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(54) **COMPLEX CONFIGURATION PROCESSING USING CONFIGURATION SUB-MODELS**

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(52) **U.S. Cl.** **706/60**
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See application file for complete search history.

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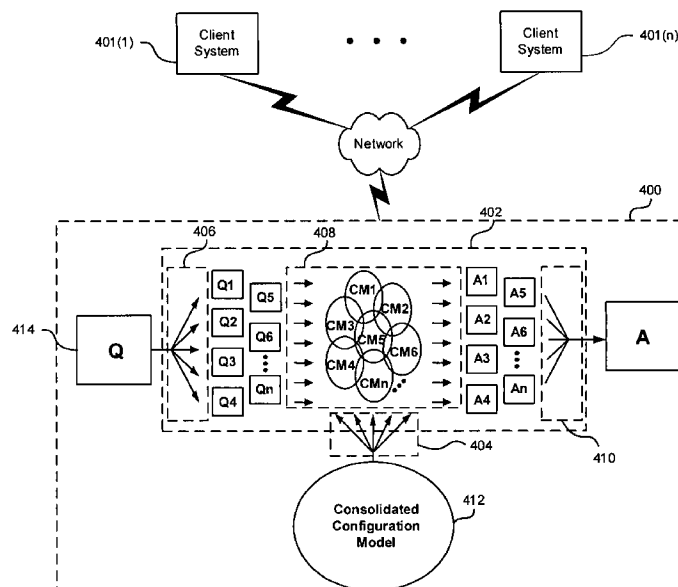*Primary Examiner*—Michael B. Holmes
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(57) **ABSTRACT**

A configuration model dividing and configuration sub-model inference processing system and procedure addresses the issue of configuration model and query complexity by breaking a configuration problem down into a set of smaller problems, solving them individually and recombining the results into a single result that is equivalent to a conventional inference procedure. In one embodiment, a configuration model is divided into configuration sub-models that can respectively be processed using existing data processing resources. A sub-model inference procedure provides a way to scale queries to larger and more complicated configuration models. Thus, the configuration model dividing and configuration sub-model processing system and inference procedure allows processing by a data processing system of configuration models and queries whose collective complexity exceeds the complexity of otherwise unprocessable conventional, consolidated configuration models and queries.
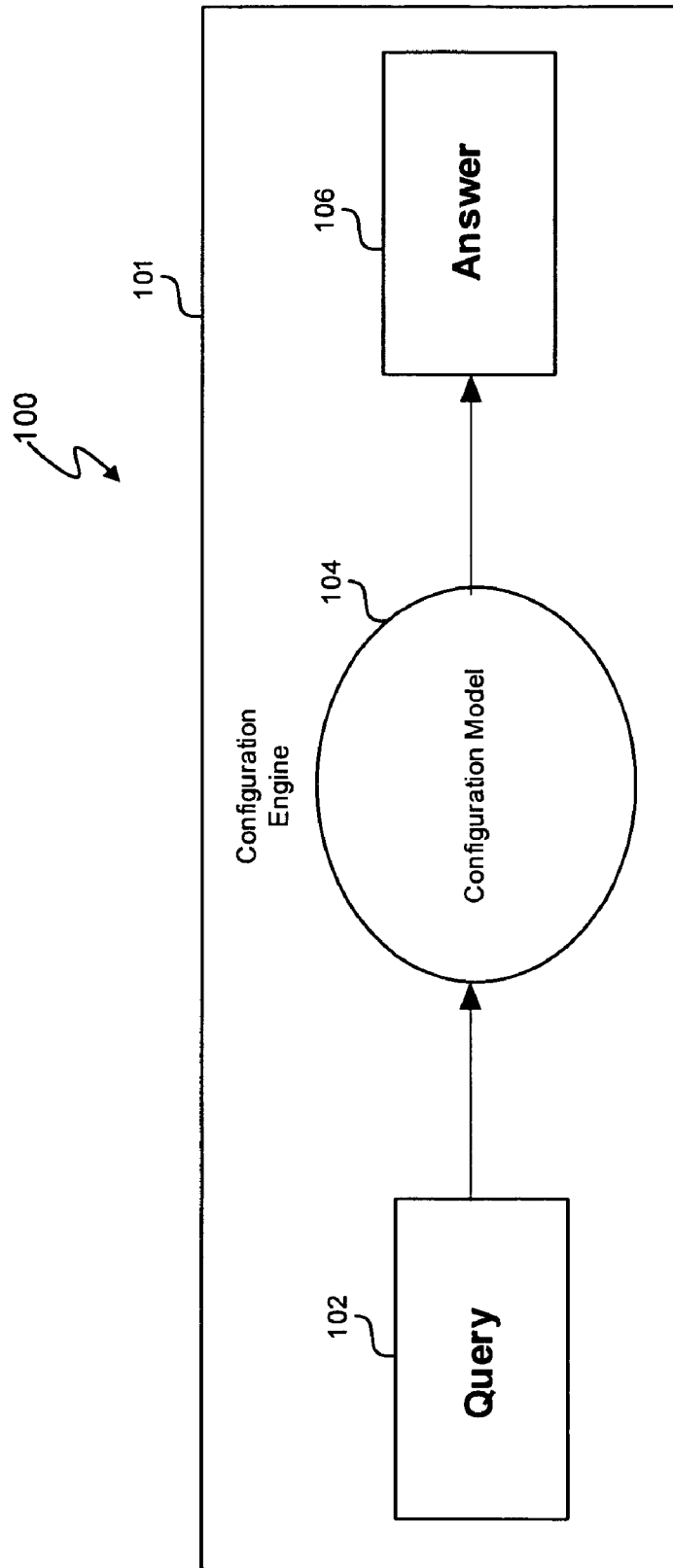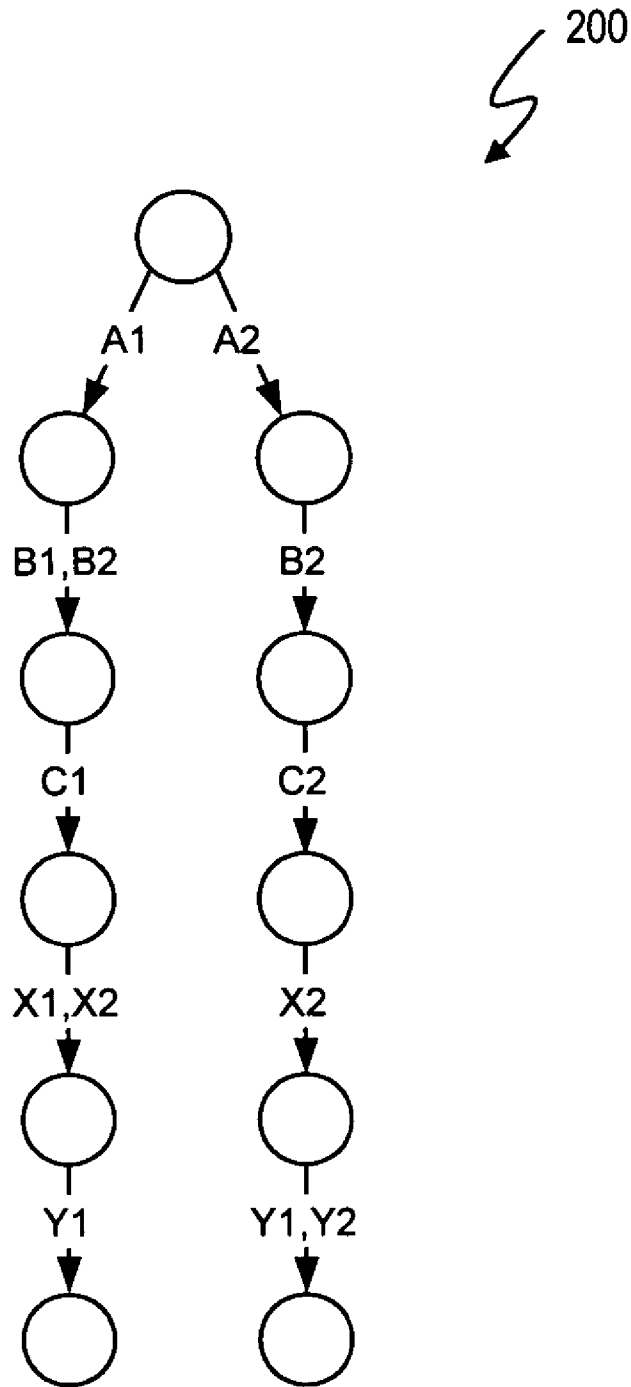
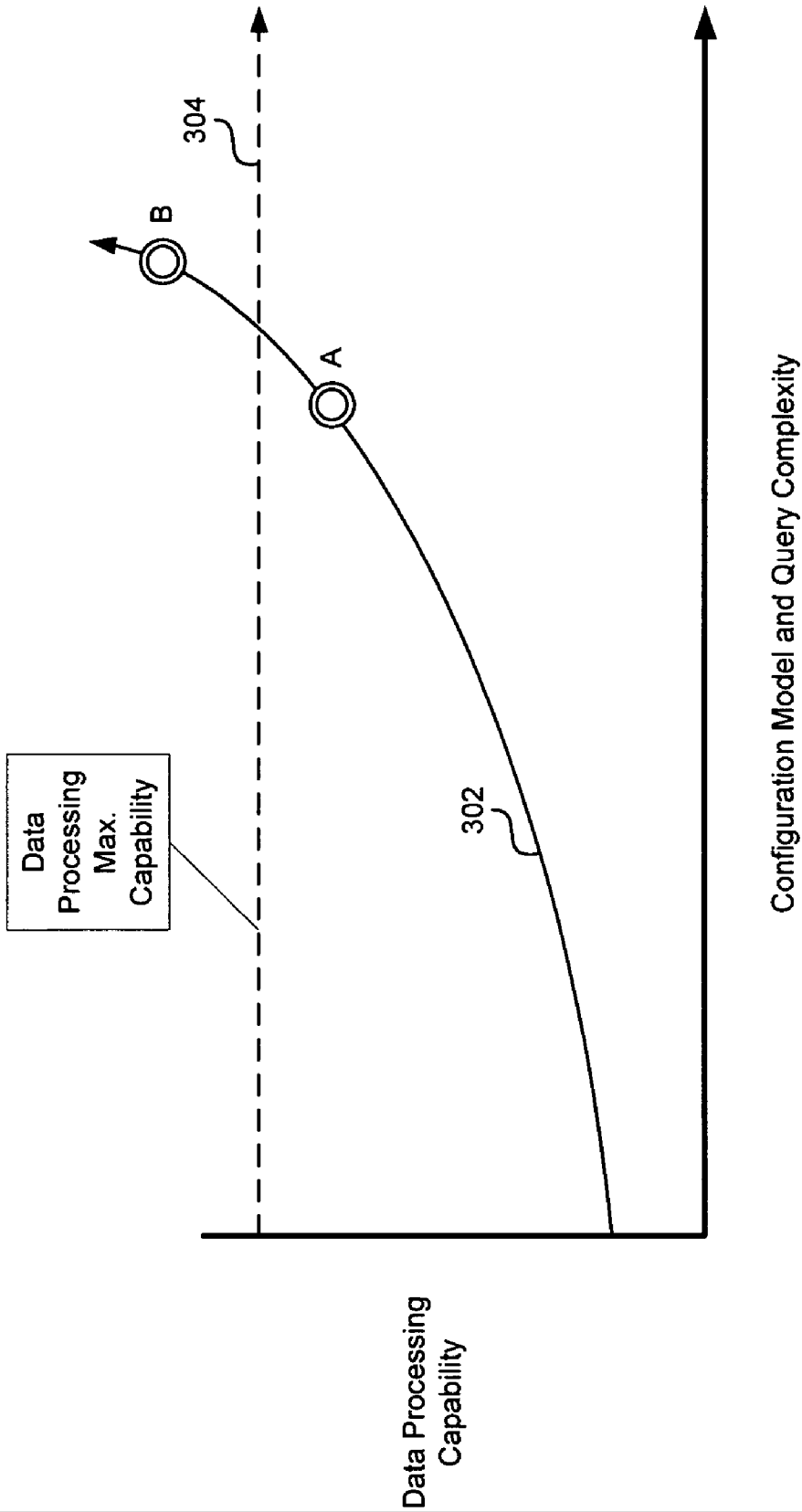**46 Claims, 8 Drawing Sheets**

Figure 1 (prior art)

200

A1   A2

B1,B2   B2

C1   C2

X1,X2   X2

Y1   Y1,Y2

Figure 2 (prior art)

Figure 3 (prior art)

Figure 4

DOCKET ALARM
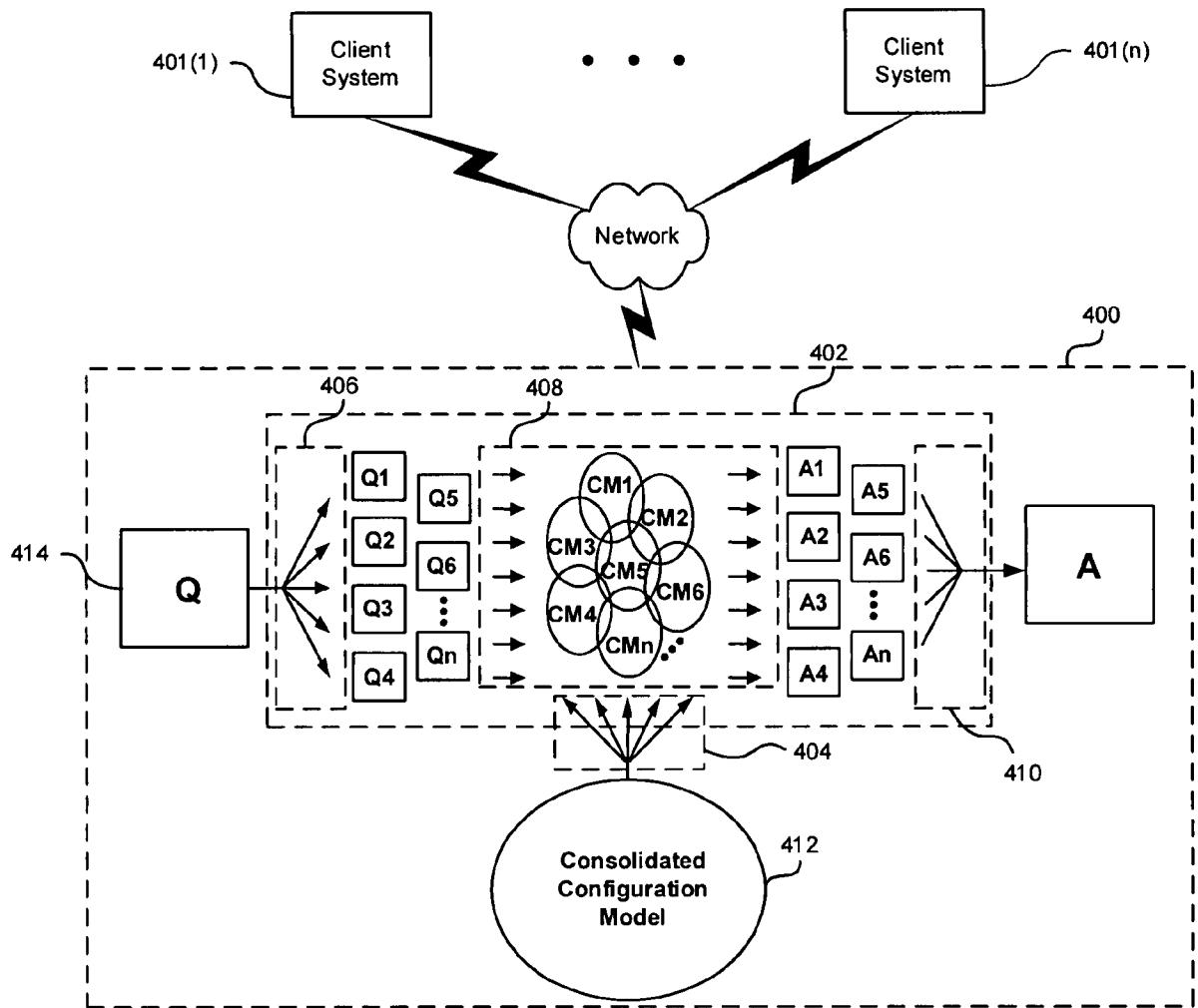
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