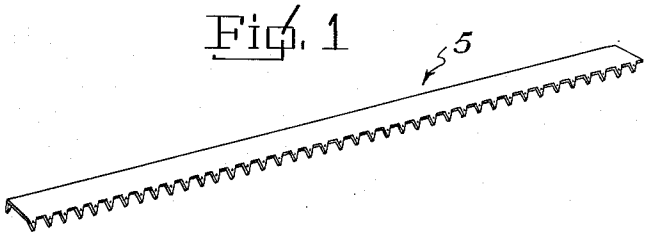
May 2, 1961 H. S. BOYD 2,982,208

BACKING STRIPS FOR PRINTING PRESSES

Filed Dec. 6, 1957

Fig. 1



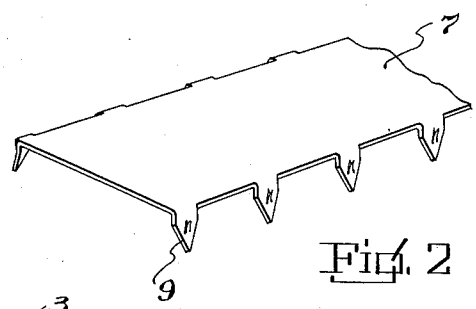
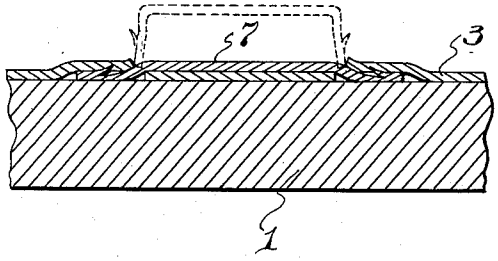


Fig. 2

Fig. 3



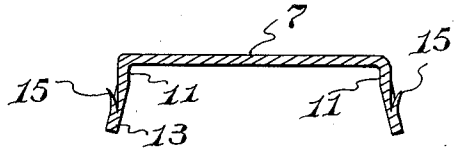


Fig. 5

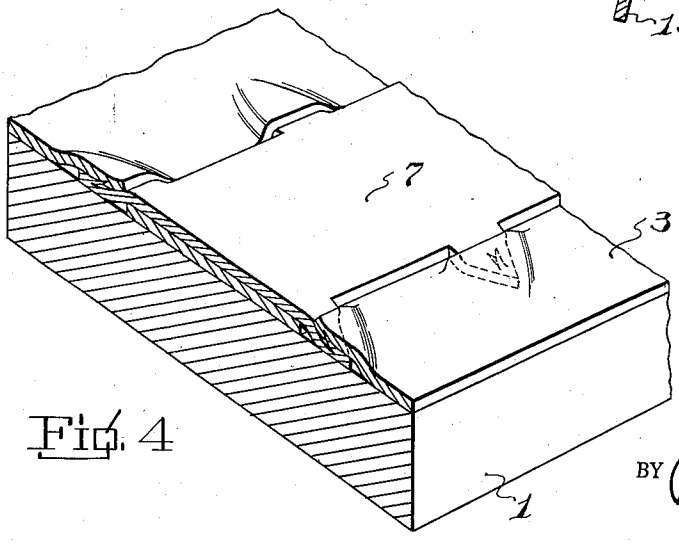


Fig. 4

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BACKING STRIPS FOR PRINTING PRESSES

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3 Claims. (Cl. 101—407)

The present invention relates to backing strips for printing presses, and more particularly to back strips against which cutting or perforating operations may be performed in a printing press during a printing operation.

Among the objects of the present invention are the provision of such backing strips which may be quickly and accurately emplaced on the platen of a printing press, which will adhere firmly to the tympan or covering sheet of the platen, which do not require any auxiliary parts or adhesive for securement in operative position, which may be manufactured in indefinite lengths and cut to fit for desired jobs, and which will be easy and inexpensive to manufacture, simple and dependable to utilize, and rugged and durable in use.

Other objects and advantages of the present invention will become apparent from a consideration of the following description, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a perspective view of a backing strip for printing presses, according to the present invention;

Figure 2 is an enlarged perspective view of one end of the strip;

Figure 3 is a transverse cross-sectional view through the strip showing two stages of application of the strip to a tympan on a platen;

Figure 4 is an enlarged perspective view, partly in section, showing a portion of the strip applied to a tympan carried by a platen; and

Figure 5 is a cross-sectional view of the strip viewed on the line 5—5 of Figure 2.

Referring now to the drawings in greater detail, there is shown a portion of the printing press comprising a platen 1. As used in the present specification, the term "platen" includes cylindrical platens as well as flat platens.

Platen 1 is covered by a conventional tympan sheet 3 comprising a heavy waxed paper cover secured to platen 1.

Adapted for securement to platen 1 by means of sheet 3 is a perforating strip or backing strip indicated generally at 5 against which cutting or perforating operations may be performed on sheets of paper passing through the press during a printing operation and comprising a thin elongated flat strip 7 of resilient metal such as strip steel or the like. As an example of the small, thin, flat nature of the strip, it should be noted that strip 7 may for example have a thickness of 0.015 inch.

Strip 7 has a plurality of resilient integral prongs 9 extending transversely therefrom and spaced longitudinally along both longitudinal side edges of the strip. Each prong 9 has a relatively short rectangular base portion 11 extending at right angle from the strip and a relatively long end portion 13 of triangular shape integral with base portion 11 and joining base portion 11 along a bend line. The end portions 13 diverge from each other on either side of strip 7 toward the ends of prongs 9 and terminate in sharp points. All of prongs 9 are disposed on the same side of the plane of strip 7.

The end portion 13 of each prong 9 is provided with an integral resilient barb 15 which diverges from the prong away from the point of the prong and terminates in a sharp point, which is to say that the barbs diverge from their respective prongs in a direction opposite to the direction in which the prongs diverge from each other on opposite sides of strip 7.

Strip 5 as described above is in condition for application to the platen of a printing press, and in this form is placed against tympan sheet 3 with the points of prongs 9 against the outer surface of the sheet and strip 7 parallel to and spaced a susbtantial distance from the outer surface of the sheet. Strip 7 is then forced down against sheet 3 as by the application of hammer blows to the strip along its full length. During this application operation, the points of prongs 9 individually penetrate sheet 3 at spaced points. The flattening of strip 7 against sheet 3 is accommodated by the bending of prongs 9 away from each other on opposite sides of strip 7, a large portion of this bending being accommodated by the bend lines between end portions 13 and base portions 11 of prongs 9. Thus, prongs 9 extend outwardly of strip 7 under sheet 3 from the phantom line position shown in Figure 3 to the full line position shown in Figure 3.

Inevitably, there is some tendency for the resilient metal of the strip to tend to spring back to its unstressed position as shown in Figures 1, 2 and 5 and in phantom line in Figure 3; and it is to counteract this tendency that barbs 15 are provided. Hence, once the strip has attained its applied position as shown in full line in Figures 3 and 4, barbs 15 engage with the underside of the upwardly displaced portions of sheet 3 and prevent recoil of the strip such as might dislodge the strip or provide a springing backing such as might frustrate complete cutting or perforation. It is particularly important to note that the resilient nature of barbs 15 enables them to spring inwardly when prongs 9 are being pushed under sheet 3 and to spring outwardly upon any tendency toward reverse movement. Nevertheless, barbs 15 are integral with prongs 9 and are of quite simple construction.

There is thus provided a backing strip of which the end portions of the prong will slide flat against platen 1 between the platen and sheet 3 and in which in the assembled form the base portions 11 of the prongs of the strip provide in effect steps between offset portions of strip 7 and end portions 13 so that the displaced portions of sheet 3 do not bulge a substantial distance above the outer surface of the strip.

It will thus be seen that all of the initially recited objects of the present invention have been achieved.

Although the present invention has been disclosed in connection with preferred embodiments, it is to be understood that modifications and variations may be resorted to without departing from the spirit of the invention, as those skilled in this art will readily understand. Such modifications and variations are considered to be within the purview and scope of the present invention as defined by the appended claims.

What is claimed is:

1. A printing press comprising a platen having a tympan sheet thereon, and an elongated backing strip disposed on the outer side of the sheet and having an exposed outer surface, the strip having a plurality of transversely extending retaining elements engaging with the sheet to retain the strip on the sheet and disposed and terminating between the sheet and the platen.

2. A printing press comprising a platen having a tympan sheet thereon, and an elongated backing strip disposed against the outer side of the sheet, the strip having a plurality of transversely extending integral prongs spaced longitudinally along both longitudinal side edges of the strip, each prong individually penetrating and ex-

tending and terminating under the tympan sheet between the tympan sheet and the platen to retain the strip on the tympan sheet.

3. A printing press comprising a platen having a tympan sheet thereon, a thin elongated flat metal backing strip disposed against the outer side of the sheet, a plurality of resilient metal prongs spaced longitudinally along both side edges of the strip and terminating in sharp points, each prong having an integral resilient barb diverging from the prong and extending in the opposite direction from the point of the prong and terminating in a sharp point, each prong individually penetrating and extending and terminating under the tympan sheet to retain the strip thereon.

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