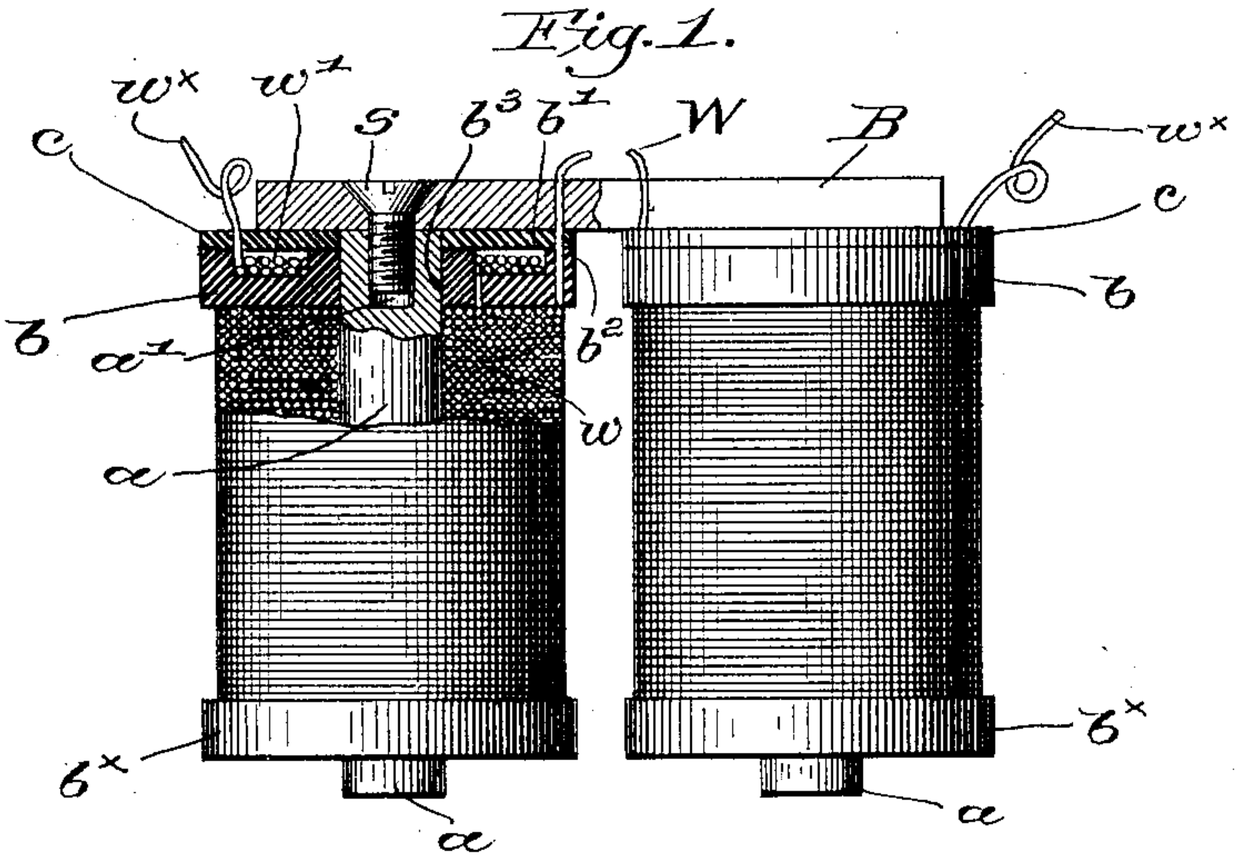
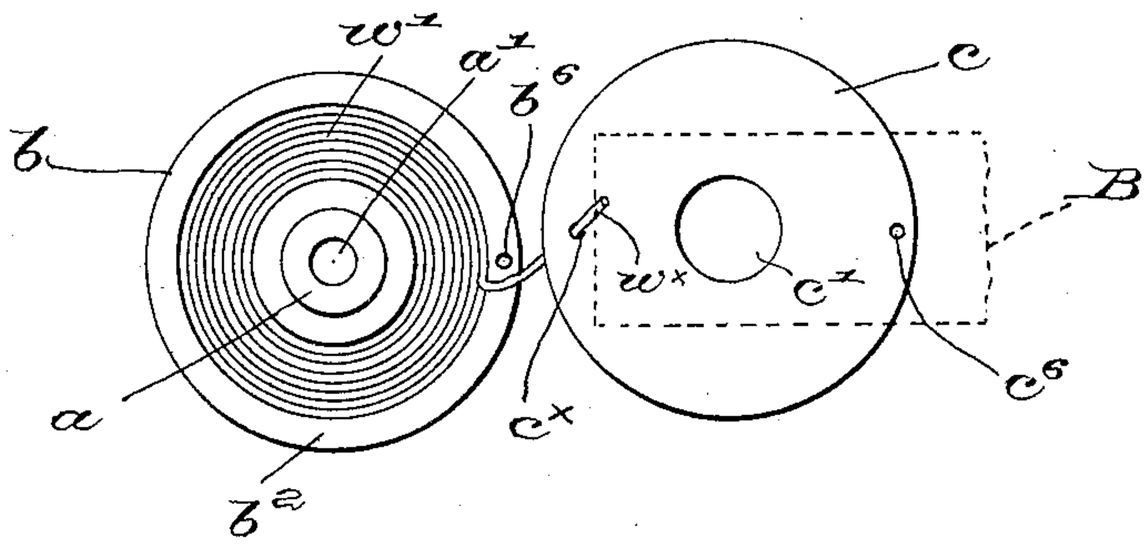


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE L. WEAVER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HORACE E. HARRIMAN, OF GEORGETOWN, MASSACHUSETTS.

SPOOL FOR ELECTROMAGNETS.

SPECIFICATION forming part of Letters Patent No. 659,882, dated October 16, 1900.

Application filed April 30, 1900. Serial No. 14,800. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. WEAVER, a citizen of the United States, and a resident of Boston, (Dorchester,) county of Suffolk, State of Massachusetts, have invented an Improvement in Spools for Electromagnets, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a novel spool for electromagnets whereby should the end of the inside wire be broken repairs can be readily made at once without necessitating unwinding of the outer coils. It frequently happens that such breaks of the end of the inside wire occur, and frequently it is desired to splice such end. In accordance with my invention I provide the outer end of one of the heads of the spool with a recess or magazine to receive a surplus or reserve portion of the inside wire which can be used if the free end breaks, the change being made at once and without any unwinding of the coil, the recess and contained wire being covered by a removable external cap or cover.

Figure 1 shows in elevation and partly in diametral section two electromagnets secured to the usual yoke, the spools embodying my invention; and Fig. 2 is an end view of one of the spools, showing the reserve wire coiled in the magazine, the protective cap being swung to one side.

The spool on which the wires are wound comprises a soft-iron core or barrel *a* and vulcanite or other suitable heads *b* $b^{\times}$ secured thereto, the core having a threaded opening a' at one end for the reception of the screw *s*, by which the yoke B is held in place, the core or barrel being shown as extended through hubs on the heads. In the present embodiment of my invention I have shown the outer end of one of the heads, as *b*, as annularly recessed at b' to form a magazine and leaving an external upturned wall or flange b^2, and in Fig. 1 I have shown an aperture or hole b^3 in the head, through which the free end of the inside wire is led, and a reserve length or surplus w' of said wire *w* is disposed in the magazine or recess, preferably in the form of a coil or spiral, as shown in Fig. 2. The surplus or reserve portion is of sufficient length to provide for several replacings or splices, as all that is necessary is to draw off sufficient wire from the reserve, and the winding is not disturbed in the least.

I close the magazine with a removable cap or cover *c* of insulating material, which rests on the top of the wall b^2 and is apertured at c' to receive the projecting end of the barrel *a*, the cap protecting the reserve wire and also preventing any short-circuiting with the yoke B.

The loose end $w^{\times}$ of the inside wire is led out through a hole $c^{\times}$ in the cap. The outside end W of the wire can be led out through a hole b^6 in the flange b^2, Fig. 2, and a registering hole c^6 in the cap.

My invention is applicable to all types or kinds of electromagnets, and the spools can be used either right or left hand, as desired.

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

As an article of manufacture, a spool for electromagnets, comprising a barrel and heads, one of the heads having an external annular recess in its outer end surrounding the end of the barrel extended through the head, and presenting an outwardly-extended annular flange, said recess being adapted to receive a reserve portion of the inside wire wound upon the barrel, the flange forming the side wall of the recess, and a removable cap centrally apertured to receive the end of the barrel and adapted to rest on the external wall to cover and protect the reserve portion of the wire in the recess.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE L. WEAVER.

Witnesses:
JOHN C. EDWARDS,
AUGUSTA E. DEAN.