ultraviolet-light-curing resin layer **17** on the surface (die face) **12***a* of the embossing roller **12**, the transparent plastic film **2** and the ultraviolet-light-curing resin layer **17** may be laminated to each other in such a manner that the transparent plastic film **2** is wound around the embossing roller **12** while feeding the ultraviolet-light-curing resin **14** between the transparent plastic film **2** and the embossing roller **12**.

[**0063**] Thereafter, the laminate of the transparent plastic film **2** and the ultraviolet-light-curing resin layer **17** is delivered to the top of the embossing roller **12**, where ultraviolet light is applied to the ultraviolet-light-curing resin layer **17** by using an ultraviolet light irradiator **18** placed above the embossing roller **12**. The ultraviolet-light-curing resin layer **17** is thus cured, and, at the same time, adhered to the transparent plastic film **2**.

[**0064**] The laminate of the transparent plastic film **2** and the cured ultraviolet-light-curing resin layer **17** is then delivered to the right hand of the embossing roller **12**, and is separated from the embossing roller **12** by a separation roller **11***b*. Thus, there can be obtained a film, a laminate of the transparent plastic film **2** and the fine irregularity layer **3** which is the cured ultraviolet-light-curing resin layer provided with fine irregularities that are the inverse of the irregularities of the surface **12***a* of the embossing roller **12**.

[**0065**] To finally obtain a transparent conductive film **1**, a transparent conductive layer **4** and, if necessary, a transparent hard coat layer **5** are laminated to the surface of the above-obtained film, as shown in **FIG. 1A, 1B** or **2**. To obtain a transparent conductive film as shown in **FIG. 1A**, in which a transparent conductive layer **4** is laminated to the surface of the transparent plastic film **2** to which the fine irregularity layer **3** is not laminated, the transparent conductive layer **4** may be laminated before or after forming the fine irregularity layer **3** in the above-described manner. On the other hand, to obtain a transparent conductive film **1** as shown in **FIG. 1B** or **2**, in which the fine irregularity layer **3** and the transparent conductive layer **4** are formed on one surface of the transparent plastic film **2**, the transparent conductive layer **4** should be laminated after forming the fine irregularity layer **3** in the above-described manner. In the case where a transparent hard coat layer **5** is laminated, as shown in **FIG. 2**, to the surface of the transparent plastic film **2** to which the fine irregularity layer **3** and the transparent conductive layer **4** are not laminated, the lamination of the transparent hard coat layer **5** may be conducted before the lamination of the fine irregularity layer **3**, or between the lamination of the fine irregularity layer **3** and that of the transparent conductive layer **4**, or after the lamination of the transparent conductive layer **4**.

[**0066**] (Transparent Plastic Film)

[**0067**] The transparent plastic film **2**, the fine irregularity layer **3**, the transparent conductive layer **4** and other layers contained in the transparent conductive film **1** according to this embodiment will be explained in detail.

[**0068**] First of all, the transparent plastic film **2** will be explained.

[**0069**] Preferred as the transparent plastic film **2** is a film of a thermoplastic resin such as cellulose diacetate, cellulose triacetate, cellulose acetate butyrate, polyamide, polyimide, polyether sulfone, polysulfone, polypropylene, polymethylpentene, polyvinyl chloride, polyvinyl acetal, polyether ketone, polymethyl methacrylate, polycarbonate, polyester (e.g., polyethylene terephthalate) or polyurethane.

[**0070**] Of these, a film of a polyester resin such as polyethylene terephthalate resin, which is often used for a photographic film containing an emulsion layer, is preferred when mechanical strength and coating properties are taken into consideration. A cellulose triacetate resin film is also preferred because it has high transparency, no optical anisotropy and low refractive index. A polycarbonate resin film is also preferred because it has transparency and heat resistance.

[**0071**] The above-described thermoplastic resin films have flexibility and are convenient for use. However, in the case where it is not necessary to bend the transparent plastic film at all even when it is handled, and if the transparent plastic film is desired to have high hardness, a plate of any of the above-enumerated resins, a glass plate or the like may also be used.

[**0072**] The thickness of the transparent plastic film **2** is preferably about 8 to 1000 μm, more preferably about 50 to 200 μm. In the case where a plate-shaped material is used as the transparent plastic film **2**, it may have a thickness exceeding the above-described range.

[**0073**] To improve the adhesion to a layer to be laminated to the transparent plastic film **2**, either one of or both surfaces of the transparent plastic film **2** may be subjected to any of various conventional treatments, for example, physical treatments such as corona discharge treatment and oxidization treatment, and a primer-layer-forming treatment in which a coating agent called an anchoring agent or primer is applied.

[**0074**] To avoid lowering of display visibility, the transparent plastic film **2** preferably has a total light transmittance of 80% or more, more preferably 90% or more.

[**0075**] (Fine Irregularity Layer)

[**0076**] Next, the fine irregularity layer **3** will be explained.

[**0077**] To form the fine irregularity layer **3**, it is possible to use any of resin compositions broadly called ionizing-radiation-curing resin compositions including ultraviolet-light-curing resin compositions and electron-beam-curing resin compositions.

[**0078**] A proper mixture of prepolymers, oligomers and/or monomers having in their molecules polymerizable unsaturated bonds or epoxy group is used as the ionizing-radiation-curing resin composition. Any of those magnetic waves or charged particle beams having energy quanta high enough to polymerize or cross-link the molecules can be used as ionizing radiation to be applied for curing, and ultraviolet light or an electron beam is usually used.

[**0079**] Examples of prepolymers and oligomers in the ionizing-radiation-curing resin composition include: (1) unsaturated polyesters such as condensation products between unsaturated dicarboxylic acids and polyhydric alcohols; (2) methacrylates such as polyester methacrylate, polyether methacrylate, polyol methacrylate and melamine methacrylate; (3) acrylates such as polyester acrylate, epoxy acrylate, urethane acrylate; polyether acrylate, polyol acrylate and melamine acrylate; and (4) cationically polymerizable epoxy compounds.