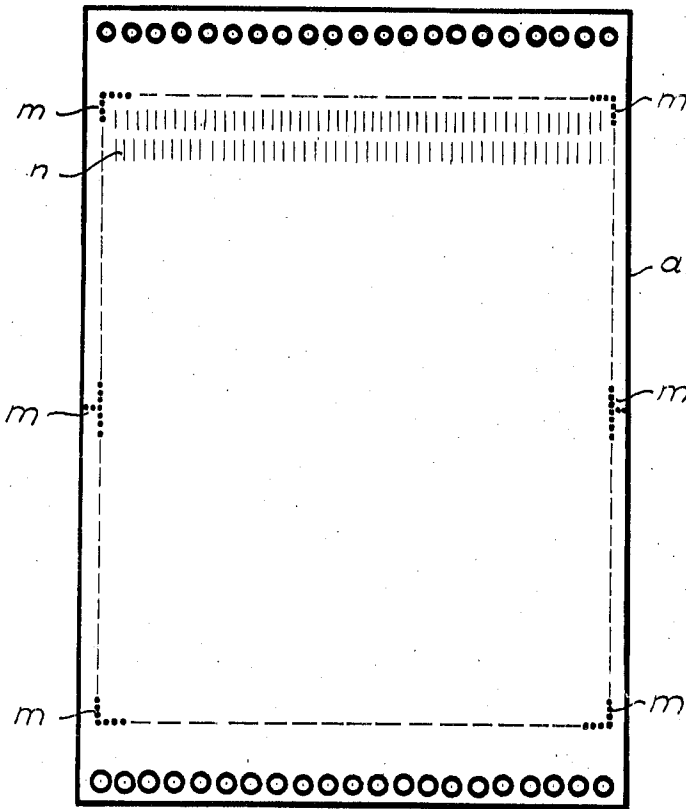


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E. LICHTENSTEIN
FLEXIBLE PRINTING SHEET
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UNITED STATES PATENT OFFICE.

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FLEXIBLE PRINTING SHEET.

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In constructing small duplicating or printing machines using the known "flat"-printing or "off-set" printing it is very desirable to counteract the inherent complication of such process for enabling unskilled persons to use the machines successfully.

In the first place the printing sheet comes in question and it has been proposed to use for printing a sheet of metallized paper or an extremely thin sheet of metal like zinc or aluminum backed with paper.

Such a metallized paper can be provided with inscriptions for instance by means of an ordinary type writing machine and on account of its flexibility can be arranged under sufficient tension on the corresponding cylinder of the printing machine without using tools or the like.

The flexible sheet is prepared for this by being cut to accurate measure and by being provided with suitable holes or perforations for receiving the securing means. Further the active surface of the sheet can be prepared in any known manner for giving it the suitable structure or "grain" for the printing process.

Such known sheets are improved by the present invention which is illustrated in the accompanying drawing in which the sole figure is a plan view of a sheet prepared according to the invention.

By the fastening means of the machine some parts of the flexible sheet are required for holding the sheet on the cylinder so that such parts of the sheet are not available for printing. The skilled typist in arranging the inscriptions or the like on the sheet would take account of this fact by determining the available area of the sheet for printing.

However a typist unskilled in the practice of duplicating would encounter difficulties. According to the invention these difficulties are removed by so preparing the sheet that the limits of the space available for printing can be seen easily.

According to the invention this result is obtained by preparing the sheet in the factory with lines or the like confining the area of the flexible sheet available for inscriptions.

The possibility that these confining lines

or the like will be transferred to the duplicates printed from such a flexible printing sheet is excluded by producing the distinction between the available printing area and the other parts of the sheet in any way preventing the printing of such confining means together with the inscriptions. This may be obtained, for instance, by using different "grain" for the different parts of the sheet produced, for instance, by sand blasting with sand of different degrees of fineness or by using a "flat-free" imprint.

In a similar way lines not to be transferred in duplicating can be arranged on the area available for printing before the flexible sheet is given to the dealers or users.

However the transfer to the duplicates of such or similar characters or the like arranged a priori on the flexible sheets is desirable in certain cases and the invention is therefore also concerned therewith. For instance letter heads or any pictures of a more or less complicated or delicate nature can be arranged a priori on the flexible sheet as well as lines for musical notes. Thereby it is possible for any musician unskilled in "off-set" printing or "flat" printing to use such flexible sheets and to inscribe the musical notes in the ordinary way.

For further simplifying the use of the flexible sheets by suitable preparation also the photoprinting process can be made use of in such a way that the area available for printing is prepared to become sensitive for light in any well known manner.

Having described the invention I declare that, what I claim is:—

1. A flexible grained planograph printing sheet having an area available for printing and an area not available for printing, said areas being visibly distinguishable from each other by the character of the grain.

2. A flexible grained planograph printing sheet having an area available for printing and an area not available for printing, said areas being visibly demarked by non-printing imperforate boundary lines.

In testimony whereof I affix my signature.

EDMUND LICHTENSTEIN.