

A. F. RIETZEL.

BEEL.

APPLICATION FILED JUNE 11, 1909.

1,055,356.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

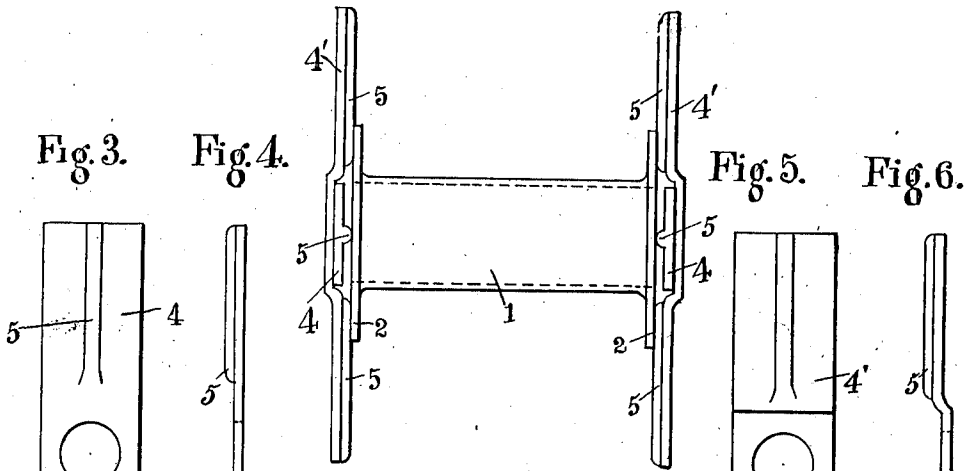


Fig. 2.

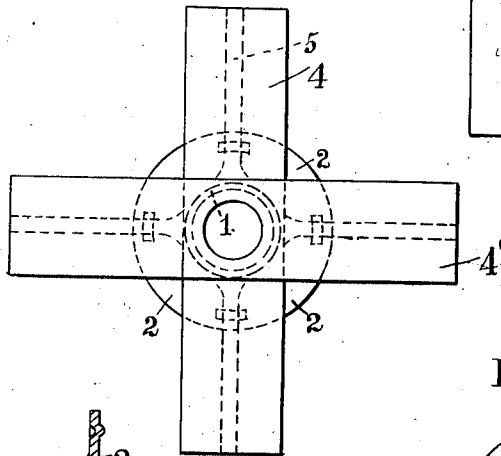


Fig. 7.

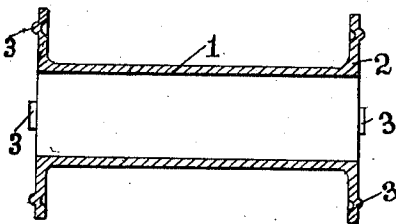
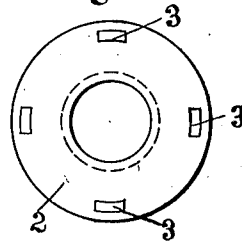


Fig. 8.



WITNESSES

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REEL.

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2 SHEETS-SHEET 2.

Fig. 9.

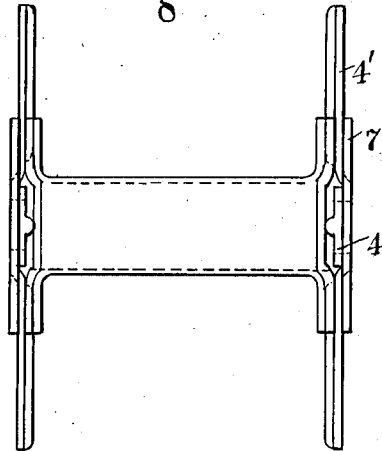


Fig. 10. Fig. 11.

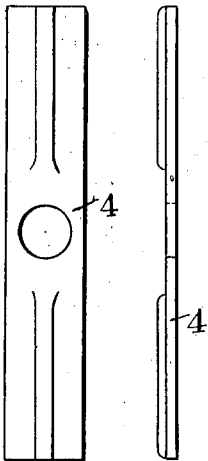


Fig. 12. Fig. 13.

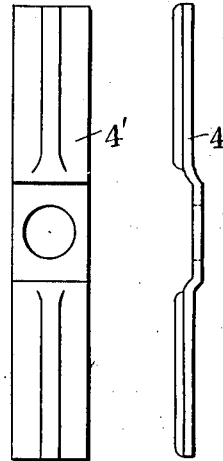


Fig. 14.

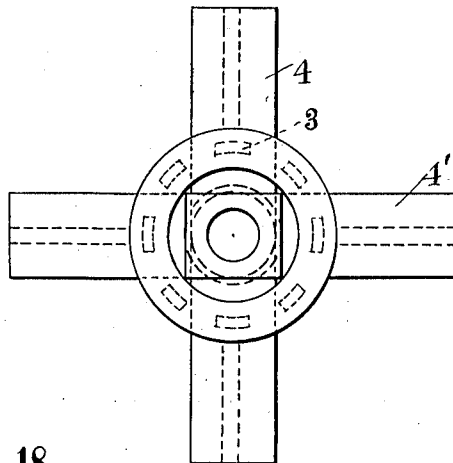


Fig. 17. Fig. 18.

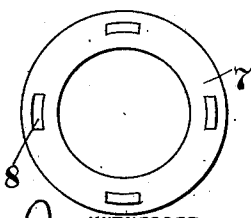


Fig. 16

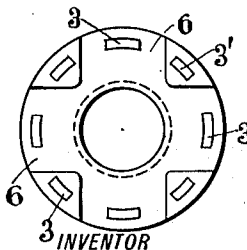


Fig. 15. Adolph F. Rietzel.

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UNITED STATES PATENT OFFICE,

ADOLPH F. RIETZEL, OF WESTERLY, RHODE ISLAND, ASSIGNOR TO WALLACE H. ROWE,
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REEL.

1,055,356.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ADOLPH F. RIETZEL, a citizen of the United States, and a resident of Westerly, in the county of Washington and State of Rhode Island, have invented certain new and useful Improvements in Reels, of which the following is a specification.

My invention relates to the construction of reels and it is designed primarily to afford a reel suitable for holding and shipping barbed or other wire and that shall be not only stronger, cheaper and lighter than the skeleton wooden reels heretofore customarily employed for such purpose but shall be also indestructible from fire or from rough handling and not liable to collapse when heavily loaded.

A further object is to provide a reel that shall be of uniform weight and not subject to the objections incident to the use of wooden reels which for the same style and weight will frequently vary a number of pounds.

My invention consists in the novel construction of reel made entirely of metal as hereinafter more particularly described and claimed.

In addition to the general objects hereinbefore recited the purpose of my invention is to permit the utilization of the electric welding process in the construction of the reel thereby making it possible to produce a metal reel which shall be strong as well as cheap when made of a number of pieces or parts.

In the accompanying drawings Figure 1 is a plan of a reel constructed in accordance with my invention after its completion by a welding of the various parts together. Fig. 2 is an end view of said reel. Fig. 3 is a plan. Fig. 4 is an edge view of a metal strip or plate used for one pair of diametrically opposite reel arms. Fig. 5 is a plan and Fig. 6 an edge view of a plate or strip of metal used for the other pair of arms. Fig. 7 is a longitudinal section through the body portion of the reel. Fig. 8 is an end view of said body portion. Fig. 9 is a plan of a modified construction of reel embodying my invention. Figs. 10, 11, 12 and 13 are plan and edge views of metal strips or plates used in constructing the reel Fig. 9. Fig. 14 is an end view of the completed reel. Fig. 15 is a plan of

the body portion of the reel and Fig. 16 is an end view thereof. Fig. 17 is a plan and Fig. 18 a central cross-section through a strengthening plate or flange forming a part of the reel.

The body portion 1 of the reel consists of a piece of tubing or piece of sheet metal shaped into the form of a tube and provided at its end with the flanges 2. Preferably, said flanges are formed in any suitable manner with raised portions or projections to be used as welding projections in the welding of the arms of the reel to the faces of said flanges. The arms or wings of the reel consist of metal plates or strips 4, 4' which are applied upon the body portion one over the other and intersect at the axis of the reel. These plates or strips are also preferably provided with one or more ribs 5 to strengthen them and to also afford electric welding projections engaging welding projections 3 on the flanges 2. The strip 4 is the inner one and the strip 4' is applied over it but is depressed at its center where it crosses the strip 4 so as to bring the arms of the same plates into substantially the same plane and cause their ribs or welding projections to lie in the same plane and so as to all engage welding projections 3 of the same height on the faces of the flanges 2. These strengthening ribs or projections 5 are preferably rounded and extend radially from the center of the reel and cross the welding projections 3 which may also be rounded in a direction transverse to that of the ribs 5 thereby affording a welding engagement or contact especially serviceable in providing a contact area of very limited extent at which the welding current will be localized, as well understood in the electric welding art. The union of the various parts by an electric welding process is conducted in the ordinary way employed in the welding of metal plates or pieces to one another, the parts being assembled in their proper relative location in an electric welding machine between welding electrodes conformed to said parts and so as to permit pressure to be applied and heating current to be passed from one part to the other across the welding projections.

Obviously, it will be possible without departing from my invention, to provide welding projections of other shapes and, if desired, omit the welding projection upon one

of the parts although ordinarily it is best to provide each part with a projection. It is to be understood further that the term "welding projection" as used herein, includes any projection section, piece or portion of metal which keeps the pieces apart on their plane faces at the start of the welding operation but which at the same time affords a path for the heating current and localizes the heating and welding pressure at the desired spot of union.

In the modification of my invention shown in Fig. 9 and following the end of the tube portion or body is provided with intersecting depressions 6 of any desired number but, as shown, two in number, crossing at right angles to afford a seat for each of the two metal plates or strips 4, 4' that constitute the reel arms. Said strips or plates 4, 4' are located in said depressions and cross one another as already described. The depressions form a bed for the wings or arms and add greatly to the strength of the reel. The strips or plates 4, 4' may be welded in all cases one at a time, if desired, the inner one 4 being the first to be welded, or they may, by suitable conformation of the welding electrodes, be both welded at once. The welding projections on the flanges to which the arms or wings are welded are indicated at 3 and are located in said depressions. If it is desired to strengthen the reel further, a plate or washer 7 may be applied over the plates 4, 4' and welded to the flange by the welding projections 3' lying on the undepressed portion of the flanged face. Coöperating welding projections 8 of any desired shape upon the plate 7 are preferably provided to engage the projections 3'. All of these projections may be formed in the metal by indenting the same or may be provided in any other suitable way. The area of contact for localizing the heating current at such projections and the shape of the electrodes therefor will be accommodated to the weight or mass of the parts, as is well understood by those versed in the electric welding art.

I do not limit myself to any particular construction or form of flanged tube constituting the body portion of the reel, nor to any special form of construction of the wings welded to the flanges or ends of said tube by their ribs or other welding projections. Obviously also, the ribs, while useful for strengthening the whole length of the arm or wing are not essential and as already stated the welded projections may be formed on either or both of the parts or may be otherwise provided.

What I claim as my invention is:

1. In a metal reel a flanged metal body portion combined with wings or vanes consisting of intersecting metal plates the outer one of which has a depressed center, formed

by bending the metal of the plate, said plates being welded on their faces to the faces of the flanges.

2. In a metal reel a metal body combined with arms or wings consisting of intersecting metal plates, the outer one of which has a depressed center formed by bending the metal of the plate to bring the arms of the two plates into substantially the same plane, said arms being welded on their faces to the ends of the body portion.

3. In a metal reel a body portion provided with flanged ends having intersecting depressions and having arms consisting of intersecting metal plates lying in said depressions and welded to the flanges.

4. In a metal reel a metal tube having flanged ends provided with depressions, and reel arms consisting of plates lying in said depressions and welded by their faces to the faces of the flanges.

5. In a metal reel the combination of a metal body portion consisting of a tube having flanged ends, reel arms comprising plates welded to the faces of said flanges and a plate welded on its face to the faces of said arms.

6. In a metal reel a metal drum having flanged ends provided with intersecting depressions, metal plates composing the reel arms and welded by their faces to the depressed portions of the flange and a plate or washer superposed on the arms and welded to the face of the flange at portions thereof lying between the depressed portions.

7. In a metal reel a body portion consisting of a metal tube with flanged ends, reel arms or wings comprising metal strips welded by their faces to the faces of said flanges and a strengthening plate or washer superposed on said arms or wings and welded thereto.

8. A metal reel comprising a metal body portion having flanged ends, reel arms or wings welded to the faces of said flanges and a strengthening plate or washer also welded to the face of said flange at points between the arms.

9. In a metal reel a body portion consisting of a metal tube having flanged ends provided with intersecting depressions, reel arms or wings consisting of intersecting metal plates or strips lying in said depressions and united by welding projections to the flange within said depressions and a metal strengthening plate or washer superposed on the crossing strips or plates and welded by its face to the face of the flange between the depressed portions thereof.

10. In a metal reel the combination of a metal body portion comprising a tube having ends provided with depressions in their faces which intersect one another, crossing bars or strips lying in said depressions and

constituting the reel arms or wings, the
outer one of said plates being depressed at
its center where it crosses the other one and
a strengthening plate or washer superposed
5 on said wings or arms and welded on its
face to the faces of the flange at portions
thereof between the depressed portions.

11. In a metal reel a metal body portion
having flanges on its ends and metal reel

arms having radial ribs and welded to the
faces of said flanges by said ribs.

Signed at New York in the county of
New York and State of New York this 12th
day of May A. D. 1909.

ADOLPH F. RIETZEL.

Witnesses:

IRENE LEFKOWITZ,

EDWARD M. JELLINEK.