

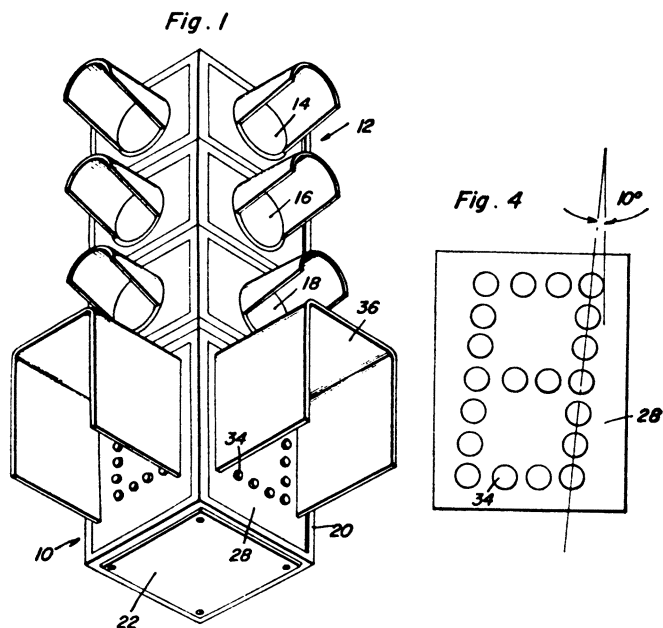
# Current Patents

## TRAFFIC CONTROL

### Time Readout for Green Lights

A timing signal that would tell a driver how long the green light was going to stay lit would help ease intersection approach jitters.

Up to now, timers attached to stoplights have been expensive and hard to regulate. A newly patented system, based on an electronic timer, may bring the idea within the realm of practicality.



The new timer doesn't use a mechanical clock as previous systems have. Instead, it uses the 60-cycle alternating current, which powers the stoplight itself, as a time base.

A transistorized computer circuit counts the seconds that have gone by since the light turned green, compares it with the total green-light period and flashes the differences on a lighted display panel.

The patent, No. 3,320,585, was granted to James L. R. Hines of Abilene, Texas, last week.

## HALL EFFECT

### Heat, Voltage Cancel Out

When a conductor or semiconductor is placed in a magnetic field and a current passed through it, a voltage is created across the two edges of the conductor perpendicular to the flow of current.

This is called the Hall effect. The amount of created voltage depends on the product of the magnetic field and the current flow. Hall effect devices are used in analogue computers to take square roots and make other calculations.

If the conductor is lined up exactly, the created voltage is zero if the magnetic field is zero. In practice, there is always a little voltage present even when the field is zero, so engineers hook a small electric battery into the circuit to cancel it out.

Temperature causes more trouble, however. The leftover voltage varies according to how hot the conductor

is. One way out has been to regulate the temperature very carefully, but this can be expensive.

A discovery by Charles B. Pear Jr. of Radiation, Inc., eliminates the need for careful temperature control. He found that the resistance of the conductor also varies according to temperature.

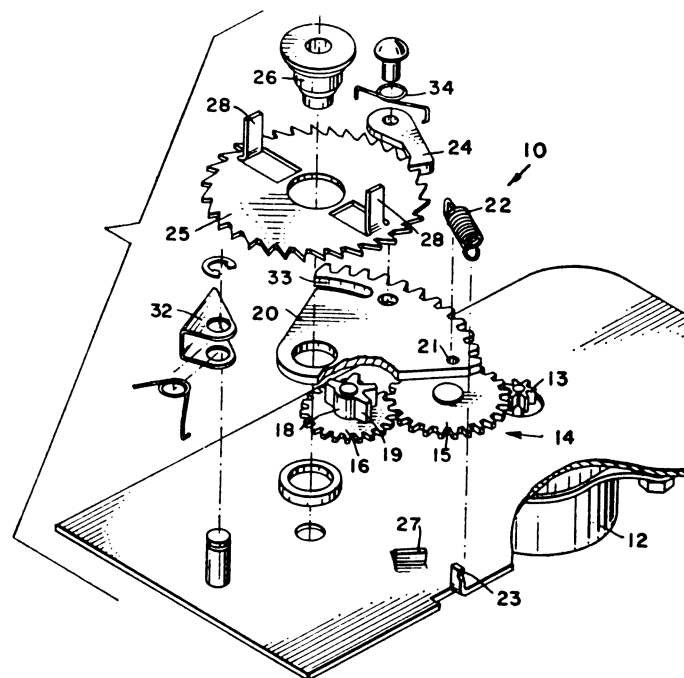
In an invention patented last week, Pear chose his circuit values so that a temperature increase would just change the resistance enough to compensate for the change in leftover voltage. This means that temperature can vary without upsetting the accuracy of the device.

Pear assigned patent No. 3,320,520 to Radiation, Inc., Melbourne, Fla.

## TIMING

### Appliance Timers Simplified

Timers for automatic washing machines, dishwashers and dryers have to move in jerks. Otherwise, at the end of a cycle when a switch has to close, the contacts of the switch would come together slowly and sparks fly, melting the contacts and burning out the switch.



To convert the continuous motion of a timer motor into a series of jerks, some kind of escapement is necessary. Conventional escapements consist of a straight spring stretched until it reaches a certain tension, at which point it releases a cog and allows a wheel to turn. The machinery involved in stretching the spring and releasing it is complicated and clumsy, because the rotary motion of the timer motor has to be changed into linear motion for the straight spring, and then back to rotary motion again.

An invention patented last week uses a coil spring and a cog-and-ratchet system, saving a lot of complications. A partially-toothed cog, fastened by the coil spring to a post, is rotated by the timer motor. When the cog runs out of teeth, the coil spring pulls it back, giving it the jerk needed.

Inventor Richard E. McVicker assigned the patent, No. 3,319,477, to P. R. Mallory & Co., Indianapolis.