

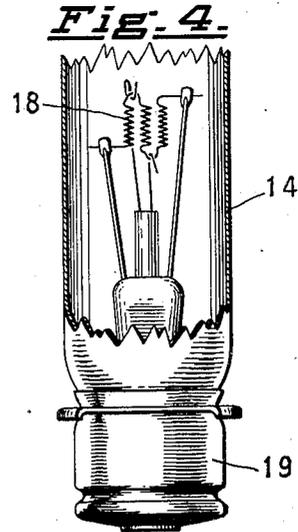
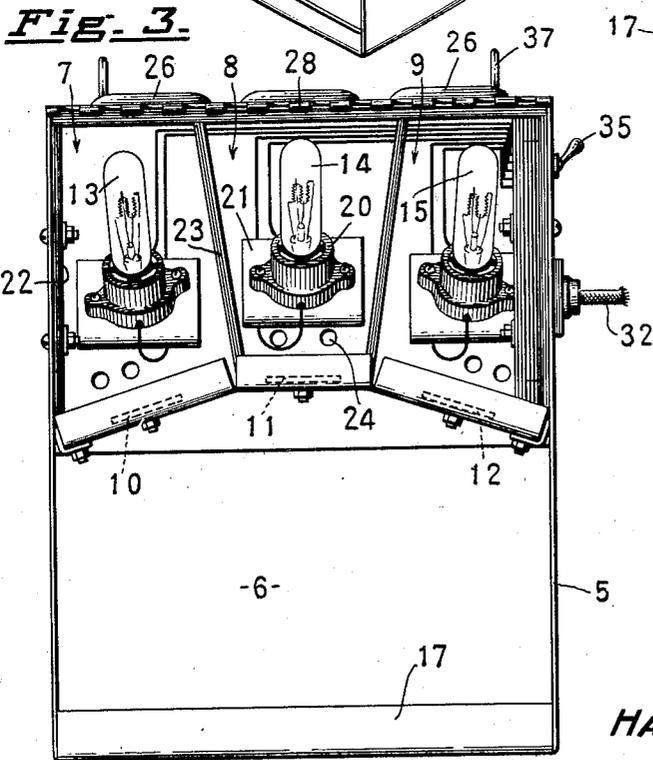
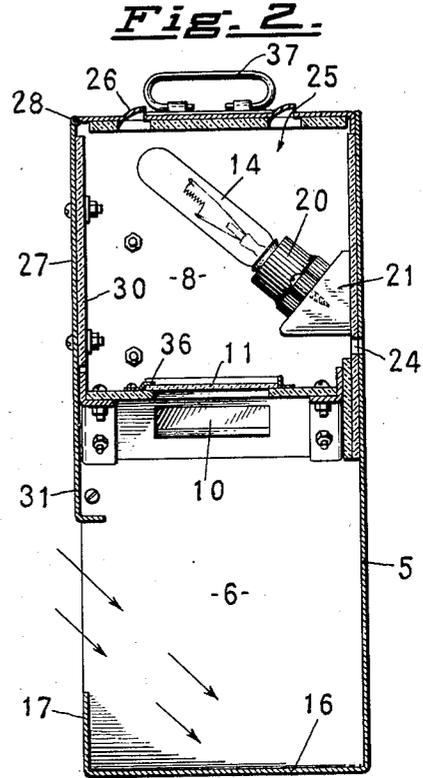
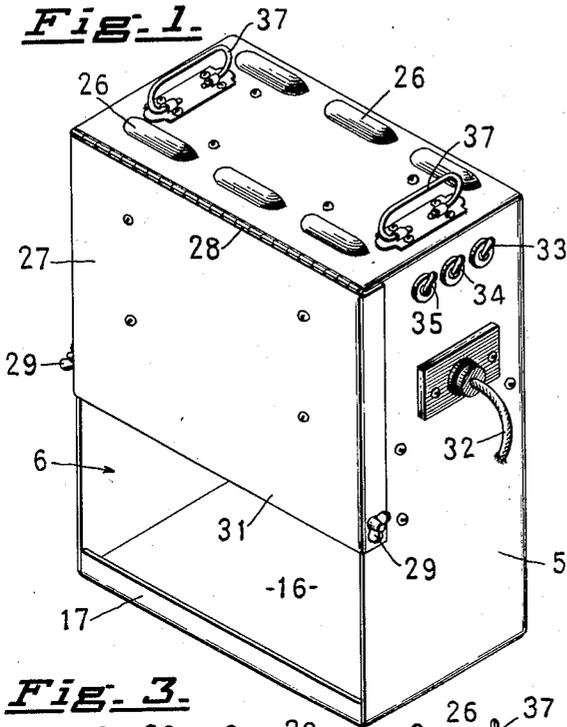
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APPARATUS FOR COMPARING COLOR EFFECTS

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APPARATUS FOR COMPARING COLOR EFFECTS

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4 Claims. (Cl. 88—14)

The main object of my invention is to provide simple and convenient means to facilitate the comparison of colors under various light conditions.

5 A special object is to provide a simple form of apparatus which can conveniently be employed, for instance, in department stores for the comparison of colors of different objects. It is frequently desirable to match the colors of different types of articles, for instance, shoes and hosiery. Obviously the materials of which such objects are made are of very different types and their colors are usually produced by dyes of different characters. As a result articles which appear to be of the same color when viewed under light of one color may actually appear quite different when viewed under light of another color. It is quite obvious, therefore, that articles should be compared under different colored lights, for instance, red, green and blue.

10 I have accordingly designed a cabinet which is preferably of a portable nature suitable for use by anyone and by means of which one may conveniently compare the colors of various articles under different light conditions, and with minimum influence of light from external sources.

15 Fig. 1 is a perspective view of a cabinet embodying one form of the improvements of my invention.

20 Fig. 2 is a vertical cross sectional view of the same.

25 Fig. 3 is a front view showing the interior construction.

30 Fig. 4 is a detail view of one form of lamp.

35 The cabinet 5 may be formed of suitable material such as sheet metal and provided with a chamber 6 for receiving articles, the colors of which are to be compared, and separate light source chambers 7, 8 and 9 preferably arranged above the article chamber and provided with color screens 10, 11 and 12 between the light chambers and the article chamber. These screens may be formed of glass and colored, for instance, red, green and blue, respectively. Lamps 13, 14 and 15 are demountably supported in the respective chambers for throwing the desired colors of light upon the article supported in the chamber 6. The articles are intended to be supported on the shelf or bottom 16 of the chamber which is conveniently horizontal and therefore at an angle to the line of sight into the chamber 6.

40 The screens 10, 11 and 12 are preferably arranged so that the light from each of the lamps

is directed approximately toward the center of the chamber 6.

45 I also preferably provide a shield 17 across the lower part of the front of the chamber 6 to prevent light from outside shining directly upon the articles in the chamber.

I preferably provide lamps of the so-called pre-focus type and of high power, for instance, 200 watts, capable of throwing a very bright light upon the articles. The most suitable form of these lamps has its filaments 18 definitely positioned with respect to the base 19 of the lamp so that it can be mounted in a definite position with respect to the socket 20, and I preferably mount these sockets so that the filaments of the respective lamps will be inclined to correspond with the inclination of the respective color screens 10, 11 and 12. This is shown by the relative angles of the axes of the sockets in Fig. 3 with respect to the color screens.

50 I also preferably mount each socket upon a support 21 which is inclined with respect to the wall of the cabinet as shown in Fig. 2.

55 On account of the substantial heat generated by lamps of high candlepower it is desirable to line the light chambers with thermal insulating material 22 and to provide partitions 23 of the same material. I also provide ventilating passages 24 to permit air to enter the light chambers and exit passages 25 at the top, protected by louvers 26 so as to prevent light from shining toward the operator. Other ventilating passages may be provided in the bottoms, tops or backs of the light chambers.

To facilitate inspection and replacement of the lamps the upper part 27 of the front of the cabinet may be in the form of a door hinged along its upper edge 28 and provided with fastening devices such as thumb nuts 29. The inside of this door is also provided with a layer of thermal insulation 30. The lower edge 31 of the door extends downwardly below the level of the color screens so as to prevent the light from these screens shining outwardly from the chamber 6. The inside of the chamber is preferably dull black and non-light-reflective.

The current for energizing the lamps is brought into the cabinet by a cable 32 and distributed to the various lamp sockets and lamps under the control of switches 33, 34 and 35, having operating finger pieces at one side of the cabinet. By means of these switches any one or two of the lamps may be lighted at the same time so as to provide any desired light upon the articles to be compared.

The light screens may be suitably mounted and are preferably detachably held by clamps such as 36 so that they may be replaced or changed conveniently.

5 I also preferably provide suitable handling devices 37 to facilitate transportation of the cabinet.

10 It will be seen from the foregoing that the apparatus is compact and readily transportable and that the lights may be changed to suit the desired conditions of comparison. If desired, light shielding curtains might be provided for the front of the chamber 6 and such curtain or curtains provided with an opening to facilitate observation under circumstances where the entrance of external light to the chamber might interfere with an accurate comparison of the colors.

15 It is possible by the use of this apparatus to make rapid comparison of colors of various articles without moving the articles and without changing lamps or color screens by simply turning on and off the switches necessary for controlling the current to the respective lamps.

I claim:

25 1. Color matching apparatus comprising a cabinet having a lower article-holding compartment, separate upper lamp compartments, inclined lamps supported in said upper compartments, a door for access to said lamp compartments and a color filter between each lamp and said lower compartment, the inclination of said lamps being such that all light emitting surfaces thereof are substantially equi-distant from the middle of said lower compartment.

30 2. In a color matching device a cabinet having a horizontally disposed article supporting shelf, a horizontal filter screen arranged in the cabinet above the center of the shelf, an inclined filter screen arranged on each side of the center screen, an electric lamp arranged in the cabinet above each filter, said lamps being designed and arranged to throw light through the respective filters upon the center of the shelf.

3. Color matching apparatus comprising a cabinet having an article receiving compartment open at one side for the introduction of articles, three light emitting compartments arranged above the article receiving compartment and each containing an electric lamp, all of the lamps being of the same size and of the prefocused type, a color screen between each lamp and the article receiving compartment, each color screen and the filament of its respective lamp being arranged substantially parallel, said lamps being situated substantially along an arcuate path and said color screens being situated substantially along a second arcuate path, said last mentioned path being substantially concentric with said first mentioned path, so as to provide a substantially uniformly illuminated field in said article receiving compartment.

4. Color matching apparatus comprising a cabinet having an article holding compartment and separate lamp compartments, said lamp compartments being arranged laterally adjacent to one another and extending as a whole along one side of said article holding compartment, a color screen arranged between each lamp compartment and the article holding compartment, the color screen of the lamp compartment which is positioned substantially central with respect to the other lamp compartments, being substantially parallel to one side of said article holding compartment, the screens on each side of said central screen being inclined with respect to said central screen and the direction of inclination of one of the side screens being opposite to the direction of inclination of the other side screen but of substantially the same angular magnitude with respect to said central screen, the said lamps all being focused so that a substantially uniformly illuminated observation field is obtained in the article holding compartment when each lamp is lighted.

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