

**SURGICAL OBJECT AND FLUID MONITORING SYSTEM HAVING HIGHLY
SENSITIVE AND RELIABLE DETECTION OF OBJECTS BEING PLACED IN A
CONTAINER**

5

ABSTRACT

A surgical sponge and fluid monitoring system and method are provided. The system (100) includes a support ring (104) for securely supporting a container (101) with at least one port opening (206) for placing sponges (204) into the container through the at least one port opening with the aid of gravity. The support ring includes IR emitters and sensors (604) that blanket IR
10 beams (1402, 1404) across the at least one port opening. The support ring is mechanically linked to a load cell (706, 1329) in the system. The processor (1302), with novel methods, reliably detects when sponges are placed into the container through the at least one port opening, counts the number of sponges in the container, sorts the types of sponges, and calculates fluid loss for a patient in a surgical procedure. A user interface (1308, 114) in the monitoring system
15 keeps the medical professionals (502) in the operating room fully informed.

FIG. 1