(No Model.)

H. BRIDENTHAL.

BOLTING REEL.

No. 381,324. Patented Apr. 17, 1888.

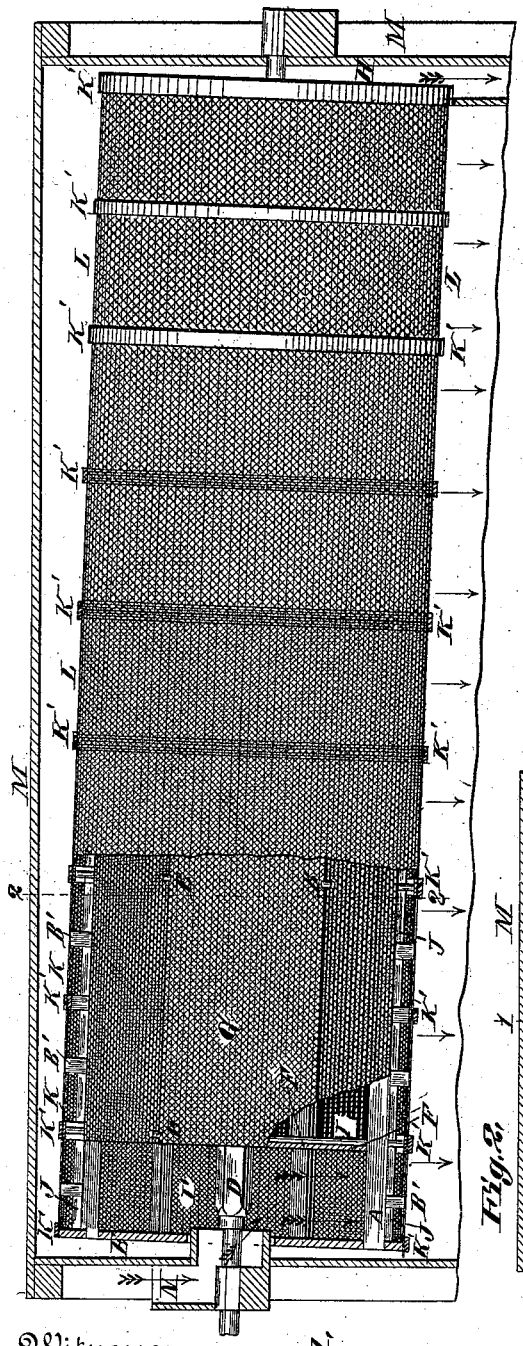

Fig. 1.

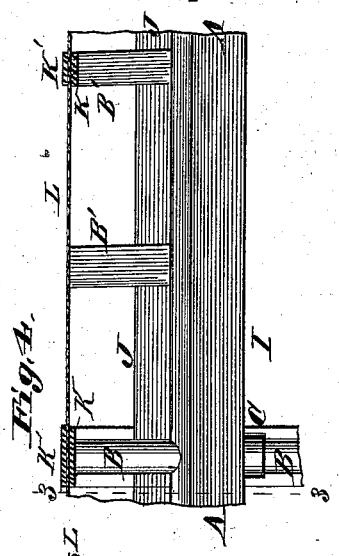

Fig. 4.

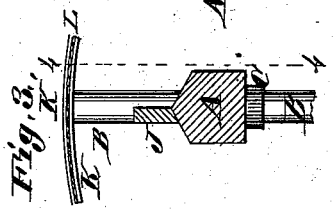

Fig. 3.

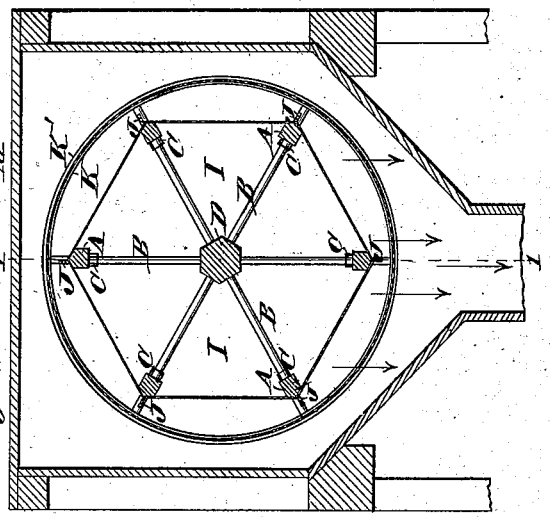

Fig. 2.

Witnesses,
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UNITED STATES PATENT OFFICE.

HEZEKIAH BRIDENTHAL, OF VINCENNES, INDIANA, ASSIGNOR OF ELEVEN-TWELFTHS TO JOHN E. HALL, OF ST. LOUIS, MISSOURI.

BOLTING-REEL.

SPECIFICATION forming part of Letters Patent No. 381,324, dated April 17, 1888.

Application filed July 27, 1886. Serial No. 209,253. (No model.)

To all whom it may concern:

Be it known that I, HEZEKIAH BRIDENTHAL, a citizen of the United States, residing at Vincennes, in the county of Knox and State of Indiana, have invented certain new and useful Improvements in Bolting-Reels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side view of the reel in a bolting-chest, the latter being shown in longitudinal section, and the reel having parts broken away to show the interior. Fig. 2 is a transverse vertical section at 2 2, Fig. 1. Fig. 3 is a detail transverse section at 3 3, Fig. 4. Fig. 4 is a detail longitudinal section at 4 4, Fig. 3.

The improvement may very readily be applied to an old-fashioned hexagonal reel of any length, from ten to twenty-four feet, (more or less,) as it is now found in use, by remodeling it, or the improvement may be applied in building new reels.

In remodeling old rotary reels of ordinary construction the mode of procedure is as follows: The silk cloth is first stripped off and the ribs or hoops to which it was secured removed, so as to leave the radial arms B perfectly bare. If the old reel which is being remodeled was of hexagonal shape, the same longitudinal ribs which supported the bolting-cloth are used in the reconstruction. They are perforated at the proper intervals for the passage of the radial arms B. The arms are then inserted in the perforations and the ribs A slipped onto said arms until they are brought to bear on shoulders or collars C on the arms, thus leaving, say, from one to three inches of the arms projecting beyond the ribs; or, if preferred, the ribs may be secured upon the arms by pins passing through them. This leaves the distance from the shaft D to the tips of the arms the same as before. Beginning at a point, say, twelve to eighteen inches from the head E of the reel, a new head, F, is constructed, closing up the space between the shaft D and the ribs with some substance dense enough to prevent the passage of any substance. Then the ribs, from the second head F to the tail end H of the reel, are covered with the impervious cloth, paper, wood, or metal G, stretched over or covering the whole space between the ribs A, and from the second head F to the tail end H, thus making a close chamber, I, into which no substance enters. This chamber or drum has thus the exact form of a common hexagonal reel; but, unlike the reel, there is no access of any material to the chamber I, as the covering is impervious to the material being bolted.

Longitudinal strips J, from one-half inch to one inch in width, are fastened over the ribs outside the covering G, and extend from the head E to the tail H. These strips are alongside the longitudinal lines of arms B and brackets B′, to which they may be secured. Next circular hoops or bands K are attached to the ends of the arms B and to brackets B′, attached at intervals to the ribs. These bands or hoops may be made of wood or metal, and may be as many in number as the quantity of material to be bolted by the reel may require. The hoops form a cylindrical framework surrounding the hexagonal drum and a chamber, I′, between the heads E and F, and which will be usually from ninety to one hundred inches in circumference, and is covered with bolting-cloth L.

The bolting-cloth is fastened to the outside or cylindrical reel-head E, and sewed and stitched tightly over and around the bands. Then other bands K′ are placed around the cloth over the other bands K. These outside bands are clamped tightly over the cloth in order to hold it tightly to its place.

New reels are made according to the above plans and specification.

The form of the drum within has been described as hexagonal, but may be cylindrical or of other shape, if preferred.

M is the bolting-chest, and N is the spout through which the material enters the chamber I. These parts M N may be of the usual construction, as also the way for the escape of the material which has not passed through the bolting-cloth.

I am aware that it is not new to secure within a rotary bolting-reel an impervious drum of less diameter and length than said reel, and to secure to the outside of said drum longitudinal strips for carrying the material to be bolted up the ascending side of the screen. I am

aware, also, that bolts have been constructed by stretching bolting material over circular hoops; and I do not claim any of these features, broadly, as my invention.

My invention is designed more particularly to be applied to the conversion or reconstruction of old rotary bolts, and the features hereinafter claimed are those which are essential to the proper accomplishment of the object of the said invention.

I claim as my invention—

1. The combination, with the shaft D and the arms B, of the collars C on said arms some distance from their extremities, the longitudinal ribs A, perforated for the passage of said arms and bearing against the collars C, the impervious material G, supported by said ribs, the circular hoops K, supported at the extremities of said arms, and the bolting material L, stretched over said hoops, substantially as set forth.

2. The combination, with the shaft D, the arms B, radiating therefrom, and the impervious drum supported by said arms some distance from their extremities, of the longitudinal strips J, secured to the arms B outside of the drum, the brackets B′, secured to the strips J between the arms B, the hoops secured to the extremities of the arms B and the brackets B′, and the bolting material stretched over the hoops K, substantially as and for the purpose set forth.

HEZEKIAH BRIDENTHAL.

In presence of—

LOUIS H. MEYER,

BENJ. M. WILLOUGHBY.