June 21, 1932. W. J. PURSER 1,864,257

MEANS FOR REMOVING LUBRICATING COMPOUND FROM PERFORATED SHEET METAL

Filed May 31, 1930

Fig. 1.

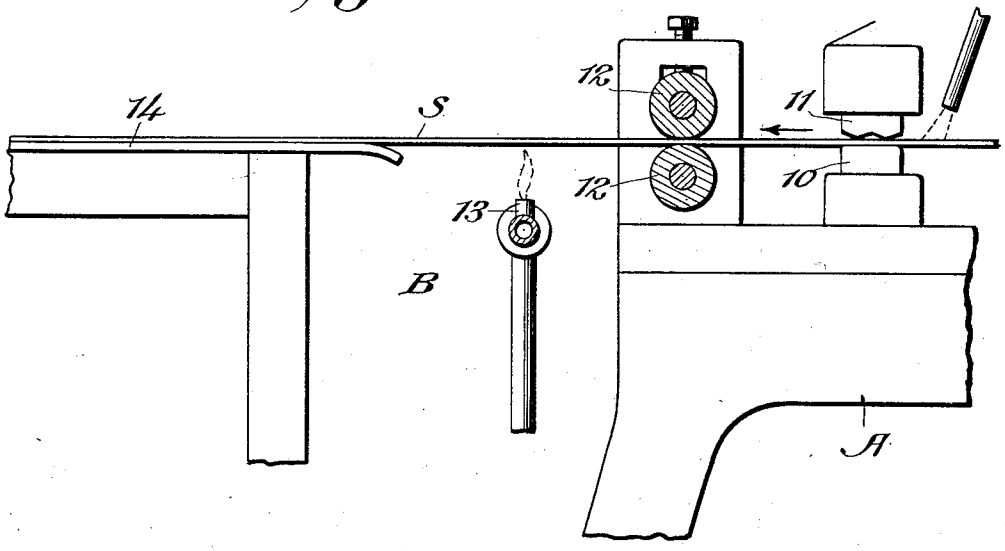
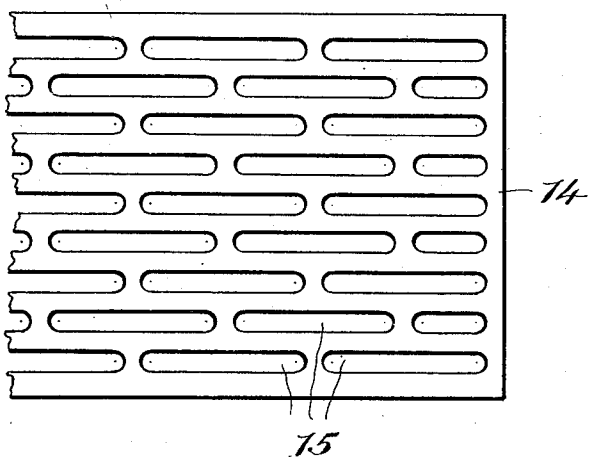


Fig. 2.



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UNITED STATES PATENT OFFICE

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MEANS FOR REMOVING LUBRICATING COMPOUND FROM PERFORATED SHEET METAL

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In the manufacture of perforated sheet metal articles, such as metal lath, it is general practice, prior to perforating the metal, to apply a lubricating compound thereto to facilitate the perforating action of the dies and to avoid ragged edges where the metal is perforated. Following perforation, it is desirable that the lubricating compound be removed from the metal especially if the latter is to be painted, lacquered or the like, and accordingly the present invention has in view to provide a novel and practical means for accomplishing this purpose.

It is also desirable, of course, to maintain production costs as low as possible, and to this end the invention further has in view to provide means for the purpose stated which does not require additional handling of the metal as compared with present manufacturing methods, and which involves only negligible additional expense.

With the further object in view of providing means for the purpose stated which is rapid and thoroughly reliable and efficient in operation, the invention consists in the novel combination and arrangement of features as will be hereinafter more fully described, illustrated in the accompanying drawing and defined in the appended claims.

In the accompanying drawing:—

Figure 1 is a diagrammatic side elevation illustrating the invention; and

Figure 2 is a fragmentary top plan view of the table onto which the metal is delivered following removal of the lubricating compound therefrom.

Referring to the drawing in detail, A designates generally a portion of a sheet metal perforating press such for example, as is employed in the manufacture of metal lath, while B designates generally a practical embodiment of the present means for removing the lubricating compound from the perforated sheet metal after same has passed through press A.

The sheet metal designates as S is adapted to be advanced through the press A in any suitable manner and to be perforated and, if desired, otherwise formed during its advance therethrough, to which end the press A has been shown in the present instance as being inclusive of a die 10 and a cooperating punch 11 for perforating the sheet, and a pair of cooperating rollers 12, 12 for suitably forming portions of the sheet after same has been perforated. It will be understood, however, that the specific design and mode of operation of the press forms no part of the present invention and that the punch and die and the rollers 12, 12 having been illustrated merely in order to bring out the utility in applying a lubricating compound to the sheet S, the function of said compound, as is understood, being to facilitate the action of the punch and die in perforating the sheet and the action of the rollers in suitably forming portions of the perforated sheet, and to avoid ragged edges due to the punching and forming operations.

The present invention contemplates removal of the lubricating compound from the sheet S by means of heat, and to this end the means B may consist of one or more gas or other fuel combustion devices 13 arranged preferably adjacent to the delivery end of the press A so as to burn the lubricating compound from the sheet S as the latter is ejected from the press, thereby to avoid any additional handling of the sheet as compared with present manufacturing methods.

Preferably a plate 14, which may constitute a table top, is arranged adjacent to the press A to receive the sheet S as the latter is ejected from the press and after the lubricating compound has been burned therefrom, the means B preferably being located between this plate and the press A and preferably below the path of travel of the sheet so that the flame from the means B is directed upwardly against the sheet, the plate 14 serving, as is manifest, to assure a proper disposition of the sheet S at all times relative to the means B.

In order to hasten cooling of the sheet S following burning of the lubricating compound therefrom, the plate 14 preferably is suitably perforated, as indicated at 15 in Fig. 2 of the drawing, thereby to enable a free circulation of air through and around the sheet.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claims.

I claim:—

1. In combination with a mechanism for performing operations on sheet metal, means arranged directly adjacent to said mechanism for removing lubricating compound from the sheet metal as it is ejected from the mechanism.

2. In combination with a mechanism for performing operations on sheet metal, means arranged directly adjacent to said mechanism for burning lubricating compound from the sheet metal as it is ejected from the mechanism.

3. In combination with a mechanism for performing operations on sheet metal and means arranged adjacent to said mechanism to support the sheet metal ejected from the mechanism, means disposed between said mechanism and said supporting means for removing lubricating compound from the metal.

4. In combination with a mechanism for performing operations on sheet metal and means arranged adjacent to said mechanism to support the sheet metal ejected from the mechanism, means disposed between said mechanism and said supporting means for burning lubricating compound from the metal.

5. In combination with a mechanism for performing operations on sheet metal, fuel combustion means arranged adjacent to the discharge end of said mechanism and below the path of travel of the sheet metal ejected from the mechanism for burning lubricating compound from the metal as the latter is ejected from the mechanism.

6. In combination with a mechanism for performing operations on sheet metal, a plate arranged adjacent to the discharge end of said mechanism to receive and support the sheet metal ejected from the mechanism, and means between said mechanism and said plate for heating the sheet, said plate being perforated to facilitate cooling of the sheet.

In testimony whereof he hereunto affixes his signature.

WILLIAM J. PURSER.