F. E. MOREY.

WINDING CORE FOR CLOTH BOLTS.

APPLICATION FILED JUNE 19, 1916. RENEWED MAY 26, 1917.

1,233,800. Patented July 17, 1917.

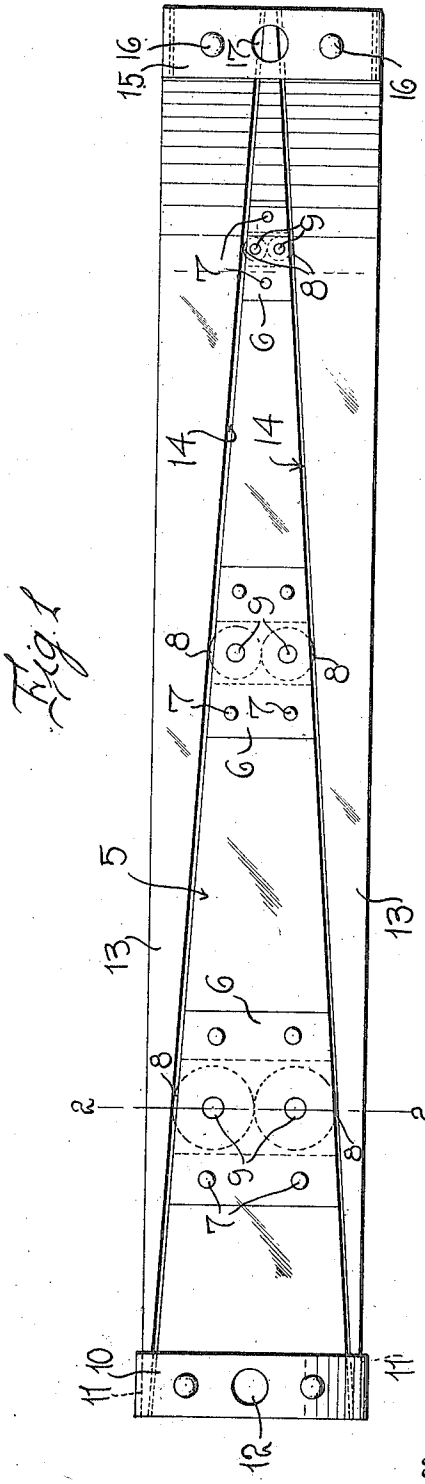


Fig. 1

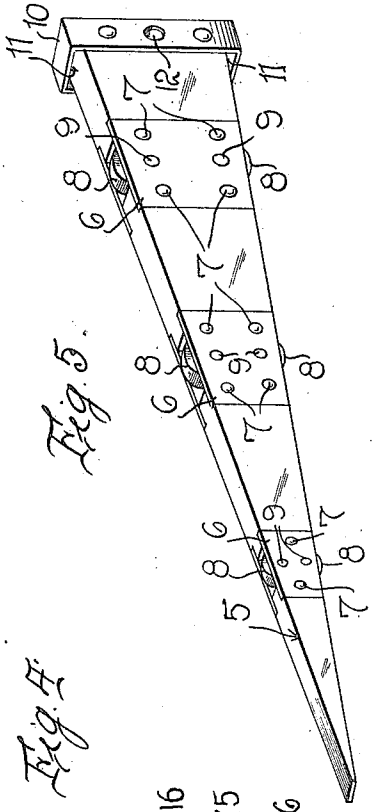


Fig. 5.

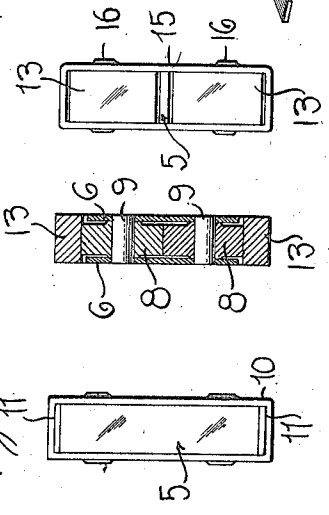


Fig. 4.

Fig. 2

Fig. 3

Inventor

F. E. MOREY

By Watson E. Coleman

Attorney

UNITED STATES PATENT OFFICE.

FRED E. MOREY, OF BARABOO, WISCONSIN.

WINDING-CORE FOR CLOTH-BOLTS.

1,233,800. Specification of Letters Patent. Patented July 17, 1917.

Application filed June 19, 1916, Serial No. 104,459. Renewed May 26, 1917. Serial No. 171,292.

To all whom it may concern:

Be it known that I, FRED E. MOREY, a citizen of the United States, residing at Baraboo, in the county of Sauk and State of Wisconsin, have invented certain new and useful Improvements in Winding-Cores for Cloth-Bolts, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to an improved winding core for cloth bolts and has for its primary object to provide a device of this character for winding cloth into bolts of the desired size, which may be subsequently removed without destroying the form of the bolt.

It is another object of the invention to provide a sectional core which may be very easily and quickly assembled and arranged in position in the winding machine, and the sections of which may be readily separated and removed from the bolt, such removal being facilitated by the pressure of the cloth upon the core.

It is a more particular object of my invention to provide a device for the above purpose, embodying an elongated, tapering body section provided with bearing rollers projecting from its opposite longitudinal edges, additional sections also tapering longitudinally and adapted to receive said body section between them, means connecting the additional sections together at one of their ends, and means on one end of said body section to hold the said sections in assembled relation.

With the above and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which,

Figure 1 is a plan view of my improved cloth winding core;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is an elevation of one end of the core;

Fig. 4 is a similar view of the opposite end of the core; and

Fig. 5 is a detail perspective view of the body section of the core.

Referring in detail to the drawing, 5 designates the body section of my improved cloth winding core which is of elongated, triangular form in plan and preferably constructed of wood. This body member is made up of a plurality of sections connected together by the metal plates 6, the ends of said body sections being mortised on their opposite side faces to receive said plates. The metal plates are rigidly fixed to the sections of the core body by means of rivets or other suitable fastening devices indicated at 7. The opposed ends of the body sections are spaced from each other, and bearing rollers 8 are arranged in these spaces between the metal plates 6, said rollers being freely rotatable upon the pins 9 fixed at their ends in said metal plates. It will be observed that a pair of said bearing rollers are arranged between each pair of the connecting plates 6 and have frictional contact with each other. These rollers are of such diameter as to project beyond the longitudinal edges of the plates 6. While I have shown in the accompanying drawing only three sets of bearing rollers 8, it will be understood that any desired number of the same may be provided. To the wider end of the core body 5, a metal band 10 is riveted or otherwise rigidly fixed, said band extending around the core body transversely thereof and projecting beyond its opposite longitudinal edges to provide the loops or pockets 11. An opening 12 is centrally formed through this metal band and the end of the core body 5.

The other section of the core consists of two elongated, longitudinally tapering members 13 having the longitudinally inclined edges 14 disposed in opposed relation. These members are pivotally mounted upon the pins or rivets 16 in a metal band 15 which surrounds their wider ends. These ends of the members 13 are spaced from each other and the metal band is provided with a central opening 17.

In assembling the parts, the body member 5 is disposed between the members 13 and moved inwardly between the same. The points of the members 13 engage in the guides or pockets 11 formed by the ends of the metal band 10 while the point of the body member 5 engages in the metal band 15, centrally thereof. The inner edges of the members 13 ride upon the projecting bearing rollers 8, said rollers preventing frictional contact of the longitudinal edges of said members upon the edges of the body member 5. Thus, a core of rectangular form is provided and the same is now arranged in

the machine in the usual manner and the cloth wound thereon. When the bolt of the desired size has been wound, the machine is stopped and the bolt removed. By means of a hook or other suitable implement engaged in the openings of the metal bands 10 and 16, the body member 5 and the members 13 are pulled longitudinally in opposite directions and separated. This separation is more easily effected if there is considerable pressure of the cloth bolt upon the edges of the members 13 which is due to the fact that the bearing rollers 8 have frictional rolling contact upon each other, and owing to the longitudinally tapering form of the several parts of the core, such pressure tends to cause the members 13 to shift longitudinally with respect to the member 5 in the proper direction, whereby the same are separated.

It is the usual practice to wind cloth bolts upon a solid core or winding board and this board remains within the bolt and is sold by the manufacturer. Such winding boards are rapidly becoming more expensive and it is desirable, therefore, to provide a winding core which can be easily and quickly removed after the bolt is formed and repeatedly re-used. By means of my invention above described, I have accomplished this desirable end in a very simple and inexpensive construction. The removal of the sectional core from the bolt of cloth does not in any way change or destroy the form of the bolt.

From the foregoing description, taken in connection with the accompanying drawing, the construction, manner of operation and several advantages of the invention will be clearly and fully understood. It is apparent, of course, that the sectional core can be constructed of any desired length or width. By the provision of the metal loops or bands, the several parts are securely held in their assembled positions against all liability of separation after the core has been placed in the machine. As the several parts of the device are of exceedingly simple form, it will further be manifest that the same are exceedingly durable in practical use.

While I have shown and described the preferred construction and arrangement of the several parts, it is to be understood that the device is susceptible of considerable modification therein and I, therefore, reserve the privilege of adopting all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

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

1. A winding core including a body section, side sections, means permanently connecting the side sections to each other at one of their ends and holding the same in spaced relation, said body section being adapted for insertion between the side sections and engageable at one of its ends with said connecting means, and a keeper element fixed to the other end of the body section to receive the other ends of said side sections, whereby the several sections are held against relative displacement to form a flat, rectangular core.

2. A winding core including a tapering body section, a keeper element fixed on the wider end of the body section, side sections between which said body section is adapted to be engaged, said side sections at one of their ends being engaged in the keeper element, means embracing the body and side sections at their other ends and preventing relative displacement thereof, and means carried by the body section to maintain the longitudinal edges of the body and side sections in spaced relation.

3. A winding core including a tapering body section, side sections, means connecting said side sections to each other at one of their ends, the inner opposed edges of said side sections being longitudinally inclined, said body section being adapted for insertion between said side sections and operatively engaged with the connecting means between the side sections, and means carried by the body section and projecting from its opposite edges to receive the other ends of said side sections whereby the several sections are held in assembled relation to form a flat, rectangular core.

4. A winding core including a tapering body section, side sections, a metal band connecting the side sections at one of their ends and holding the same in spaced relation, a metal band secured to the wider end of the body section and projecting from the opposite edges thereof, said body section being adapted for insertion between said side sections and the point thereof being engageable centrally in the band connecting said side sections, the other ends of said side sections being engageable in the projecting end portions of the band on said body section, whereby said sections are detachably held in assembled relation in the same plane to form a flat, rectangular core.

5. A winding core including a tapering body section, side sections, a metal band connecting the side sections at one of their ends and holding the same in spaced relation, a metal band secured to the wider end of the body section and projecting from the opposite edges thereof, said body section being adapted for insertion between said side sections and the point thereof being engageable centrally in the band connecting said side sections, the other ends of said side sections being engageable in the projecting end portions of the band on said body section, and means carried by the body section to prevent

frictional contact of said side sections upon the longitudinal edges of said body section.

6. A winding core including a body section, side sections between which said body section is adapted to be engaged, a retaining loop permanently connecting the side sections together at one of their ends and adapted to receive one end of the body section, a keeper element secured to the other end of the body section and engageable by the other ends of the side sections, whereby the several sections are held in assembled relation and in the same plane to form a flat, rectangular core, and spaced, anti-friction rollers mounted in the body section and projecting beyond the longitudinal edges thereof to prevent frictional engagement between the body and side sections.

7. A winding core including a tapering body section, side sections between which said body section is adapted to be engaged, means connecting said side sections together at one of their ends in spaced relation and adapted to be operatively engaged by said body section when arranged between the side sections, rollers mounted in the body section and projecting beyond the longitudinal edges thereof to prevent frictional contact of the side sections with said body section, and means on the body section to receive the other ends of the side sections and hold said sections in assembled relation to form a flat, rectangular core.

8. A winding core including a tapering body section, side sections connected together at one of their ends in spaced relation to each other, the opposed edges of said side sections being longitudinally inclined, spaced pairs of rollers mounted in the body section and the rollers in each pair having frictional contact with each other and projecting beyond the opposite longitudinal edges of said body section, said body section being adapted for insertion between the side sections, said rollers preventing frictional contact between the body and the side sections, and means on said body section to receive the other ends of said side sections and hold the several sections in assembled relation to form a flat, rectangular core.

9. A winding core including a tapering body section, spaced pairs of rollers mounted in said body section, the rollers in each pair respectively projecting beyond the opposite longitudinal edges of said body section and said rollers having contact with each other, a transversely disposed metal band fixed to the wider end of the body section and projecting beyond its opposite longitudinal edges, side sections, a metal band connecting said side sections at their opposite ends and holding the same in spaced relation, the opposed longitudinal edges of said side sections being inclined, said body section being adapted for engagement between the side sections and said rollers preventing frictional contact between the body and side sections, said body section being engageable within the band connecting the side sections, and the side sections engaging in the ends of the band on said body section whereby the several sections are detachably held in assembled relation and in the same plane to form a flat, rectangular core.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FRED E. MOREY.

Witnesses:
GEO. W. BAUMCHINLER,
J. W. FRENZ.

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