E. R. MAISON.

BARREL LINER.

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1,011,979.

Patented Dec. 19, 1911.

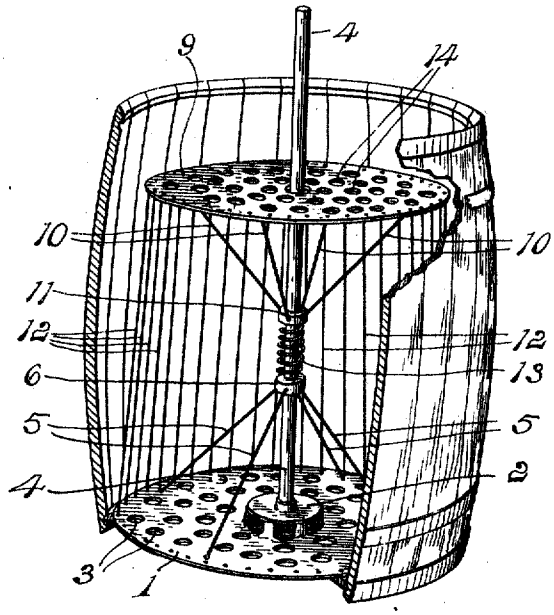

Fig. 1.

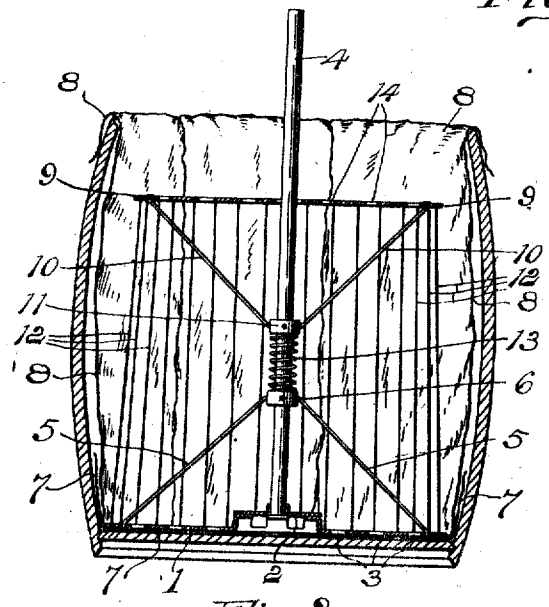

Fig. 2.

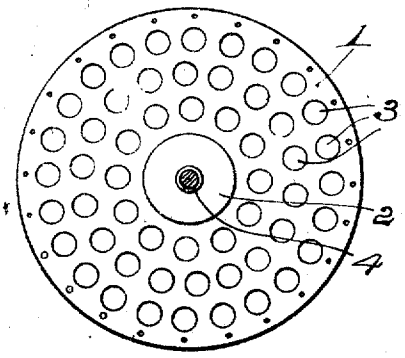

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

EDMUND R. MAISON, OF MOUNT CLEMENS, MICHIGAN.

BARREL-LINER.

1,011,979. Specification of Letters Patent. Patented Dec. 19, 1911.

Application filed March 25, 1911. Serial No. 616,987.

To all whom it may concern:

Be it known that I, EDMUND R. MAISON, a citizen of the United States of America, residing at Mount Clemens, in the county of Macomb and State of Michigan, have invented certain new and useful Improvements in Barrel-Liners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a device for use in lining barrels with paper or similar material and its object is to provide a cheap and efficient device for the purpose, the invention consisting of the matters hereinafter set forth and more particularly pointed out in the claims, reference being had to the accompanying drawing in which,

Figure 1 is a perspective view of a device embodying the invention in place within a barrel which is broken away to show the interior thereof; Fig. 2 a transverse vertical section of the same; and Fig. 3 a horizontal section of the device.

In the operation of lining sugar, salt and other barrels with loose sheets of paper before the material is placed therein to prevent its sifting through, it is difficult to place, and form the paper into the bottom of the barrel and then lap and form the side sheets into place so that they will remain in position until the barrel is filled. To form the paper flat upon the bottom of the barrel and into the angles a disk 1 of wood, sheet metal, or other suitable material is provided which is of slightly less diameter than the inner diameter of the head or bottom of the barrel. This disk is preferably formed with a raised center portion 2 and a plurality of openings 3 to permit the air to pass through the disk when the same is lowered into a barrel. To the raised portion 2, is secured in any suitable manner, at the axis of the disk, the lower end of a rod 4 and brace rods or wires 5 attached to the disk and a collar 6 on the rod, hold said rod at right angles to the face of the disk. The forming disk may thus be lowered by means of the rod 4 horizontally into a barrel and force a sheet of paper indicated at 7 in Fig. 2 for lining the bottom, down into the barrel and form it well into the bottom angle so that it will stay in place while the sheets for lining the sides are being placed. The sheets indicated at 8 in Fig. 2 for lining the sides of the barrel are then placed in the barrel with their edges overlapping each other and their upper ends folded down upon the outer side of the barrel over its upper edge to hold them in place. To prevent the upturned corners of the bottom sheet 7 and the lower ends of the side sheets 8 from falling inward over the bottom disk 1, a second or upper disk 9 is placed upon the rod 4 and supported thereon by brace wires or rods 10 secured to the disk, and to a collar 11 loose upon the rod 4. Cords or fine wires 12 are secured in a series of holes adjacent to the edge of each disk connecting said disks and together forming a circular wall to prevent the paper from falling inward. These spaced vertically extending wires serve to form creases or folds in the paper as the device is lowered into the barrel and the air trapped between the barrel sides and the paper forces said side sheets inward against and between the spaced wires so that when the liner is lifted out the lower disk will smooth down or partially fold the paper along the lines or creases laid in the paper by the wires. The cords or wires 12 are held under tension by a coiled spring 13 sleeved on the rod 4 between the collars 6 and 11. The upper disk 9 is formed with a plurality of holes 14 for the free passage of air therethrough and said disk is preferably of slightly less diameter than the diameter of the lower disk 1.

In the operation of lining a barrel, a sheet of paper is placed upon the top of the barrel and forced down into the same by placing the disk 1 thereon, the disk forming the paper well into the angle at the bottom of the barrel and the wires 12 preventing the upturned corners of the paper from falling inward and at the same time creasing the same so that it will fold regularly along these lines when the head is lifted. The device is then removed and the side lining sheets placed in the barrel with the upper ends folded over the upper edge. The device is then again placed in the barrel and allowed to fall by gravity, the air in the barrel beneath the disks and paper preventing the device from falling too quickly and tearing the paper and the paper is regularly creased by the wires as it is caused to bulge inward between them by the air behind the paper. The bottom disk engaging the side sheets forms the same to the barrel sides and also forms their lower ends down upon the bottom lining sheet over the upturned edges thereof.

Having thus fully described my invention what I claim is:

1. A barrel liner comprising flat perforated disks adapted to fit within a barrel, a rod secured to one disk and extending loosely through the other disk, flexible members connecting the disks near their peripheries, and means for moving the disk which is loose on the rod to hold the flexible members under tension.

2. In a device for the purpose described, the combination of a lower disk, a rod secured at one end to said disk, a disk movable longitudinally upon the rod, wires connecting the said disks at their peripheries, and a spring to force the movable disk longitudinally to said rod and to hold the said wires under tension.

3. In a device for the purpose described, the combination of a lower perforated disk, a rod secured to said disk at one end at the axis thereof, an upper perforated disk movable upon the rod longitudinally thereof, a collar movable upon the rod, braces connecting said collar and movable disk, a series of wires connecting said disks near their peripheries and forming a circular wall, and a spring exerting a force to move the movable disk upon said rod and put a tension upon said wires.

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

EDMUND R. MAISON.

Witnesses:

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