H. V. RAU.

REEL.

APPLICATION FILED APR. 26, 1918.

1,324,172.

Patented Dec. 9, 1919.

Fig. 1

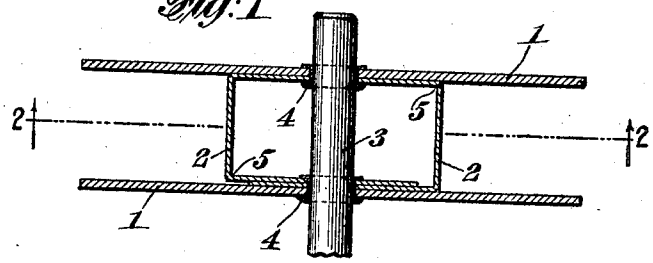


Fig. 2

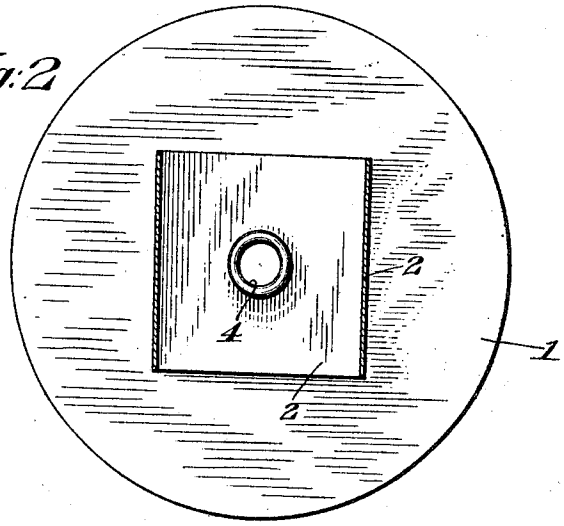
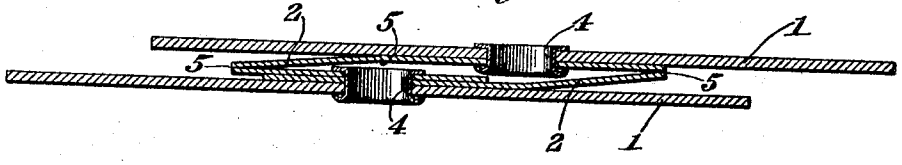


Fig. 3



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UNITED STATES PATENT OFFICE.

HENRY V. RAU, OF BROOKLYN, NEW YORK, ASSIGNOR TO EDWIN B. STIMPSON COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

REEL.

1,324,172. Specification of Letters Patent. Patented Dec. 9, 1919.

Application filed April 26, 1918. Serial No. 230,944.

To all whom it may concern:

Be it known that I, HENRY V. RAU, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Reels, of which the following is a specification.

My invention relates generally to reels of a type that is adapted to be rotatably mounted on a spindle and to serve as a holder for ribbon, tape, braid and the like.

In devices of this general nature heretofore known and used a form of construction has been employed in which the metallic bearing member provided for rotatably mounting the reel on a suitable spindle has consisted of a complicated device in which a cylindrical bearing member has been upset at the ends and attached to metallic flange supporting members that were in turn attached to the flange members which were designed to afford lateral supports for the coil of ribbon. In addition to the expensive and bulky construction thus produced it has usually been the custom to still further complicate the device by providing in addition a body member between the flanges on which the ribbon was directly wound. It is accordingly an object of the present invention to provide a ribbon reel of a greatly simplified construction and at a very small expense.

Another object of the invention is to provide a reel that can be compactly folded for shipping and storage purposes.

With these and other objects in view, one feature of the invention consists in the provision of a reel adapted to be rotatably mounted on a spindle and having a collapsible body member with coil supporting flanges attached to opposite sides thereof.

Another feature of the invention resides in the provision of a reel having a body member formed of a single strip of sheet material bent into a substantially rectangular formation, with flange members attached to opposite sides of the body member by means of eyelets to which access can be had for clenching the eyelets into place through open ends provided in the body member.

Other features of the invention will be hereinafter described.

In the drawings,

Figure 1 is a sectional view of a device embodying a preferred form of the invention.

Fig. 2 is a sectional view taken along the line 2—2 of Fig. 1.

Fig. 3 is an enlarged sectional view showing the device in a collapsed condition.

In Fig. 1 of the drawing there is shown in section a view of my improved reel in which the flange or end members 1 are attached to the jointed and collapsible web or body member 2. Both the flange members 1 and the body member 2 may be made of any suitable sheet material having the requisite stiffness, such as cardboard, wood, or sheet metal, and, in order to provide for rotatably mounting the reel thus constructed on a suitable spindle 3 so that the material can be readily drawn from the reel as desired, metallic eyelet or bearing members 4 are placed at the oppositely disposed central portions of the respective flanges 1.

It will be seen that the eyelet members 4 not only serve as bearing members for engagement with the spindle 3, but that they also serve as clamping members for attaching the flange members 1 to the web strip forming the body member 2 of the reel, and that they may be used either alone for this purpose or in conjunction with cement, staples or other fastening means, in order to provide a substantial and durable construction.

The web forming the body member 2 is preferably formed of a single, continuous strip so shaped as to take a substantially rectangular formation when viewed longitudinally of the axis of the spindle as in Fig. 1, and to form substantially a square when viewed transversely of the axis of the spindle as in Fig. 2. The portions of the web strip defining the corners of the rectangle as in Fig. 1 are preferably scored or otherwise treated to provide suitable joints 5 whereby the reel, as a whole, may be placed either in the distended ribbon-holding position in which it is adapted to be maintained by the spindle, or in the collapsed position in which it is shown in Fig. 3 of the drawing.

It will be seen that the reel as thus constructed can be folded to occupy a minimum amount of space for storage or shipping purposes and that it can be instantly placed and locked in a rigid, ribbon-holding position by merely slipping it into place on a suitable spindle as in Fig. 1 of the drawing. It will be seen also that the opposite open ends that

are formed in the body member by the lateral edges of the web strip serve not only to facilitate the folding of the reel when desired, but also to provide for the passing of the reel over the arm of a riveting machine in order to clamp the eyelet members 4 into place. By reason of the structural arrangement illustrated use can be made of the simple type of eyelet members shown, and a resulting construction secured that is not only superior to devices of this general nature now known and used because of the collapsible feature of the device, but that is adapted to be manufactured at a much lower expense than is possible with reels heretofore known in the art.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

1. A reel comprising flange members and an interposed collapsible body member to which said flange members are attached, said flange members being formed with openings in which a spindle can be placed to hold the reel in open position.

2. A reel comprising: a body member consisting of a single strip of sheet material bent into a substantially rectangular formation with the corners arranged to serve as flexible joints, eyelet members attaching said flange members to opposite sides of said body member, and said body member having open ends arranged to coöperate with the flexible joint formation whereby the body member may be collapsed and the reel folded into a compact position.

3. In a reel structure adapted to be mounted on a spindle, a collapsible body, and flanges attached to the sides of said body and arranged to engage the spindle to hold the reel against collapse.

4. A reel comprising: a collapsible body member, and flange members attached to opposite sides of said body member, the flanges and attached sides of the body member being provided with eyelet members arranged to act as bearing members in relation to a spindle, said bearing members being so disposed as to cause the reel to be held in a distended ribbon-receiving position when mounted on said spindle.

Signed at Brooklyn, in the county of Kings, and State of New York, this 20th day of April, 1918.

HENRY V. RAU.