P. M. BENNETT & G. C. C. SMITH.

BOLTING-REEL.

No. 187,805. Patented Feb. 27, 1877.

Fig. 1.

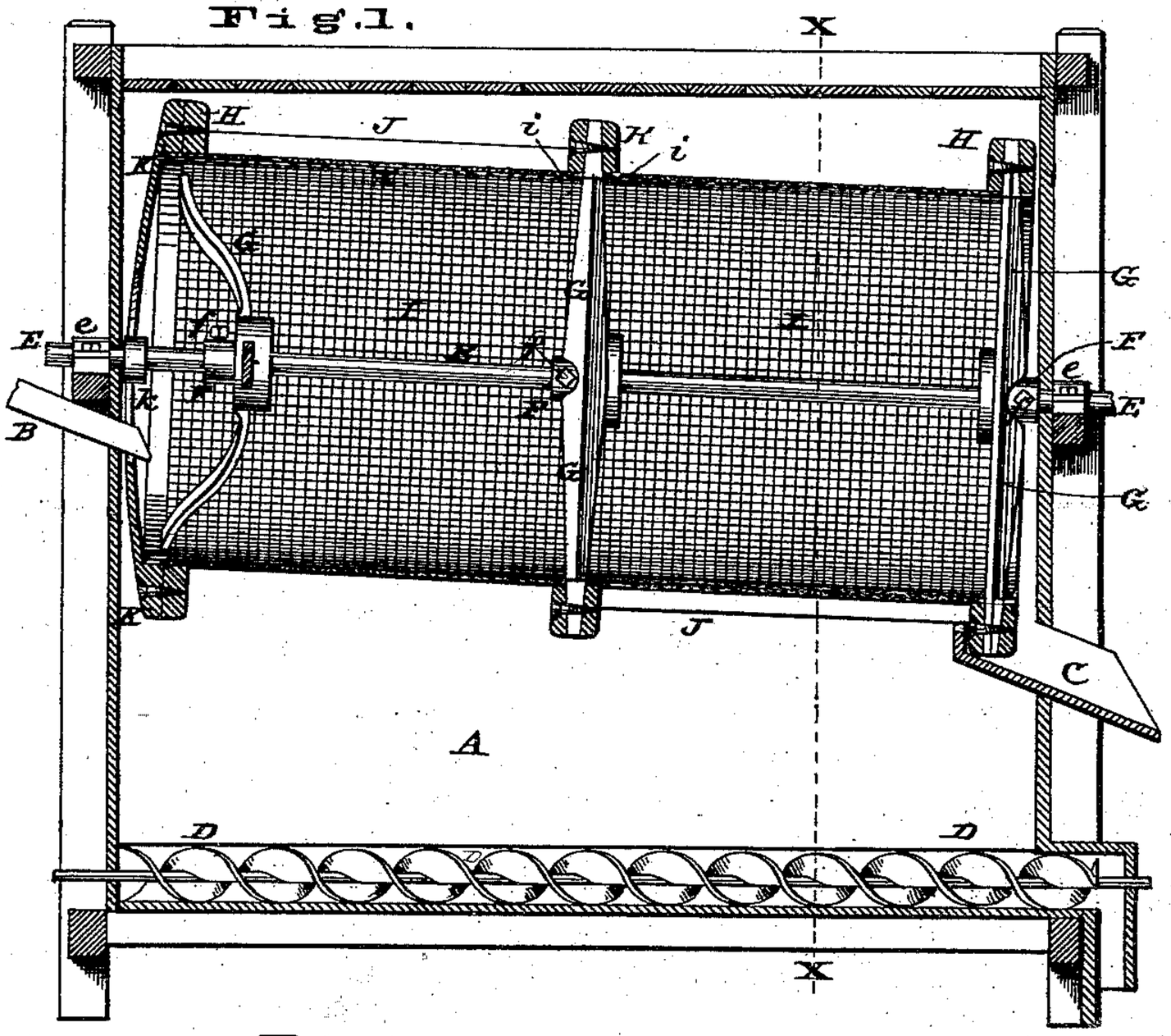
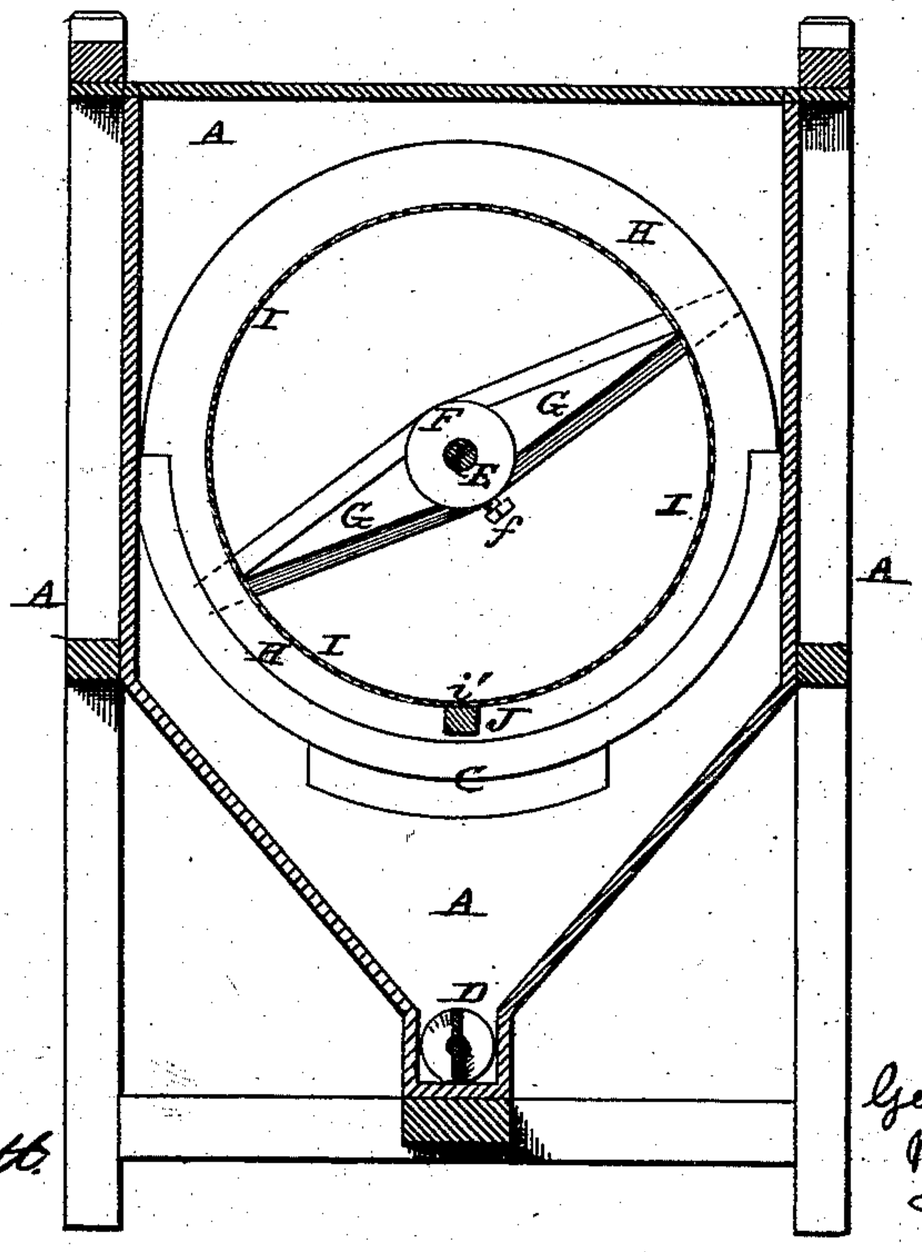


Fig. 2.



Attest.

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UNITED STATES PATENT OFFICE.

PETER M. BENNETT AND GEORGE C. C. SMITH, OF LEBANON, MISSOURI.

IMPROVEMENT IN BOLTING-REELS.

Specification forming part of Letters Patent No. **187,805**, dated February 27, 1877; application filed May 12, 1876.

To all whom it may concern:

Be it known that we, PETER M. BENNETT and GEORGE C. C. SMITH, of Lebanon, Laclede county, State of Missouri, have invented a certain new and useful Improvement in Flour-Bolts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

Our improvement consists in making the bolt cylindrical in form, and supporting the cloth by attachment to the inside of rims or rings connected to collars on a central shaft, by arms made thin and feather-edged at the outer end, so as to give but little obstruction to the passage of the "chop" or meal through the bolt or reel.

Figure 1 is an axial vertical section. Fig. 2 is a vertical section at X X.

A is the chest or case, having a chop-spout, B, through which the chop or unbolted flour enters the bolt. C is a spout, through which the bran escapes from the lower end of the bolt. D is a conveyer for carrying off the flour.

The chest may, of course, have the required number of hoppers or divisions to receive the different grades of flour and middlings, and the bolt be clothed with the required grades of cloth; but as no novelty is claimed in the parts A B C D they require no particular description. The reel or bolt is supported on an axial shaft, E, turning in bearings *e*. On the shaft E are collars or hubs F, capable of adjustment endwise upon the shaft, and held in place by set-screws *f*. Extending from the hubs F are radial arms G, made feather-edged in the line of their revolution, so as to form throughout their length, while retaining thickness and strength, a very slight impediment to the movement of the chop in its passage around the inside of the bolt, and not permitting the lodgment of the material on their sides. The arms G are attached to and support a rim or ring, H, at their outer ends. The rings H are concentric with the shaft E. The opposite edges *i* of the bolting-cloth are attached to the inside diameter of the rings H, the joint of the cloth with the ring being made so smooth and even as to form no obstruction to the chop in passing over it. The longitudinal seams or joints in the cloth are made by a simple lap-joint on the inner side of a longitudinal bar, J, extending from one to another of the rims H, the edges *i'* being simply laid one upon another, in such manner that the chop will not gather under the lapped edge, the upper lapped edge being laid in the direction the chop passes as the bolt revolves. K is the head of the bolt, said head having a central opening, *k*, for the entrance of the chop through the spout B.

In the construction of the bolt, one edge, *i*, of the cloth is attached, by tacking or other suitable means, around the inside of that rim H at the head of the bolt or reel, and the opposite side *i* of the cloth is, in like manner, secured to the inside of the proximate rim H. The other edges, *i' i'*, of the cloth are laid on a simple lap. The first circular frame F G H is secured in position on the shaft E, by its set-screw *f*, and the cylindrical section of cloth between the two circular frames is stretched longitudinally by forcing the second circular frame along the shaft E said frame being then secured in place by the set-screw *f* in its hub. The longitudinal bar J is then placed in position between the two frames, and the lap-joint *i' i'* secured down upon its inner side. The bolt is thus made up in cylindrical sections to the required length, each section having the required grade of cloth. Both the edges of arms G being feathered, they permit the bolt to be rotated in either direction without clogging of the material.

We claim—

The supporting-arms G, placed within the reel-bolt, and formed with feathered edges, substantially as set forth.

PETER M. BENNETT.
GEO. C. C. SMITH.

Witnesses:
JOSIAH IVEY,
GEO. H. GREENLEAF.