March 5, 1935. A. MARCHEV ET AL 1,993,559

DUPLICATING MACHINE

Filed Oct. 7, 1933

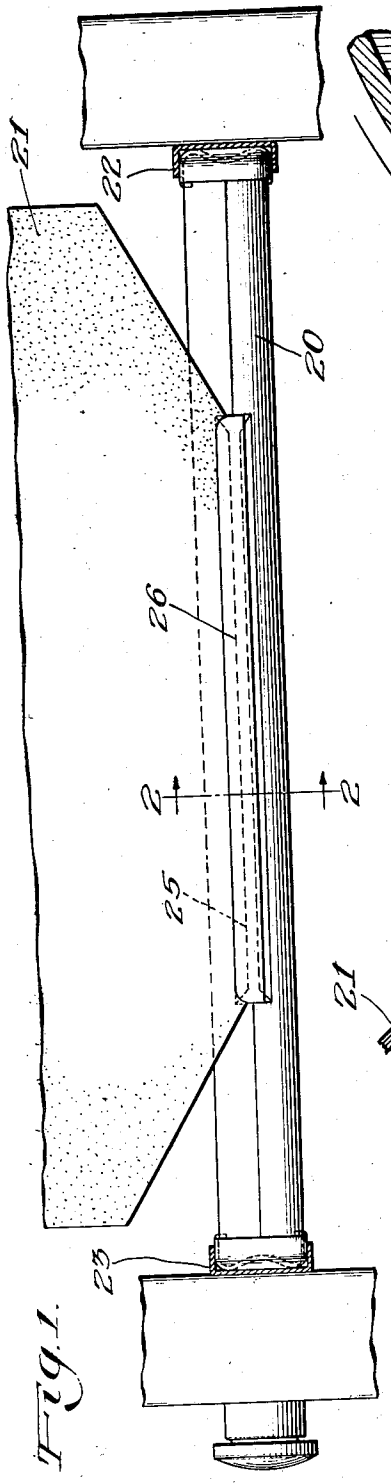


Fig. 1.

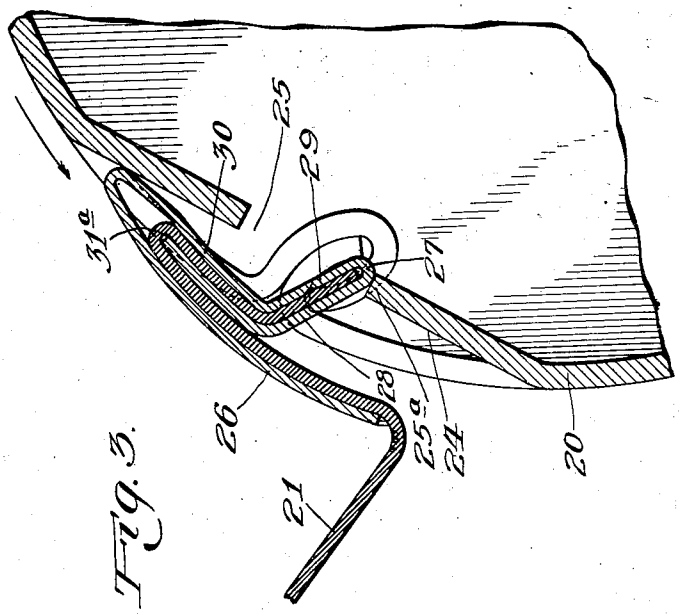


Fig. 3.

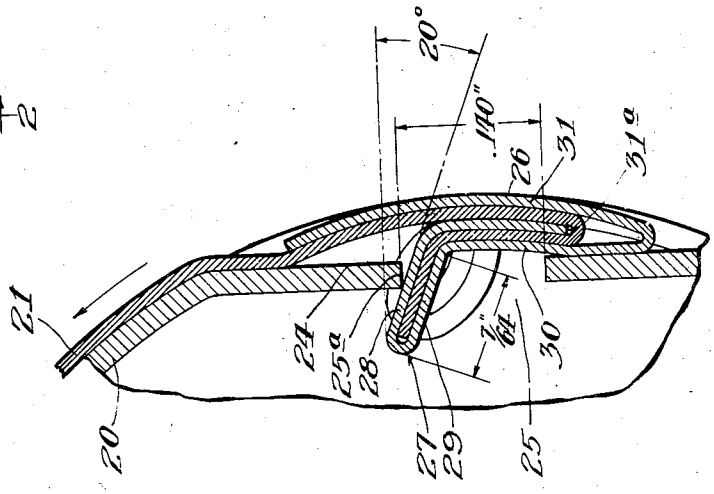


Fig. 2.

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DUPLICATING MACHINE

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Application October 7, 1933, Serial No. 692,680

3 Claims. (Cl. 242—74)

This invention relates to duplicating machines and, more especially, to an attaching clip for fastening the end of the gelatin band to the receiving or dispensing spindle. We have here shown the invention incorporated in such a clip adapted for attachment to a spindle having a flattened face with a slot therein.

Among the features of our invention is a clip which can be easily and cheaply made and one which is simple in construction and operation. Among the special features of the clip is that it can be easily and quickly attached to a spindle and is self-detaching as the band is unwound from the spindle when the end is reached.

Another feature of our invention is such a clip which can be made out of a single piece of sheet metal and fastened to the end of the band by clamping the latter between portions of the clip.

Other features and advantages of our invention will appear more fully as we proceed with our specification.

In that form of device embodying the features of our invention shown in the accompanying drawing—

Figure 1 is a top plan view of a spindle, showing the end of a band attached thereto by our improved clip; Fig. 2 is a view taken as indicated by the line 2 of Fig. 1; and Fig. 3 is a view similar to Fig. 2 showing the clip becoming detached from the spindle at the completion of the unwinding of the band.

As shown in the drawing, 20 indicates a cylindrical spindle for receiving or dispensing the gelatin band 21. These parts are in common use in conventional duplicating machines of the hectograph type. The spindle 20 is described in detail in our copending application, Serial No. 692,679, filed October 7, 1933. Similarly, 22 and 23 may indicate conventional supporting or bearing members in such a machine for rotatably supporting the ends of the spindle 20.

It is to be understood that in speaking of the gelatin band, or band, we may refer only to the flexible supporting sheet commonly forming a part of such band upon which a coating of gelatin is applied.

The spindle 20 for the purpose of cooperating with the improved clip is provided with an elongated flattened face 24 having a centrally arranged slot 25. The face 24 is preferably centrally arranged on the spindle and may extend a distance substantially half the length of the spindle. Obviously, however, this distance may be varied. The width of the face as here shown is about sufficient to subtend an angle of about 50° of the circumference of the spindle. Obviously, also, the width of this face may be varied.

The clip is formed of a single piece of sheet metal bent to form the outer convex portion 26 adapted to lie on the flattened face 24 of the spindle. This portion is so curved or convexed and proportioned so that when the complete clip with the gelatin band attached thereto is placed on the flattened face 24, as shown in Figs. 2 and 3, the outer face of the portion 26 will form a substantial continuation of the outer surface of the spindle 20. By means of this construction, therefore, when the clip is in place, it will serve to fill out the flattened face 24 so that when the band 21 is wound on the spindle, it will wind smoothly over the clip.

The clip is provided with an inwardly extending slanting tongue 27 adapted to enter the slot 25 and hook against and partly under one edge 25^a thereof when the band 21 is wound on the spindle. In the unwinding operation, however, when the end of the band is reached and the pull is somewhat away from the cylinder or spindle, as shown in Fig. 3, this pull will readily disengage the tongue 27 from the slot 25 causing self-detachment of the clip from the spindle.

As here shown, the clip is formed of a single piece of sheet metal and the tongue 27 is formed with the double walls 28 and 29, the latter being attached at its outer edge to one edge of the portion 26 by the sheet metal portion 30. The other wall 28 of the tongue is extended in between the portions 26 and 30, as shown in Figs. 2 and 3 and as indicated by 31.

The band is attached to the clip by passing the same around the extreme edge 31^a of the portion 31, thence backwardly and down into the tongue 27 between the walls 28 and 29.

It will be noted that the tongue 27 is substantially straight as distinguished from the hooks usually provided to secure gelatin bands to spindles.

While we have shown and described certain embodiments of our invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claims, in which it is our intention to claim all novelty inherent in our invention as broadly as permissible, in view of the prior art.

What we regard as new, and desire to secure by Letters Patent, is:

1. The combination with a flexible band, of a

clip attached to one end of said band, said clip comprising a single piece of sheet metal clamped upon a fold in said end of said band, and an integral tongue projecting laterally from the body portion of the clip, and clamped on said end adjacent said fold.

2. The combination with a flexible band, of a clip attached to one end of said band, said clip comprising a body portion clamped on a fold in said end of said band, and a tongue projecting laterally from said body portion, and clamped on said end adjacent said fold.

3. The combination with a flexible band, of a clip attached to one end of said band, said clip comprising a piece of sheet metal bent upon itself to form a tongue and to provide a portion disposed between two other portions of said sheet metal, said end of said band being folded around the first mentioned portion of said sheet metal, and being clamped between said portions.

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