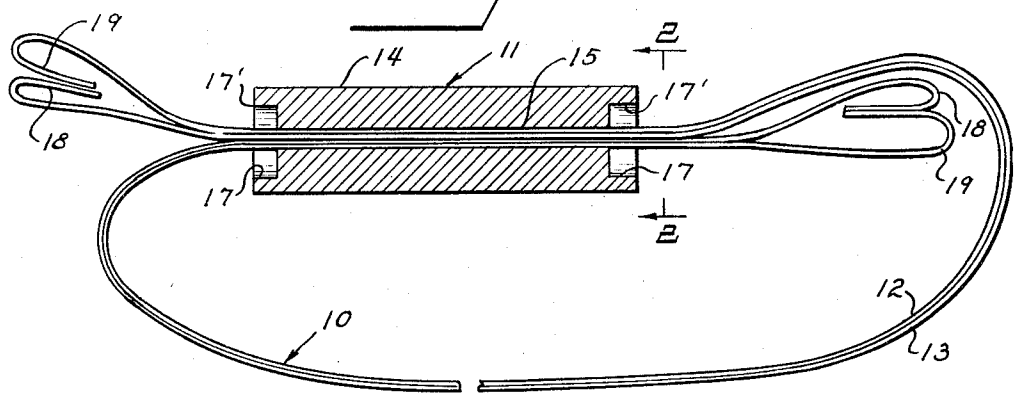
Nov. 18, 1958 J. A. BROCK 2,860,393

BAND TIES

Filed July 5, 1957

Fig. 1



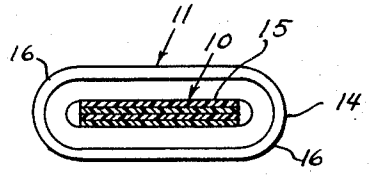




Fig. 2

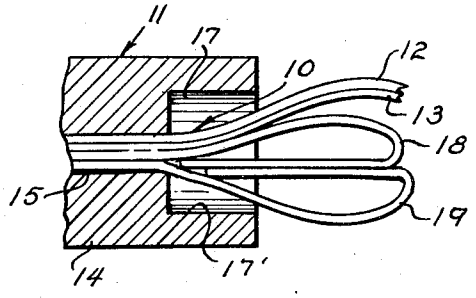



Fig. 3

INVENTOR

JOE A. BROCK

BY Frank P Cyr

ATTORNEY

United States Patent Office

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# BAND TIES

Joseph A. Brock, Jacksonville, Fla.

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1 Claim. (Cl. 24—16)

This invention relates to an improved tie and locking block for bales and more particularly to such a tie and locking block for bonding compressed bales of cotton, lint, waste or the like.

A primary object of the invention is the provision of a tie, preferably composed of a relatively inflexible, non-resilient plastic material, such as reinforced plastic, cushioned glass warp, silicone-varnish, asbestos felt-silicone or like material of high tensile strength, the tie having split ends, for use with an apertured locking block, the split ends being reverted into the aperture in the block to provide a positive locking wedging action.

An additional object of the invention is the provision of a locking block having recessed ends to preclude any shearing action against the tie between the edge of the block and any object or surface against which the end of the block may be forced.

Still another object of the invention resides in the provision of a locking block having rounded edges to preclude damage to the block when the bale is dragged over a floor or similar surface with the block on its under side.

A further object of the invention resides in the provision of an improved tie which is of great tensile strength, with with a minimum modulus of elasticity, fire proof, water proof, oil and acid proof, non corrosive, and non adhesive.

Still another object resides in the provision of an improved method of applying and securing ties to a compressed bale of cotton or the like.

An additional object of the invention is the provision of a locking block which is fire and water proof, non-corrosive and non elastic which will afford a positive lock to the split ends of the tie band to hold a compressed bale effectively in its desired compressed size.

Still other objects reside in the provision of such a device which is sturdy and durable in construction, reliable and efficient in operation, and relatively simple and inexpensive to manufacture, assemble and utilize.

Additional objects reside in the combination of elements, arrangements of parts and features of construction, all as will be more fully described hereinafter and shown in the accompanying drawing wherein:

Fig. 1 is a side elevational view of a preferred form of the instant invention showing the tie and locking block in assembled relation, portions of the former being broken away, after reverting the split ends of the tie bent before pulling the tie taut to wedgingly engage the ends of the tie in the block.

Fig. 2 is an end elevational view of the locking block, the wedged tie being shown in section; and

Fig. 3 is an enlarged fragmentary sectional view showing a reverted split end of the tie in position for wedging into the aperture of the tie.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Refering now to the drawing, there is generally indicated at **10**, a tie, or tie band while a locking block for



securing the ends of the tie about a bale of cotton or the like, is generally indicated at **11**. The tie **10** is preferably composed of two plys **12** and **13** of a suitable plastic material such as reinforced cushioned glass warp, asbestos felt-silicone, silicone-varnish, or similar non-resilient, comparatively inflexible material, which is of high tensile strength as well as being water, fire and acid proof and non corrosive. The two plies are bonded throughout substantially their entire length, with the exception of a relatively short portion at each end, where the plies are not bonded, to provide a transversely split end portion, the purpose of which will be more fully described hereinafter. The strips are formed in any desired length, and due to their inelasticity and comparative inflexibility are preferably packaged for storage shipment of sale in bundles of unrolled, straight ties.

The locking block **11** comprises an elongated body **14** having a longitudinal slot **15** of a width slightly in excess of the width of tie **10**, and of a depth substantially equal to double the thickness of the tie **10**, plus an additional tolerance of 0.1 of an inch. The longitudinal corner edges of body **14** are rounded as at **16**, to prevent damage to the block when the same is dragged over a flat surface or caught between the bale and an adjacent object, the block thus being oval in cross-sectional configuration, as shown in Figure 2.

Each end of body **14** is provided with a recess **17** into which an end of slot **15** opens, the rims **17'** formed by recesses **17** serve to protect the tie **11** at its juncture with the edges of slot **15** to prevent shearing of the tie along the comparatively sharp edge of the slot when scraped along a floor or the like.

Locking block **11** is preferably molded of a suitable plastic similar in composition to that of tie **10** and embodies similar characteristics.

In the use and operation of the device, a bale of cotton, lint, waste material or the like to be tied is first placed in a press and compressed to a desired degree. A tie **10** is then placed around the bale and its ends passed through slot **15** in opposite direction, the split portions formed by the unbonded plies **12** and **13** at each end are then reverted inwardly relative to each other, as indicated at **18** and **19**, respectively and the tie is tightened as much as possible manually. Block **11** is then pulled outwardly until the reverted ends **18** and **19** seat within the tips or edges at either end of the slot **15**. After a desired number of ties **10** have been positioned about the bales, the number varying from 6 to 10 or more in accordance with the size of the bales, the press is released and the normal expansion of the bale expands the ties, forcing the reverted end portions **18** and **19** firmly into the ends of the slot **15** so that the sides of the slot effect a wedging and compressing action thereon, effectively to lock the tie against disengagement.

While in the foregoing, a bonded two ply plastic tie has been described, it is to be understood that multiple bonded plies, split along a central line may be employed, or that a single ply suitably split transversely at its ends may be utilized. Similarly while a plastic material, as above described has been found most suitable for the purpose, other materials, such as leather or metal strips, formed according to the instant invention may be utilized.

Correspondingly, the locking blocks may be of other materials and differ in shape and dimensions.

From the foregoing it will now be seen that there is herein provided an improved tie and locking block for securing compressed bales, as well as a method of applying the same, which accomplishes all of the objects of great practical, utility, and commercial importance.

As many embodiment may be made of this inventive concept, and as many modifications may be made in the

embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim as my invention:

In a device of the character described, in combination, a flat tie strip having its ends split transversely to form two flat end strips, and a locking block having a longitudinal flat slot therein, the width of said slot being slightly in excess of the width of said tie and the depth of said slot being slightly in excess of two thicknesses of said tie, whereby the ends of said tie may be passed through said slot in opposite directions, and the split end strips reverted inwardly, the ends being drawn back into said slot with the inwardly reverted end strips wedgingly engaging in said locking block firmly to secure the opposite ends of said tie in said locking blocks, said tie being comprised of bonded two ply material and the ends being split along the bond line of said plies and the ends of said block being recessed to prevent shearing of said tie along its juncture with said slot.



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