W. FAIRCHILD.

SPOOL.

APPLICATION FILED DEC. 18, 1911.

1,073,110. Patented Sept. 16, 1913.

Fig. 5

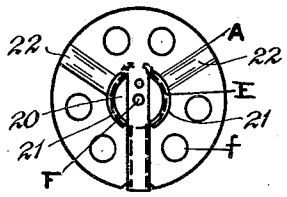


Fig. 1

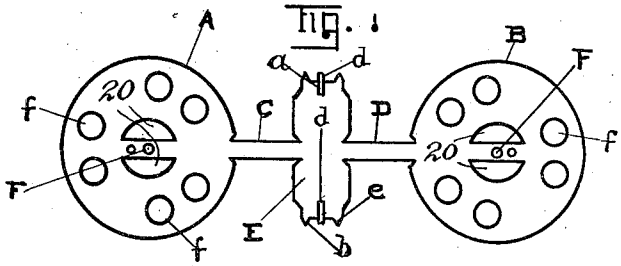


Fig. 2

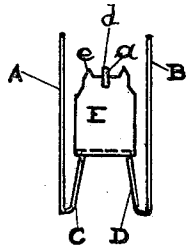


Fig. 3

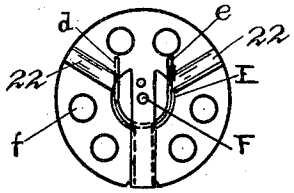


Fig. 4

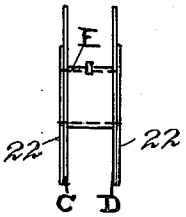


Fig. 6

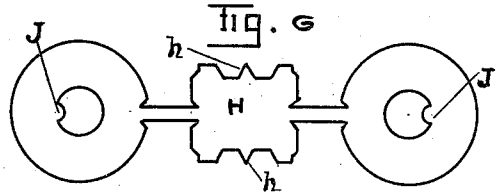


Fig. 7

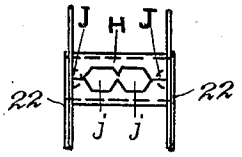


Fig. 8

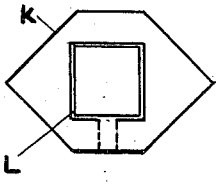
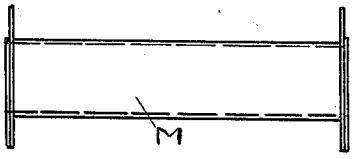


Fig. 9



WITNESSES

Lottie Brow.

Beulah Carle.

INVENTOR

William Fairchild,

by Frederick W. Cameron.

Attorney.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM FAIRCHILD, OF ALBANY, NEW YORK.

SPOOL.

1,073,110. Specification of Letters Patent. Patented Sept. 16, 1913.

Application filed December 18, 1911. Serial No. 666,358.

To all whom it may concern:

Be it known that I, WILLIAM FAIRCHILD, a citizen of the United States of America, residing at No. 440 Clinton avenue, in the city of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Spools, of which the following is a specification.

My invention relates to spools, and the object of my invention is to provide a spool or roller which may be stamped out of one piece of material, and bent into form and secured in position quickly and economically, together with such other elements and combinations as are hereinafter more particularly described and claimed. I accomplish this object by means of the mechanism illustrated in the accompanying drawings, in which:

Figure 1 is a plan of a spool blank. Fig. 2 is a plan after the spool has been bent, during the process of being formed in position for use. Fig. 3 is an end elevation of the spool, during its construction, shown in plan in Fig. 2. Fig. 4 is a plan of a completed spool. Fig. 5 is an end elevation of a completed spool. Fig. 6 is a plan of a modified form of spool blank. Fig. 7 is a plan of a completed spool shown in modified form in Fig. 6. Fig. 8 is an end elevation of second modified form. Fig. 9 is a plan of an extended spool.

Similar letters refer to similar parts throughout the several views.

In order to construct a spool or roller, especially those adapted for carrying a ribbon for a typewriting machine, it is advisable to use thin flexible material, such as tin, which may be easily extended out in the form desired and may be bent quickly and easily to the desired position. Spools used for carrying type writer ribbons and for similar purpose are usually provided with a small portion, centrally disposed, between two wider ends, to which smaller portion the ribbon is attached and about which it is wound.

In Fig. 1 I show a blank stamped out of a thin piece of metal. The circular portions, A and B, are each connected by thin narrow bands, C and D, to a centrally disposed portion, E, which extends at about right angles to the bands, C and D, and which preferably has at its extreme ends spurs, *e*, *b*, and also the locking projections, *d*, *a*. There is preferably cut an opening, F, through the center of each of the circular portions, A and B, and there may be several openings, *f*, through the circular portions A and B, for the purpose of ornamentation or to reduce the amount of material therein.

In order to bend the blank shown in Fig. 1 into the position required I first cause the blank to assume the position shown in Fig. 2, in which the circular portions, A and B, are bent upon the bands C and D, respectively, and the bands, C and D, are bent to nearly parallel the portions A and B, and the portion E is bent upon itself, the ends caused to approach each other, to occupy the position shown in Fig. 2 and in elevation in Fig. 3. I then press the bands, C and D, closely against the circular portions A and B, respectively, and lock the portions A and B and E together, by causing the ends of the portion E to project through the openings 20 in the portions A and B and then turning them over to form a bead in connection with the circular portions A and B, as shown at 21 on Fig. 5. The spool then assuming the position shown in plan in Fig. 4 and end elevation in Fig. 5.

An opening will be found through the spool, passing through the openings, F, in the circular portions, and that formed by the bending of the portion E will be between the ends of the spool. Through the opening, F, any rod, post or bolt may pass, if desired, in the manipulation of the spool.

In Figs. 3, 4, 5 and 7, I show embossed portions 22, which may be placed there for strengthening the sides of the spool.

In Fig. 6 I show simply another form of a blank. The central portion, H, being provided with a somewhat serrated edge, *h*, *h*, and the circular portions provided with lips, J, J, so that when the portions, J, J, are bent in the manner already described in reference to Figs. 2, 3 and 4, the circular part, H, will be provided with the openings, *j*, as shown in Fig. 7, and the projecting lips, J, J, will be bent to engage the interior surface of the portion H when that portion has been bent into position for use, as shown in Fig. 7.

In Fig. 8 I have shown a modified form in which the enlarged end portions, K, are six sided, instead of circular, provided with a square opening, L, instead of circular, as shown in previous figures.

In Fig. 9 I have shown the spool constructed as described in reference to Figs.

1 to 5 except that I have made the circular portion, M, much longer than the portion E of Fig. 1.

Of course I do not limit myself to the size and form of the parts, nor the particular manner of locking them in position.

What I claim as my invention and desire to secure by Letters Patent is:

1. A spool formed from a single piece of material; the enlarged ends connected by a narrow band with a centrally disposed enlarged portion; bands and ends bent so that the bands will lie against the ends and the centrally disposed portion bent to form a shank and locked together between the ends, substantially as described.

2. A spool formed from a single piece of material, having at each end and midway between the ends enlarged portions with narrow bands connecting the central with each of the end portions; a means for locking the ends of the central portions together when they are bent, so that its ends unite; the enlarged ends of the spool bent in such a position that they will be parallel to each other and in contact with the sides of said centrally disposed portion.

3. A spool blank formed out of one piece of material provided with circular flanges at each end with an enlarged center member; narrow bands connecting said central member to each circular flange, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM FAIRCHILD.

Witnesses:
LOTTIE PRIOR,
BEULAH CARLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."