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W. J. PETERSON
SHEET PRINTING DEVICE
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2,426,564

FIG. 1.

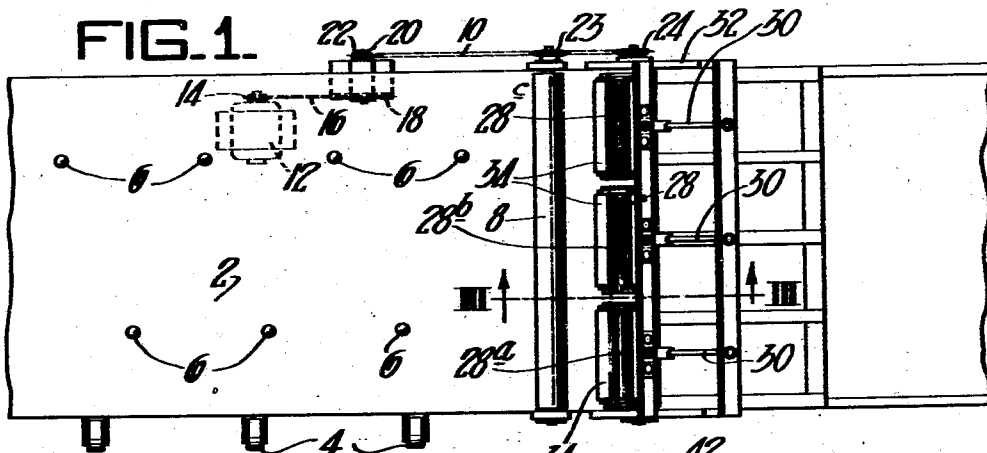


FIG. 2.

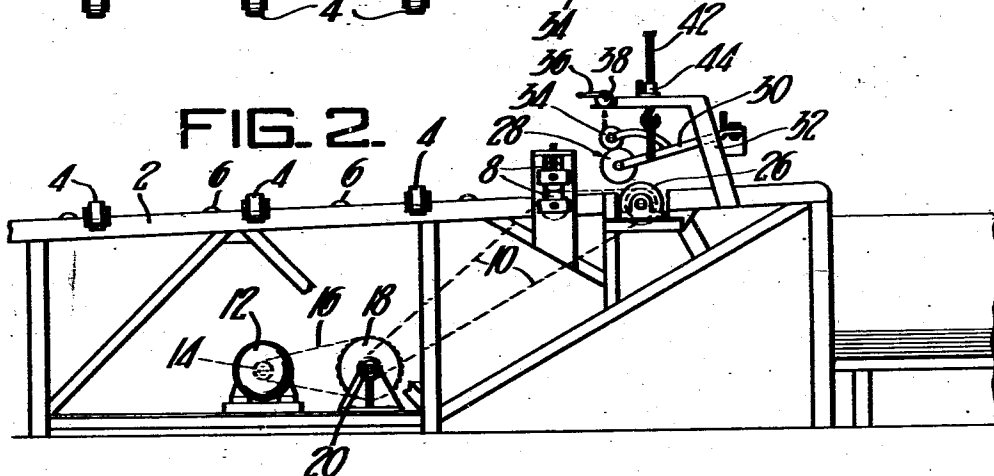


FIG. 3.

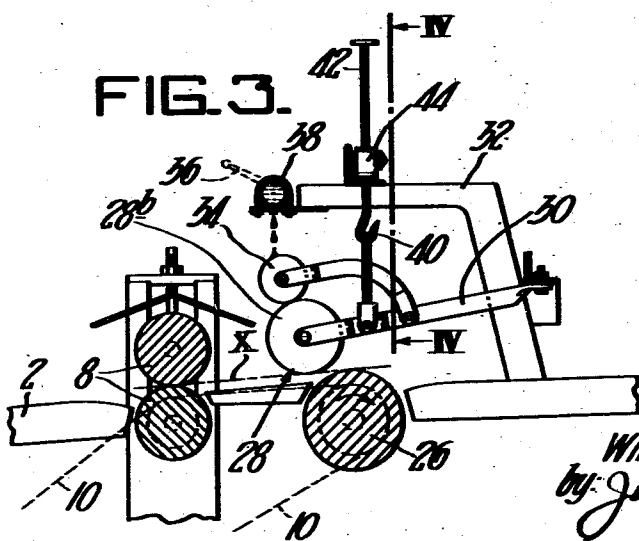
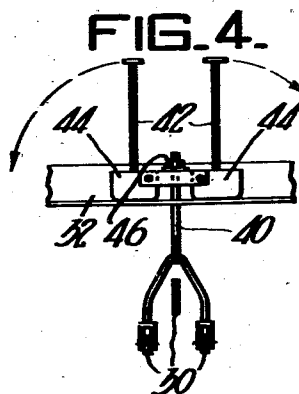


FIG. 4.



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UNITED STATES PATENT OFFICE

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SHEET PRINTING DEVICE

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5 Claims. (Cl. 101—37)

1

This invention relates to a sheet printing device, especially such a device for use in printing essential data on metallic sheets. Before shipment of most sheet products it is necessary to stamp essential data such as the grade of the product and the heat number in various places lengthwise and crosswise of the sheets. In many instances the printing roll which is made of a relatively soft material is damaged by the leading edge of the sheet being fed thereto.

It is an object of this invention to provide such a printing device in which the printing roll is protected from injury by the sheet.

This and other objects will be more apparent after referring to the following specification and attached drawings, in which

Figure 1 is a plan view of the device;

Figure 2 is a longitudinal elevation thereof;

Figure 3 is a sectional elevation taken on line III—III of Figure 1; and

Figure 4 is a sectional elevation taken on line IV—IV of Figure 3.

Referring more particularly to the drawings the reference numeral 2 indicates a table on which the sheets to be printed are supported. Castors 4 extend along the side of the table 2 and facilitate feeding of the sheets to the table which is provided with ball castors 6 to facilitate handling of the sheets. At one end of the table are a pair of pinch rolls 8, the lower roll of which is driven by means of a chain 10 from a motor 12 through sprocket 14, chain 16, sprocket 18, shaft 20 and sprockets 22 and 23. The chain 10 also passes around a sprocket 24 which is connected to a roll 26, the top of which is slightly above the pass between the pinch rolls 4. A printing roll 28 which is arranged above the roll 26, has its lowest point above the path of travel between the rolls 8 and 26 and in a vertical plane between the axes of these rolls. The bottom of the roll 28 is slightly below the top of the roll 26. As shown the roll 28 consists of three sections, 28^a, 28^b, and 28^c, arranged crosswise of the table 2, this permitting different data to be applied to the sheet by each section of the printing roll and the printing to appear in several rows crosswise of the sheets.

The sectional roll permits rapid changing of any particular portion of the data to be printed on the sheet.

Each section of the printing roll is supported on a lever 30 which is carried by a bracket 32. The lever 30 also supports an inking roll 34, which supplies ink to the roll 28 as desired by moving the handle 36 of the tilting ink container,

2

38. The printing roll sections and their corresponding inking roll sections are suspended by hooks 40 and may be raised by moving the handles 42 a quarter turn to revolve the cams 44.

5 This raises the section of the printing roll high enough so that it does not contact the sheet as it passes over the roll 26 and also permits the type to be changed or the section to become inactive. The section can then be removed without interfering with the operation of the remaining sections of the printing roll.

The operation of the device is as follows:

The sheets are placed on the table 2 by hand, the castors 4 permitting easy transfer of the sheets from a truck. The sheet to be printed is then fed by the feed rolls 8 to the roll 26, the leading end of the sheet striking the moving periphery of the roll and being deflected upwardly into contact with the roll 28. The forward movement of the sheet rotates the printing roll so that the impressions carried thereby are transferred to the face of the sheet. The spacing between the rolls 26 and 28 may be varied by changing the position of the nut 46 to raise or lower the hook 40, this providing for the printing of various gauges of sheet. It will be seen that this arrangement of the rolls 26 and 28 prevents the printing rolls from contacting the driven roll and also prevents damage to the printing roll 28 since the leading ends of the sheets do not strike it.

30 While one embodiment of the invention has been shown and described, it will be apparent that other modifications and adaptations may be made without departing from the scope of the following claims.

I claim:

1. A sheet printing device comprising a feed roll, a driven roll horizontally spaced from said feed roll, means for driving said rolls, and a printing roll having its axis above the top of said rolls in a vertical plane between the axes of said rolls, the distance between the bottom of the printing roll and the top of the driven roll being slight so that the sheet being fed first strikes the driven roll and then is raised into contact with said printing roll by continued rotation of the driven roll.

2. A sheet printing device comprising a feed roll, a driven roll horizontally spaced from said feed roll, means for driving said rolls, and a printing roll having its lowest point above the path of travel between the feed and driven rolls and in a vertical plane between the axes of said rolls, the distance between the bottom of the printing roll and the top of the driven roll being

3

slight so that the sheet being fed first strikes the driven roll and then is raised into contact with said printing roll by continued rotation of the driven roll.

3. A sheet printing device comprising a feed roll, a driven roll horizontally spaced from said feed rolls, means for driving said rolls, a printing roll having its axis above the top of said rolls in a vertical plane between the axes of said rolls, the distance between the bottom of the printing roll and the top of the driven roll being slight so that the sheet being fed first strikes the driven roll and then is raised into contact with said printing roll by continued rotation of the driven roll, and means for adjusting the distance between the driven and printing rolls.

4. A sheet printing device comprising a feed roll, a driven roll horizontally spaced from said feed roll, means for driving said rolls, a printing roll having its lowest point above the path of travel between the feed and driven rolls and in a vertical plane between the axes of said rolls, the distance between the bottom of the printing roll and the top of the driven roll being slight so that the sheet being fed first strikes the driven roll and then is raised into contact with said

4

printing roll by continued rotation of the driven roll, and means for adjusting the distance between the driven and printing rolls.

5. A sheet printing device comprising a driven roll, means for driving said roll, means for feeding a sheet against the driven roll at a point below its top, a printing roll having its lowest point above the path of travel between the feed means and roll, the distance between the bottom of the printing roll and the top of the driven roll being slight so that the sheet after striking the driven roll is raised into contact with the printing roll by continued rotation of the driven roll.

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