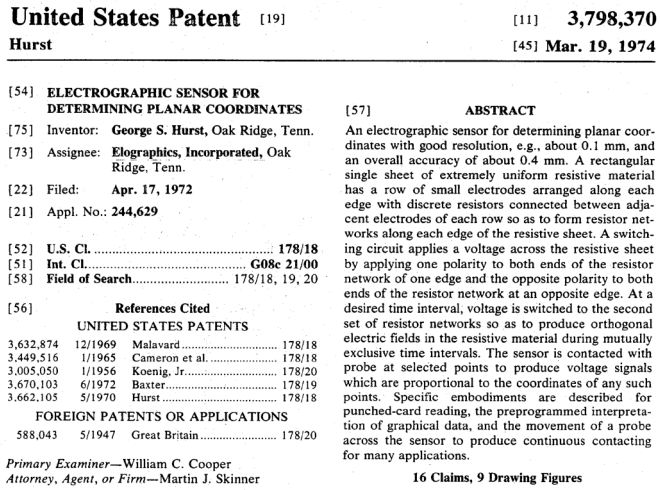
Legislative Moments

Kentucky Innovations



United States Patent [19] — **Hurst**

[11] **3,798,370**

[45] **Mar. 19, 1974**

[54] **ELECTROGRAPHIC SENSOR FOR DETERMINING PLANAR COORDINATES**

[75] Inventor: **George S. Hurst,** Oak Ridge, Tenn.

[73] Assignee: **Elographics, Incorporated,** Oak Ridge, Tenn.

[22] Filed: **Apr. 17, 1972**

[21] Appl. No.: **244,629**

[52] **U.S. Cl.** **178/18**

[51] **Int. Cl.** **G08c 21/00**

[58] **Field of Search** 178/18, 19, 20

[56] **References Cited**

UNITED STATES PATENTS

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3,449,516	1/1965	Cameron et al.	178/18
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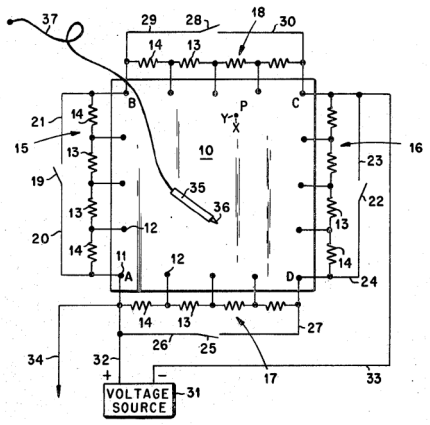
Primary Examiner—William C. Cooper
Attorney, Agent, or Firm—Martin J. Skinner

[57] **ABSTRACT**

An electrographic sensor for determining planar coordinates with good resolution, e.g., about 0.1 mm, and an overall accuracy of about 0.4 mm. A rectangular single sheet of extremely uniform resistive material has a row of small electrodes arranged along each edge with discrete resistors connected between adjacent electrodes of each row so as to form resistor networks along each edge of the resistive sheet. A switching circuit applies a voltage across the resistive sheet by applying one polarity to both ends of the resistor network of one edge and the opposite polarity to both ends of the resistor network at an opposite edge. At a desired time interval, voltage is switched to the second set of resistor networks so as to produce orthogonal electric fields in the resistive material during mutually exclusive time intervals. The sensor is contacted with probe at selected points to produce voltage signals which are proportional to the coordinates of any such points. Specific embodiments are described for punched-card reading, the preprogrammed interpretation of graphical data, and the movement of a probe across the sensor to produce continuous contacting for many applications.

16 Claims, 9 Drawing Figures



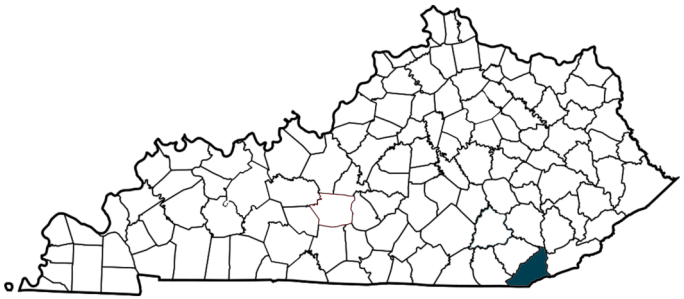
Hurst's Patent, U.S. Patent Office Database

Touch Screen Technology

George Samuel Hurst developed the foundations of today's touch screen technology while teaching at the University of Kentucky in 1971.

Hurst was a scientist, inventor, and businessman with a long and distinguished career. He was born in **Ponza** in **Bell County** on October 13, 1927. Hurst earned a Ph.D. in physics from the University of Tennessee in 1959 and began teaching at the University of Kentucky in 1966. There, Hurst and his students developed the world's first touch sensor, known as the "Elograph."

This sensor laid the foundation for five-wire resistive technology, which Hurst and his company, Elographics, developed in 1977. This innovative advancement remains the most popular touch screen technology today.



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