G. WOLFERMANN AND E. SOHN.

BINDER AND PROTECTOR FOR PICTURE FILMS.

APPLICATION FILED JULY 30, 1918.

1,319,552. Patented Oct. 21, 1919.

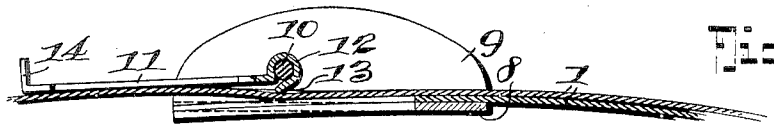


Fig. 4.

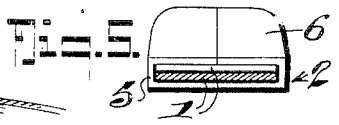


Fig. 5.

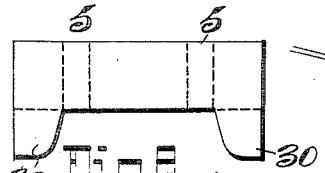


Fig. 2.

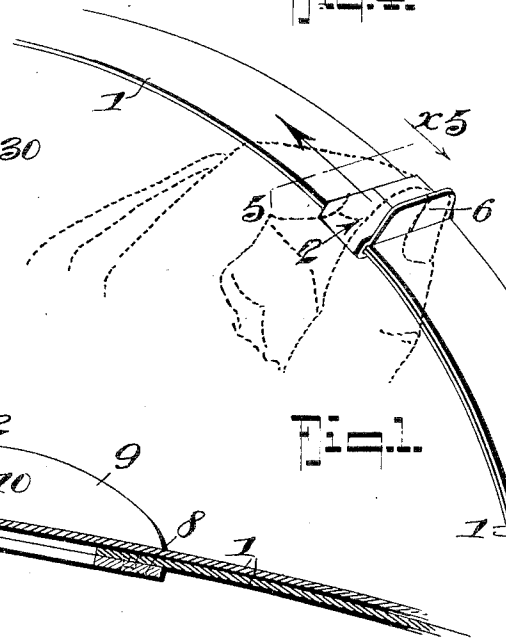


Fig. 1.

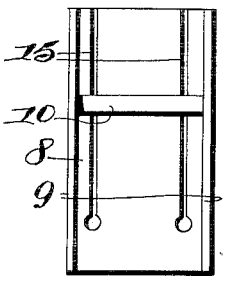


Fig. 6.

Fig. 3.

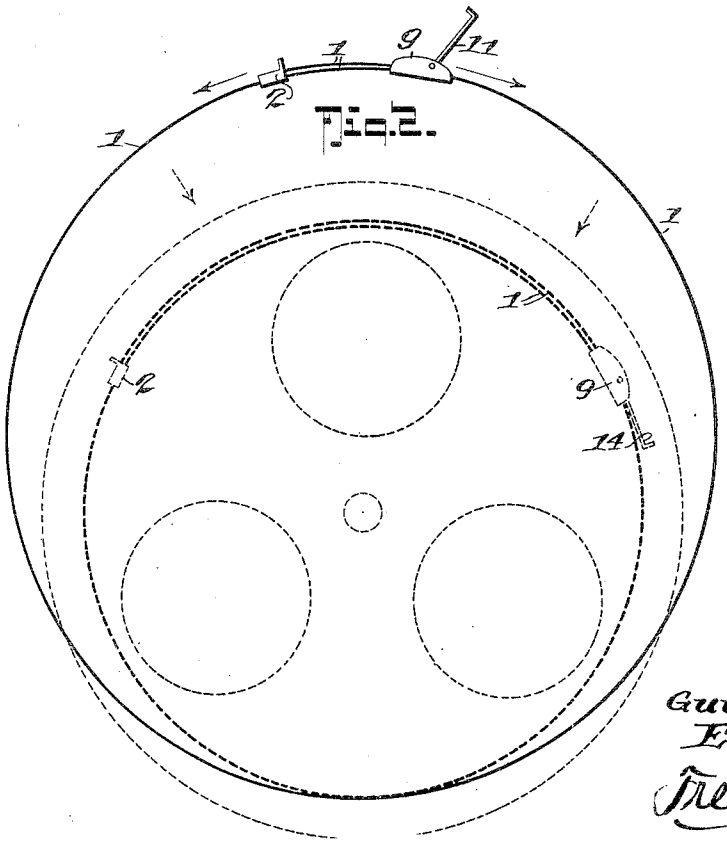
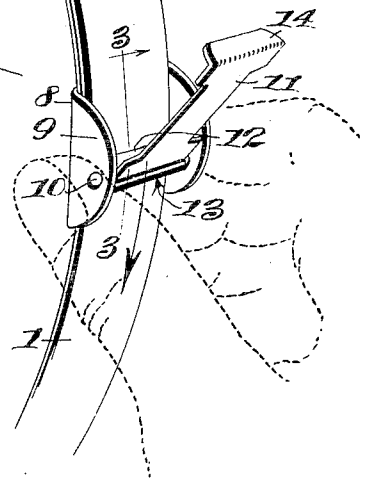


Fig. 2.



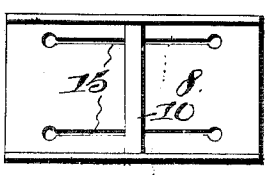


Fig. 7.

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GUIDO WOLFERMANN AND EDWARD SOHN, OF ST. LOUIS, MISSOURI.

BINDER AND PROTECTOR FOR PICTURE-FILMS.

1,319,552. Specification of Letters Patent. Patented Oct. 21, 1919.

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To all whom it may concern:

Be it known that we, GUIDO WOLFERMANN and EDWARD SOHN, citizens of the United States, residing in the city of St. Louis and State of Missouri, have invented a new and Improved Binder and Protector for Picture-Films, of which the following is a specification.

This invention has for its purpose to provide a simple, inexpensive, and easily manipulated device especially designed for protecting and preventing the unwinding of moving picture films from the reel, when not in use and during shipment thereof from place to place.

Heretofore it has been a common practice to use rubber bands as fasteners or binders for holding the films and keeping them from being accidentally unwound.

The present high cost of rubber and the fact that rubber bands are not lasting has developed the use of paper band ribbons usually of the same width of the picture ribbon and of sufficient length so that, when placed around the said picture film reels, the said ends can be overlapped and adjusted for different sizes of film reels.

In the use of paper ribbon binders, special means is provided for securing the overlapped ends of the paper ribbon or band, such means as now commonly employed being a thin cord, one end of which is made fast to one end of the said paper band and of a length sufficient to extend around the band, when applied on the picture reel, to provide for tying or otherwise connecting with the other cord end.

The latter form of reel binder and protector is also more or less expensive and not at all absolutely safe in its use, for the reason that the cord and the paper ribbon easily tear or break and the tied ends of the binder cords easily become disconnected.

Our invention is particularly designed to provide an indestructible binder in the nature of a thin resilient metal ribbon or band, whose ends are overlappingly and slidably engaged and provided with means whereby the said ends can be almost instantly and with great facility extended or drawn up to fit over the film reel.

Our invention also includes a simple and effective means for locking the overlapped ends to their adjusted positions, when applied to reels of different diameters.

With other minor objects in view, that will hereinafter appear, our invention embodies in an appliance of the character stated, the peculiar features of construction and novel arrangement of parts that will be first explained in detail and specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the overlapped ends of our construction of moving picture film binder and protector.

Fig. 2 is a diagrammatic side elevation of our device and illustrates, in dotted lines, the manner in which the same is applied to a reel of moving picture film.

Fig. 3 is a longitudinal section on the line 3—3 on Fig. 1 and it illustrates the position of the clamping device for locking the binder band ends, when adjusting the lapped ends of the band to close down onto the film reel, as indicated in Figs. 1 and 2.

Fig. 4 is a similar view of the said locking device, the same being shown in position for locking the said band ends to their adjusted condition.

Fig. 5 is a cross section of the shifting member secured to that end of the band that slidably engages the locking device that is attached to the other end of the binder band, the section being on the line 5—5 on Fig. 1 looking in the direction of the arrow *x*.

Fig. 6 is a plan view of the bottom plate that constitutes a part of the locking device.

Fig. 7 is a plan view of a modified form of the said plate and hereinafter specifically referred to.

Fig. 8 is a plan view of a blank from which the finger piece hereinafter referred to is bent up.

Referring now to the details of construction of our invention, 1 designates a steel ribbon or band, which band, in the practical application of our said invention, is of such length that, when the said ends are brought together, they constitute a ring-shaped protector whose ends overlap, as is shown in Fig. 2, so that the said protector may be readily adjusted from the ordinary smallest to the commercially largest diameter of picture reels.

The opposite ends of the band 1, when the parts are assembled for use, overlap and are adapted for slidably interengaging so that the diameter of the binder and pro-

tector may be readily expanded or contracted to fit over the particular size or diameter of the picture reel to which it is to be applied.

To facilitate the ready adjustment of the band, one end thereof is provided with a finger engageable member 2 which consists of a thin flexible plate that is bent up from a blank shaped as shown in Fig. 8 and which includes laterally extended members 30, at one edge thereof.

Plate 2 is riveted to the band edges. The opposite ends 5—5 of the plate 2 are bent and close over the band and the members 30 are bent up at rightangles and form a finger grip 6, see Fig. 1.

A plate 8 is riveted to the other end of the band and whose opposite edges are bent up at rightangles to form opposite ears or brackets 9 and the said brackets are apertured to receive a cross pintle 10 that constitutes a part of the locking device hereinbefore referred to.

The locking device includes a swingable member consisting of a plate 11, one end 12 of which is formed into tubular shape to rockably engage with the pintle 10 and which terminates in a cam projection 13.

The other end of said plate 11 constitutes a lever or handle 14.

By referring more particularly to Figs. 3 and 6, it will be seen that the plate 11 has a pair of longitudinal slits 15 that may extend from the outer to near the inner end thereof, as shown in the said Figs. 3 and 6, or they may be disposed midway the ends of the plate, as shown in Fig. 7.

By slitting the lock plate 8, as stated, provides a resilient base member against which the cam projection 13 presses the band portion that passes under it when the lever arm 11 is turned down to the band locking position, as shown in Fig. 4, and thereby provides for buckling or bending the band along the points engaged by the cam, which would not occur if the bottom plate 11 were rigid throughout its length.

From the foregoing description taken in connection with the drawings, the construction and the advantages of our invention will be readily apparent to those accustomed to handling and using moving picture reels.

As will be clearly understood from Figs. 1 and 2, to apply our fastener and protector to a reel film, all that is necessary is to slip one end of the circular band against the reel at one edge and slide the opposite or lapped ends of the band along each other until the diameter of the band is reduced, so that it fits tightly around the reel, as indicated in dotted lines on Fig. 2.

The attached devices at the opposite ends of the bands constitute convenient finger grips to facilitate the proper expansion or contraction of the band ring, as indicated on Figs. 1 and 2.

Our device is exceedingly simple, easily applied for use on different sizes of picture film reels and is practically indestructible.

What we claim is:

1. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a closed band having overlapping ends and a grip member at each end of the band for effecting the expansion and contraction of the lapped ends, and means coöperating with one of the grip members for locking the lapped ends to any of their adjusted positions.

2. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a closed band having overlapping ends and a grip member at each end of the band for effecting the expansion and contraction of the lapped ends, and means coöperating with one of the grip members adapted for frictionally clamping the lapped ends at any of their adjusted positions.

3. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a closed band having overlapping ends and a grip member at each end of the band for effecting the expansion and contraction of the lapped ends, and means coöperating with one of the grip members for locking the lapped ends to any of their adjusted positions, the said means including a lever having a cam end rockably mounted on its co-engaging grip member and adapted for clamping the relatively slidable band member against the said grip member.

4. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a closed band having overlapping ends and a grip member at each end of the band for effecting the expansion and contraction of the lapped ends, and means coöperating with one of the grip members for locking the lapped ends to any of their adjusted positions, the said means including a base plate having its opposite ends bent up to form ears, a lever having a cam head pivotally mounted between the said ears with the said cam head adapted for being brought into engagement with the relatively slidable band member for clamping the said band member against the said base plate.

5. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a closed band having overlapping ends and a grip member at each end of the band for effecting the expansion and contraction

of the lapped ends, and means coöperating with one of the grip members for locking the lapped ends to any of their adjusted positions, the said means including a base plate having its opposite ends bent up to form ears, a lever having a cam head pivotally mounted between the said ears with the said cam head adapted for being brought into engagement with the relatively slidable band member for clamping the said band member against the said base plate, the said base plate having a plurality of longitudinal slits, whereby to produce a resilient cam opposing portion.

6. As a new article, a protector and binder for moving picture film reels, comprising a single band of resilient metal shaped to form a ring having overlapping ends, and a grip member at each end of the band for effecting the expansion and contraction of the lapped ends, means coöperating with one of the grip members for locking the said lapped ends to any of their adjusted positions, the said means including a base plate formed with a resilient bearing portion, and a lever having a cam head pivotally mounted on the base plate with the cam head adapted for being brought into engagement with the slidable band member for clamping the said member against the resilient portion of the base plate.

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