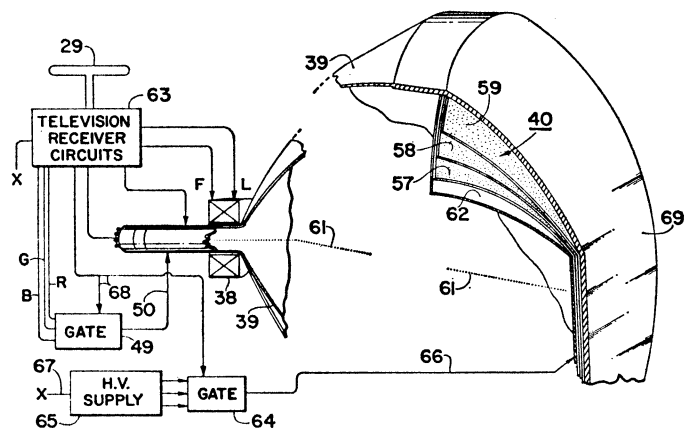


Current Patents

COLOR TELEVISION

Single-Gun Tube Gives Full Spectrum



Dr. Edwin H. Land, whose discoveries in color perception challenge standard theories, received a patent last week for a color television receiver utilizing the new theory. He assigned patent No. 3,312,781 to the Polaroid Corp.

Conventional color theory holds that each color is associated with a particular wavelength of light, and the eye sees a color when its wavelength is present.

Dr. Land discovered that the eye could see a color even though the wavelength isn't present. He made black-and-white transparencies through red and green filters. Projecting the films through almost any combination of colored filters, even red and orange, produced images that looked like full color, even though no wavelengths of the blue end of the spectrum were present.

Present-day color TV uses conventional color theory. Three images are taken, through red, green and blue filters. The three pictures are transmitted, received in the home set, and shot out of three electron guns toward the screen. A complicated pattern of red, green and blue phosphors reacts to the proper electrons.

Dr. Land's system uses the same red-green-blue input signal, but it has only one electron gun. The signals are separated, not by position, but by how fast they go. In one form, for example, the blue signal electrons go fastest, the green slower, and the red slowest.

The target screen has three layers, each responding to a different color. The fastest electrons go through three layers, the intermediate, two, and the slowest, one.

In terms of wavelength, the three-layer electrons put out white light, the two-layer ones put out yellow, and the single-layer red, seen as full color.

Polaroid spokesmen said the company is working with Texas Instruments Corp. to develop a commercial TV set using Dr. Land's system.

RECLAMATION

Land Fills Form Uniform Base

When land is reclaimed from water, the usual method is to dredge earth from a sea-bottom or river-bottom, mix it with water and pump it into place. Because the dredged earth is composed of particles of different sizes, the fill close to the output hose is usually coarse and that farther away is fine. This causes uneven settling, waste of fine material, and a land-fill that is uneven.

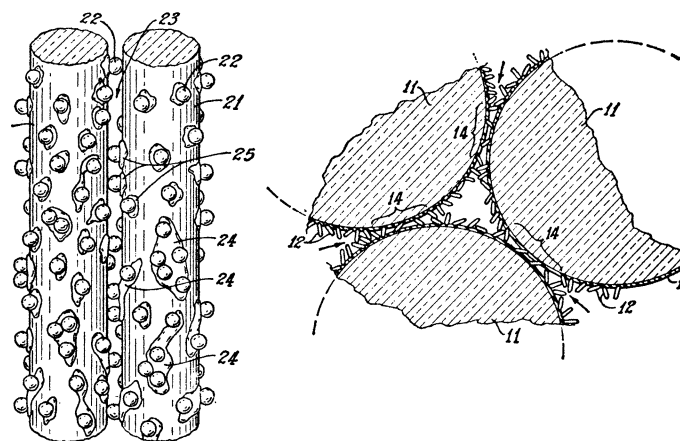
To improve the quality of landfill, two Japanese sci-

entists have developed a method of coagulating the fine material before it leaves the output hose.

The inventors, Shinichiro Matsuo and Hikaru Konishi, assigned patent No. 3,312,070 to Dai-Ichi Kogyo Seiyaku Kabushiki Kaisha, a corporation of Kyoto, Japan.

ORGANIC CHEMISTRY

Glass Fiber Reinforces Plastic



A process for making fibrous glass that can be used to reinforce plastic was patented last week by Thomas E. Philipps and John S. White, who assigned patent No. 3,312,569 to Owens-Corning Fiberglas Corp.

Glass-filled plastics theoretically should have greater strength, but it was difficult to get the plastic to stick tightly enough to the glass fibers. When fibers were not completely surrounded by plastic they tended to rub against each other and become weak. Unfilled spaces between fibers also allowed the glass to act as a wick and draw water into the center of the plastic.

The new process treats the glass fibers with small particles of an aluminum oxide called boehmite, in a mixture that adheres well to the fibers. The tiny particles force the individual fibers of glass apart, allowing the plastic to surround each fiber completely.

TRANSPORTATION

System for Piping Solids

A system for transporting solid matter in pipelines, was patented last week. Inventor Charles O. Baker assigned rights to patent No. 3,312,506 to Mobil Oil Corp.

The system involves coating the solid, such as sulfur, with a non-reactive material and pumping the coated balls along with the liquid in the pipeline.

Stimulus for the invention was the problem faced by oil producers in areas where laws forbid by-product sulfur dioxide or hydrogen sulfide to be released in the atmosphere. In these areas, producers usually convert the by-products to solid sulfur.

The protective coating on the sulfur ingots is chosen with a melting point either above or below that of sulfur. At the pickup station, the two are separated. If the coating melts at lower temperature than sulfur, the transported balls are sprayed with steam which melts the coating and leaves the sulfur intact. If the coating has a higher melting point, the balls are heated and the coating split so that the molten sulfur pours out.