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Tethrake et al.

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(54) **WORKSTATION RFID READER FOR SURGICAL INSTRUMENTS AND SURGICAL INSTRUMENT TRAYS AND METHODS OF USING SAME**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 92 days.

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(Continued)

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Primary Examiner—Van T. Trieu

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(74) *Attorney, Agent, or Firm*—Goodwin Procter LLP

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(57) **ABSTRACT**

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G08B 13/14 (2006.01)

(52) **U.S. Cl.** **340/572.1**; 340/572.4;
340/539.12

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340/572.4, 573.1, 539.12, 539.32, 10.1, 10.3,
340/10.4, 10.41, 10.42, 10.31; 604/362;
606/1

See application file for complete search history.

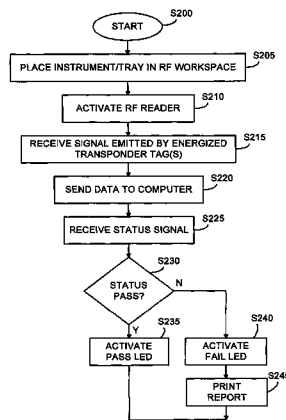
A radio frequency identification (RFID) workstation reader for RFID-enabled surgical instruments and surgical instrument trays and a method of using a RFID workstation reader to read RFID-enabled surgical instruments and surgical instrument trays. The method, apparatus, and system enable individual instruments or a surgical instrument tray containing several surgical instruments to be quickly and efficiently inventoried and tracked. An instrument or instrument tray is placed on the workstation reader. An RF field generated by a plurality of antennae, causes RFID tags embedded in or attached to the instrument or instrument tray to emit a signal containing item specific identification information stored in the tags. The information is received by a control circuit and passed to a computer for data analysis. A status LED is illuminated on the workstation reader based on the results of the data analysis. The method, apparatus, and system can track, inspect, and verify inbound and outbound surgical instrument kits, and help to assess the surgical instruments' and trays' duty life cycle usage.

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19 Claims, 4 Drawing Sheets



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Figure 1

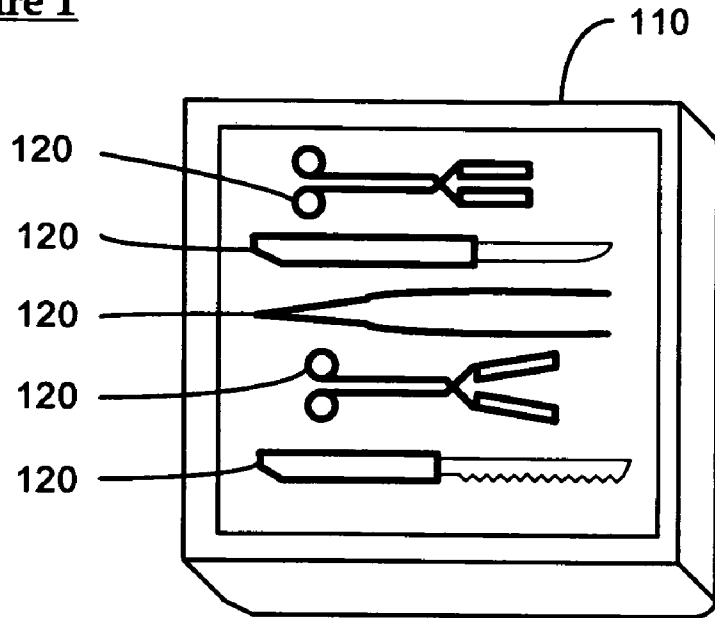


Figure 2

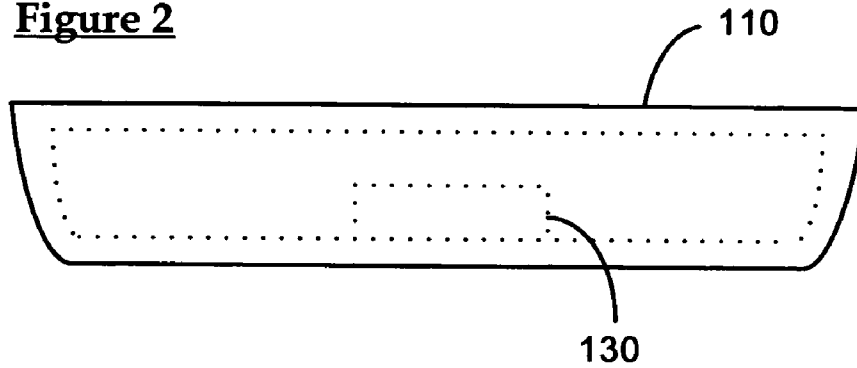


Figure 3

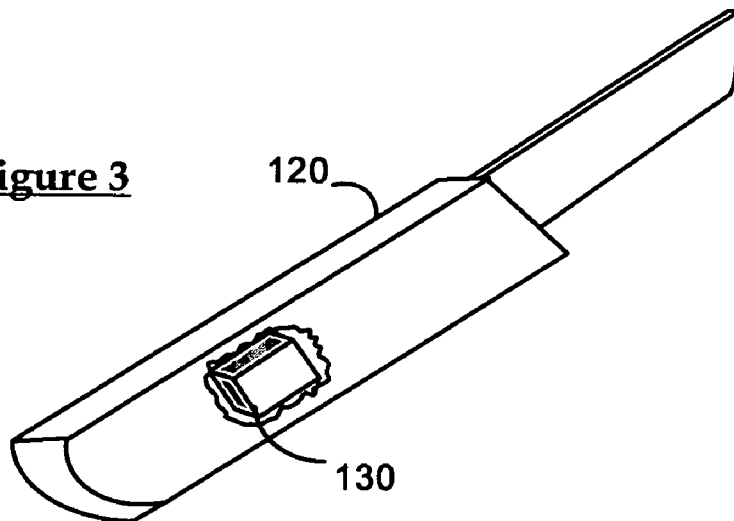


Figure 4

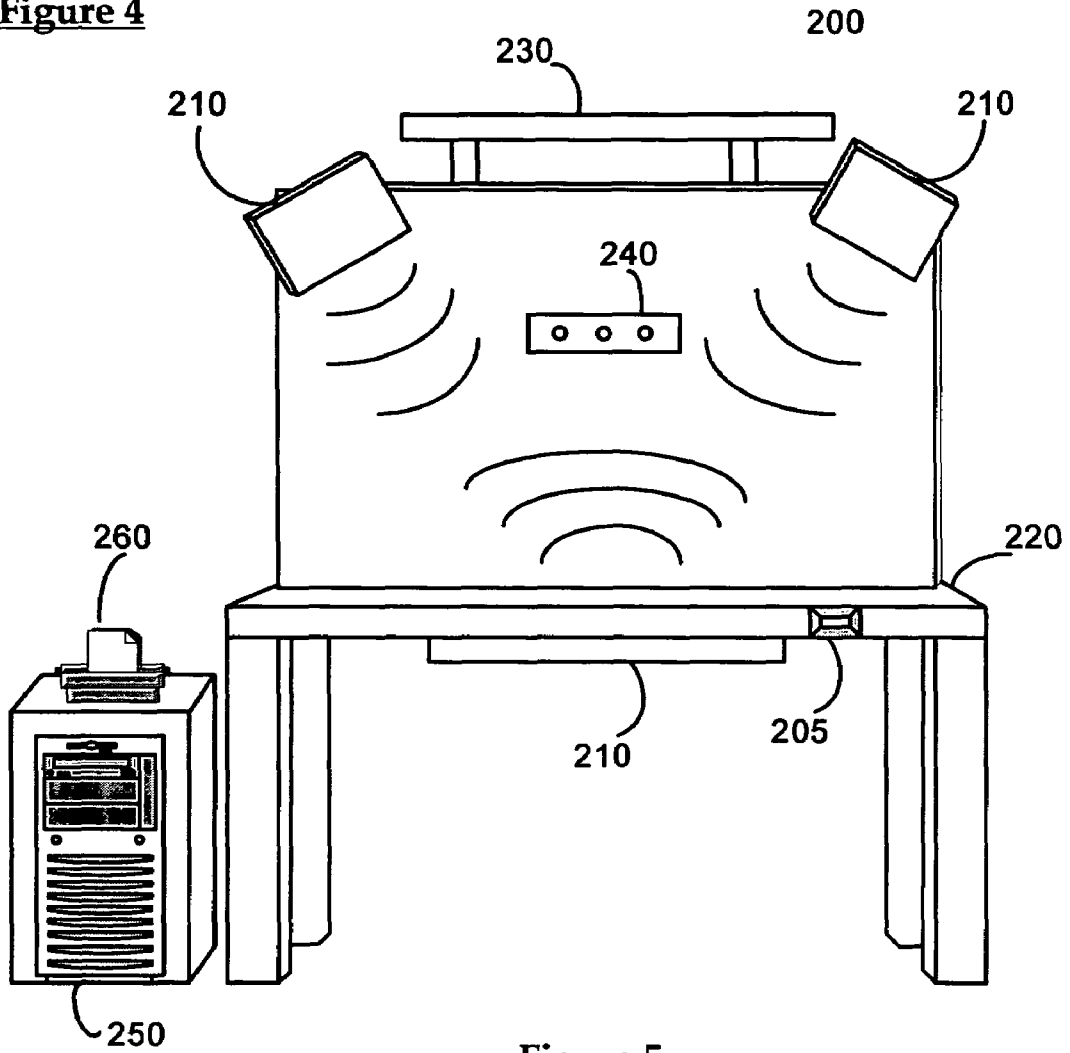


Figure 5

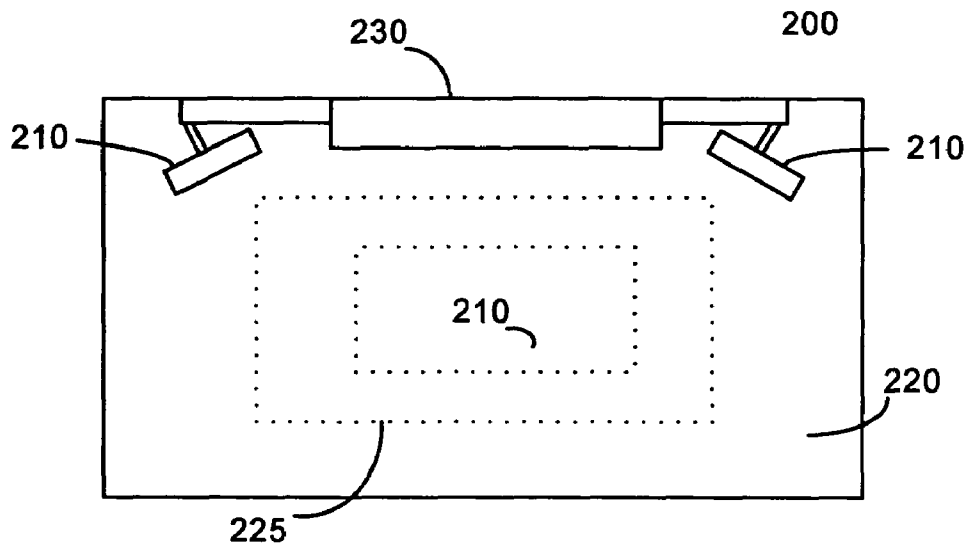


Figure 6

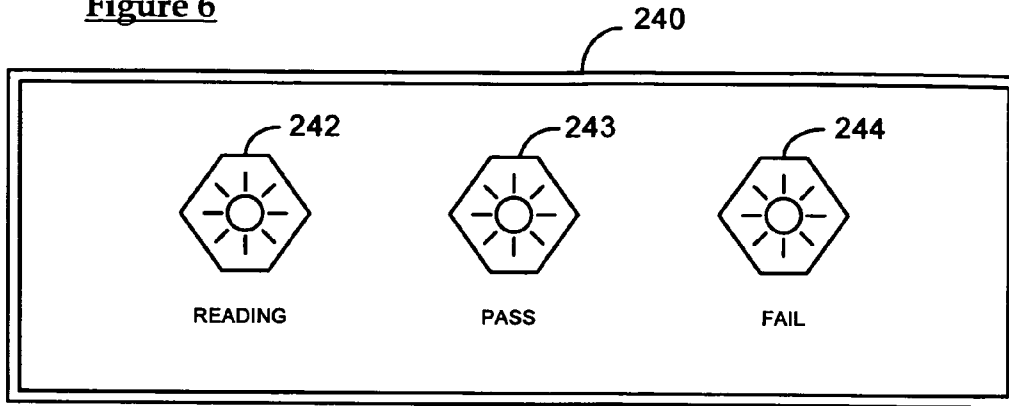
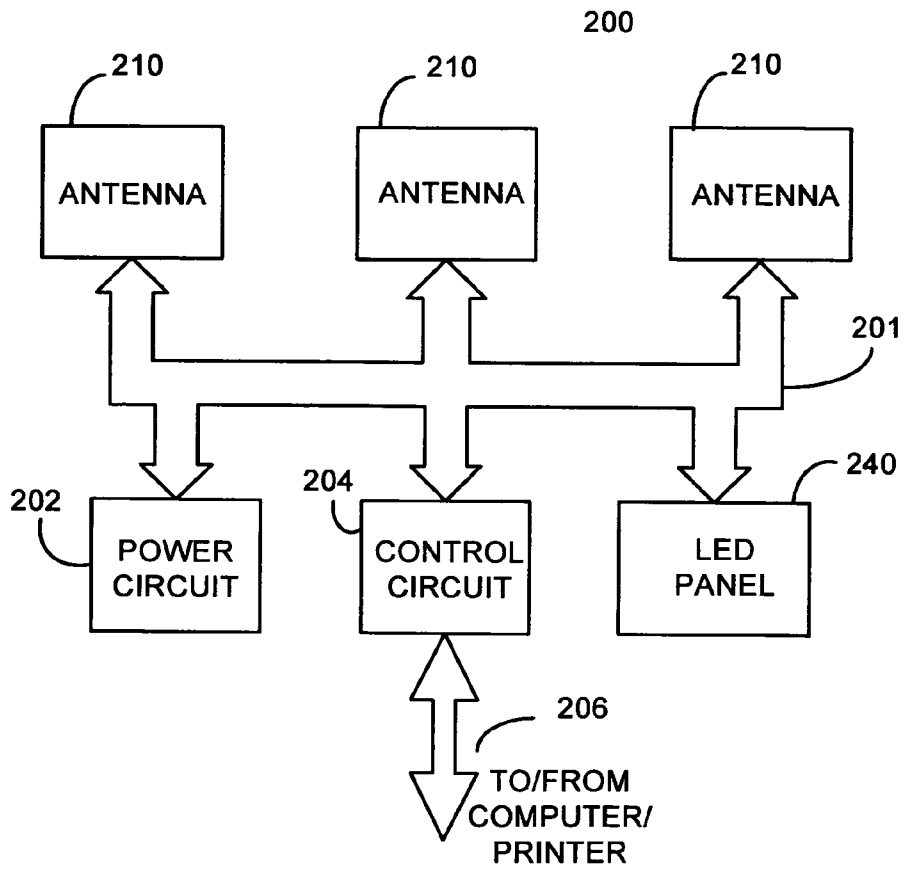


Figure 7



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