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(54) **HUMAN INTERFACE SYSTEM**

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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 502 days.

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345/169, 173, 168; 400/472; 341/22

See application file for complete search history.

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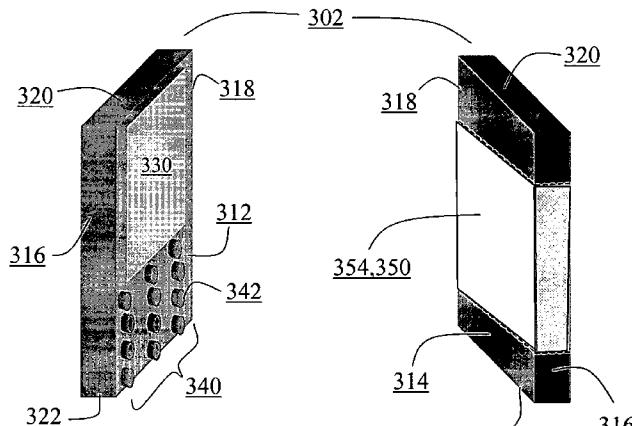
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Primary Examiner—Ricardo Osorio(74) *Attorney, Agent, or Firm*—Fish & Richardson P.C.(57) **ABSTRACT**

A human interface configured to optimize a biomechanical effect of a human user's opposing thumb and fingers by including, on one surface, one or more software configurable input elements manipulatable by a user's thumb(s) or a stylus, and, on another surface, one or more software configurable selection elements manipulatable by a user's finger(s). A selection element may be a pressure sensor pad configurable to represent delineated active areas that are mapped to one or more input functions. Shape changing media may be provided to permit a user to tactilely discriminate between delineated active areas. Tactile feedback may be provided to a user through palpable detents, vibratory or force producing units. Inputting data may include mapping each selection element to a shift function, mapping each input element to text functions, and using the selection elements to shift between text functions associated with an input element to input a desired text function.

60 Claims, 9 Drawing Sheets



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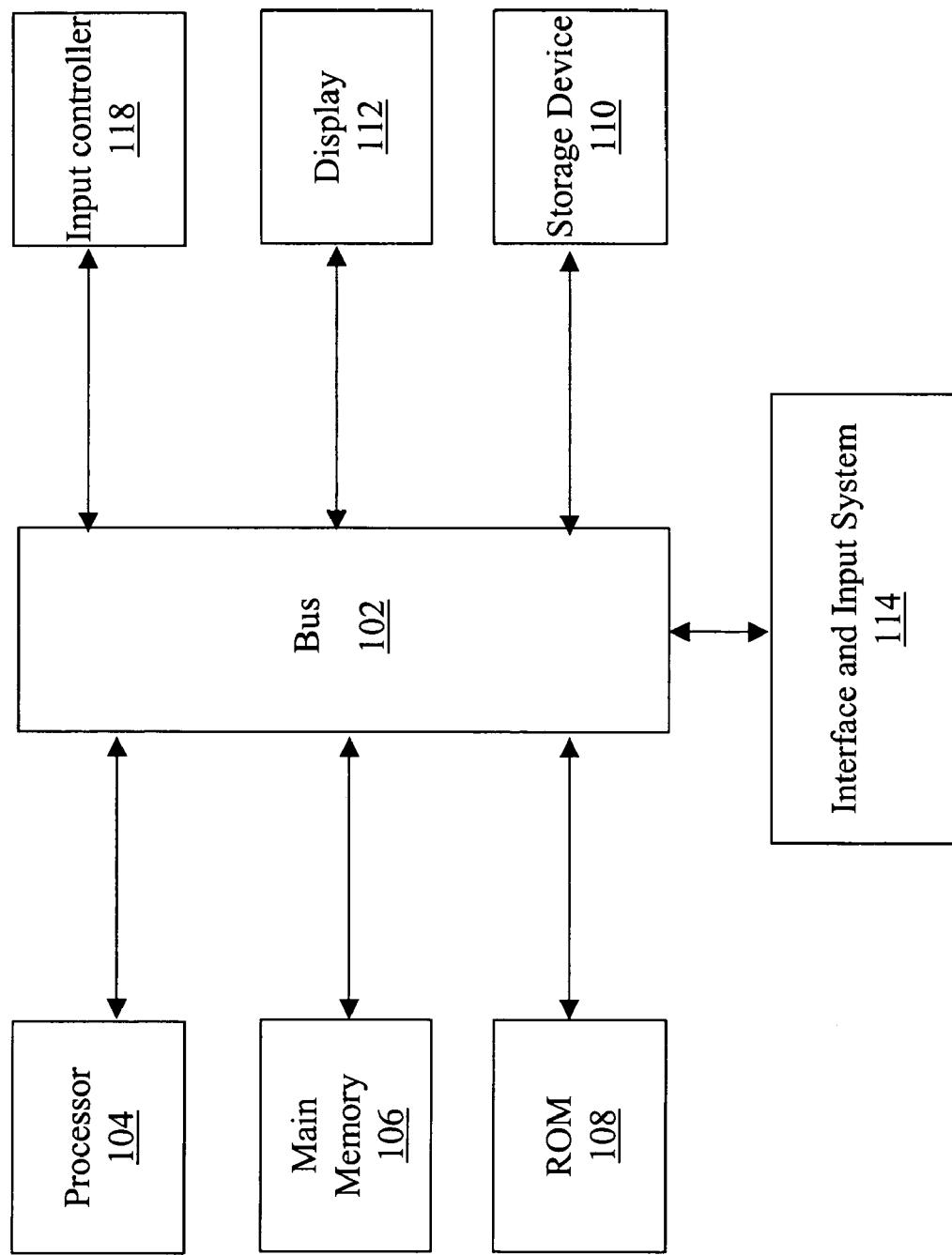
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Fig. 1



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