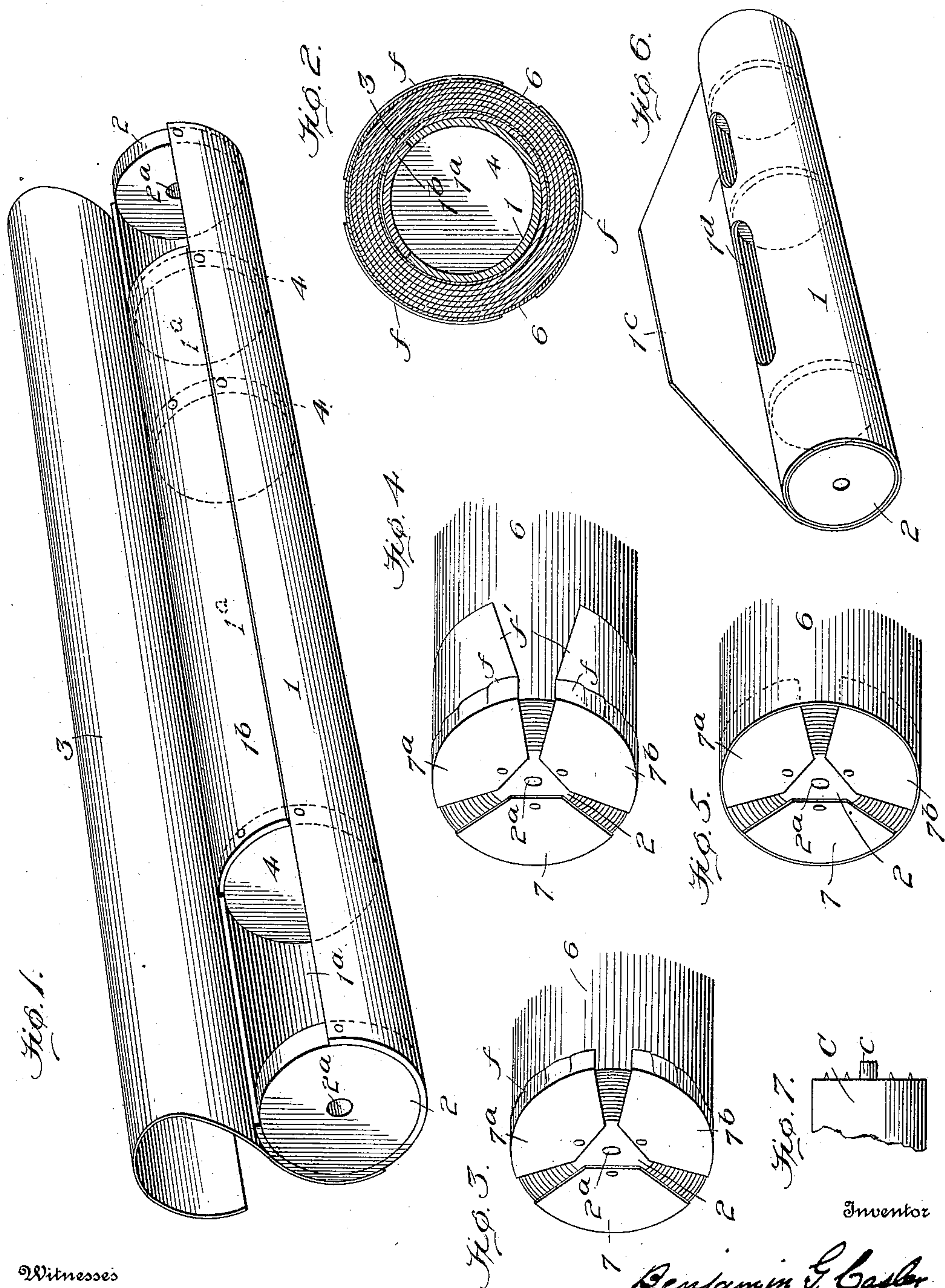


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 MANDREL FOR REELING READY ROOFING FABRICS.
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980,406.

Patented Jan. 3, 1911.



Witnesses

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MANDREL FOR REELING READY-ROOFING FABRICS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN G. CASLER, a citizen of the United States, residing at Tonawanda, in the county of Erie and State of New York, have invented certain new and useful Improvements in Mandrels for Reeling Ready-Roofing Fabrics; 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.

My invention relates to the construction of that class of mandrels or reels used for reeling ready-roofing fabrics for the market, and has for its object the provision of a reel or mandrel adapted to so engage the leading end of the fabric as to permit and insure the proper tension thereon and the alinement of the fabric in the initial reeling thereof, and also adapted to constitute in itself a receptacle for the adjuncts, such as cement, nails, caps, &c., required in laying the roofing.

To this end one feature of my invention, generally stated, embraces a tubular mandrel having heads adapted to engage the chucks of a reeling machine, a peripheral opening for the introduction into the mandrel of articles such as cement, nails, &c., required in laying the roofing, a peripheral tongue or flap for engaging the end of the fabric in reeling the same, and solid partitions within and connected to the mandrel for dividing the interior thereof into compartments said partitions of a character to reinforce the slotted shell of the mandrel and enable it to support the weight of the roofing fabric and the strains incident to the reeling operation.

A secondary feature of my invention embraces the provision of end caps comprised of a plurality of independent segments separately secured to the reel head whereby said caps may be applied to rolls of different diameters in preparing the reeled fabric for storage or for the market.

There are other, minor, features of invention, all as will hereinafter more fully appear.

In the drawings chosen for the purpose of illustrating my invention, the scope whereof is pointed out in the claims, Figure 1 is a perspective view of a tubular reel or mandrel embodying my invention, the peripheral flap or tongue being turned back to disclose the peripheral openings in the man-

drel. Fig. 2 is a transverse section of the mandrel with the roofing-fabric reeled thereon. Figs. 3, 4 and 5 are perspective views of the end portions of a roll of ready-roofing fabric reeled on a mandrel or reel embodying my invention, and having the cover or wrapper and end caps applied for shipment or storage purposes. Fig. 6 is a perspective view of a modified form of the reel or mandrel; and Fig. 7 is a detached view of the end of one of the chucks of the reeling machine whereby the reel or mandrel is centered, held and rotated during the reeling operation.

Like symbols refer to like parts wherever they occur.

I will now proceed to describe my invention more fully so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1 indicates a hollow mandrel or reel having its ends closed by heads 2, 2 with which the chucks of the reeling machine engage when the reel or mandrel is in operative position in the reeling machine. This mandrel 1 which is of tubular form may be composed of any suitable material, but is preferably composed of several plies of like weight paper or straw-board, and the heads 2, 2 may also be of any suitable material, but preferably are wooden disks with an axial opening 2^a for the centering pin *c* of the chuck C of a reeling machine.

The reel may be formed from a sheet of a sufficiently heavy straw-board having the length of the desired reel or mandrel and a width somewhat less than the circumference of the desired mandrel, said sheet secured at its ends to the heads 2, 2, so as to leave peripheral openings 1^a, 1^a in the mandrel. To one side of the peripheral openings 1^a, 1^a of the mandrel a peripheral flap 3 is provided, which may extend the length of the mandrel and is secured thereto in any suitable manner. The interior of the tubular mandrel or reel is divided into compartments by a series of substantial partitions 4, 4 capable of supporting the weight of material carried in said compartments, and said partitions are connected to the slotted shell of the mandrel so as to compensate for loss of material in the shell and enable the mandrel to sustain the weight of the roofing fabric and the strains incident to the reeling operation. The partitions 4, 4 are prefer-

ably light wooden disks which will effectively stiffen the mandrel without materially adding to its weight or cost of manufacture. The several compartments of the hollow mandrel or reel serve as receptacles for the asphaltum cements, nails, caps, &c., required for making laps and laying the roofing fabric, and said materials are introduced into the mandrel through the peripheral openings 1^a, 1^a before reeling or spooling the roofing fabric on the mandrel. The leading end of the roofing fabric when inserted under the peripheral flap 3 of the mandrel, will serve as a sufficient closure for the peripheral openings 1^a, 1^a, but if desired, and as a means of preventing adhesion of the included asphaltum cement to the fabric, a covering sheet 1^b of straw-board or of heavy paper may be applied and secured to the partitions 4, 4 by nails.

In some instances it may be found desirable to form the mandrel or reel from a single blank by rolling and pasting as indicated in Fig. 6 of the drawing, in which case the free end of the blank 1^c may constitute the peripheral flap or tongue, and the peripheral openings may be cut through the several plies as at 1^d.

The mandrel or reel being of the character hereinbefore set forth, the asphaltum cements, nails, tin caps, &c., required in the laying of the fabric are inserted in the several compartments of the mandrel through the peripheral openings, and if desired, said openings are closed, after which the mandrel or reel is inserted in the reeling machine between the chucks thereof and in proper relation to the conveyer belt of the roofing machine and set in rotation.

The leading end of the roofing fabric, as it leaves the conveyer belt of the roofing machine, is inserted under the peripheral flap 3 of the mandrel and is held loosely thereby so that, as the reel rotates faster than the conveyer belt, the slack in the roofing fabric will be taken up and tension exerted on the fabric which will cause its proper alinement and insure a perfect roll when the fabric is spooled. When the roll is completed it is removed from the reeling machine with the included mandrel and the outer cover or wrapper and the end caps are applied to protect the roll of fabric for storage or transportation.

The wrapper 6 may be of the usual character but the end caps are composed of a plurality of independent card-board segments, preferably three, indicated at 7, 7^a, 7^b and may be secured to the roll in any

suitable manner, as for instance by nails which pass through the segments into the heads 2, 2 of the mandrel or reel and by a crimped peripheral flange *f* pasted directly to the wrapper 6 as indicated in Fig. 3 of the drawing; or by aprons *f'* of thinner material pasted or glued to card-board flange *f* and to the cover or wrapper 6 as indicated at Fig. 4 of the drawing; or by applying the segmental end cap to the roll before applying the wrapper, and confining the crimped flange *f* by the wrapper as indicated in Fig. 5 of the drawings. By making the end caps in separate segments it will be noted that while the ends of the roll of fabric will be effectively protected, the end caps may be adjusted to different diameter rolls to meet the requirements of the manufacturer and furthermore, by securing each of the independent segments directly to the center mandrel shocks, which would otherwise have to be taken up by the edge of the roll, are transmitted to the center mandrel.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A tubular mandrel or reel for ready roofing fabrics, said reel having heads provided with means for engaging the chucks of a reeling machine, a peripheral opening for the introduction of articles into the reel, solid partitions which divide the interior of the reel into compartments, said partitions connected with the shell of the reel to reinforce the shell and enable it to sustain the weight of the fabric to be reeled and resist strains incident to the reeling operation, and said mandrel provided with a peripheral flap or tongue to engage the end of the fabric to be reeled thereon.

2. The combination with a mandrel or reel for ready-roofing fabrics, of an end cap comprised of a plurality of independent segments separately secured to the reel head.

3. The combination with a mandrel or reel for ready roofing fabrics of an end cap for protecting the end of the roll, said end cap comprised of a plurality of independent segments separately secured to the reel head, said segments having peripheral flanges whereby they may be secured to roll wrapper.

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

BENJAMIN G. CASLER.

Witnesses:

BENJAMIN N. HOLLER,
A. H. CROWN.