

(54) **ALTERNATIVE TO THROUGH-HOLE-PLATING IN A PRINTED CIRCUIT BOARD**

(75) Inventors: **Daniel A. Jochym**, Downingtown, PA (US); **Robert H. Fix**, Schwenksville, PA (US)

(73) Assignee: **Unisys Corporation**, Blue Bell, PA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/989,820**

(22) Filed: **Nov. 20, 2001**

(51) Int. Cl.⁷ **H01R 12/04; H05K 1/11**

(52) U.S. Cl. **174/265; 174/266**

(58) **Field of Search** **174/265, 267, 174/262-264, 266; 29/842, 843, 844, 845; 361/792, 793, 794, 803**

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,752,580 A * 8/1956 Shewmaker 174/262

3,524,960 A *	8/1970	Lohff	174/262
3,660,726 A *	5/1972	Ammon et al.	174/262
5,290,970 A *	3/1994	Currie	174/250
5,619,018 A *	4/1997	Rossi	174/261
5,656,798 A *	8/1997	Kubo et al.	174/263
5,761,050 A *	6/1998	Archer	361/791
6,011,222 A *	1/2000	Sekiya et al.	174/266
6,255,601 B1 *	7/2001	Burkhart	174/255
6,333,471 B1 *	12/2001	Nojioka	174/261

* cited by examiner

Primary Examiner—David A. Zarneke

Assistant Examiner—Jeremy Norris

(74) *Attorney, Agent, or Firm*—Michael B. Atlass; Mark T. Starr

(57) **ABSTRACT**

A printed circuit board (PCB) comprises a number of electrically conductive layers. Instead of coating, or plating, a PCB through-hole with an electrically conductive material to form a via (for the purpose of connecting together signal paths across the electrically conductive layers)—the via is formed by placing a conductive stake, or conductive pin, in the through-hole.

6 Claims, 10 Drawing Sheets

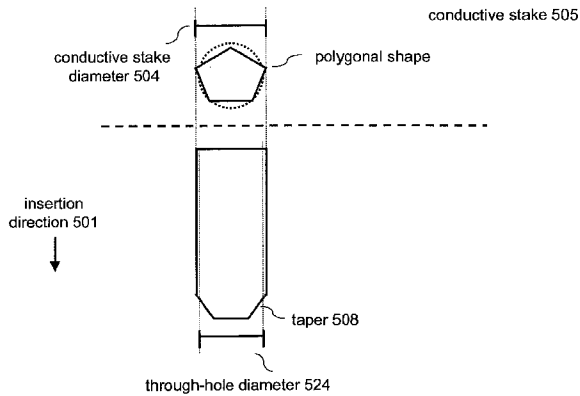
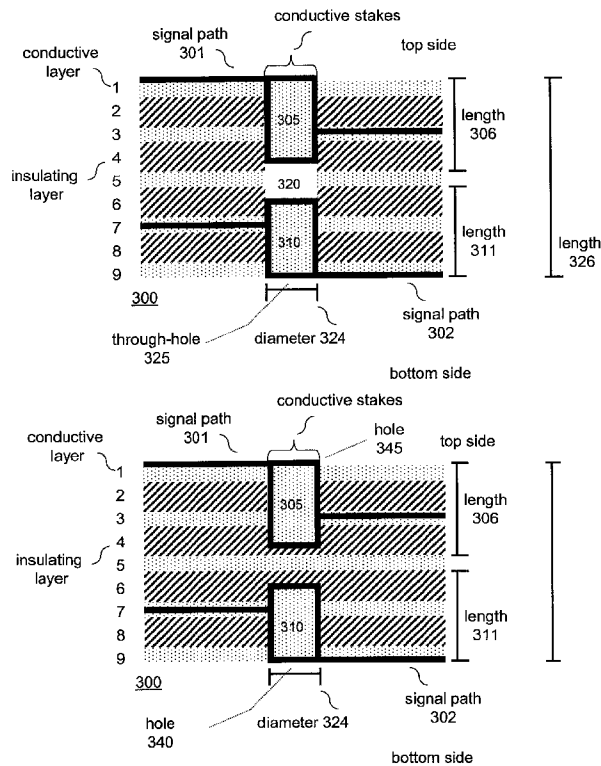
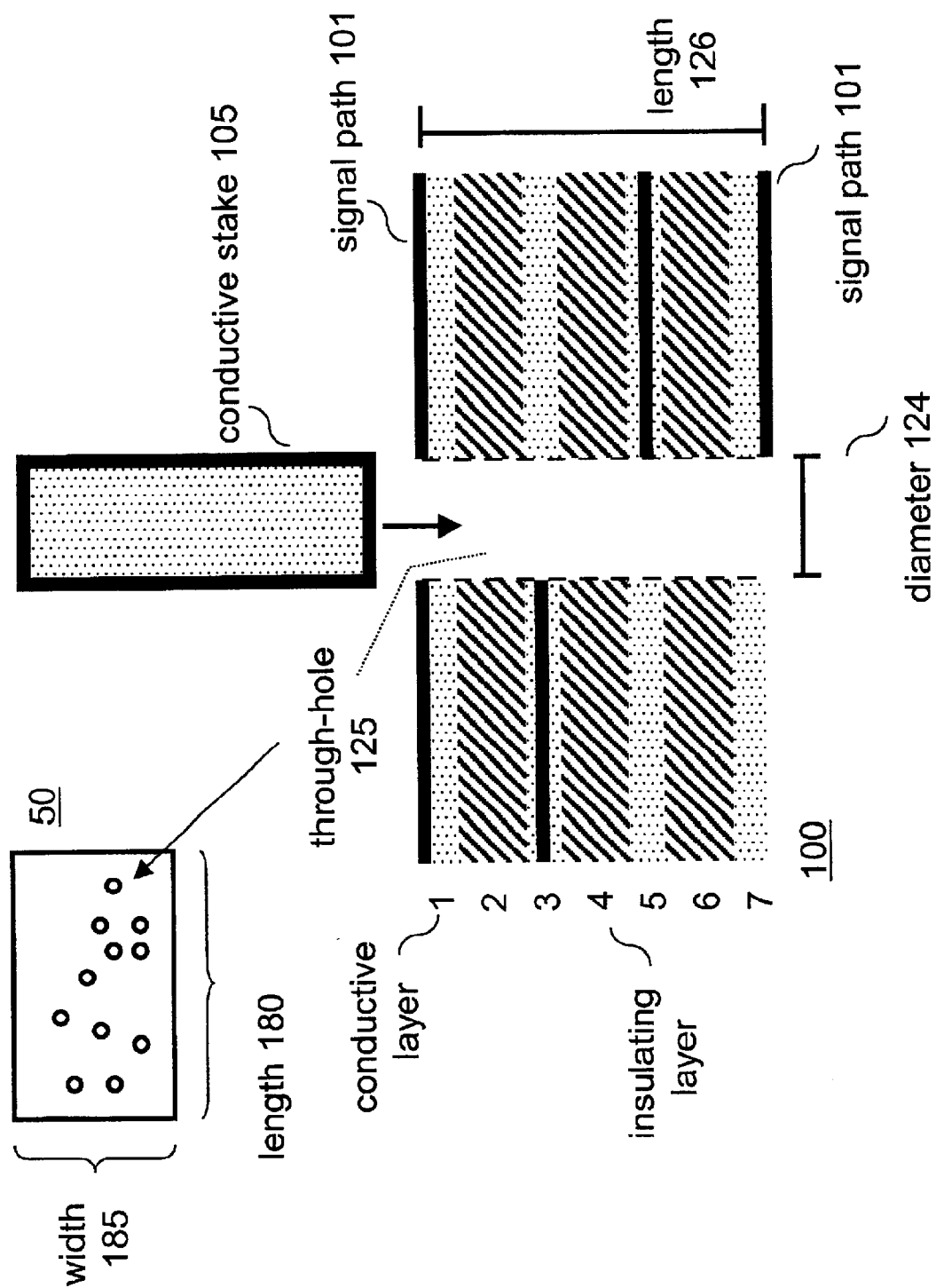


FIG. 1



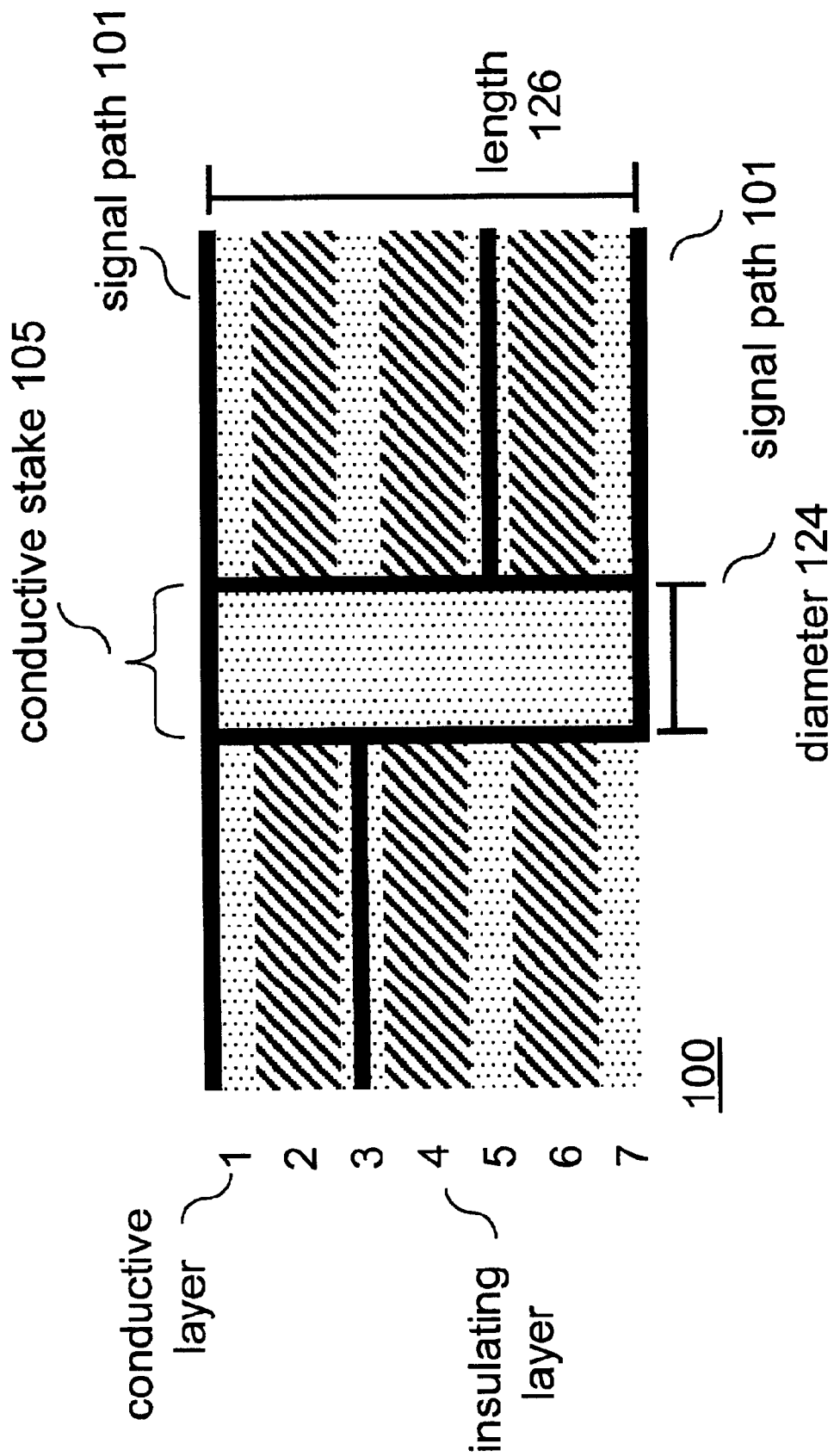


FIG. 3

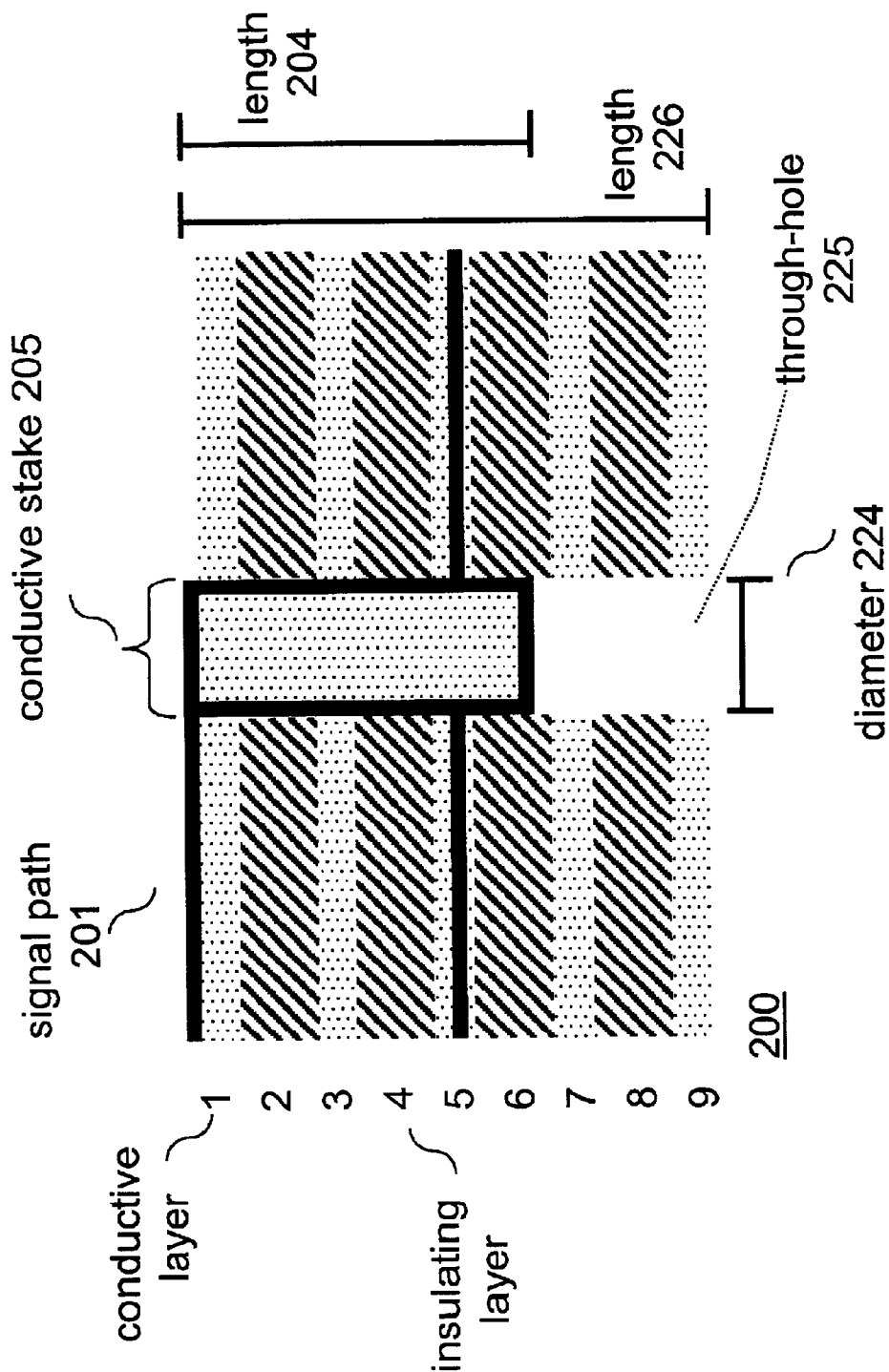
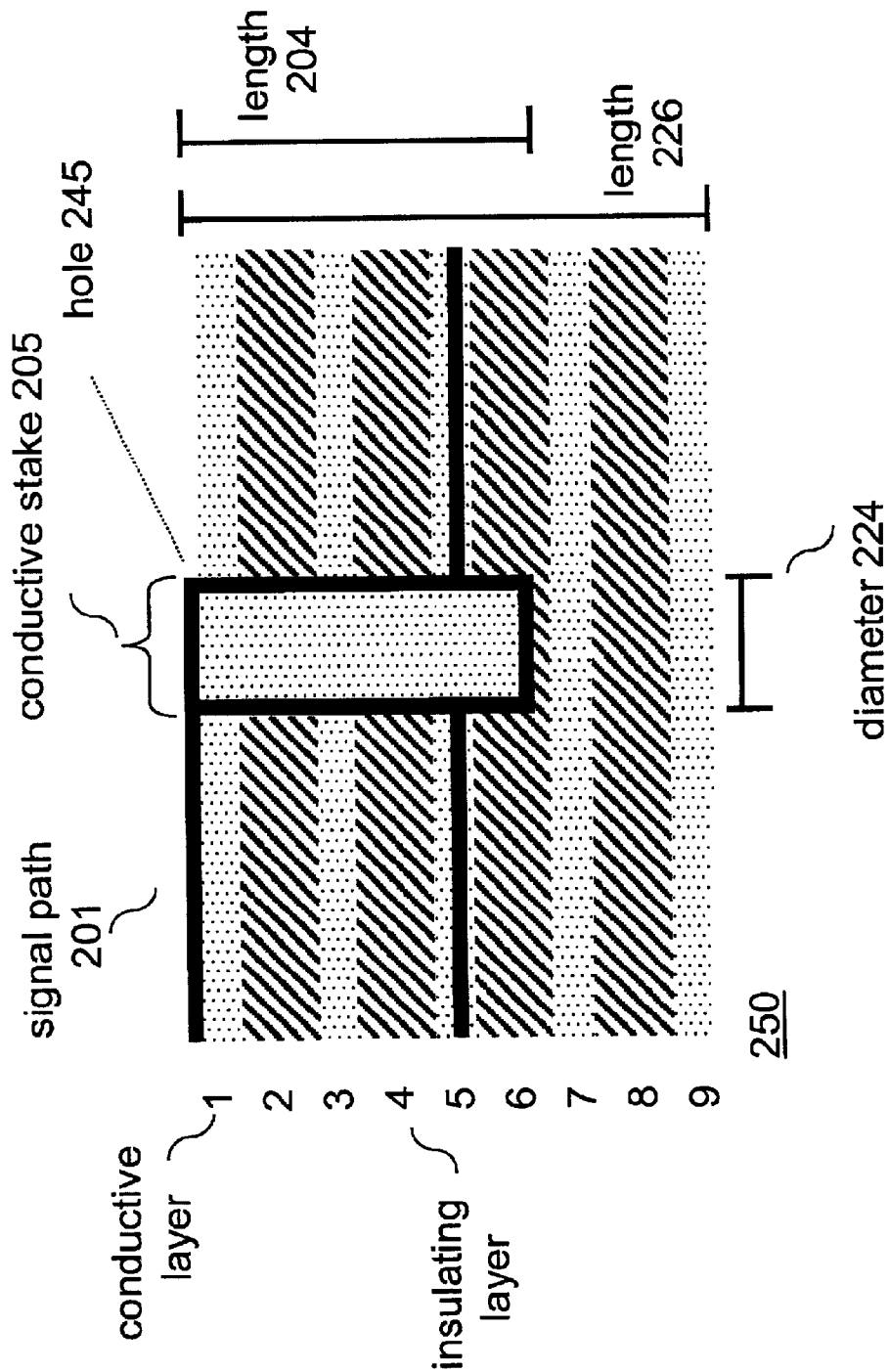


FIG. 4



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.