(No Model.)

T. H. NEANDER.

FLOUR BOLT.

No. 265,428. Patented Oct. 3, 1882.

Fig. 3.

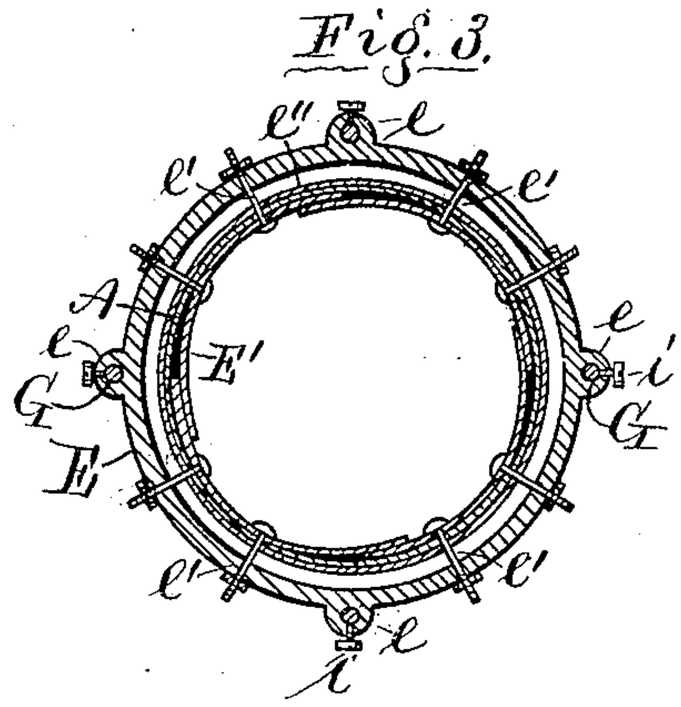


Fig. 4.

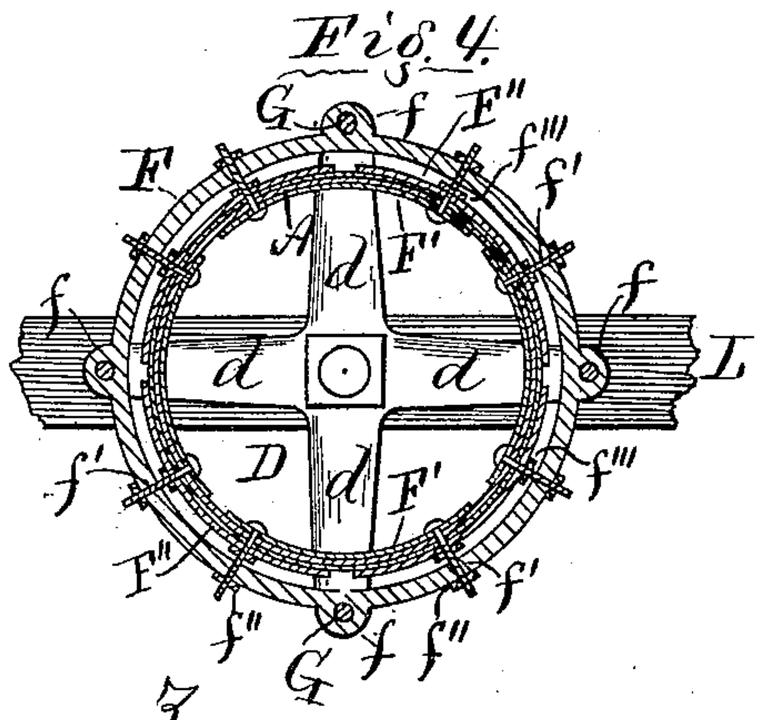


Fig. 2.

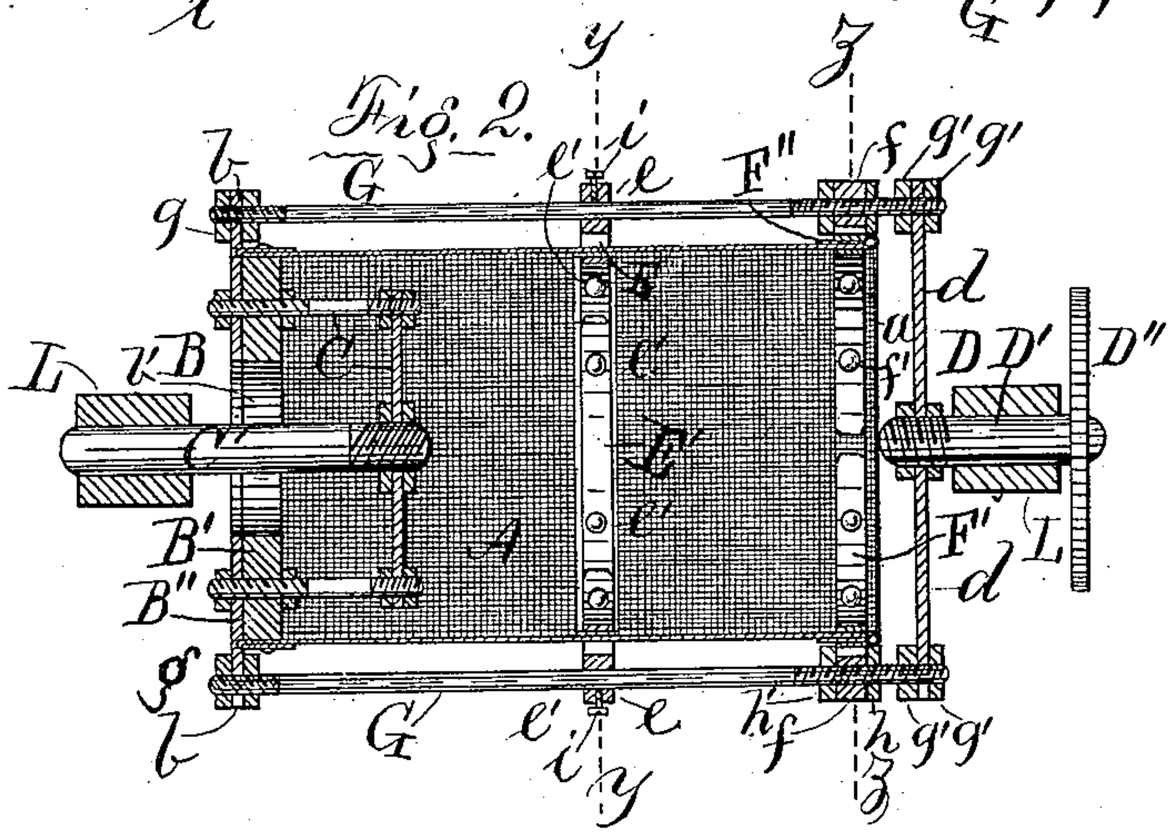
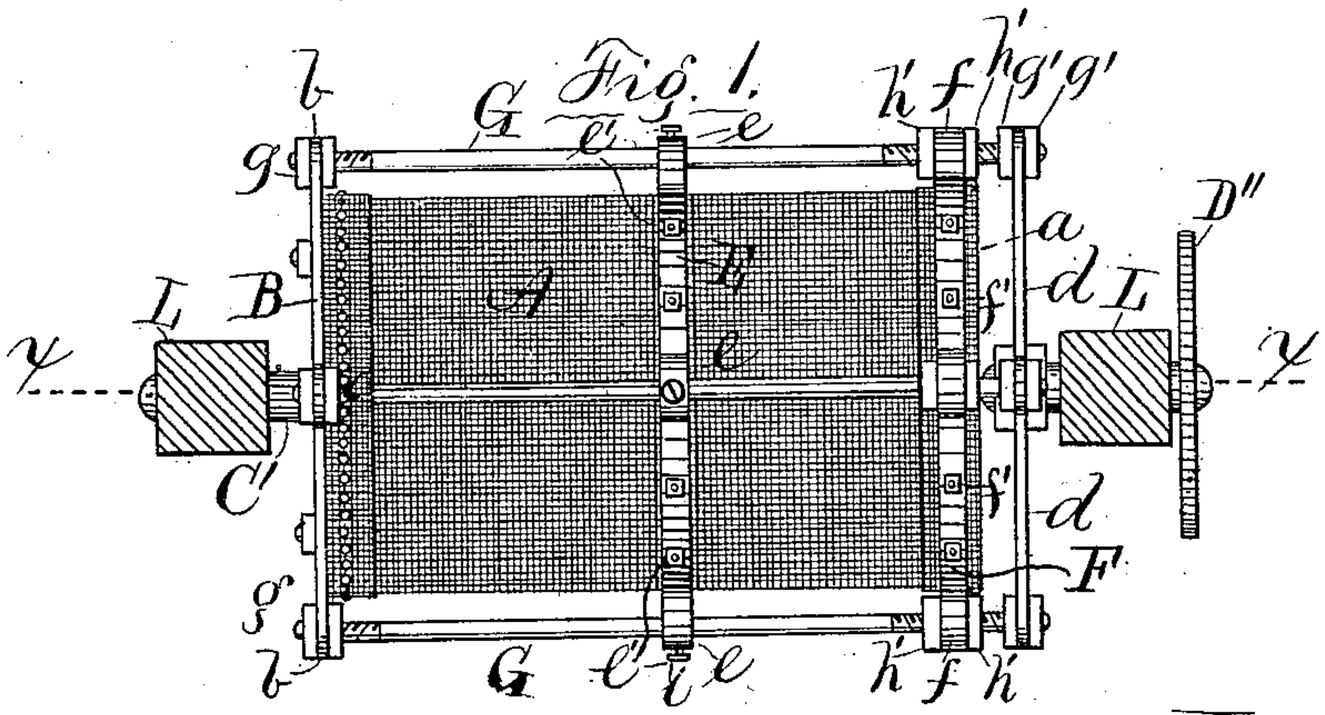


Fig. 1.



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UNITED STATES PATENT OFFICE.

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FLOUR-BOLT.

SPECIFICATION forming part of Letters Patent No. 265,428, dated October 3, 1882.

Application filed July 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, THEODORE H. NEANDER, a citizen of the United States, residing at Wataga, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Flour-Bolts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to flour-bolts or cylindrical sieves of the class known generally among millers as "reel-bolts." In this class of bolts as heretofore constructed the bolting-cloth has usually been stretched upon the exterior side of a frame; and the primary object of my invention is to provide means of stretching the bolting-cloth, which means are located exterior to the cylinder of cloth that forms the sieve; and to the end of carrying out this main object of my invention it consists in constructions and combinations hereinafter described, and set forth in the claims hereto annexed.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 is a side elevation. Fig. 2 is an axial section in line *x x* in Fig. 1. Fig. 3 is a transverse sectional elevation in line *y y*, Fig. 2. Fig. 4 is a transverse sectional elevation in line *z z*, Fig. 2.

Referring to the drawings by letters, the same letter indicating the same part in the different figures, A represents the bolting-cloth, its sides sewed together and its ends turned back and stitched to strengthen them, as shown, or in any other desired manner. A cord, *a*, is preferably placed in one end of the cloth A by lapping the end of the cloth around it.

B is a head formed of a wooden disk, B′, and exterior metallic disk, B″, with radial ears *b*. The head B may be constructed as described or in any other ordinary manner, and has the ordinary aperture or hole, *b′*, for the entrance of the flour. One end of the bolt is tacked or secured to the disk B′, and its other portions supported as hereinafter described.

C is an ordinary frame secured to the head B, and supports the shaft C′ at its inner end, while its outer end extends outward through the aperture *b′*, and constitutes the journal on which the adjacent end of the bolt is suspended.

D is a head formed of shaft D′, with arms *d* coincident in radial planes with the ears *b*. The shaft D′ is the journal at the discharge end of the bolt, and is provided with a pinion-wheel, D″, through which rotary motion is received in the ordinary manner.

E is a ring exterior to and at or near the mid-length of the bolt, and has ears *e* coincident in radial positions with the arms *d* and ears *b*. Radial bolts *e′*, with heads on their inner ends and nuts on their outer ends, extend through radial holes in the ring E and through sectional rings E′ on the inner side of the bolt-cloth. A strip of cloth, *e″*, is preferably stitched to the bolt-cloth between the rings E and E′ to strengthen the bolt-cloth at this point.

F is a ring similar to the ring E, and with ears *f* coincident in radial positions with the ears of said ring. The ring F is located exterior to the bolt-cloth and near its discharge end. Bolts *f′*, with heads on their inner ends and nuts *f″* on their outer ends, pass through radial holes in the ring F, through the bolt-cloth, and also through a sectional ring, F′, on the inside of said cloth, and a similar sectional ring, F″, on the outside of said cloth. Nuts *f‴* are also on the bolts *f′*, between the ring F and sectional ring F″, by means of which the rings F′ F″ may be clamped together, and the bolt cloth thereby be securely held between them. A rod, G, with head *g* on one end, is passed through a hole in each coincident ear *b*, ear *e*, ear *f*, and arm *d*, and is threaded where it passes through the arm *d* and carries a nut, *g′*, on each side of said arm, by means of which nuts the rods G and arms *d* are secured firmly to each other. Nuts *h h′* are located one on each side of the ring F on each rod G, and when the ring F is slid either way on the rods G it may be held after adjustment by adjusting said nuts in the manner evident from the drawings. Set-screws *i* secure the ring E to the rods G.

When it is desired at any time to stretch the bolt-cloth in the direction of its length the set-screws *i* are loosened and the outer nuts, *h*, screwed outward on the rods G, when the inner nuts, *h′*, may then be turned to force the rings F F′ F″ outward, so as to stretch the cloth as desired, when the outer nuts, *h*, may be turned back to the ring F to hold it securely

in position. To stretch the bolt-cloth transversely, the nuts on the outer ends of the bolts *e' f'* may be turned to draw the sectional rings E' F' F'' outwardly toward the rings E and F, respectively.

As will be seen, the sectional rings E' F' F'' are less in diameter than the rings E and F to permit the last-named adjustment. This construction of frame not only produces a cylindrical bolt free of the frame-work on its inside with all the advantages thereof, but also furnishes the means of stretching the bolt-cloth both lengthwise and crosswise, whereby it may be stretched so as to keep the meshes about square, as is very desirable.

L L are parts of any suitable frame in which the supporting-journals have bearings.

What I claim as new is—

1. A cylindrical flour-bolt formed of a bolt-cloth, a head to which said cloth is secured at one end, a ring at its other end, rods on which said ring is adjusted for the purpose of stretching the cloth lengthwise, an exterior ring at its mid-length, and means whereby the cloth may be stretched crosswise.

2. In a flour-bolt, in combination with a cylindrical bolt-cloth, a suitable head to which said cloth is attached at one end, rods exterior to said bolt-cloth and disposed parallel or about parallel with its axis, and a ring secured by suitable means to the other end of the bolt-cloth and adjustable lengthwise on said rods, for the purpose of stretching the cloth lengthwise, substantially as specified.

3. In a flour-bolt, in combination with a cylindrical bolt-cloth attached at one end to a suitable head, rods exterior to said bolt-cloth and disposed parallel or about parallel with its axis, and a ring adjustable lengthwise on said bolts, a ring surrounding the bolt-cloth at or near its mid-length, and means whereby it is adapted to stretch the bolt-cloth, substantially as and for the purpose specified.

4. In combination with a cylindrical flour-bolt cloth and with rods exterior thereto, a ring secured to said rods and provided with means for drawing the bolt-cloth thereto, substantially as and for the purpose set forth.

5. In combination with a cylindrical flour-bolt cloth, a ring exterior to said cloth, and means adapted to stretch the cloth crosswise of the bolt, substantially as and for the purpose specified.

6. In combination with a cylindrical flour-bolt cloth, the ring E, exterior thereto, a sectional ring, E', interior thereto, and means for adjusting it, substantially as and for the purpose specified.

7. In combination with the cylindrical bolt-cloth and central stretching-ring, the end ring, F, sectional rings F' F'', and their respective bolts, substantially as specified.

8. In combination with head B and cylindrical bolt-cloth secured thereto at one end, the rods G, rings E F, sectional rings E' F' F'', and bolts, substantially as and for the purpose specified.

9. In combination with a cylindrical bolt-cloth and ring E, the sectional ring E' and bolts for drawing the sectional ring toward the ring E, substantially as and for the purpose specified.

10. In combination with the head B, cylindrical bolt-cloth secured thereto, the rods G, ring F, sectional rings F' F'', and bolts securing them together, the nuts *h h'*, adapted to hold the ring F after adjustment on the rods G, substantially as and for the purpose specified.

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

THEODORE H. NEANDER.

Witnesses:
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HARRY M. RICHARDS.