No. 690,241. Patented Dec. 31, 1901.

B. DAY.

PAD FOR SUPPORTING PRINTING FILMS.

(Application filed May 1, 1901.)

(No Model.)

Fig. 1.

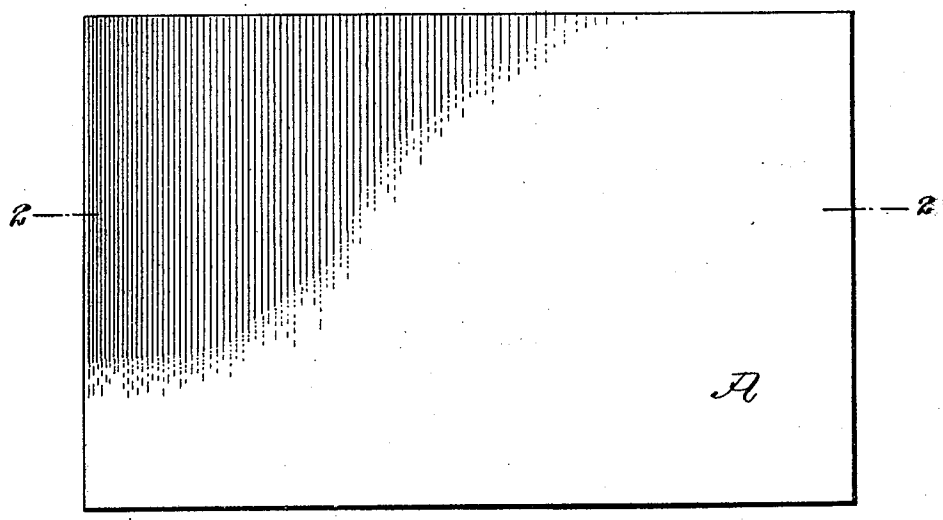
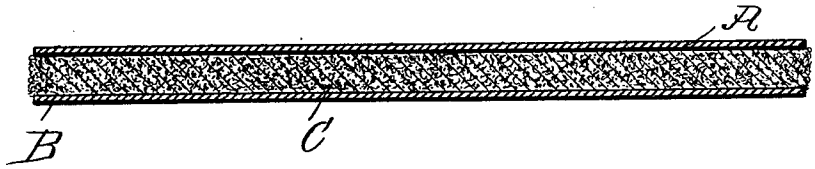


Fig. 2.



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PAD FOR SUPPORTING PRINTING-FILMS.

SPECIFICATION forming part of Letters Patent No. 690,241, dated December 31, 1901.

Application filed May 1, 1901. Serial No. 58,272. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN DAY, a citizen of the United States, residing at West Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Pad for Supporting Printing-Films, of which the following is a full, clear, and exact description.

My invention relates to pads for supporting printing-films while they are being inked. The object of the invention is to provide a pad for the above-indicated purpose which will present a semirigid and evenly-yielding support for the printing-film while the latter is under the pressure of the flexible composition hand-roller that is passed over it during the operation of inking the film.

While my invention relates to pads only, it may be conducive to clearness to refer briefly to the art in which my pad is used and to the defects in the old system which led up to my invention.

The printing-films which are supported upon my pad while being inked are of the kind heretofore used, and consist of tolerably-thin transparent sheets of gelatin, collodion, or some analogous substance. They are mounted on frames and are smooth upon one surface, while the other surface is provided with grains, shade-lines, stipples, or other textures in relief. These printing-films or "shading mediums," as they are sometimes called, (see Letters Patent Nos. 214,493, of 1879, and 250,211, of 1881,) are now recognized factors or adjuncts in the lithographic and other kindred arts. To use them, the film is placed with its back or smooth side downward upon a smooth plane surface, and a soft elastic composition inking-roller is run by hand over the rough or relief side, which is the printing-face of the film. Of course the ink touches only the tops of the grains or lines. The film when properly inked is inverted and placed, relief side down, upon the surface of the drawing which is to be shaded or operated upon, this drawing being usually made on zinc, stone, or cardboard. A pressing instrument, which may be either a small rubber roller or an agate stylus, is then used on the back surface of the film, causing the relief pattern of the face of the film to print on the zinc, stone, or cardboard such parts as are pressed down by the stylus or roller.

My pad is an improvement upon the plane surface heretofore used in supporting the film during the inking process. The object of my invention is to provide a support for this printing-film that will readily accommodate itself to the action of the flexible composition roller in passing over its printing-surface without inking the interstices or intaglio parts surrounding the tints, &c., in relief. As the printing-film is of necessity a very thin sheet, with the relief or printing parts only slightly raised from its body, and as these raised portions are semi-elastic, it follows that if the support during the inking is a solid plane, the support being unyielding, the tendency of the very elastic composition roller is to seek the intaglio parts of the film and charge them, as well as the printing parts, with the ink used, producing a more or less smudgy inking of the film. If, on the contrary, a wholly elastic pad is used, the same defect in inking is perceptible, owing to the film being held between two elastic surfaces—*i. e.*, the soft pad being forced against the back of the intaglio parts of the film presses them against the flexible inking-face of the roller, and a smudgy result in inking is the consequence; but by interposing the thin sheet of metal between the back of the film and the elastic pad both imperfect inkings are avoided.

The invention will be described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both figures.

Figure 1 is a plan of my improved pad, and Fig. 2 is a cross-section thereof on the line 2 2 of Fig. 1.

The improved pad consists of three members—namely, two rigid members A and B and a yielding or elastic member C, located between them—the three members being connected so as to form a single article. The rigid members A and B consist, preferably, of thin metal or sheets of any suitable material that will not warp, and I have found thin aluminium plates particularly suitable for the

purpose of my invention. The yielding member C may consist of a sheet of felt, sponge, rubber, or other material of the requisite properties, and the said sheet may be connected to the aluminium plates A and B by gluing or in any suitable manner.

It will be understood that the pad can be used either side up, one of the plates A and B resting upon the table or other supporting-surface, while the other plate forms a support for the printing-film which is laid on top of the said plate, whereupon the inking-roller is passed over the film by hand in the ordinary way.

As the plate is rigid and cannot warp, it always affords a plane surface to support the film, so that the ink will be evenly distributed and reach all the parts of the film. The elastic central member C enables the upper plate A or B, as the case may be, with the film supported thereon, to yield to the pressure of the inking-roller, thus preventing the breakage of the film and equalizing the pressure.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A supporting-pad for inking printing-films, consisting of two spaced plane plates of a comparatively rigid material, and a yielding member located between the said plates and connected with each of them.

2. A supporting-pad for inking printing-films, consisting of two parallel plane plates of a comparatively rigid material, and a sheet or filling of elastic material interposed between the said plates and secured thereto.

3. A supporting-pad for inking printing-films, consisting of a comparatively rigid plane plate adapted to support the film, and a yielding member secured to one side of the said plate.

4. A supporting-pad for inking printing-films, consisting of a comparatively rigid plane plate adapted to support with the film on one side, and a sheet of yielding material secured to the other side of the said plate.

5. A supporting-pad for inking printing-films, consisting of two aluminium plates, and a sheet or filling of yielding material arranged between said plates and secured thereto.

6. A supporting-pad for inking printing-films, comprising a flat cushion of yielding material, and a flat plate of metal mounted upon the same, the thickness of said plate being such as to render said plate slightly resilient under the action of an elastic hand inking-roller.

7. A supporting-pad for inking printing-films, comprising a cushion of yieldable material and a sheet of aluminium mounted thereon, the thickness of the said sheet of aluminium and the degree of yieldability of said cushion being apportioned for the purpose of allowing the said films to yield slightly without breaking while subjected to the pressure of a hand-roller while in contact with said film.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN DAY.

Witnesses:
FLETCHER COWAN,
SYDNEY FISK.