

S. A. Clapp,

Flour Packer.

N^o 28,561.

Patented June 5, 1860.

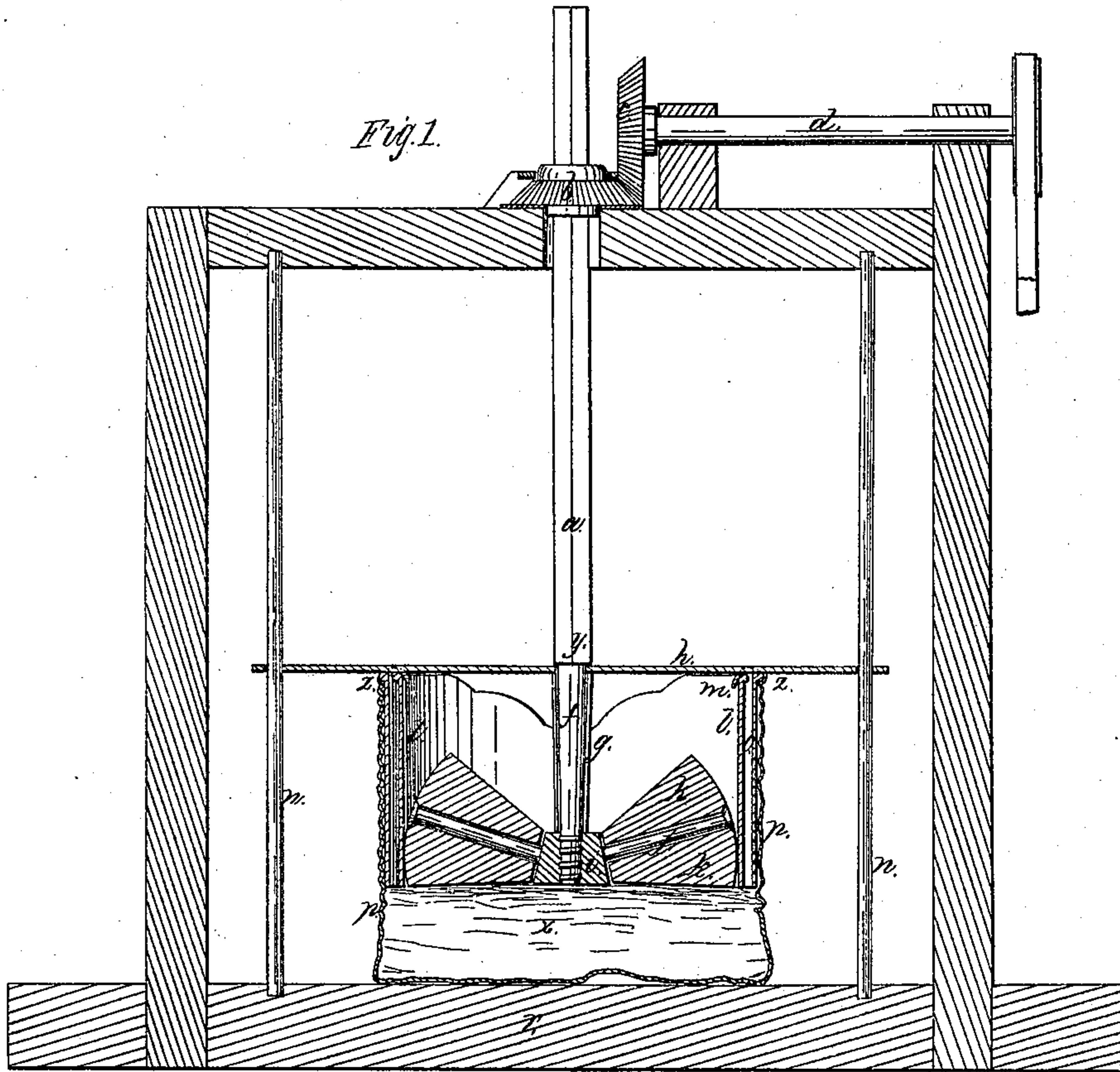
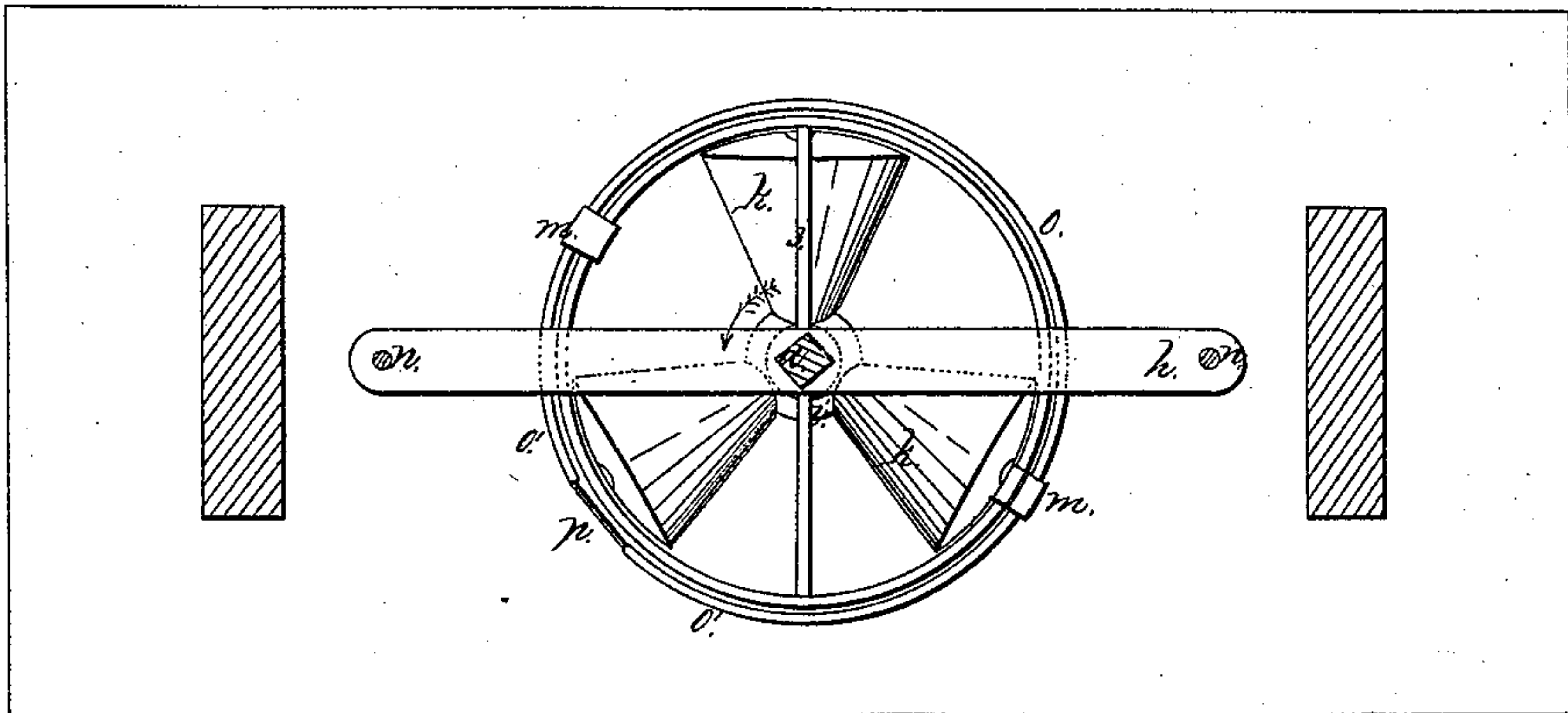


Fig. 2.



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SOLON A. CLAPP, OF HAMILTON, ILLINOIS.

MACHINE FOR PACKING FLOUR.

Specification of Letters Patent No. 28,561, dated June 5, 1860.

To all whom it may concern:

Be it known that I, SOLON A. CLAPP, of Hamilton, in the county of Hancock and State of Illinois, have invented a new and useful Improvement in Machines for Packing Flour; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, represents a vertical central section, and Fig. 2, a horizontal cross section of the machine.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of my invention consists in the combination of a spring ring or short cylinder with hooks, an inner cylinder, a frame and upright rods; by this combination the upper end of the flour sack is expanded and kept open, and the sack is prevented from turning and twisting while being packed.

To enable others, skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A ring or short cylinder *o*, open at one side (as seen at *o'*, *o'*, Fig. 2) so that it may be compressed a little and spring back when the pressure ceases, is inserted in the upper end of a flour sack *p*, so as to expand that end of the sack and keep it open while the sack is being packed with flour, as will hereafter be described. On withdrawing this spring ring *o*, after the sack has been packed, the sack can be tied up in the usual manner.

Two hooks *m*, are hinged to the upper rim of the spring *o*, as seen at *z*, and may be turned over (as seen in Fig. 1) so as to hang the spring ring *o*, to an inner cylinder *l*, of somewhat smaller diameter. These hooks are placed against the bar *h*, (see Fig. 2) of a frame *h, s*, to which the cylinder *l*, is fastened. This bar *h*, is provided with two holes at its outer ends, through which pass two vertical rods *n, n*, fastened to the main frame of the machine. These rods allow the frame *h, s*, and cylinder *l*, to move up and down while they prevent them from turning.

The cylindric end *f*, of a vertical shaft is

inserted through a hole in the bar *h*, concentric with the cylinders *o, l*, the end *y*, of the upper square part *a*, of the shaft, resting upon the upper surface of the bar *h*. A tube *g*, fastened to bar *h*, surrounds the cylindric portion *f*, of the shaft in order to prevent the flour from working into the bearing of the shaft at *y*. A nut *i*, is screwed to the under end of the part *f*, of the shaft, and a number of cones *k*, are arranged upon pins or short axles *j*, extending from said nut *i*. The axles *j*, are arranged at such an inclination that the bottom line of the cones, while they turn upon the axles, is always horizontal. The square part *a*, of the shaft passes through the square center hole of a bevel pinion *b*, which takes into a bevel wheel *c*, upon driving shaft *d*.

The operation of the machine is as follows: The sack with the ring *o*, inserted is hung to cylinder *l*, by means of hook *m*, as set forth, the shaft *d*, is then set in motion so as to keep shaft *a, f*, revolving (see arrow in Fig. 2) while the sack is being filled with flour *x*. It will be seen that while the flour is being filled in, the cones *k*, will travel around upon the surface of the flour and sack it tight, by their own weight. As the quantity of flour filled in increases, the cones, always resting and traveling around on the surface of the flour, will gradually rise, and with the cones, the nut *i*, shaft *f, a*, (the square end *a*, passing up through the square center hole of pinion *b*,) frame *h, s*, both cylinders *o, l*, and with them upper end of the sack. As the hooks *m*, rest against the bar *h*, the ring *o*, is prevented from being turned and the sack from being twisted by the motion of the flour in the sack.

When the flour has been packed to a proper height in the sack, the hooks *m*, are unhooked from cylinder *l*, and the spring ring *o*, may be withdrawn from the upper end of the sack, so as to leave it ready to be tied up.

Thus the serious disadvantage of the twisting of the sack while being packed is entirely obviated by fastening the inner cylinder *l*, to the bar *h*, arranged upon rods *n, n*, and hooking the outer cylinder *o*, to the inner one in the manner described.

What I claim as my invention and desire to secure by Letters Patent, is—

5 The combination of a spring ring or short cylinder *o*, with hooks *m*, an inner cylinder *l*, a frame *h*, *s*, and upright rods *n*, for the purpose of expanding the upper end of the sack, and preventing the sack turning and

twisting while being packed, substantially as set forth.

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Witnesses:

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