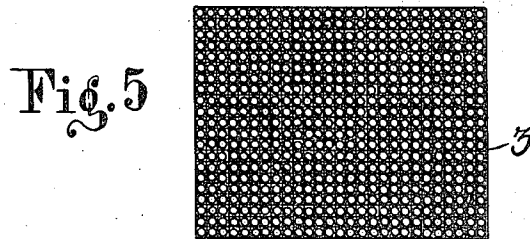
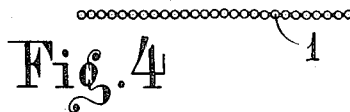
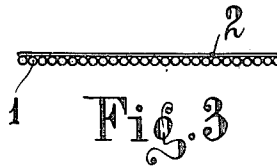
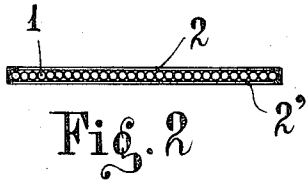
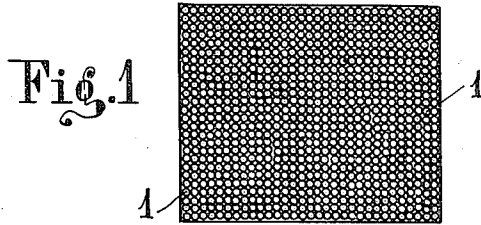


R. FEDERICO.
LIGHT SPREADING SCREEN.
APPLICATION FILED MAR. 12, 1913.

1,176,746.

Patented Mar. 28, 1916.



WITNESSES

State Notary.

Rosario Federico

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UNITED STATES PATENT OFFICE.

ROSARIO FEDERICO, OF TURIN, ITALY.

LIGHT-SPREADING SCREEN.

1,176,746.

Specification of Letters Patent.

Patented Mar. 28, 1916.

Application filed March 12, 1913. Serial No. 753,816.

To all whom it may concern:

Be it known that I, ROSARIO FEDERICO, residing at Turin, Italy, have invented certain new and useful Improvements in or Relating to Light-Spreading Screens, of which the following is a specification.

It is known that at present the light spreading screens as required for luminous signs or the like illuminated by transparency are made of ground glass or opalescent glass with the inconvenience that a considerable amount of light is absorbed by the screen.

This invention relates to a new light spreading screen which is perfectly transparent and consequently insures the light to be fully utilized.

The screen according to this invention is obtained by assembling side by side small grains or particles of a solid transparent substance so as to form a continuous layer.

In the annexed drawing:—Figure 1 shows in elevation a light spreading screen according to the invention; Fig. 2 is a plan of the same; Fig. 3 shows in plan another form of screen; Fig. 4 shows in plan a third form; Fig. 5 shows in elevation a screen in which a reinforcing network is embedded.

In any case the grains 1 may be particles of celluloid or starch, or small bits or balls of glass or crystal or the like. These grains are arranged so as to form a continuous layer and are maintained close to each other either by inclosing them between two glass or celluloid surfaces 2, 2' (Fig. 2) or by applying them on a transparent surface 2 by means of an appropriate transparent adhesive substance (Fig. 3) or finally by causing them to adhere with each other without a support surface (Fig. 4). When the grains are inclosed between two transparent surfaces, as for example, when the screen is intended to be used in illuminated signs or the like, one or both of such surfaces may be of such character as to augment the dispersion of the light.

In the case according to Fig. 4, the trans-

lucent grains 1 are arranged on a suitable surface with an adhesive substance and then the layer so obtained is separated from the said supporting surface. In this case, in order to obtain a screen having greater stiffness or body, it is advisable to place a reinforcing network of suitable material on the supporting surface before arranging the grains, said network being embedded in the screen and constituting a stiffening frame as at 3 (Fig. 5). In either case, the screen is a flexible sheet-like body or layer of sufficient strength and coherence to be self-sustaining without the aid of a backing or other exterior surface-supporting means.

Obviously all the transparent grains constituting the screen or a portion of them may be colored, and by various arrangements of the same pictures, designs or words may be obtained; said grains being if desired of different colors.

In every case the new screen being entirely composed of translucent substance it absorbs a very small amount of the light passing through it while spreading it in every direction.

I claim:—

1. A light-transmitting screen for luminous signs and the like comprising a layer of transparent solid particles embedded in and united by transparent adhesive material, said screen being light-diffusing, flexible, coherent and self-sustaining.

2. A light-transmitting screen for luminous signs and the like comprising a layer of transparent solid particles embedded, together with a reinforcing network, in transparent adhesive material, said screen being light-diffusing, flexible, coherent and self-sustaining.

In testimony whereof I affix my signature in presence of two witnesses.

ROSARIO FEDERICO.

Witnesses:

CARLO TORBAY,
GOCOLYN GOUBEYRAN.