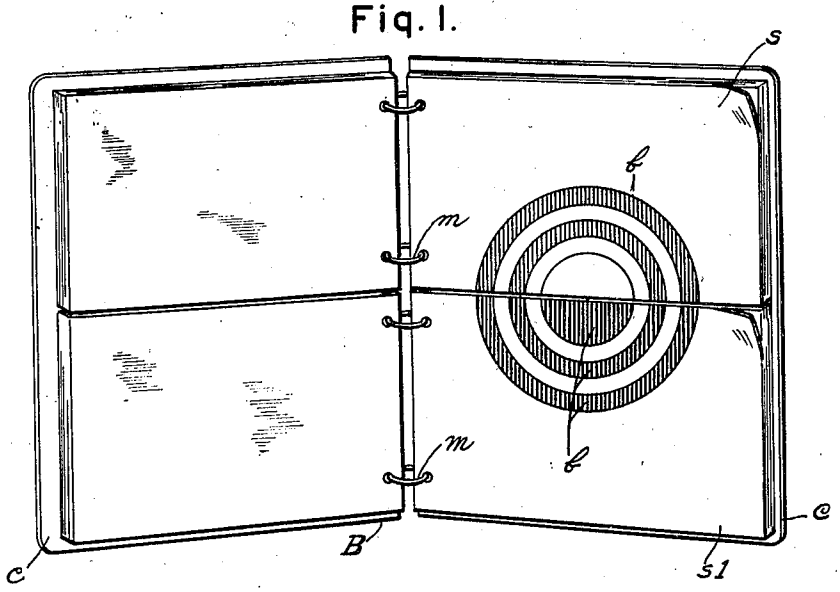
June 2, 1942. C. R. SHERMAN 2,285,379

ASSEMBLED SHEETS FOR THE DISPLAY OF PRINTED SURFACES

Filed Dec. 6, 1939 2 Sheets-Sheet 1

Fig. 1.



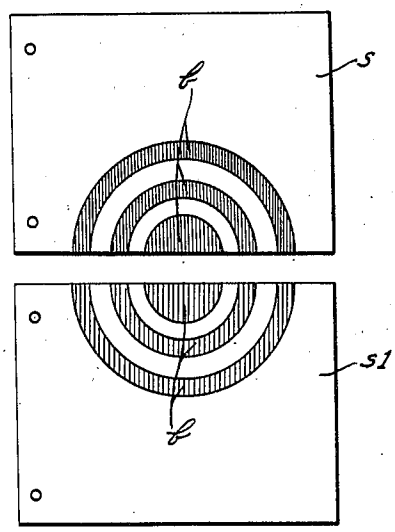


Fig. 2.

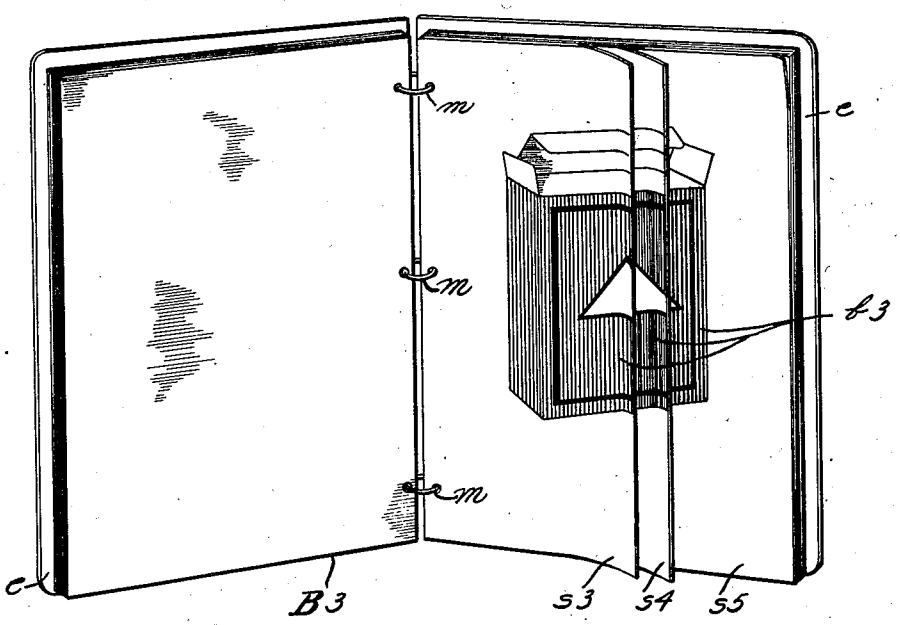
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ASSEMBLED SHEETS FOR THE DISPLAY OF PRINTED SURFACES

Filed Dec. 6, 1939 2 Sheets-Sheet 2

Fig. 3.



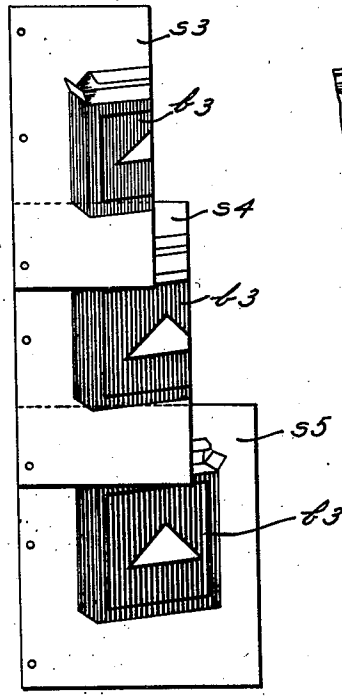


Fig. 4.

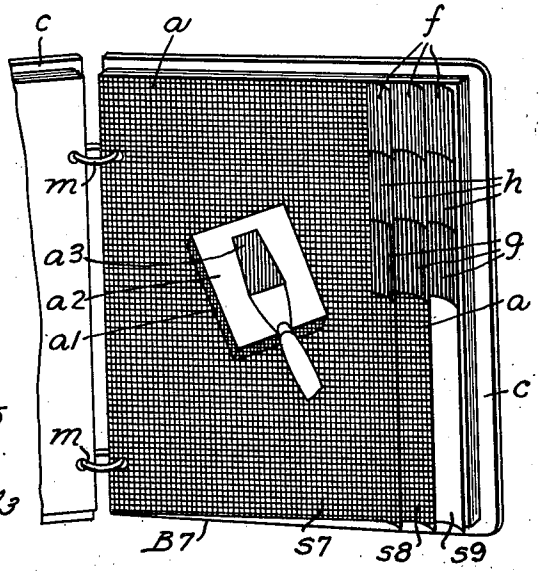


Fig. 5

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UNITED STATES PATENT OFFICE

2,285,379

ASSEMBLED SHEETS FOR THE DISPLAY OF PRINTED SURFACES

Charles R. Sherman, Kirkwood, Mo., assignor to General Printing Ink Corporation, New York, N. Y., a corporation of Delaware

Application December 6, 1939, Serial No. 307,779

1 Claim. (Cl. 35—53)

My invention relates to assembled or grouped sheets utilizable for the display of printed surfaces.

In accordance with the invention, a plurality of sheets formed, respectively, from different grades of paper are disposed in end-to-end or stepped relation, or otherwise as may be suitable so as to expose to view a part at least of the upper surface of each sheet, such exposed sheet surfaces bearing printed representations all of which are formed from the same kind of ink.

My invention has further reference to books formed by suitably binding sheet assemblies of the character described.

Various other objects, advantages and features of my invention will become apparent from the following detailed description.

My invention resides in the assembled or grouped sheets, the books formed therefrom and in the combinations and arrangements of the character hereinafter described and claimed.

For an understanding of my invention and for an illustration of some of the forms thereof, reference is to be had to the accompanying drawings, in which:

Figure 1 is a perspective view showing a book formed from composite sheets, each of the latter being formed from upper and lower sheets disposed in end-to-end relation;

Fig. 2 is a plan view showing one of the composite sheets included in the book of Figure 1;

Fig. 3 is a perspective view showing a book in which is included a group of sheets having the respective edges thereof disposed in stepped relation;

Fig. 4 is a plan view illustrating a disassembled group of the sheets included in the book of Fig. 3; and

Fig. 5 is a perspective view showing a book in which is included a group of sheets of a modified form.

Referring to Fig. 1, B represents a book which, as shown, comprises the cover sheets *c*, *c* between which are disposed the upper interior sheets or leaves *s* and the lower interior sheets or leaves *s1*. In accordance with a preferred form of the invention and as illustrated, the width of each of the sheets *s* and *s1* is slightly less than that of a sheet *c* whereas the height of each of said sheets *s* and *s1* is slightly less than one-half that of a sheet *c*. In other words, the sheets *s* and *s1* are substantial duplicates as regards size although it is to be understood that my invention is not to be limited in this respect. The sheets *s* and *s1* may be bound between the cover sheets *c*, *c* in any suitable manner as, for example, in loose-leaf fashion by the fastening members *m*.

In accordance with the invention, each of the upper sheets *s* is formed from the same grade of paper such, for example, as corrugated board or fibre board stock known in the art as "jute" whereas each of the lower sheets *s1* is formed from the same grade of a different paper such, for example, as corrugated board or fibre board stock known in the art as "kraft." It is to be understood that the invention is not to be limited to the utilization of stocks of the character just noted.

In accordance with the invention, each composite sheet, i. e., the split sheet formed by an upper sheet *s* and a lower sheet *s1*, receives a printing impression from the same kind of ink although, as regards the different composite sheets, the inks are of different colors, respectively. Thus, on the upper sheet *s* and the lower sheet *s1* forming the composite sheet shown in Figs. 1 and 2, there is printed a suitable design *b*, each design *b*, if desired, being formed from a plurality of arcuate representations. Thus, for example, the sheets *s* and *s1* last noted may have the designs *b* formed thereon from light red ink. Another composite sheet, as formed by an upper sheet *s* and a lower sheet *s1*, may have designs *b* formed thereon from deep blue ink. Similarly, the other composite sheets of the book B have designs *b* printed thereon from inks which, respectively, have colors different from those specified above. As a result, the book B comprises a relatively large number of composite sheets, the respective upper sheets *s* of which are all formed from the same grade of paper, and the respective lower sheets *s1* of which, likewise, are all formed from the same grade of paper, the grade of paper last noted, however, being different than that of the paper first noted immediately above. Further, in said book B, the composite sheets (each of which comprises an upper sheet *s* and a lower sheet *s1* as described above) have inks of different colors printed thereon, respectively.

In view of the foregoing, it will be understood that an observer, by inspecting a selected composite sheet of the book B may readily compare the contrasting effect which the same kind of ink of a selected color produces on the different grades of paper forming the respective sheets *s* and *s1* of said composite sheet. Further, each of the other composite sheets of said book B may be inspected in turn to compare the contrasting effect of ink having different colors. In addition,

any sheet *s* or *s1* may readily be considered by itself apart from all of the others to visualize the effect produced by the ink printed on the particular grade of paper represented by the selected sheet *s* or *s1*.

Therefore, the book B serves advantageously as a guide whereby a purchaser of ink, for example, may readily visualize the appearance which a given ink will have when printed on a selected paper. In this way, the purchaser of ink, in advance, may obtain highly desirable and reliable information concerning the appearance of printed products subsequently to be produced.

By the invention of Figs. 1 and 2, the two different grades of paper (to which ink of the same kind is applied) are disposed in end-to-end relation so that the above described comparative examination is facilitated. The use of designs *b* comprising arcuate representations which show the printed areas is desirable because, when such representations are matched as illustrated, the desired comparative effect is more readily obtained.

It is to be understood that my invention, in a broader aspect thereof, is not to be limited to the "split" sheet arrangement shown in Figs. 1 and 2. Thus, by reference to Figs. 3 and 4, a book B3 is shown which may comprise one or more groups of sheets or leaves disposed in stepped relation along one side so that a visual indication may be obtained of the appearance which the same ink will take when applied to paper of different grades.

More particularly, as indicated in Figs. 3 and 4, the book B3, which may be of loose-leaf character having cover sheets *c*, *c* as hereinbefore described, comprises a group of sheets *s3*, *s4* and *s5* all, preferably, having the same height which is slightly less than that of said cover sheets *c*, *c*. However, in accordance with the invention of Figs. 3 and 4, the width of the sheets *s3*, *s4* and *s5* is different and, to this end, the width of the sheet *s5* may be only slightly less than that of a cover sheet *c*, the width of the sheet *s4* being less than that of the sheet *s5* and the width of the sheet *s3*, in turn, being less than that of the sheet *s4*. Accordingly, when the three sheets *s3*, *s4* and *s5* are assembled in the book B3, they assume a stepped relation with respect to each other as clearly shown in Fig. 3.

As noted above, the sheets *s3*, *s4* and *s5* are formed from different grades of paper such, for example, as label stock which is used for the manufacture of high grade cartons or boxes. In accordance with the invention, suitable designs *b3* are printed from the same kind of ink on said sheets *s3*, *s4* and *s5*, the designs being so positioned on the sheets *s4* and *s5* that at least part of the area of each is exposed to view when the sheets are disposed flatwise and in stepped relation as shown in Fig. 3. Accordingly, an observer, by viewing this sheet arrangement, may readily compare the effect which the same kind of ink produces on the different grades of paper which form the respective sheets *s3*, *s4* and *s5*.

Further, said sheets last named may be inspected individually apart from the others to ascertain the effect which a selected ink produces on a given grade of paper. To this end, it is desirable that the designs *b3* be of substantial area such, for example, as shown wherein the sheet *s4* covers a part of the design *b3* on the sheet *s5*, and the sheet *s3*, in turn, covers a part of the design *b3* on the sheet *s4*.

In connection with the character of the designs *b3*, it is desirable as an aid for the comparison of the effect produced by printing the same kind of ink on the respective sheets *s3*, *s4* and *s5*, for the three designs *b3* to be related in the sense that one, two or three of them cooperate to represent the same object. Thus, the design *b3* on the sheet *s5* constitutes a complete representation of an open box. When the design *b3* on the sheet *s4* is superimposed on the design *b3* of the sheet *s5*, there is still a complete representation of the same open box and the same effect is produced when the sheet *s3*, in turn, is superimposed on the sheet *s4*.

It will be understood that either two, three or more sheets may be included in each sheet-group when practicing the invention of Figs. 3 and 4. Further, it will be understood that the book B3 may include a plurality of such sheet-groups and, if so, inks of different colors will be printed thereon, respectively.

For an explanation of another form of the invention generally similar to the form last described, reference is to be had to Fig. 5 wherein there is disclosed a book B7 which comprises a plurality of groups of sheets, the sheets of each group being disposed in stepped relation generally the same as hereinbefore described.

More particularly, as indicated, the book B7, preferably of loose-leaf character and having cover sheets *c* and *c*, comprises, preferably, a plurality of groups of sheets *s7*, *s8* and *s9* having dissimilar widths whereby the edges of said sheets are disposed in stepped relation as shown in Fig. 5.

The sheets *s7*, *s8* and *s9* are formed from different weights of paper such, for example, as paper which is used in offset printing. Thus, as a specific example of the invention, the sheet *s7* may be twenty pound bond, the sheet *s8* may be sixty pound offset and the sheet *s9* may be eighty pound enamel.

In accordance with the invention, the sheets *s7*, *s8* and *s9*, along their stepped edges, may have different tone values of the same kind of ink printed thereon in separate zones. Thus, each of said sheets last named has the zones or areas *f*, *h* and *q* which exhibit, respectively, full-tone, half-tone and quarter-tone values of the same kind of ink. It shall be understood that the invention may be practiced in connection with tone values other than those just specified.

Accordingly, with the group of sheets *s7*, *s8* and *s9* disposed in the book B7 as shown in Fig. 5, an observer, by viewing this sheet arrangement, may readily compare the effect which different tone values of the same kind of ink produce on the different weights of paper forming the respective sheets. This constitutes a color guide especially useful for comparison and matching purposes. Further, the sheets last named may be inspected individually to ascertain the effect which different tone values of a selected ink produce on a given weight of paper.

Further in accordance with the form of the invention shown in Fig. 5, each of the sheets *s7*, *s8* and *s9*, away from the zones *f*, *h*, and *q*, may have a background by which a desirable contrast may be obtained between the tone values of the ink printed in the respective zones and the background. To this end, for example and as shown in Fig. 5, the sheet *s7* may comprise a gray area *a*, a black area *a1*, a white area *a2* and

an area *a3* representing the full tone value of the ink. The sheet *s8* may correspond in background effect substantially with the sheet *s7* and, in addition, may have an area representing the quarter-tone value of the selected ink. The sheet *s9*, in one zone thereof, may be printed with an ink corresponding with the full-tone value of the selected ink. In addition and if desired, said sheet *s9* may have white areas and other areas representing, respectively, half-tone and quarter-tone values of the selected ink. Obviously, different background effects may be produced in a variety of ways different from those specifically described above.

As with the form of the invention described in connection with Figs. 3 and 4, it will be understood that two, three or more sheets may be included in each sheet-group when practicing the inventive idea shown in Fig. 5. Further, it will be understood that the book B7 preferably and usually comprises a plurality of groups of sheets *s7*, *s8* and *s9* to the respective groups of which are applied inks of different colors and in desired tone-values. Preferably, the groups of sheets having inks of different colors applied to the stepped edges thereof as described are so arranged in the book B7 that a spectrum effect is obtained when the sheets are "thumbed."

In the art to which this invention appertains, paper is usually classified as of different types or kinds depending upon characteristics such as smoothness, roughness, porosity, color, etc., it being understood that there may be many grades of the same type or kind of paper. Ordinarily, the invention involves the use of different types or kinds of paper in the limited sense noted above although not excluding the use of different grades of the same type or kind of paper. Accordingly, the invention as described and claimed refers to the "grade" of the paper, this term being used generically as describing type, kind and grade of paper as referred to above.

As the invention is described and claimed, the term "paper" is to be interpreted in its broad generic sense as including true paper, as well as corrugated board, fibre board, carton stock, label stock, offset, etc.

While the invention has been described with respect to certain particular preferred examples which give satisfactory results, it will be understood by those skilled in the art after understanding the invention, that various changes and modifications may be made without departing from the spirit and scope of the invention and it is intended therefore in the appended claim to cover all such changes and modifications.

What is claimed as new and desired to be secured by Letters Patent is:

In an arrangement of the character described, a plurality of sheets formed, respectively, from different grades of paper, said sheets being associated with each other in such manner that a part at least of the upper surface of each sheet is exposed to view, said exposed sheet surfaces bearing printed representations formed from the same kind of ink.

CHAS. R. SHERMAN.