

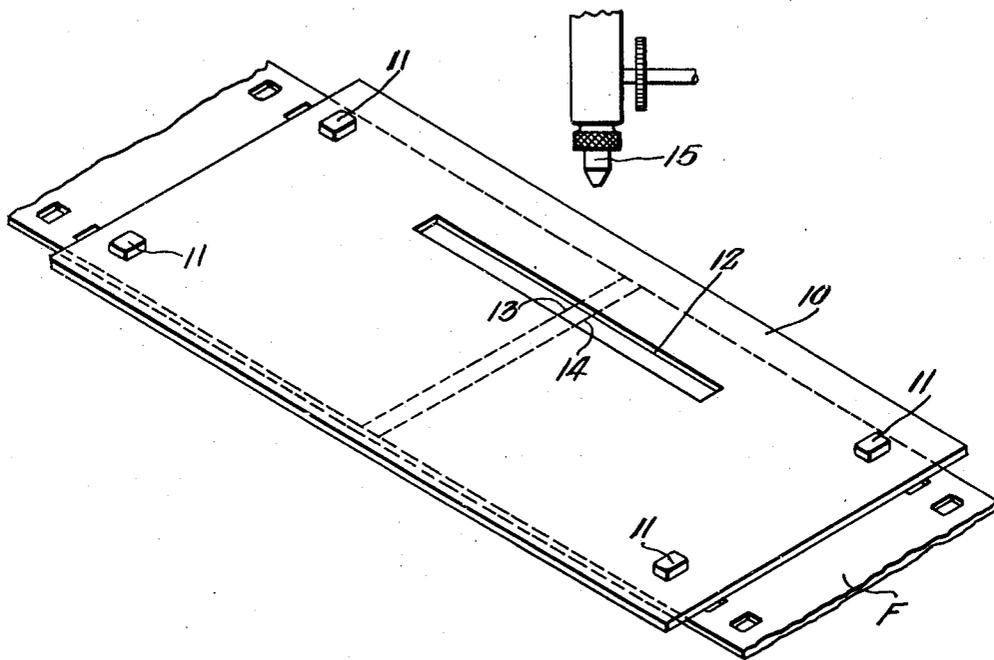
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SOUND FILM SPLICE

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SOUND FILM SPLICE

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1 Claim. (Cl. 274—46)

This invention relates to an improvement in sound film splices, and more particularly to a method of and apparatus for increasing and decreasing the density of the sound track progressively to and from the splice or printed image thereof. The photographic obscuration of splices in sound track is described and claimed, for example, in Case Patent 2,030,098, wherein an appropriate notch in the spliced film causes an appropriate light to fog the corresponding portion of the print thereof. This arrangement has been satisfactory for use in printers appropriately equipped, but cannot be used for obscuring a splice in film which has been already exposed and developed as, for example, the ordinary positive release print. It has also been proposed, as, for example, in Stewart Patent 1,921,954, to superpose a piece of appropriately tinted or shaded transparent material over the sound track at the splice. This arrangement, however, is unsatisfactory in that the ends of the superposed material, if of the variable density type, produce noises as they pass the reproducing light beam. The use of a variable area obscuration on variable area sound track is not satisfactory since the variable area obscuring patch and the variable area sound record so interact as to produce many undesired frequencies where the sound track is partly obscured, and the undesirable noises from this effect may, in some instances, be more annoying than the noise from the splice itself.

It is, accordingly, desirable to provide a variable density obscuration at the splice on variable area sound tracks, and it is also desirable to provide such an obscuration which may be applied either to a spliced film or to a print thereof, and which will not leave any sharp line of demarcation at its ends. I accomplish these results by obscuring the sound track at the splice or in the print of the splice by an appropriate medium applied by means of an air brush through an appropriate mask and gradually shaded out in density to nothingness over an appropriate distance.

One object of my invention is to provide an improved sound film splice.

Another object of my invention is to provide an improved method of obscuring the splice in sound film.

Another object of my invention is to provide an improved method of obscuring a splice image in a print of a spliced sound film.

Other and incidental objects of my invention will be apparent to those skilled in the art from a reading of the following specification and an

inspection of the accompanying drawing in which:

The single figure of drawing illustrates the apparatus used for and the method of performing my improved obscuration of the film splice.

As illustrated in the drawing, the obscuration is applied to a print of a spliced film rather than to the spliced film per se, but it will be apparent to those skilled in the art that the operation is identical for both.

In the drawing, the film F is shown as having a splice image at its middle portion represented by the lines 13 and 14, which appear as clear lines on the print due to the obscuration of light by the ends of the superposed spliced films. If the obscuration is to be applied to spliced films, then the ends of the films would occur along the lines 13 and 14. A mask 10 of appropriate material, such, for example, as metal, is provided of sufficient width to completely cover the face of the film and of convenient length. This mask is provided with appropriate registry pins 11 which, if desired, may protrude from both sides of the mask as shown in the drawing so that either face of the mask may be used against the film. These registry pins are so shaped and spaced as to cooperate with the sprocket holes in the film in fixing the mask in a predetermined location in regard to the film. The mask is provided with a longitudinal slot 12 corresponding in width with the sound track and having a length slightly greater than the length of the obscuration which is desired. The tolerances in the width of this aperture or slot are determined by the tolerances of sound track positioned laterally of the film, and the width should, accordingly, be sufficient to cover the entire width of any sound track located within the usual tolerances but without permitting the obscuring medium to cover any portion of the picture.

After placing the mask 10 on the film with the aperture 12 in proper relation to the sound track area of the film and to the splice or splice image 13, 14, I apply an appropriate medium to the film through the aperture 12 by means of the air brush 15. If the splice to be obscured occurs as an image on a positive print or occurs as a splice in the positive film, I use a medium which is either opaque to light or which is opaque to such light as a photoelectric cell may be sensitive to. In this case, I may use as the obscuring medium such a material as India ink or an appropriate solution of black or other dark colored dye. This solution may be made, as is known in the art, in such a manner as to partly dissolve the surface of the film material, thereby introducing

the coloring material into the surface of the film and preventing its mechanical removal. If the splice which is to be obscured appears as a photographic image on a duplicate negative, I prefer to use some appropriate silver dissolving material such, for example, as Farmer's reducer or some other silver solvent in order to leave the sound track area transparent and produce a correspondingly blackened area on a print therefrom.

In applying the obscuring medium by means of the air brush 15, the air brush may be so adjusted as to give a fairly fine cone of spray and moved back and forth along the aperture 12 in such a manner as to completely obscure the sound track between the lines 13 and 14, and to gradually decrease the obscuration almost, but not quite to, the ends of the aperture 12, or the air brush may be so adjusted as to give a fairly wide cone of spray having the proper distribution lengthwise of the aperture 12, and the jet may then be moved transversely across the aperture along the lines 13 and 14 depending upon the distribution of the obscuring material by the

spray of the air brush to properly shade the obscuration of the splice. If desired, a combination of these two methods may be used, i. e., the air brush may be so adjusted as to produce a spray of intermediate size and distribution, and it may be moved longitudinally of the aperture 12 across the lines 13 and 14 a corresponding amount either by a longitudinal movement of the air brush along the aperture or by an appropriate rotational movement of the air brush about an axis in a plane transversely perpendicular to the film and passing approximately along the lines 13 and 14.

Having now described my invention, I claim:

The method of treating a sound film splice for preventing undesirable noises therefrom comprising the step of spraying the sound track area with an appropriate light-obscuring medium at the splice position, and spraying the sound track area with a gradually decreasing amount of said medium over a predetermined distance in each direction therefrom.

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