E. M. CRANDAL.
Spool for Winding Wire.

No. 216,836. Patented June 24, 1879.

Fig. 1

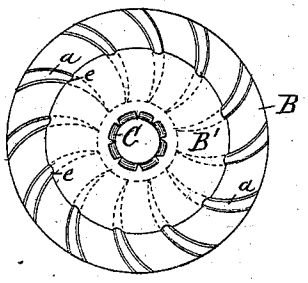
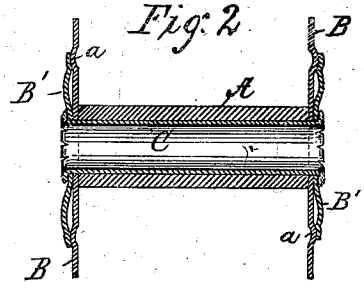


Fig. 2



Witnesses
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EDWARD M. CRANDAL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SPOOLS FOR WINDING WIRE.

Specification forming part of Letters Patent No. **216,836**, dated June 24, 1879; application filed September 16, 1878.

To all whom it may concern:

Be it known that I, EDWARD M. CRANDAL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spools for Winding Wire; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents an end view of a spool embodying my invention, and Fig. 2 represents a longitudinal section of the same.

Like letters of reference indicate like parts.

The object of my invention is to provide a strong, light, and cheap spool upon which to wind wire, commonly used in connection with reaping-machines for binding the gavels of wheat or other grain, and so that the wire may be readily transported and used; and my invention consists in the construction and combination of the several parts of the spool, as hereinafter described and claimed.

In the drawings, A represents the body or axle of the spool, which consists of a hollow cylinder made of some strong and light material, preferably of wood or paper. B are disks or flanges, made preferably of sheet-iron, which form the ends of the spool A, and are provided with annular openings at the center thereof, and are also provided with corrugations *a*, formed therein by suitable dies, for the purpose of giving rigidity and strength thereto. B′ are auxiliary disks, also provided with annular openings at the center thereof, and which are also cut or stamped preferably from sheet-iron, and are made concave or dish-shaped, as shown, for the purpose of bracing and giving additional strength to the flanges or disks B.

The peripheries of the auxiliary disks B′ are provided with a series of depressions or notches, *e*, which are coincident with the corrugations in disks B, thereby permitting the entire peripheries of the auxiliary disks B′ to bear against the flanges B.

Within the cylinder A is inserted a sleeve or thimble, C, preferably of sheet iron, the outer circumference of which is coincident with the inner diameter of the body or axle of the spool.

The openings in the flanges B B′ are of a less diameter than the diameter of the axle A, so that each end of the axle forms a shoulder or seat for the support of said flanges.

The thimble C passes through the entire length and slightly beyond the ends of the axle A, and its ends are bent and impinged against the disks B′ by any suitable machinery, and in such a manner as to clamp or rivet firmly together the several parts of the spool, as shown.

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

An improved spool for winding wire, consisting of the hollow axle A and thimble C, in combination with the flanges B, provided with the corrugations *a*, and the auxiliary concaved flanges B′, provided with the depressions *e*, substantially as specified.

EDWARD M. CRANDAL.

Witnesses:

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