R. C. FAY.

Bobbin or Spool for Facilitating the Winding of Wire upon Skeleton Frames or Reels.

No. 220,066. **Patented Sept. 30, 1879.**

FIG. 1.

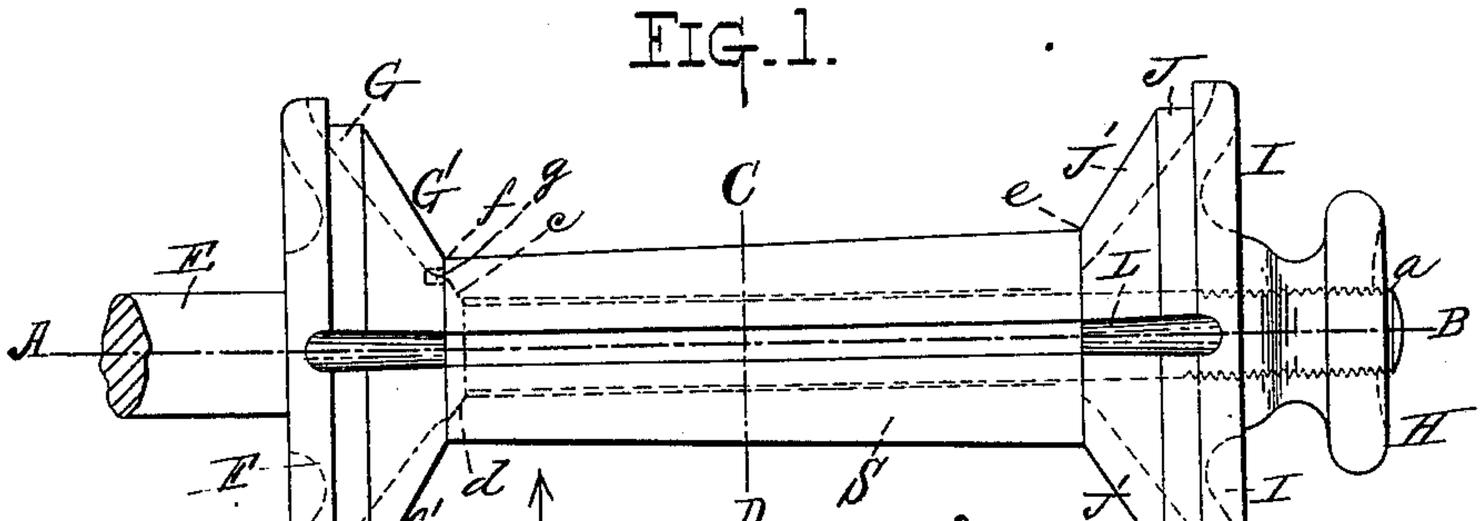


FIG. 2.

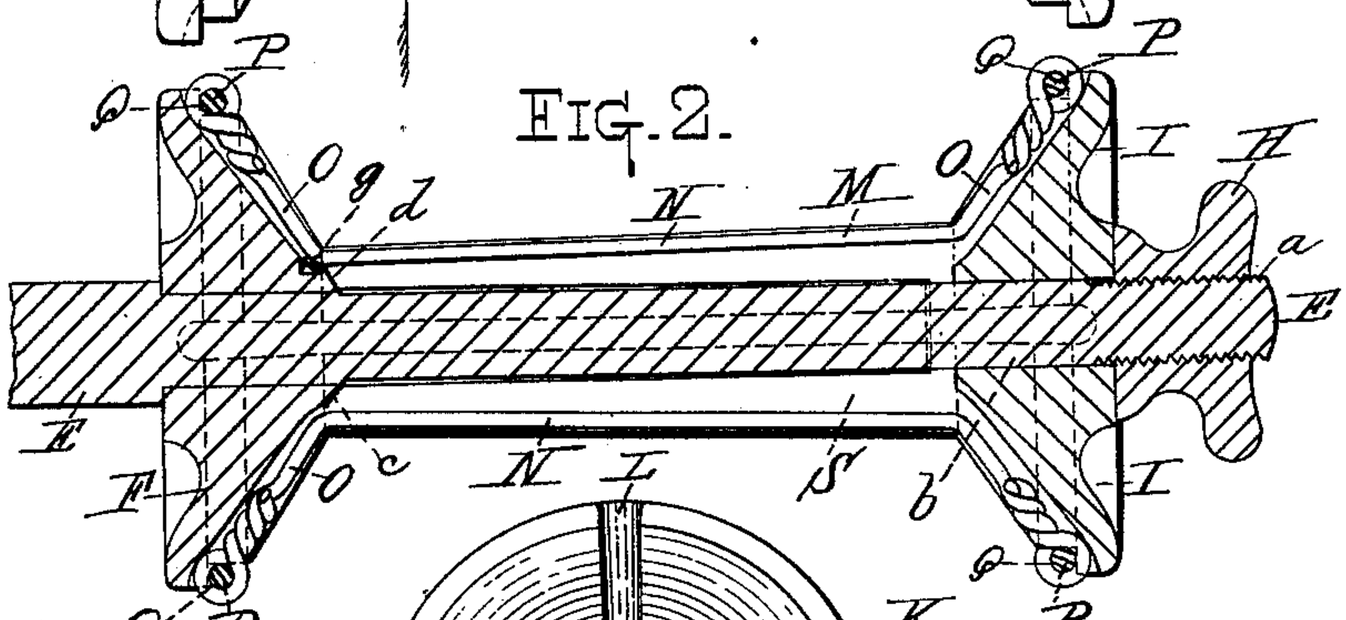


FIG. 3.

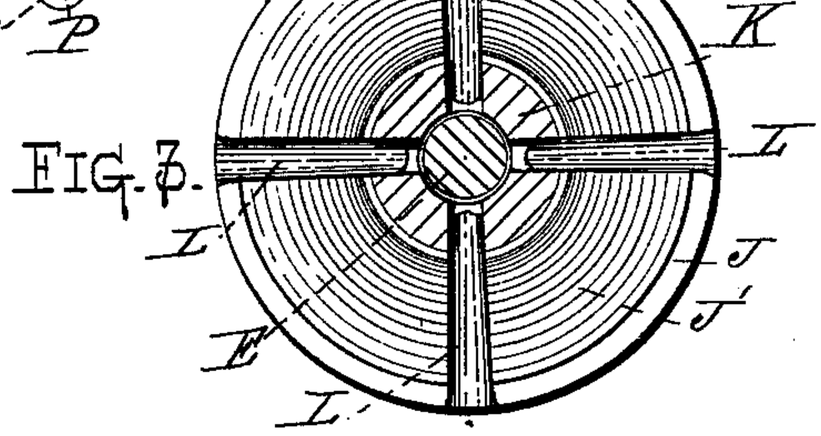
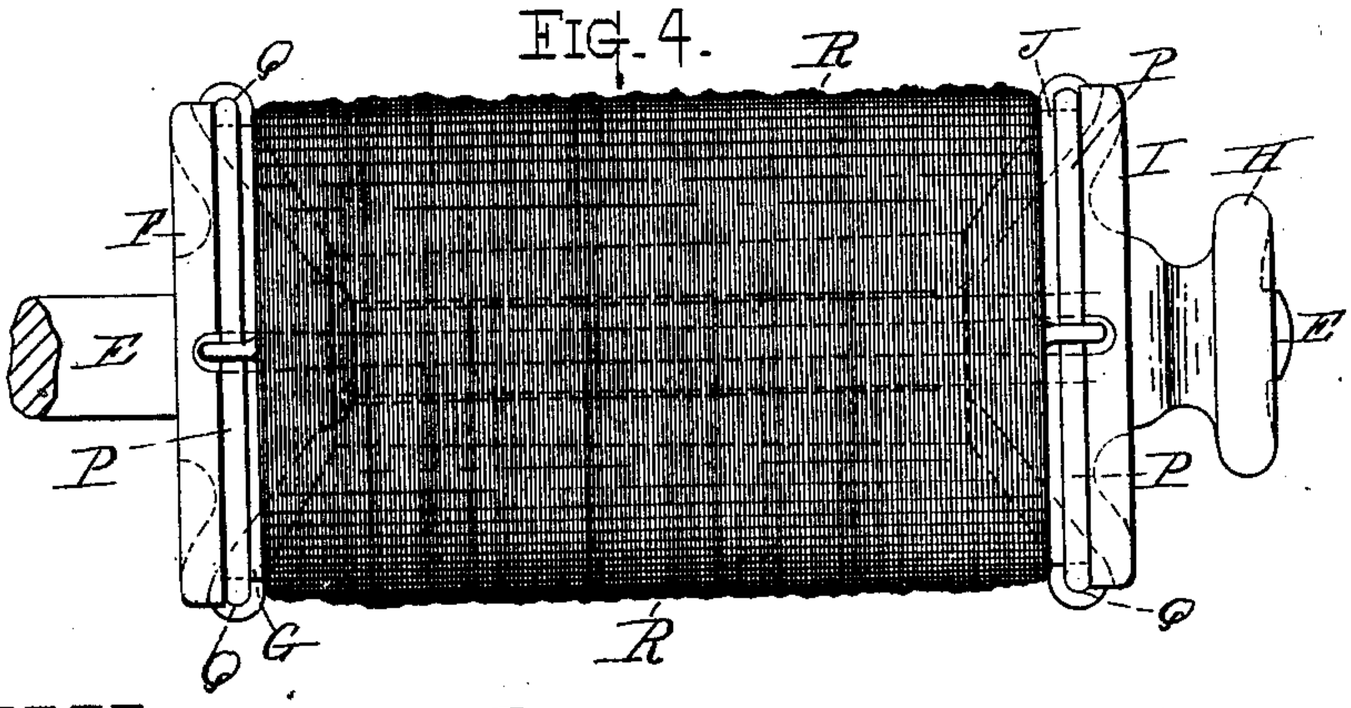


FIG. 4.



Witnesses:

Edwin E. Moore

Thos. H. Dodge

Inventor:

Rinman C. Fay

UNITED STATES PATENT OFFICE.

RIMMON C. FAY, OF LINCOLN, RHODE ISLAND.

IMPROVEMENT IN BOBBINS OR SPOOLS FOR FACILITATING THE WINDING OF WIRE UPON SKELETON FRAMES OR REELS.

Specification forming part of Letters Patent No. **220,066**, dated September 30, 1879; application filed June 9, 1879.

To all whom it may concern:

Be it known that I, RIMMON C. FAY, of Lincoln, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Bobbins or Spools for Facilitating the Winding of Wire upon Skeleton Frames or Reels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a side view of my aforesaid improved bobbin or spool. Fig. 2 represents a central longitudinal section through the same, taken on line A B, Fig. 1, looking in the direction indicated by arrow 1 of the same figure, with the addition of my improved skeleton wire frame or reel inserted in position to receive the wire, as will be hereinafter more fully described. Fig. 3 represents a section on line C D, looking in the direction of arrow 2, Fig. 1; and Fig. 4 represents a side view of a coil of wire wound upon my said improved bobbin and skeleton wire frame or reel.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the part marked E represents a section of the shaft or spindle by which the bobbin is rotated, and to this shaft or spindle is rigidly secured the head F, having a groove, G, upon its inner outer edge, and a bevel face, G′.

The outer end of shaft or spindle E is provided with a screw-thread, *a*, to receive the thread of nut H, which holds head I in place upon said spindle, and which head I is provided with a groove, J, upon its inner outer edge, and a bevel face, J′. The hole through head I is just sufficient to receive the part *b* of spindle E.

From head I project ribs K, and these ribs are divided from end to end by grooves L, which connect with those formed in the peripheries of heads F when in position, as shown in Figs. 2 and 4 of the drawings. These grooves are for the reception of the skeleton wire bobbin or reel frame M, which is composed of bars N, having the bent ends O and wire circular heads P, which heads pass through eyes Q in the bent ends O, as fully indicated in Figs. 2 and 4 of the drawings.

Head F is made with a slight bevel projection, *c*, upon its inner bevel face, against which the ends of ribs K press, the latter being beveled, as shown at *d*, to fit said beveled portions *c*.

Ribs K are made tapering from the point *e*, where they are united to head I, to their ends *f*, where they abut against head F.

When head I is slipped into position upon spindle E, and nut H screwed into position, as shown in Fig. 2, the ends of ribs K, which abut against the bevel surfaces *c* of head F, are sprung slightly outward; consequently, after the wire coil R has been wound upon frames S and M, (the former frame being composed of the heads F and I, ribs K, and spindle E,) and the nut H is removed from the spindle E, the ribs K will spring in a little when head I is forced off spindle E, thereby permitting ribs K to be slipped out of the coil of wire R with ease and facility, the coil of wire R being left upon and supported by the wire skeleton frame or reel M.

To insure the heads F and I always being attached in the same relative positions, a pin, *g*, projects from one of the ribs K and enters a hole in the stationary head F, as indicated in dotted lines, Figs. 1 and 2 of the drawings.

The skeleton frame or reel M retains and holds the wire coil R in the same compact and uniform shape in which it is first wound upon both frames, as indicated in Fig. 4 of the drawings.

The skeleton wire frame or reel M forms the subject-matter of a separate application for Letters Patent filed by me of even date herewith.

Having described my improvements in bobbins or spools for facilitating the winding of wire, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with removable head I, provided with slotted ribs K, having beveled

ends *d*, of spindle E, provided with head F, having beveled surfaces *c*, substantially as and for the purposes set forth.

2. The wire winding-bobbin S, consisting of the head I, provided with springing ribs K, spindle E, provided with head F, and nut H, said parts being constructed and combined together substantially as shown and described, and for the purposes set forth.

RIMMON C. FAY.

Witnesses:
EDWIN E. MOORE,
THOS. H. DODGE.