Sept. 26, 1950 F. V. HOWE 2,523,828

BLIND PICTURE

Filed Sept. 21, 1948

Fig. 1.

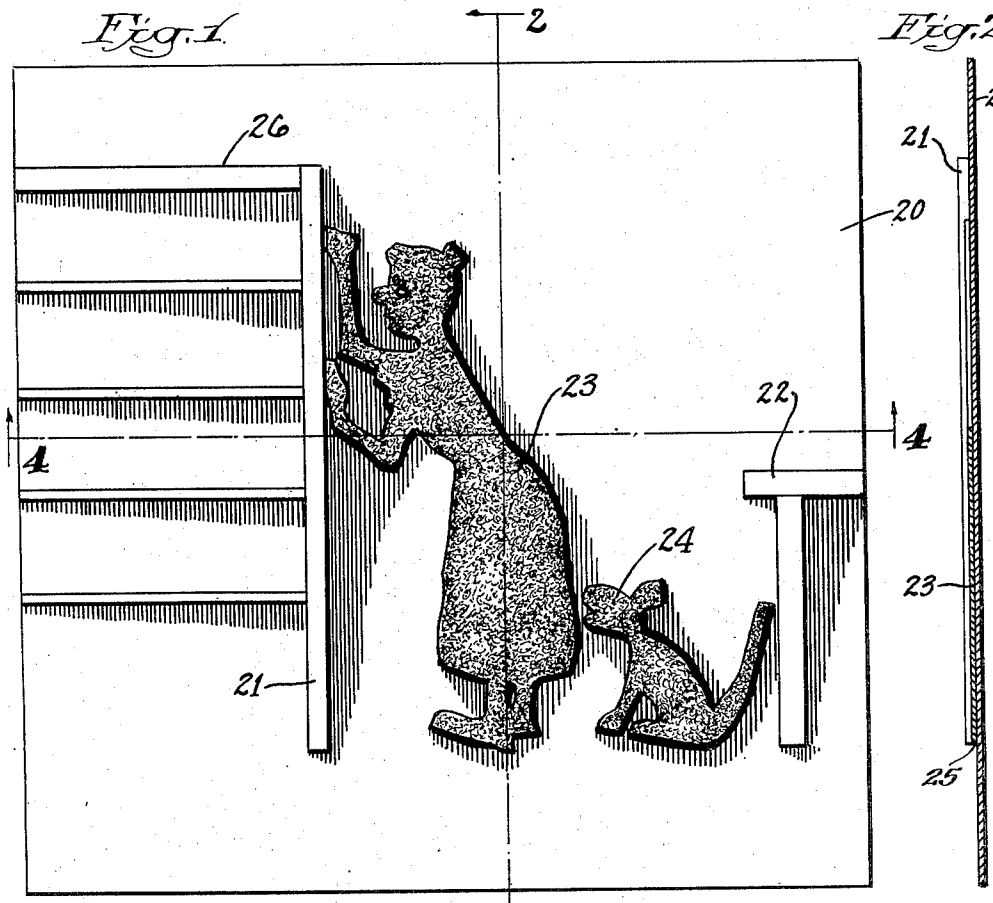


Fig. 2.

Fig. 3.

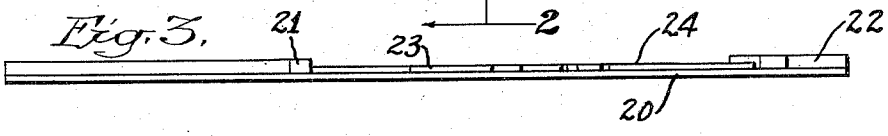


Fig. 4.

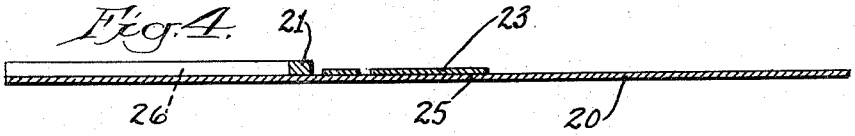
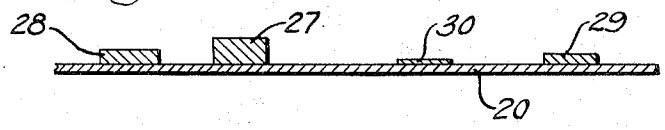


Fig. 5



INVENTOR
Faith V. Howe.
BY
ATTORNEYS.

Patented Sept. 26, 1950 2,523,828

UNITED STATES PATENT OFFICE

2,523,828

BLIND PICTURE

Faith V. Howe, Philadelphia, Pa.

Application September 21, 1948, Serial No. 50,362

1 Claim. (Cl. 35—35)

1

The present invention relates to pictures intended for manual sensing by the blind.

A purpose of the invention is to permit the enjoyment of pictures by the blind and to provide for simple, easy and inexpensive fabrication of contour pictures which can be sensed as conveniently as possible by the fingers of a blind person.

A further purpose is to permit the fabrication of objects on pictures for inspection by the blind by superimposing and cementing on a backing sheet strips or pieces of thin but uniform thickness, having the desired outline.

A further purpose is to produce pictures for the blind of wood of uniform thickness varying between 1/64 and ¼ inch and desirably uniform in thickness so that the fingers of the user will not be hurt by unexpectedly encountering an abnormally high ridge in which the fingers might become caught.

A further purpose is to construct pictures for the blind by cementing balsa wood on a backing sheet, thus avoiding the danger of injuring the fingers of the user by splinters or the like.

A further purpose is to provide a convention for discriminating classes of objects on a picture for sensing by the blind through maintaining a difference in feel, a difference in uniform height or differences in both feel and height between objects of one category and objects of another category. For example, objects may be distinguished between broad categories by feel and distinguished between narrow categories which comprise species of the broad categories by height, or vice versa.

Further purposes appear in the specification and in the claim.

In the drawings I have chosen to illustrate a few only of the numerous embodiments in which my invention may appear, choosing the forms shown from the standpoints of convenience in illustration satisfactory operation and clear demonstration of the principles involved.

Figure 1 is a top plan view of the invention.

Figure 2 is a section of Figure 1 on the line 2—2.

Figure 3 is an edge elevation of Figure 1.

Figure 4 is a section of Figure 1 on the line 4—4.

Figure 5 is a fragmentary cross section of a variation.

In the drawings like numerals refer to like parts.

Describing in illustration but not in limitation and referring to the drawings:

The problem of providing relaxation and instruction for those afflicted by blindness, including those who also lack the sense of hearing or the ability to speak, has recently been receiving increased attention. This problem is particularly acute in the case of young blind children who are likely to experience a very bleak childhood, particularly in the period below school age and in the earlier school years.

2

The present invention is designed to provide pictures which can be used for both recreational and educational purposes by blind persons generally and particularly by very small blind children of the nursery school and kindergarten ages. It is intended to meet the requirement of conveying the thought behind the picture by improving the means for making the picture, with raised contour, by improving the convenience in sensing the picture, and by providing an inexpensive raised picture which can be sensed by the user with pleasure and with safety.

The picture of Figures 1 to 4 may be regarded as a separate entity, but will normally be a page of a book, such as for example a nursery rhyme book or other book primarily intended for the entertainment or instruction of children. A backing sheet **20** of card board, plastic or the like extends over the entire area of the picture, and provides a support for the objects mounted thereon. On the backing sheet is mounted objects **21**, **22**, **23** and **24**, each of which preferably has a thickness between 1/64 and ¼ inch, so that the hand of the user can be carried across the surface of the picture and will not become unexpectedly caught in abnormally high protrusions which may cause bruises or other injuries. For best results the objects will be of the order of 1/16 to ⅛ inch in height.

Each of the objects is desirably united to the backing sheet by cement at **25**, which may extend continuously or intermittently over the back of the object to unite it firmly to the backing sheet. The cement may be glue or synthetic adhesive such as nitrocellulose or casein adhesive.

Obviously the contours **26** of the objects will vary, depending upon what they are to depict. In Figure 1 the picture deals with the nursery rhyme "Old Mother Hubbard" and therefore **21** is the cupboard, **22** is the table, **23** is Mother Hubbard and **24** is the dog.

To facilitate sensing the picture, distinctions are provided between classification of objects so that a blind person accustomed to observing pictures of this category will be able to distinguish the character of an object by the representation used.

The inanimate objects are depicted by wood, a comparatively hard and non-resilient material, while the animate objects are depicted by a textile fabric, preferably felt, which is soft to the touch. In addition, two different heights are used, for example the animate objects are of approximately half the height or thickness of the inanimate objects. Thus the scanning finger of the user is able to discriminate between the objects in the picture by virtue of the difference in height and the difference in feel.

The wooden objects **21** and **22** must not give forth splinters, as this is especially hazardous under the prying fingers of very small children, curious to experiment with everything touched. Accordingly, I find it very desirable to use balsa wood for the wooden objects. This is very soft compared to other woods, and, therefore, not likely to produce splinters.

The felt employed is preferably white as there is little danger of contamination by a dye in case a child brings the felt in contact with his mouth. Likewise the adhesive used should be carefully chosen to be sure that it is not toxic.

It will be understood, of course, that the discrimination between objects on the picture by difference in texture of the material and difference in height of the object may be used to distinguish different categories other than animate and inanimate objects. For example, in the picture of various persons in a game, the relatively hard material such as balsa wood may be used to indicate the spectators, and the resilient material such as felt to indicate players, while male spectators or players may be indicated by the greater thickness and female spectators or players by the thinness of the particular object. In Figure 5 I show men spectators **27**, women spectators **28**, boy players **29** and girl players **30**. It will thus be seen that, depending upon the character of the picture or the subject matter of the book, the objects shown may be designated not only by their contours, but by a predetermined code relating to the texture of the particular wood, fabric or the like which is employed.

This discrimination can be extended by using

the feeling of warmth or coldness to distinguish. Thus for example the cupboard **22** may be discriminated automatically by making it of plastic, which often has a feeling of coldness, or by making it of metal, which has a distinctly different feel, readily discriminated by the hands of the user.

In view of my invention and disclosure variations and modifications to meet individual whim or particular need will doubtless become evident to others skilled in the art, to obtain all or part of the benefits of my invention without copying the structure shown, and I, therefore, claim all such insofar as they fall within the reasonable spirit and scope of my claim.

Having thus described my inveintion what I claim as new and desire to secure by Letters Patent is:

In a picture for sensing by the blind, a backing sheet, a multiplicity of objects thereon of one uniform thickness, some of the objects being of one texture and some of the objects being of another texture, and a multiplicity of objects thereon, of a different thickness, some of the latter objects being of one texture and some of the latter objects being of another texture, and each thickness and each texture corresponding to a category of objects classified by thickness and a category of objects classified by texture, according to which the objects may be discriminated by the blind.

FAITH HOWE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
941,680	Houghton	Nov. 30, 1909
1,563,485	Hales	Dec. 1, 1925
1,611,868	Alkire	Dec. 26, 1926

FOREIGN PATENTS

Number	Country	Date
132,672	Austria	Apr. 10, 1933
154,818	Great Britain	Dec. 9, 1920