

J. M. SPRINGER.  
Bolting-Reel.

No. 228,409.

Patented June 1, 1880.

Fig 1

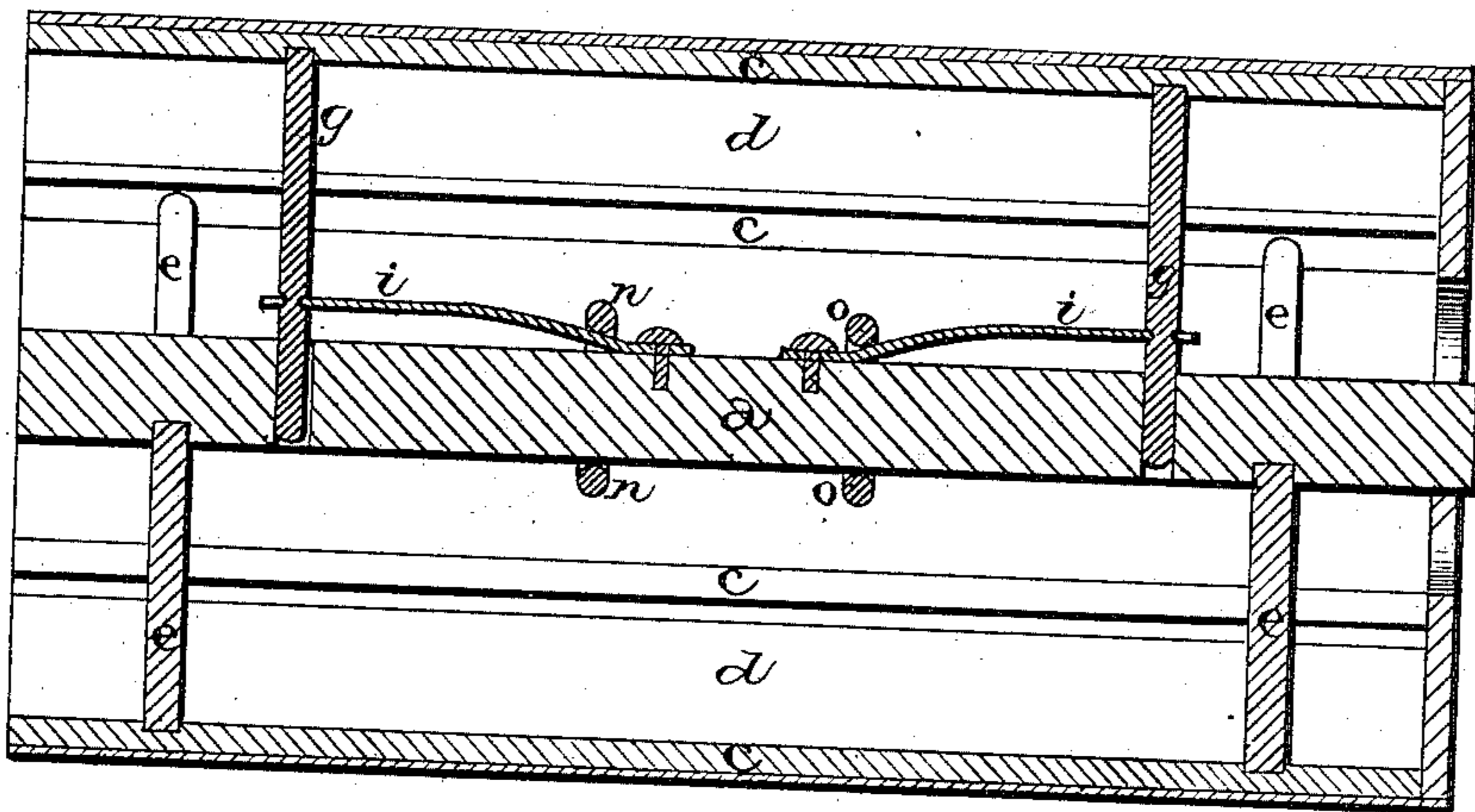
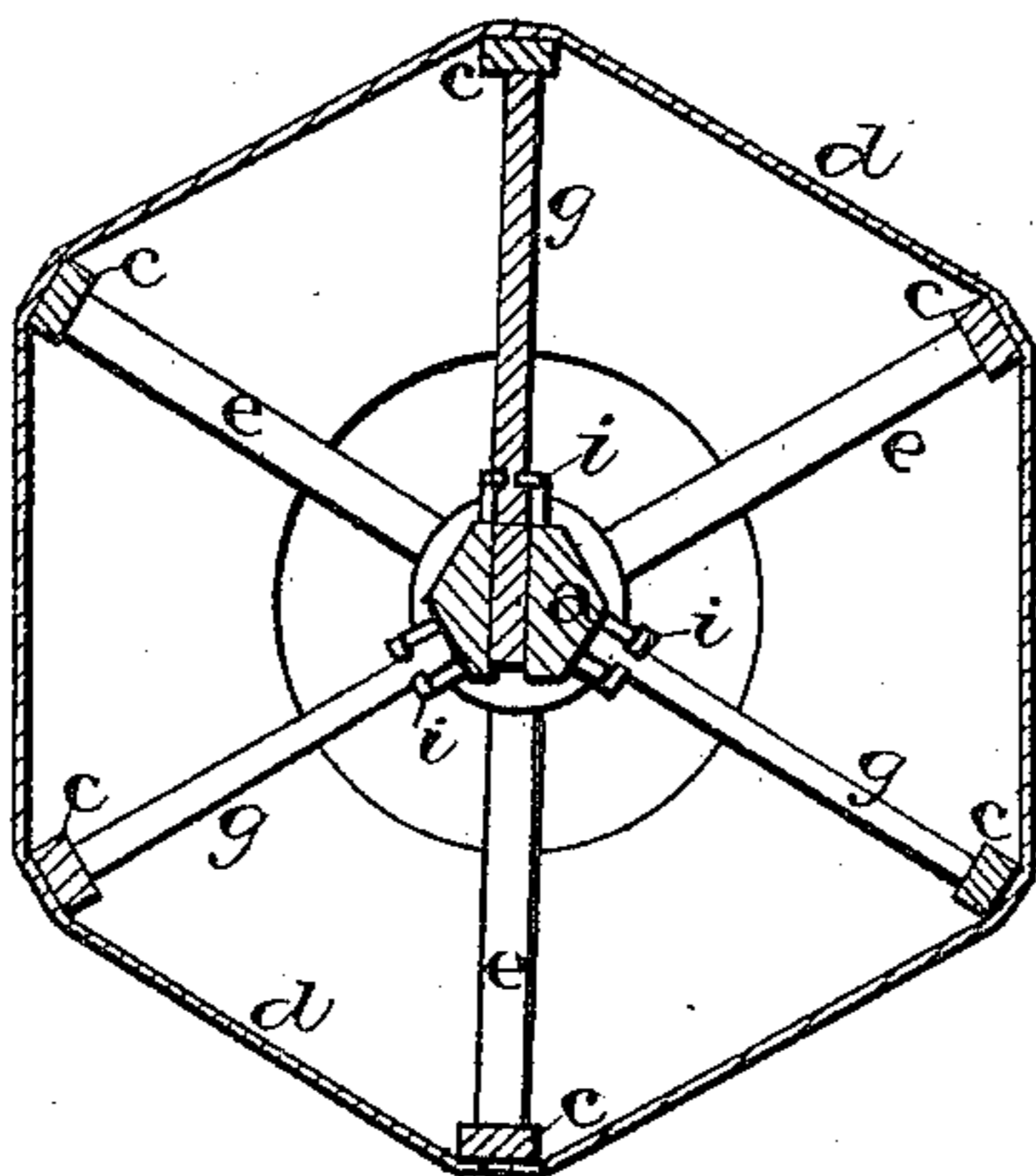


Fig 2



Witnesses:

Wm W Mortimer

Chas H. Isham

Inventor=

Jos. M. Springer,

per

F A Lehmann,

Atty.

# UNITED STATES PATENT OFFICE.

JOSEPH M. SPRINGER, OF LOGANSFORT, INDIANA.

## BOLTING-REEL.

SPECIFICATION forming part of Letters Patent No. 228,409, dated June 1, 1880.

Application filed January 23, 1880.

*To all whom it may concern:*

Be it known that I, JOSEPH M. SPRINGER, of Logansport, in the county of Cass and State of Indiana, 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in bolting-reels; and it consists in making a portion of the arms which support the bolting-cloth movable in the central shaft at their inner ends, and connecting to these movable arms suitable springs for keeping them pressed constantly outward against the cloth, and rings for depressing and holding the springs, whereby the cloth is kept automatically stretched to the proper degree or slackened at will, as will be more fully described herein-after.

Figure 1 is a longitudinal section of my invention. Fig. 2 is a cross-section of the same.

*a* represents the shaft, *c* the ribs, and *d* the bolting-cloth, all of which are constructed in the usual manner. There are two kinds of arms used to keep the ribs and bolting-cloth in position—the rigid ones *e*, which are attached to every other rib, and the movable ones *g*, which are attached to the ribs not supported by the arms *e*. These arms *e* are rigidly secured to the shaft *a* at their inner ends, and to the ribs at their outer ones, and have no longitudinal movement whatever, while the arms *g* merely have their inner ends held in sockets in the shaft and can move freely back and forth.

In each arm *g* is cut a small groove, and in this groove is made to engage the outer end of the flat spring *i*, which exerts a constant pressure on the arm to keep it and the rib attached to it pressed outward against the bolt-

ing-cloth. Every other rib being held stationary, while the others are pressed outward, the bolting-cloth is held constantly stretched, and yet can adapt itself to every change of the temperature.

In order to slacken the cloth at any time or to draw the movable ribs inward, as when attaching the cloth, it is only necessary to move the rings *n o* up over the springs toward the arms, when the arms will be forced inward into the shaft, drawing their ribs in with them. As soon as the rings are moved back from over the springs, the springs at once force the ribs outward again, and again stretch the cloth.

As shown in Fig. 2, it is only the alternate arms which have an endwise movement, and hence the bolt will never be drawn out of shape by the weight of the flour in it.

By placing the springs *i* upon the shaft *a* in the center of the bolt the damp flour never comes in contact with them, and hence can never impede their action, as it would do if the springs were located out upon the ribs.

Having thus described my invention, I claim—

1. In a bolting-reel, the combination of alternate rigid arms and alternate arms having an endwise movement with springs for moving the movable arms, which springs are located at or near the center of the reel, so as to never come in contact with the flour, substantially as shown.

2. In a bolting-reel, the combination of the shaft *a*, stationary arms *e*, movable arms *g*, springs *i*, rings *n o*, and ribs *c*, the shaft *a* having holes in or through it to receive the ends of the arms *g*, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 15th day of January, 1880.

JOSEPH M. SPRINGER. [L. S.]

Witnesses:

JAMES J. SHAFFREY,  
JOHN W. MCGREEVY.