Aug. 30, 1932. F. W. DAVIS, JR., ET AL 1,874,464

BALE BAND TIE OR BUCKLE

Filed Nov. 14, 1931

Fig. 1.

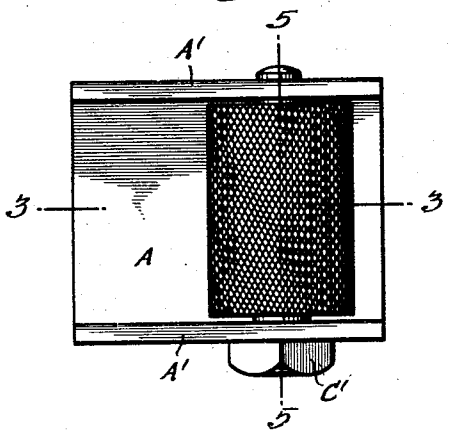


Fig. 2.

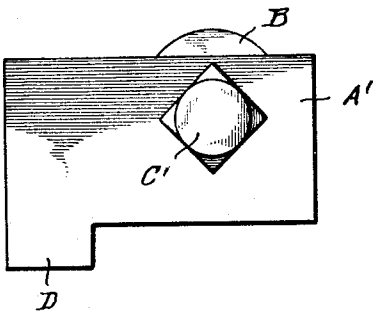


Fig. 3.

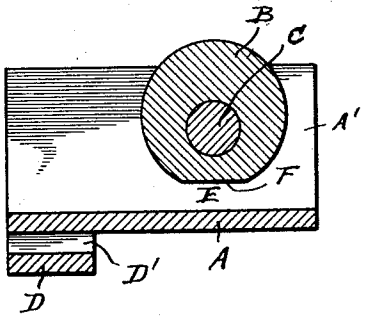


Fig. 4.

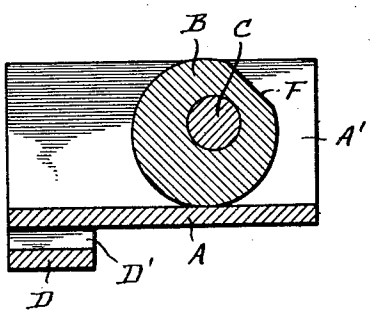


Fig. 5.

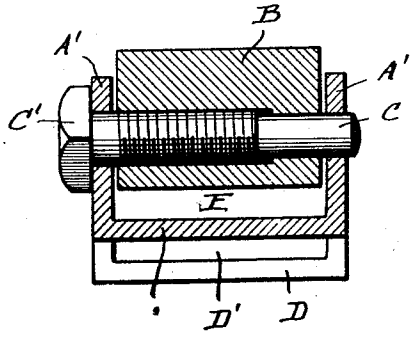
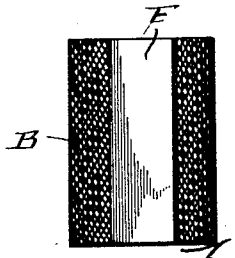


Fig. 6.



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By

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UNITED STATES PATENT OFFICE

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BALE BAND TIE OR BUCKLE

Application filed November 14, 1931. Serial No. 575,122.

This invention relates to a device for fastening bale bands on cotton bales, and can be used for fastening metal bands on other packages, particularly to secure material under pressure. The invention has for its general object the simple and secure fastening of metal bale bands in a way that will prevent their becoming loosened on the bales during their shipment and movement in warehouses, at the same time providing a device that can be easily and rapidly disengaged and thereby cause the bale band to automatically loosen so that it may be removed from the bale.

The more particular objects of the invention, together with means whereby the latter may be carried into effect, will best be understood from the following description of a preferred form thereof illustrated in the accompanying drawing. It will be understood, however, that the particular construction described and shown has been chosen for purposes of exemplification merely, and that the invention, as defined by the claim hereunto appended, may otherwise be embodied without departure from the spirit and scope thereof.

In said drawing, which forms a part of the application and specification:

Figure 1 shows a top view of the device.

Figure 2 is a vertical view from the side on which the shaft head C is extended.

Figure 3 is a vertical sectional view taken on line 3—3 in Figure 1.

Figure 4 is a vertical sectional view showing the position of the roller B after it has been turned on its shaft C to engage a band inserted between its flat surface F and the base A; and

Figure 5 is a view in section on line 5—5 of Figure 1.

Figure 6 is a view of the roller.

Referring to the drawing by characters, A represents the base of the fastener or buckle and extending upwardly from the base are walls A′. The walls A′ and base are so arranged that they present a channel like member. Formed integral with the walls and located below the base A′ is securing member D′ to which one end of a bale strap (not shown) is to be secured. The securing member D′ may be formed in any desired manner but it is preferred that the horizontal portion thereof be parallel with the base A.

In the walls A′ is mounted a shaft C, one end of which has an enlarged portion C′ which acts as a handle or means for releasing the shaft from the locked position. Mounted on the shaft C is an eccentric roller B which has a flat portion at one point on the surface. The flat portion is so arranged on the roller that when it is parallel with the base there is sufficient space for a bale band to be passed between the roll and the base. The roller B is so eccentrically mounted on shaft C that the roller can not make a complete revolution. The extent of the movement of the roller is limited to an arc of not less than 270 degrees. The roller, when turned so that the flat portion is not parallel with the base, comes into contact with the base B and thus securely clamps the bale band in place.

The functioning of the device will be described by referring to Figure 5. Space D′ represents the opening through which one end of the band (not shown) is inserted and hooked around under flange D; this attaches the buckle or tie to one end of the band. The other end of the band is passed around the bale or package and then it is passed through the space between the roller B and the surface A, which is the base or trough of the buckle. When the band has had the slack taken up, the appended head C′ of the shaft C is turned until the surface of the roller comes in contact with the inserted band. Since the roller is operated on an eccentric shaft, the more it turns downward the greater is the force or pressure exerted against the base of the device. Once the roller clamps the band, the greater the force exerted against the band by the pressure of the expanding bale the tighter the roller clamps against it. To remove the band, appended head C′ is turned, which raises the roller B clear of the band. The band being under pressure thereupon automatically springs loose and is released.

Roller B is made of hard cased rolled steel and may be used indefinitely. The surface of the roller may be uniform throughout or a

small portion of the surface may be filed down flat and smooth to provide more space for the insertion of a band between the roller and the base member.

In order to remove bands from bales that are equipped with the present bale band buckle it is necessary to sever the band by the use of a heavy, sharp instrument, thus destroying the band so that it cannot be used again, and creating a fire hazard by causing sparks from the cutting to come in contact with the cotton lint. Often pieces of the metal band break in the cutting process and become mingled with the cotton, entailing probability of damage to the textile machinery. This proposed device obviates the difficulties and dangers thus encountered.

Having thus described our invention, what we claim is:—

A bale band tie comprising a main body member having a base with two parallel upwardly extending sides, said member being open at the ends and on the top, the sides extending below the base at one end and being connected by a cross member thus forming an opening through which one end of a bale band is passed and fastened, an eccentrically mounted roller, a bolt supported by the said sides and having a head extending beyond one upwardly extending side, said roller being mounted upon the said bolt, said roller suspended between the said sides, said roller having a serrated surface except a small portion of which is filed down smooth to provide an opening between the roller and the base of sufficient width to allow the passing of a cotton bale band when said roller is so turned that the smooth portion of its surface is parallel with the base.

In testimony whereof, we affix our signatures.

FRANK W. DAVIS, JR.
ROBT. T. STUTTS.