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B. W. BROCKETT

1,710,401

IRONING ROLL

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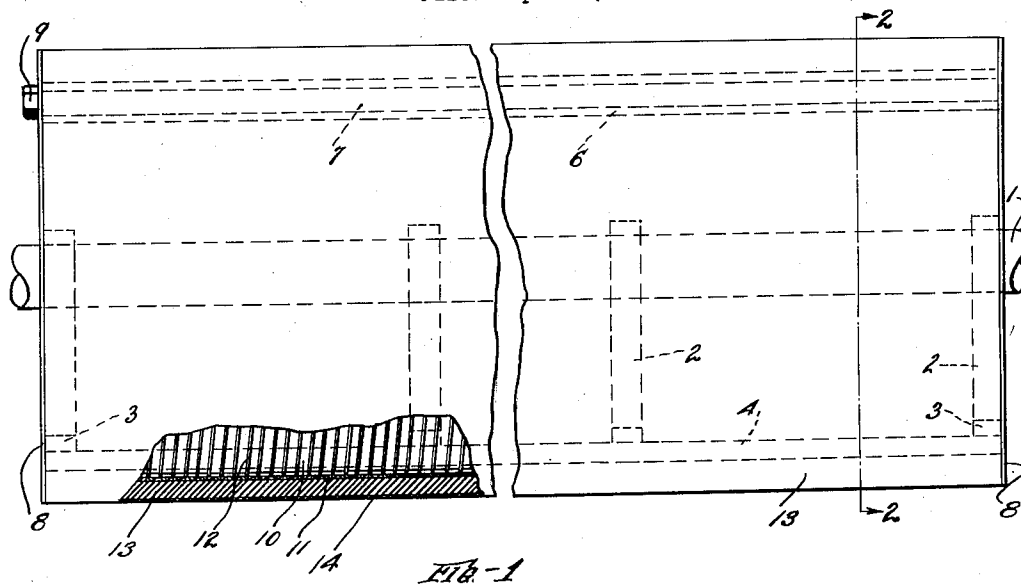


Fig. 1

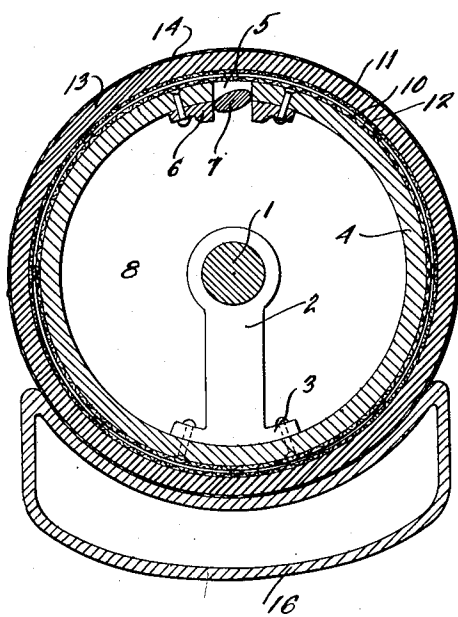


Fig. 2

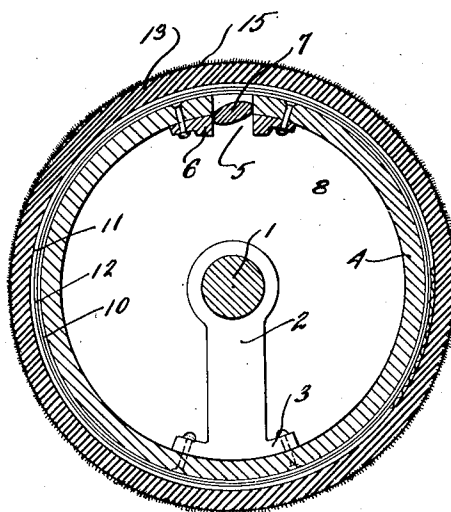


Fig. 3

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IRONING ROLL.

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This invention relates to flat work ironers for laundry use and particularly to padded rolls therefor.

In pressing or ironing laundered articles it has been the practice to use rolls and heated ironing beds between which the articles are passed in producing the ironing finish. Up to the present time the most satisfactory type of roll is one comprising a suitable cylindrical core and a cellulose padding arranged thereon and adapted to press the articles with uniform tension against the ironing bed. These rolls possess a very distinct disadvantage in the fact that it is necessary to wind the cellulose padding upon the core and when wound in this way the rotation of the roll tends to wrap the padding tightly upon the core and in a very short time, due to this wrapping action and the heat and moisture, the padding becomes hard and does not produce the necessary resiliency and rough dry spots appear on the work, especially at the seams and thickened portions.

To overcome the foregoing, the present invention has been devised and it consists of an ironing machine wherein the heated ironing beds are supplied with rolls comprising cores and rubber coverings circumferentially continuous and extending throughout the length of the roll. The roll thus produced, includes a core of a type such that its size or perimeter may be reduced to permit the covering to be freely slid on to the core and thereafter increased to size in a concentric arrangement to thoroughly grip the covering and support it radially at all points throughout its length so that it may not only act as a padded roll for these machines, but includes means which insures the driving of the covering by the core. The invention also contemplates a specific form of rubber covering in the form of an annular tube with an inner re-enforcement for maintaining its shape and for permitting the core structure to be increased in size or otherwise arranged to properly support the tube radially throughout its length and furnish a drive between the two.

Other features of the invention will be brought out in the following description, drawings and claims.

Referring to the drawings, Fig. 1 is a side elevation of the roll constructed according to my invention with parts broken away;

Fig. 2 is a section upon the line 2—2, Fig. 1; and Fig. 3 is a similar view showing a modified form.

In the embodiment shown, 1 represents a suitable shaft carrying radially extending arms or webs 2 having peripheral plate portions 3 riveted or otherwise secured to the core shell 4, which is in the form of a cylindrical tube slit through its length at 5 opposite to the point where the arms 2 are secured. Here the edges of the tube are provided with re-enforcing strips 6 extending the length of the roll and arranged on each side of the opening. Engaging the side walls of the slit or slot in the shell 4 is a suitable cam rod 7 mounted at its ends in suitable end plates 8 secured to the shaft 1. At the end of this cam rod 7 is a suitable nut 9 or other device for rotating the cam rod. When the cam or rod is turned it spreads the shell and thereby increases its size or perimeter to be concentric with the shaft. When it is collapsed the shell is somewhat eccentric and smaller in size and perimeter so that it may pass freely within the covering.

The roll cover is in the form of a circumferentially unbroken tube suitably vulcanized in cylindrical form and of a size such that it may slide freely upon the core when collapsed. This covering may also be provided with an inner re-enforcement of inner and outer layers of fabric 10 and 11 between which is arranged a suitable re-enforcing wire 12 wound spirally throughout the length of the roll during its production. Upon the outside of this re-enforcing inner structure is a suitable cover 13 of rubber of the proper thickness to bring the roll to size. This cover is built up before the rubber content is vulcanized and after vulcanization it presents a covering or padding comprising an inner supporting re-enforcement and an outer resilient pad portion suitably treated to produce the desired ironed resiliency and be unaffected by the heat incident to the ironing operation.

The roll thus produced is then covered with a small amount of cellulose padding in the form of a cover cloth 14 wound in several turns about the roll.

In the modification shown in Fig. 3 the outer pad portion 13 is provided on its outer face with a textile fabric coating 15 imbedded

in the outer surface of the roll while it is still green, and held tightly in place by the process of vulcanization. The roll thus presented has a finished ironing roll having a textile fabric outer face suitable for the ironing processes and devoid of any packing or padding tendency by reason of any wrapping action during the operation of the roll. Indeed, the bond between this fabric coating and the rubber pad is such that the coating freely slides upon the ironing surfaces without any tendency toward distortion of the roll and other undesirable effects accompanying the use of the ordinary roll.

In use either type is shipped to the machine having the roll cores. These cores are collapsed to reduce their size and the covers are slid onto them. Thereafter, the cores are expanded into the covers and the two parts form an ironing roll having the proper resiliency for the ironing operation and incapable of packing or becoming hard in use.

The rolls thus formed cooperate with the usual ironing chest or bed 16.

What I claim is:

1. A roll for flat work ironers comprising

a circumferentially continuous tubular pad member consisting of an inner annular reinforcing portion of rubberized fabric with an annular non-expanding yielding member embedded therein and an outer rubber pad portion all vulcanized as a unit, a core co-extensive with said member, and means for securing said core therein.

2. A roll for flat work ironers as in claim 1 wherein the non-expanding yielding member is in the form of a wire coil embedded in the rubberized fabric.

3. A roll for flat work ironers comprising a core, a rubber covering therefor, and a textile fabric ironing surface imbedded in and vulcanized into the outer surface thereof.

4. A roll for flat work ironers comprising a core, a continuous tubular rubber covering upon said core, and a coating of fibers vulcanized into the outer surface of the rubber covering and forming a finished ironing cover for the roll.

In testimony whereof I hereby affix my signature.

BLUFORD W. BROCKETT.