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Loomans

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(54) **TECHNIQUES FOR MANAGING MULTIPLE THREADS IN A BROWSER ENVIRONMENT**

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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 0 days.

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Related U.S. Application Data

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(51) **Int. Cl.⁷** **G06F 9/00**

(52) **U.S. Cl.** **718/102; 709/203; 709/204; 709/205; 709/206**

(58) **Field of Search** **709/102, 200-210, 709/310, 322; 707/526; 713/1; 718/102**

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 5,708,798 A 1/1998 Lynch et al.
- 5,745,765 A 4/1998 Paseman
- 5,825,651 A 10/1998 Gupta et al.

- 5,889,990 A * 3/1999 Coleman et al. 709/322
- 5,918,239 A * 6/1999 Allen et al. 707/526
- 6,128,640 A * 10/2000 Klienman 709/102
- 6,175,877 B1 * 1/2001 Zerber 709/310
- 6,256,673 B1 * 7/2001 Gayman 709/232
- 6,415,316 B1 * 7/2002 Van Der Meer 709/203
- 6,438,592 B1 * 8/2002 Killian 709/224
- 6,516,338 B1 * 2/2003 Landsman et al. 709/203

FOREIGN PATENT DOCUMENTS

WO WO 9939265 * 8/1999 G06F/9/44

* cited by examiner

Primary Examiner—Meng-AI T. An

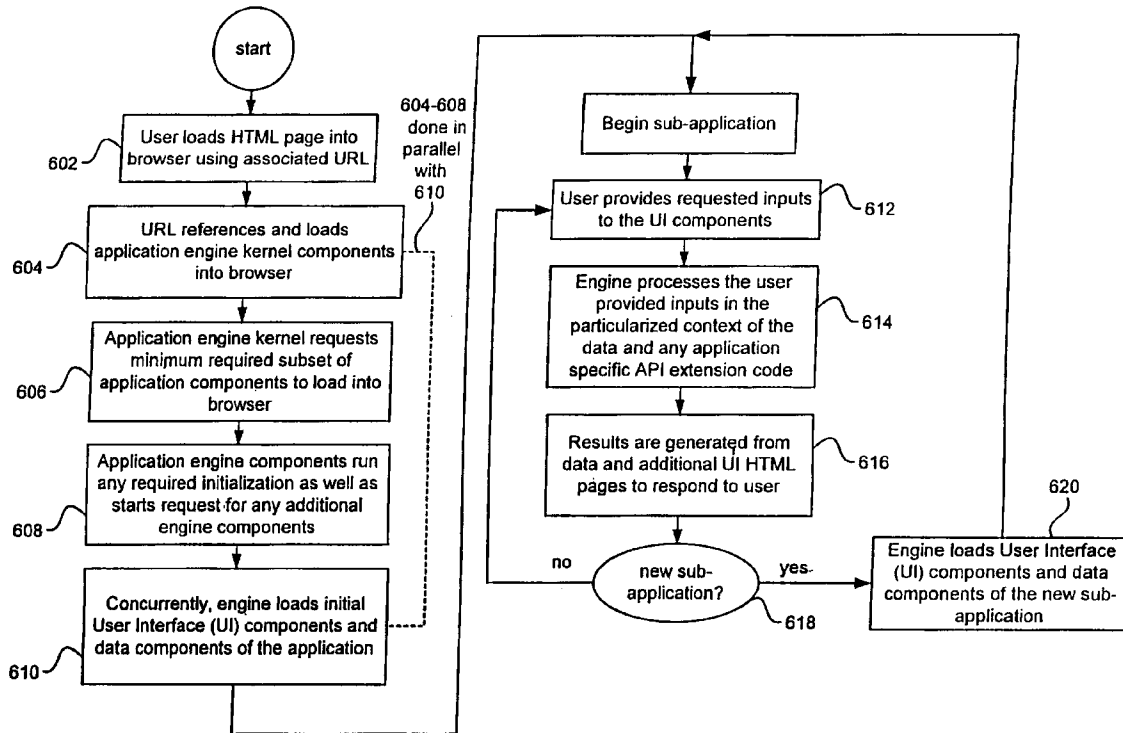
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(57) **ABSTRACT**

Techniques for managing multiple threads in an asynchronous environment, such as a browser, are described. As a method, instantiating an event thread in response to a user event by a shell event handler block that provides shell functions for a user event. Once the event thread has been instantiated, managing the event thread by a generic thread manager block that provides a plurality of multithread management functions for the shell event handler. When required, blocking and unblocking the event thread by a blocking system that is arranged to block and unblock threads.

11 Claims, 7 Drawing Sheets



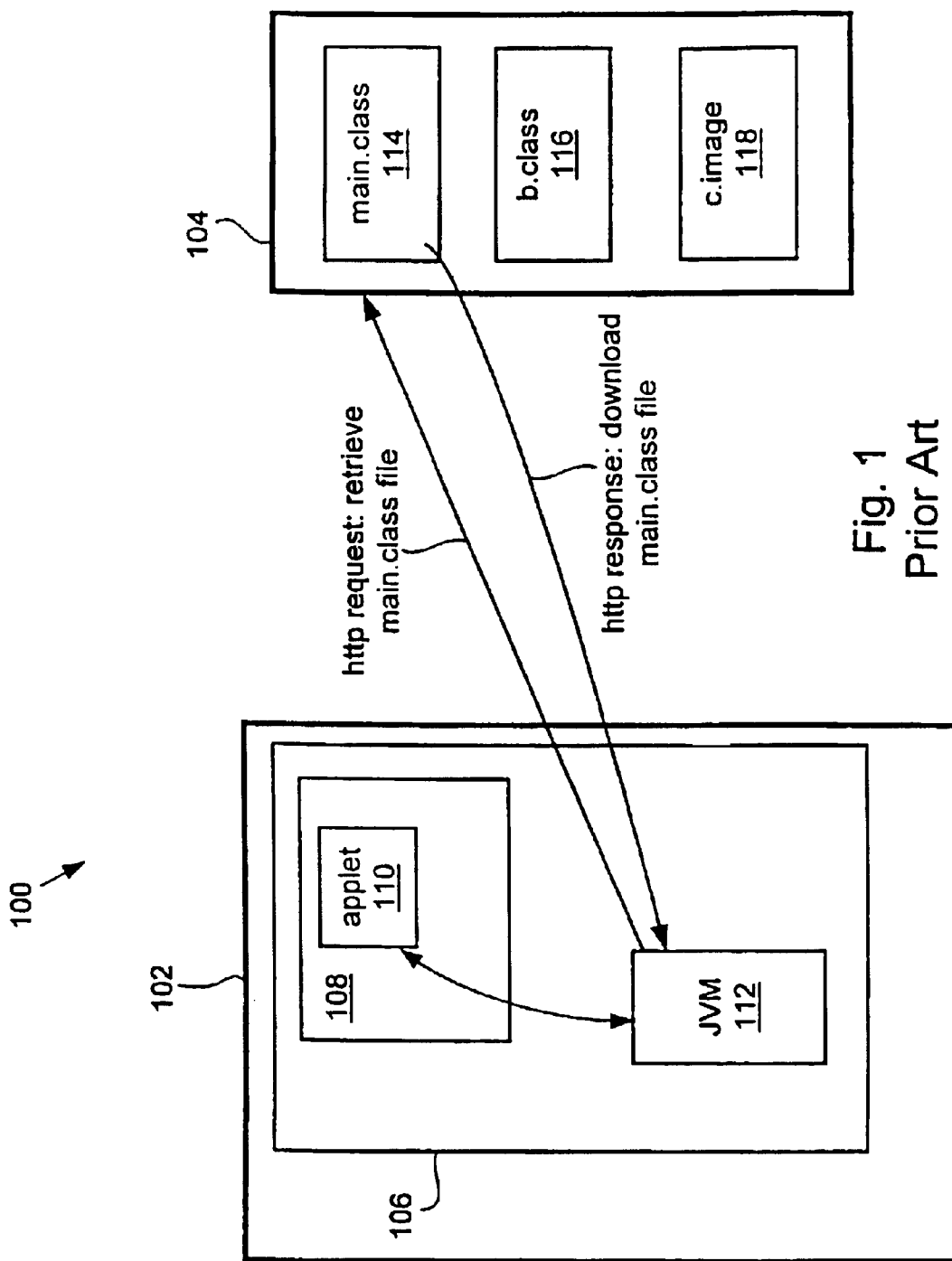


Fig. 1
Prior Art

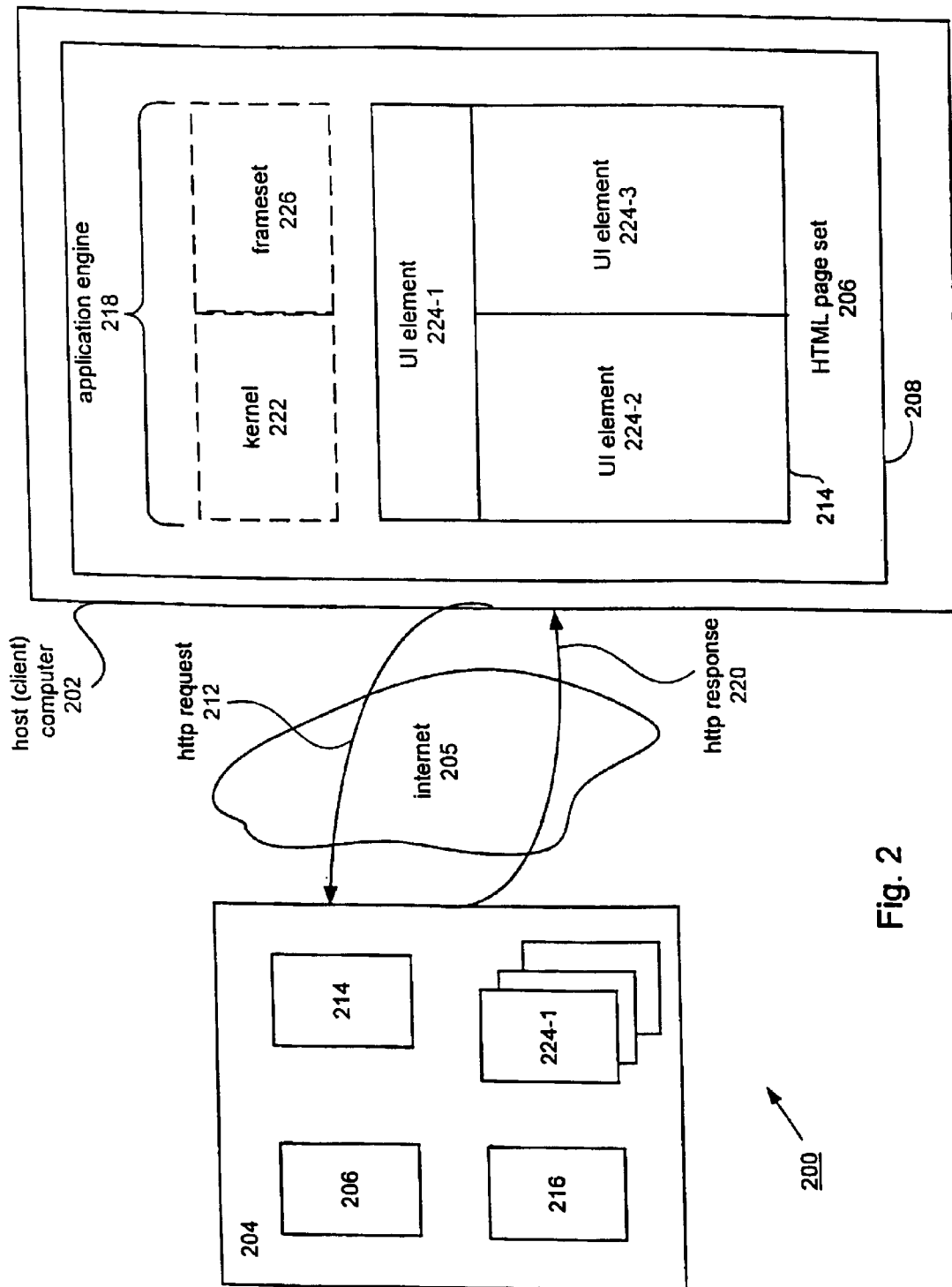


Fig. 2

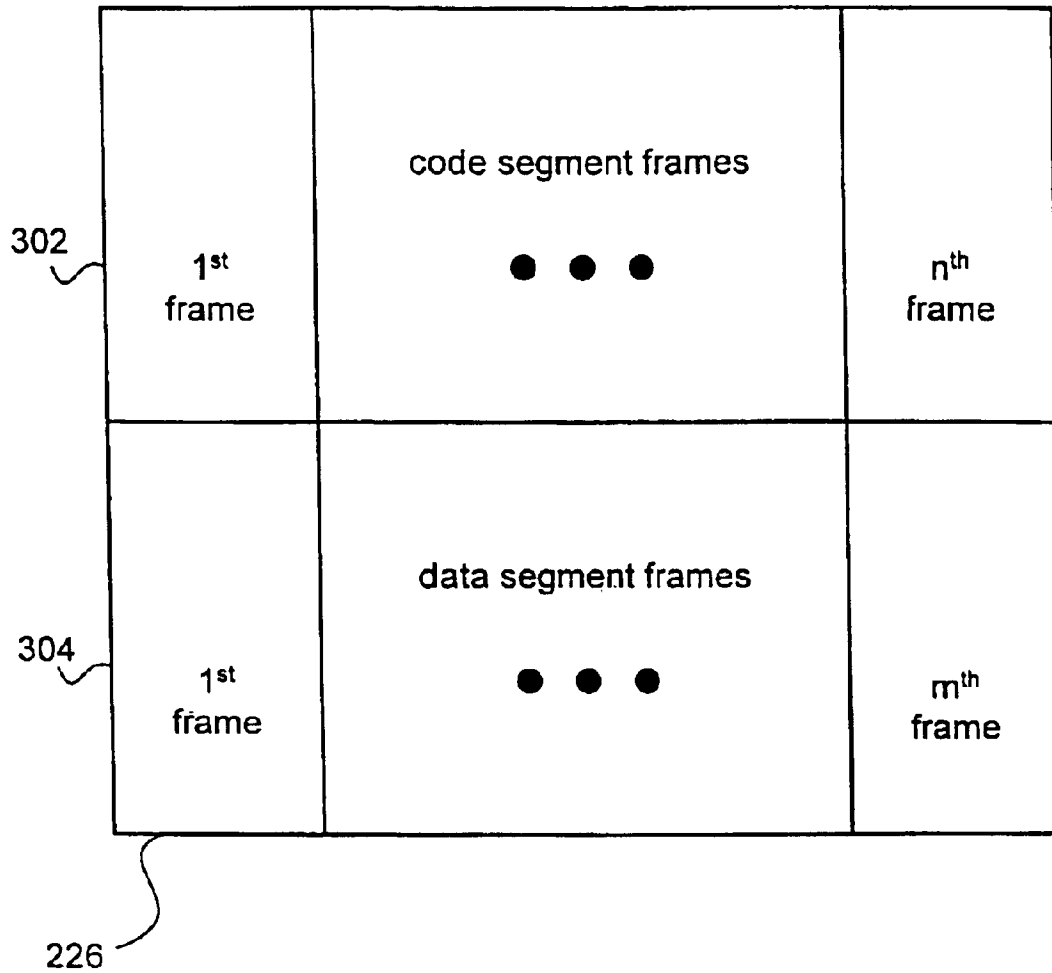


Fig. 3

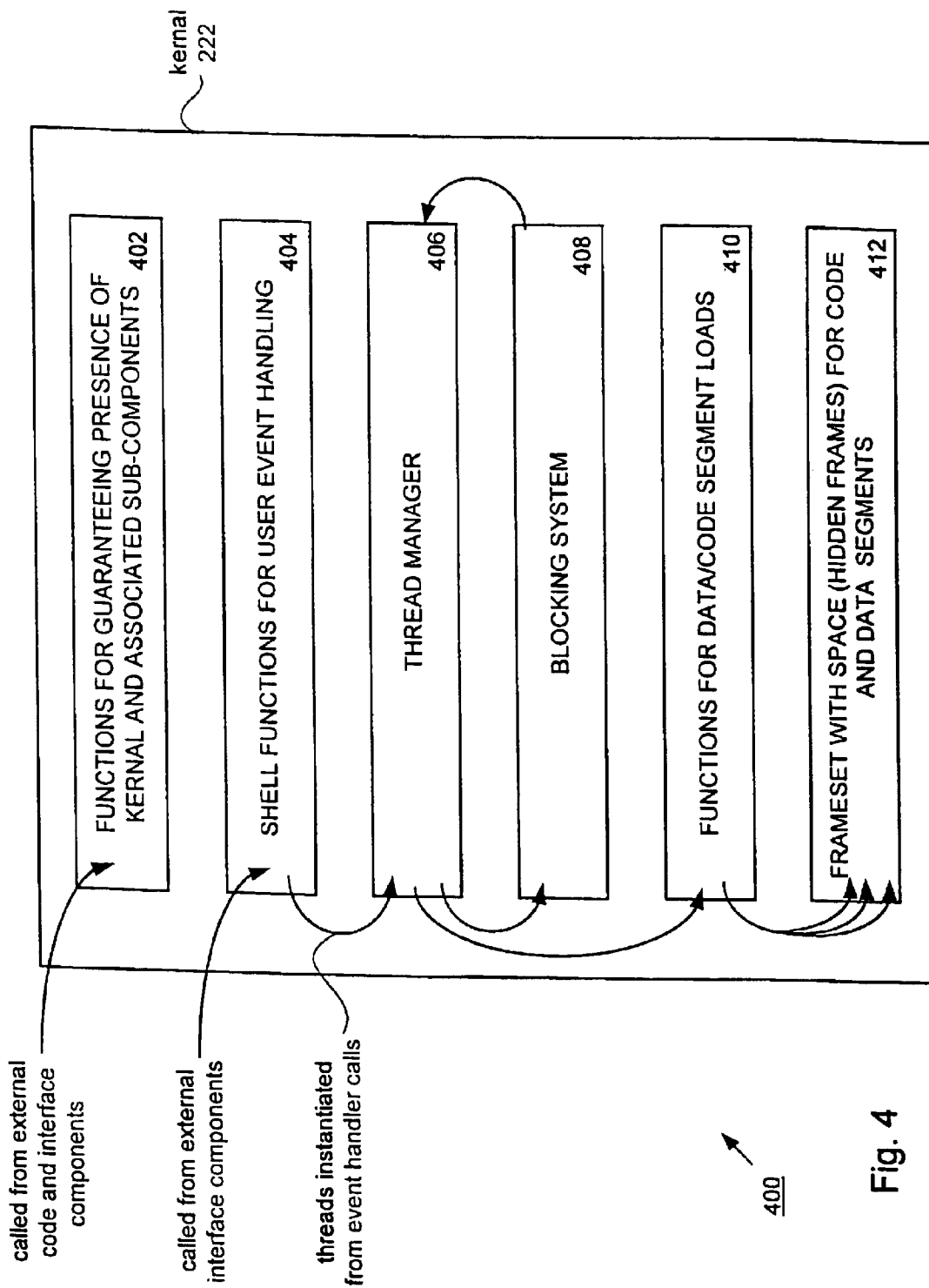


Fig. 4

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