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(54) **Title:** TOOL IDENTIFIER RECOGNITION AND SENSOR CALIBRATION IN A TOOL CONTROL SYSTEM

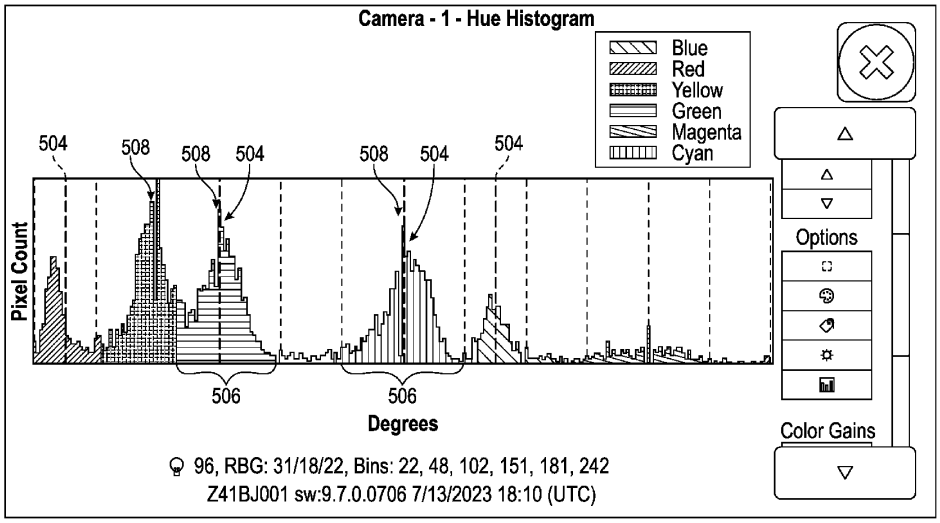

FIG. 5D

(57) **Abstract:** The disclosure comprises systems and methods for identifying color-coded tags on tools in a storage container where the identification sensor can be calibrated and adjusted. The method can include capturing image data comprising a plurality of pixels of an identification tag associated with a tool in a storage container. The method can include correlating a plurality of pixels to a numeric hue value. The method can include identifying a pattern of pixels from the plurality of pixels, wherein the pattern of pixels is correlated to a known pattern of color parameters consistent with the identification tag associated with the tool in the storage container. Further in response to identifying the pattern of pixels is consistent with the identification tag, determining the presence or absence of the tool in the storage container. The method can further include implementing a color gain to adjust a boundary range for a color.

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