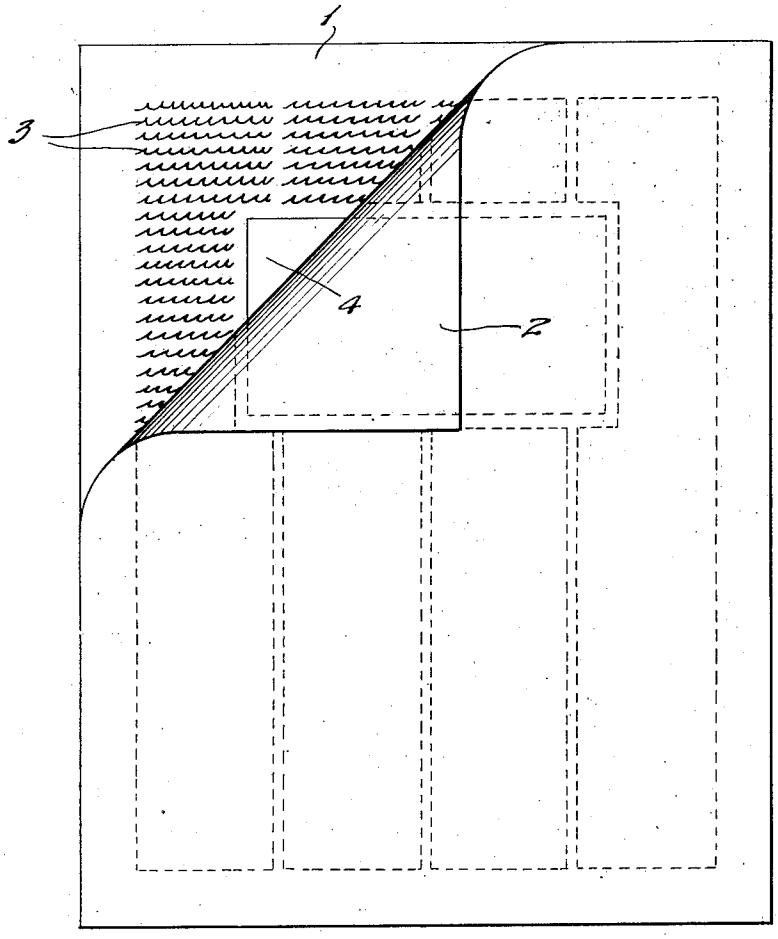
A. GRASS.

MASTER SHEET FOR LITHOGRAPHIC PRINTING SURFACES AND METHOD OF MAKING THE SAME.

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MASTER-SHEET FOR LITHOGRAPHIC-PRINTING SURFACES AND METHOD OF MAKING THE SAME.

1,333,544. Specification of Letters Patent. Patented Mar. 9, 1920.

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To all whom it may concern:

Be it known that I, ALFRED GRASS, a subject of the King of Great Britain, residing at 461 W. 23 street, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Master-Sheets for Lithographic-Printing Surfaces and Methods of Making the Same, of which the following is a specification.

The invention relates to the production of a translucent or transparent master sheet for use in the preparation of printing surfaces, and has for its objects to simplify and cheapen the production of such surfaces or plates, and also the printing process, and to provide for permanently preserving the text, pictorial or other composition which had been printed, in such form that it will occupy very small space, be safe from injury or deterioration and may conveniently be reëmployed at any future time for reprinting and republication.

With such objects in view, as well as other advantages which may be incident to the use of the improvements, the invention consists in the procedure, and in the parts and combinations thereof hereinafter set forth and claimed, with the understanding that the several necessary elements constituting the same may be varied in proportions and arrangement without departing from the nature of the invention.

In order to make the invention more clearly understood there is shown in the accompanying drawings means for carrying the same into practical effect, without limiting the improvements, in their useful applications, to the particular constructions which, for the purpose of explanation, have been made the subject of illustration. In the said drawings—

The figure represents a face view of the composite translucent master-sheet, one corner of the front or covering section thereof being detached and curled up for purposes of explanation.

Referring to the drawings, 1 represents a sheet of tissue paper or equivalent material, which is coated with a varnish, preferably of linseed oil and resin, which gives it a smooth surface and makes it translucent and suitable for use to be applied over a lithographic surface or plate having on its grained surface a sensitive photographic film, so that the text, pictorial design or other matter contained on the sheet 1 may be printed by light on the film of said plate. This plate is thereafter washed, developed and treated by etching or otherwise in known manners to produce a lithographic printing surface.

The sheet 1 is smooth so as to be capable of receiving a clear impression from type, is tough and is waterproof, but its surface is somewhat tacky and adhesive.

After drying the edges of the sheet may be trimmed if necessary. The matter which it is desired to print having been set up in type, the form of type is inked, and the sheet 1 is impressed thereon so that the entire text or other matter 3 will appear on the sheet.

But it is first necessary to prepare the surface of the sheet for such impression by rubbing the same with a powder, like talc or French chalk or magnesia powder to partially counteract the tacky and adhesive surface and render it somewhat unctuous. After said impression has been made the surface of the sheet is dusted with an opaque powder, such as graphite, bronze, silver or Indian red, which will adhere to the ink of the impression and render the same entirely opaque for the said light-printing operation. Then the excess of said powder is dusted off, the French chalk or its equivalent rendering the sheet smooth and non-adhesive, so that no opaque powder will remain excepting on the ink impression, and the sheet will be clearly translucent in contrast with the entirely opaque character of the said impression thereon.

I then take another sheet of the same paper, the same being indicated at 2, and apply it over the face of the sheet 1 and over the impression 3 thereon so as to permanently and securely adhere thereto. It is preferred that the sheet 2 shall have been preliminarily stretched as above described. The desired adhesion of the sheet 2 on the sheet 1 may be obtained by slightly steaming, gumming or heating the sheet 2 and then rolling it down, by roller pressure, on the sheet 1.

The master-sheet is thus made permanently durable, while retaining its translucency and the opaqueness of the design,

and the design is rendered immune from defacement or mutilation in handling. Such master-sheets may be filed for reference in complete volumes, making a transparent magazine or newspaper form for future use in reprinting any of the pages which may be desired, or for republication.

If a page or a part of a page is to consist of a pictorial design, a negative of the picture is made by a camera, with the interposition of a screen, on a contrast stripping dry plate. This plate is developed and dried, and the film of emulsion is stripped therefrom and caused to adhere on the sheet 1, as indicated at 4, and is covered by the sheet 2 as already described.

The said composite master-sheet may be used either as a positive or a negative, in a printing frame over the sensitized lithographic plate; or it may be gummed on said plate, by an adhesive containing no water, and then exposed to light. In the latter case, when the master-sheet is peeled off from the plate the said adhesive is rubbed off by benzin. Before the master-sheets are laid away in storage their exterior surfaces are rubbed with French chalk or the equivalent, such as magnesia powder.

It will be understood that the sheet 1, after having been treated with French chalk and opaque powder, may be used for light-printing without the application of the sheet 2.

What is claimed is:—

1. A translucent master sheet for the production of lithographic printing surfaces, comprising a fibrous sheet treated to render it translucent and moisture resistant, and having impressed thereon a design in ink, the inked design being powdered with opaque powder to render the inked parts opaque, and said sheet being attached to a translucent backing sheet to form said master sheet.

2. A translucent master sheet for the production of lithographic printing surfaces comprising a transparent sheet having its impression surface treated with talc, the design impressed thereon in ink, and the impression then powdered to render it opaque, the said sheet being attached to a translucent backing sheet to form a master sheet.

3. A translucent master sheet for the production of lithographic printing surfaces, comprising a flexible absorptive or semi-opaque fibrous sheet treated to render it translucent, and also treated with a talc-like powder and having impressed thereon a design in ink, the inked design being powdered to render the inked surfaces opaque.

4. A translucent master sheet for the production of lithographic printing surfaces, comprising a flexible, absorptive fibrous sheet, treated to render it translucent and also treated with a talc-like powder and having a design thereon of a firmly adherent and opaque material.

5. A translucent master-sheet, for the production of lithographic printing surfaces, having its impression surface treated with talc, the design impressed thereon in ink, the impression powdered and rendered opaque, and having said design covered by an attached translucent sheet.

6. A method of making master-sheets for the production of lithographic printing surfaces, which consists in treating the face of a translucent sheet with talc, impressing the design thereon in ink, treating the impression with opaque powder, and attaching over the powdered design a second translucent sheet.

In testimony whereof I affix my signature.

ALFRED GRASS.