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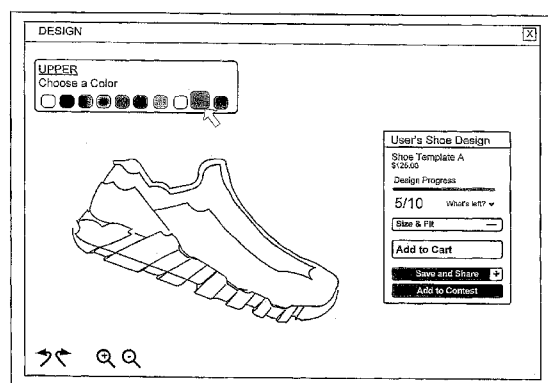


Fig. 3

(57) Abstract: Computer based systems and methods allow designing of (e g, customization) consumer products, such as articles of footwear, apparel, athletic equipment, etc, by users A first embodiment is a method, including the steps of receiving design input for a product from a computing device operated by a user, associating the design input with an electronic file, assigning one or more search tags to the electronic file, and storing the electronic file in a searchable database

ON-LINE DESIGN OF CONSUMER PRODUCTS

RELATED APPLICATION DATA

- [01] This application claims the benefit of U.S. Provisional Patent Appln. No. 61/182,704, filed May 30, 2009 in the names of Tiffany L. Paul, Heather A. Mahoney and Michael J. Woods and entitled "On-Line Design of Consumer Products." This priority application is entirely incorporated herein by reference.

FIELD OF THE INVENTION

- [02] The present invention relates to systems, methods, and computer generated user interfaces for design of (e.g., customization of) consumer products, such as articles of footwear, articles of apparel, athletic equipment (e.g., bags, gloves, watches, socks, uniforms, protective equipment, pads, team gear, etc.).

BACKGROUND OF THE INVENTION

- [03] Recent years have ushered in dramatic advancements in electronic computing devices and their capabilities, including dramatic advances in the information readily available to such devices (e.g., over the internet or other networked connections) and communications capabilities between such devices, including hand-held devices. While advances have been made, certain drawbacks still remain. The present invention takes advantage of these technological advances in the on-line commerce field and provides features not currently available in prior systems.

BRIEF SUMMARY OF THE INVENTION

- [04] Various aspects of this invention relate to systems and methods for designing (e.g., customization of) consumer products, such as articles of footwear, by users of computing devices. Various users may participate in an on-line or other computer communicative session to create and buy customized products.
- [05] Additional aspects of this invention relate to user interfaces provided on computing devices that allow users to design consumer products, such as articles of footwear.

Each user's computing device may generate a user interface that displays a rendering of the product being designed as the design is being made. The user interfaces are generated by computer readable media including computer executable instructions stored thereon for generating a desired user interface on a display device, wherein the computer executable instructions provide systems and methods and accept users' input for product (e.g., footwear) design.

- [06] While described above in conjunction with articles of footwear, aspects of this invention also may be practiced in conjunction with design of other products, such as apparel (including athletic apparel, uniforms, etc.) and athletic equipment (such as balls, bats, gloves, bags, protective equipment, team gear, pads, hockey sticks, watches, socks, etc.).

BRIEF DESCRIPTION OF THE DRAWINGS

- [07] The above-noted and other features and aspects of the invention will become more apparent from the following detailed description, when considered in conjunction with the appended drawings, wherein:
- [08] Figures 1-3 illustrate example user interface screens through which product customization functionality in accordance with examples of this invention may be launched.
- [09] Figure 4 illustrates an example user interface screen with the save and share feature activated in accordance with aspects of this invention.
- [10] Figure 5 illustrates an example login user interface screen according to aspects of this invention.
- [11] Figure 6 illustrates an example registration user interface screen in accordance with aspects of this invention.
- [12] Figures 7 and 8 illustrate example user interface screens relating to a share your story functionality in accordance with aspects of this invention.

DETAILED DESCRIPTION OF THE INVENTION

I. General Description of Design Systems and Methods According to Examples of this Invention

- [13] In general, as described above, some aspects of this invention relate to systems and methods for designing consumer products, such as articles of footwear, apparel, and/or athletic equipment.
- [14] Any desired type of footwear design data may be controlled, altered, or customized by a user of systems and methods according to this invention, such as: a color of a portion of the article of footwear (e.g., the various upper portions or elements, the various midsole portions or elements, the various outsole portions or elements, etc.); pictorial or other graphical data that may be printed or otherwise provided on the shoe, including the picture or graphical data itself (i.e., so the picture or graphic can be generated), as well as data identifying the desired location for the picture or graphic on the shoe, the picture or graphic size, the picture or graphic orientation, etc.; logo data that may be provided on the shoe (e.g., the footwear manufacturer's logo, a team or group logo, etc.), including the logo data itself (i.e., so the logo can be generated), as well as data identifying the desired logo location on the shoe, the desired logo size, the desired logo color(s), the desired logo orientation, etc.; textual data that may be provided on the shoe, including the textual data itself (i.e., so the text can be generated), as well as data identifying the desired text location, the desired text size, the desired text color, the desired text orientation, the text font, etc. If desired, systems and methods according to at least some examples of this invention further may allow a user to select from a variety of materials or other characteristics for various portions of the article of footwear, such as different upper material(s); midsole material(s); outsole material(s); upper thickness(es); midsole thickness(es); outsole thickness(es); midsole stiffness characteristics (such as the stiffness of foam, fluid-filled bladders, or other materials making up the midsole); outsole tread patterns; arch support characteristics; impact-attenuation characteristics; size, orientation, and/or location of openings or windows in the outsole, midsole, and/or upper; patterns of openings provided in the outsole,

midsole, and/or uppers; laser cutting designs and/or characteristics; laser etching designs and/or characteristics; etc.

- [15] While described above in conjunction with design of articles of footwear, aspects of this invention also may be used for design of other consumer products, such as articles of apparel, athletic equipment, etc.
- [16] In the footwear example, a user may be permitted to select various features of the footwear and manipulate the visual image of the footwear from a website that is displayed on the user interface. The user interface may display one or more tools for changing aspects of or otherwise manipulating various design data of the footwear, as described above. Some design tools may include features like a color palette or color menu that allows users to change a color of a selected portion of the article of footwear; one or more orientation elements that allow users to change an orientation of the article of footwear as rendered in the first display portion; one way, two way, or multi-way user communication elements or features (such as textual input and display panel(s), instant messaging capabilities, audio and/or video communication capabilities, etc.); etc.
- [17] Users may use computing devices to access the design website. The computing devices establish a communication channel within a network and communicate with a messaging server system (comprising one or more server computers) that provide interactive design features used to change the design of a product. Any desired communication link and communication protocol may be used to provide and control the data exchange between computing devices and the system. Users may use a computing device to connect to the online design system via a network, such as the Internet, a local area network (LAN), a wide area network (WAN), or the like. Users may connect their computing devices to the system via any communication channel, such as website portals and application from various social networking websites that link to the website portal of the manufacturer.
- [18] Any desired types of computing devices may be used without departing from this invention, such as any computing device capable of establishing a networked connection and/or a peer-to-peer connection and capable of providing the necessary

display, user interface, and input capabilities, as will be described in more detail below. Some more specific examples of computing devices that may be used in systems and methods in accordance with at least some examples of this invention include, but are not limited to: desktop computers, personal computers, laptop computers, palmtop computers, handheld computers, cellular telephones, personal digital assistants, computer workstations, televisions, and the like.

[19] Computing devices that may be used in systems and methods in accordance with examples of this invention may include one or more input devices and a data processing system (e.g., including one or more microprocessors). Examples of input devices that may be included with the computing devices include, but are not limited to conventional input devices, such as: a keyboard (hard keyboard or soft keyboard); a mouse, trackball, rollerball, touchpad, or other pointing device; a stylus or other pen-type input device (e.g., for a tablet PC type computing device); a disk drive; a USB port; a network connection; a joystick type controller; a telephone connection; an Ethernet connection; voice recognition capabilities; etc. Also, any desired type of display device may be provided for use in conjunction with the computing devices of systems and methods according to this invention, including display devices integrated with the computing device itself or display devices separate from the computing devices but in communication therewith, such as projector displays, separate monitor displays, etc.

[20] The computing devices may be connected to a network in any desired manner without departing from this invention, including in conventional manners that are known and used in the art, such as any conventional wired or wireless connection and using any network connection protocol. Systems and methods in accordance with examples of this invention also will provide a user interface display on the user's computing device. This interface will allow the user to see the subject matter of the design effort and will allow the user to introduce his/her input to the design effort. The user interfaces on various devices will be provided and controlled by the user's computing device and/or by the server system, and data for generating, maintaining, and receiving input through the user interfaces will be generated and provided via computer readable media included as part of or associated with the

computing device and/or the server system. Examples of such computer readable media include, but are not limited to: computer-readable memories, both internal to a computer (*e.g.*, hard drives) or separable from the computer (such as disks, solid state or flash memory devices, data available over a networked connection, etc.), including any type of computer readable media that is conventionally known and used in the computer arts.

[21] The software for generating the user interface may reside on computer readable media present on or available to the computing device or server system. Alternatively, if desired, the software, or at least some portion(s) thereof, may reside on more than one computing device or server system. The sever system may be operated and maintained by the same organization(s) or individual(s) that operate and maintain the computing device and/or network, or the server system may be operated, controlled, and maintained by a party separate from any or all of these entities. As some more specific examples, server system may be operated and maintained (and the user interface software also may be operated and maintained) by one or more entities whose products are being marketed through the design systems and methods described below (*e.g.*, a manufacturer, a retailer, a vendor selected by a manufacturer or retailer, etc.).

[22] Given this general background and information, more detailed information regarding specific examples of systems, methods, computer-readable media, and user interfaces in accordance with this invention will be described in more detail below. It should be understood that this more detailed description relates to various specific examples of the invention and their features and functionality, and this description should not be construed as limiting the invention.

II. Specific Examples of Design Systems and Methods According to Examples of this Invention

[23] Various features of product design systems, methods, and user interfaces (*e.g.*, generated by a computing device for accepting user input and providing a user with information regarding the design) will be described in more detail below. Those skilled in the art will appreciate that the following description and the attached drawings merely represent examples of potential features, functionality,

arrangement of interface components, orientation of interface components, combinations of interface components, and the like, of systems, methods, and user interfaces in accordance with this invention.

[24] In at least some examples of this invention, a design session may be launched or initiated from an individual user's visit to a website, such as via a website of a manufacturer of the product being designed. Figure 1 illustrates an example user interface screen 100 (as may be generated on a computing device) in which a user is involved in an on-line design experience for shoes. On-line design websites may display various products available for custom design, e.g., in one portion of the interface display 100, such as product display panel 102, which shows a variety of footwear products, in various different models, etc., optionally from various different manufacturers and/or retailers. These various different models of the product (footwear) may include template or "base" models that are available for a user to select as the first step of the design process. Such "base" models or templates may be added to or changed based on the user's selections during the design process. User input may be accepted in such systems and user interfaces, e.g., through a mouse, trackball, keyboard, rollerball, touch screen, stylus, joystick, etc., and a user may be allowed to interact with the interface and make selections using a selection device, like pointer device 104 controlled by a computer mouse or other input device. In the illustrated example display 100, the user has selected "Shoe Model C" and the product information panel 106 provides information about this selected product. Any desired product information may be provided without departing from this invention.

[25] If desired, user interfaces for websites may be provided with one or more ways to launch product customization systems and methods. This is shown in the example of Figure 1 as a "Customize" button 108 that the user can select (selection shown by blackening the button 108 in Figure 1) in order to launch a product customization session.

[26] Product design customization also may be initiated from other web-sites or other on-line experiences without departing from this invention, such as through direct

interaction with a dedicated product design website, through a product manufacturer's website, etc.

- [27] Figure 2 illustrates an example of a user interface response that might take place as a result of initiation of a footwear product customization system and method as described above in conjunction with Figure 1. In this illustrated example, an overlay screen portion or text box 200 is provided that requests information from the user in order to launch the customization session. For example, the box 200 may request entry of the user's name, email address, account number, user ID, password, credit card number, etc. The request(s) for information may be provided to the user in any desired manner or format without departing from this invention, such as via text input boxes, drop down listings, lists, icons, buttons, etc. Once all necessary or desired information is input, the customization session can be launched by user input at the "Start Designing" icon 202 (or in any other desired manner). Optionally, if desired, a customization session can be launched directly from the screen of Figure 1, without the need for input of this type of additional information, without departing from this invention. This may be done, for example, if the customization system will allow the process to be performed anonymously, if the ID information for the computer starting the session is already stored and available from a previous customization session, etc. Also, ways of requesting this information using other than an overlay or text box 200 may be used without departing from this invention, such as transfer to a new website, launching of new application program and/or its user interface, etc.
- [28] Initiation of a design session may result in generation of a Customization Session Identification Number (e.g., a unique "Session ID") for the session (e.g., by a server or other computing device that will be in control of the session and the transfer of data relating to the session). Also, initiation of a design session may result in the launch of a new customization webpage or website or a customization application program, e.g., to create an example user interface screen 300 like that shown in Figure 3. The user interface 300 may include various customization features, in any desired arrangement, orientation, or display, without departing from this invention. In this illustrated example, the user interface 300 includes a portion 302 in which

the product being customized appears, a “color palette” portion 304 for selecting colors for various parts, one or more controllers 306 for changing the appearance or view of the product in portion 302 (such as rotation controls, zoom-in, zoom-out, change in views shown, etc.), an “undo” control (to eliminate the last action), a “redo” control (to re-do a previously erased action), a cost information panel, and a product design information panel 308. While the product design information may be provided in any desired manner without departing from this invention, in this illustrated example, the product design information panel 308 provides information about the various portions of the article of footwear being designed, such as color information, size information, material information, personalization message information (e.g., content, size, location, color, etc.), logo information (e.g., size, location, color, etc.), etc.

- [29] Other features and functionality may be provided in the customization interface, if desired, without departing from this invention. The following features and functionality may be provided in some manner via the interface: the ability to directly return to a previously viewed website, the ability to save the design, the ability to print the design, the ability to store this design at a location for sharing with others (which may launch an interface that allows one to identify specific persons, classes of persons, or groups (public or private) with whom the design may be shared), the ability to “return to the default” design (e.g., to the blank product on which the customization process was initiated for this product or some other intermediate default design (optionally selected and stored by the user), and the ability to exit or quit the session.
- [30] As an additional potential feature, systems, methods, and computer interfaces in accordance with at least some examples of this invention may allow the user to get “inspiration” or “on-line help” during the design or customization process. While any desired information may be provided in response to user interaction with this portion of the interface, in some examples, the systems, methods, and computer interfaces may display to the user information such as: a display of one or more other user designs of the same product (or a selected portion of the product); a display of one or more other user designs of a product (or a selected portion of a

product) having the same or similar uses, characteristics, or functions; a display of one or more other user designs by users with similar tastes or interests (e.g., same favorite sports team, same favorite recreational activities, etc.); users from the same geographical region; users from the same age group; users from the same profession; etc.); suggestions for different colors or color combinations that might match well with existing portions of the design (e.g., complementary colors); information regarding popular colors or color combinations for one or more portions of the design (e.g., from previously designed products or inventory); and/or any other desired information (including information relating to the specific product or product line or other interesting designs or inspiring information). This interface also may include functionality to allow the user to immediately purchase the customized shoe at any time during the design process.

- [31] Another feature that may be included in the computer interface is a “last action” capability, which allows users to view the last several steps in the design session (and possibly scroll to see all steps in the design session), more details regarding the individually displayed step (e.g., more specifics about the logo color, position, size, or orientation selections, etc.), or the like. The “last action” tool may allow users to select any desired individual step for further action, such as an “undo” action (to undo that step), a “view” change action (e.g., to cause the interface to highlight the change made at that step in the users’ views), a reselection action (e.g., to cause the interface to reselect the same part for further action), etc.
- [32] Changes to various selected portions of the shoe design may be made in any desired manner without departing from this invention. For example, a user might first use the pointer to “select” some specific part of the shoe (e.g., the heel reinforcement part 900, a visible portion of the midsole, a portion of the outsole, the tongue, eyelets, laces, toe cap, tread elements, etc.). Interface elements also could be provided to allow user selection of and changes to parts of the article of footwear that may not be visible, such as fluid-filled bladders, plates in the sole, etc. Once selected, the user can make changes to that element. For example, to change color of a part of the shoe, first the user may move the pointer over the depiction of the desired part in the display portion and “click” a mouse button (or other input device)

to “select” that part. This selection action may cause the interface to highlight the part in some manner, such as by enlarging it, coloring it differently, or by bolding the external boundary of it. Then, with the part highlighted, the pointer may be moved to select a color from the color palette (e.g., from a color display chart, from preselected color tiles or elements available for that part, from a menu, etc.). When the new color is selected (e.g., by the user again clicking the mouse button or otherwise entering selection input), the systems, methods, and user interfaces according to this invention may immediately change the color of that part on that user’s screen. In addition to color changes for the various parts, users could select various other features for customization, such as tread designs, midsole thickness, outsole thickness, midsole window sizes and/or locations (which may allow a view of internal structures of the midsole, such as a fluid-filled bladder, etc.), number of eyelet pairs, etc. Any desired structural, design, or other changes may be made to the shoe design in this general manner without departing from this invention.

- [33] Another example feature of systems, methods, and computer interfaces in accordance with at least some examples of this invention relates to a “cost” or “pricing” box. This element of the user interface tracks the cost of article of footwear in its present design state. As one or more features of the shoe are designed or changed, this may cause the cost of the shoe to change somewhat (e.g., if more expensive materials are used, if a large amount of personalization or customization is requested, if additional production steps or different production techniques are required, etc.). The interface may maintain a price display so that the user can be aware of which changes to the design have caused a shift in price, and the user may be better able to control the final price of the product.
- [34] Another potential feature that may be included in systems, methods, and computer interfaces in accordance with at least some examples of this invention includes a “cost variations” icon (although other interface elements may be used to activate this functionality). User selection of this interface element may provide users with information and an opportunity to change various features of the designed shoe to either increase or decrease its costs (optionally, with little or no performance change, although any anticipated effect on performance may be displayed for the

user to consider (e.g., “less breathability,” “more stiff feel,” etc.). For example, interaction with this interface element may provide shoe “upgrade” information, which could advise the user of various potential “upgrade” features available, the performance changes (if any), and the costs associated with making such an upgrade. As a more specific example, a change in material for some portion(s) of the upper or sole structure may make the shoe more comfortable, more stable, and/or otherwise affect its performance characteristics. As another example, the interface may advise the user of the costs associated with adding another design element or feature to the shoe (e.g., adding an additional personalized message, adding a picture or graphic, etc.) or changing an existing design element or feature (e.g., changing sizes of various design elements or personalization elements, changing materials, etc.). The cost change associated with eliminating a design element or feature also may be provided. Systems, methods, and computer interfaces according to the invention may display a list of various options to the user with the cost differential associated therewith, or in some other manner make this type of cost variation information available to the user.

- [35] Various additional potential features and functionality may be included in systems, methods, and user interfaces in accordance with at least some examples of this invention. For example, a personalized message may be placed on the lateral side of the shoe in lieu of the usual location of the manufacturer’s logo. Users can launch this “personalized message” feature in any desired manner, such as via a toolbar menu item by interacting with an “add message” icon (e.g., by selecting the “add message” icon using a pointer device). Interaction with this icon may cause a text insertion box to pop up (at least on the selecting user’s computer interface screen), and the user may be able to type or write in any desired message using that insertion box (optionally, the available message length may be limited based on available space at the desired location for the message). The user selecting the icon also could select other features of the message such as font, size, location, orientation, line breaks, etc. If desired, systems, methods, and user interfaces in accordance with examples of this invention also may allow the user to drag the message around (e.g., using the pointer device) to aid in positioning or orienting the message with respect to the shoe structure. The personalized message may be

applied to any desired portion of the shoe structure being designed, such as the upper, the midsole, the outsole, the interior bootie, the tongue element (top side or underside), etc., and even to multiple parts of the shoe, if desired.

[36] In a similar fashion to the text message described above, a graphic element may be placed on the shoe structure, such as a picture, graph, icon, avatar, clip art, or other graphic element. Users can launch this “graphics insertion” feature in any desired manner, such as via a toolbar menu item or by interacting with an “add graphic” icon. Interaction with the “add graphic” icon may cause a graphic file selection box to pop up, and the user may be able to choose a saved file corresponding to the desired graphic for insertion into the shoe structure using that selection box. The user selecting the icon also could select other features of the graphic such as size, location, orientation, etc. If desired, systems, methods, and user interfaces in accordance with examples of this invention also may allow the user to drag the graphic around (e.g., using a pointer device) to aid in positioning or orienting the graphic with respect to the shoe structure. The graphic may be applied to any desired portion of the shoe structure being designed, such as the upper, the midsole, the outsole, the interior bootie, the tongue element (top side or underside), etc., and even to multiple parts of the shoe, if desired.

[37] After a user has completed a design for an article of footwear (or any other article of interest), the user may select various features from the design website including purchasing the custom designed footwear, adding the custom design to a contest, and selecting the “save and share” tool. Users may enter their custom design into contests offered by various entities, such as the manufacturer of the footwear or product, the entity maintaining the custom design website (which may be the manufacturer), and/or any third party. Figure 4 illustrates an “add to contest” icon that would permit the user to enter the custom design into such a contest.

[38] The user may select the “save and share” tool from the design website, which may launch a new webpage or website or an overlay screen portion or text box that presents various options to the user, as illustrated in Figure 4. The “save and share” tool may be launched by selecting the “save and share” icon illustrated in Figure 4. Selection of the “save and share” icon may cause the “save and share” overlay

screen to appear on the computer interface. The “save and share” overlay screen may provide the user with one or more selections relating to the electronic storage and sharing of the custom-designed footwear that the user just created. The “save and share” overlay screen may launch a new webpage or website (*e.g.*, a webpage maintained by the same entity that maintains the custom design tool) or may cause another overlay screen to launch on the same webpage in order to complete the electronic storage and/or the sharing aspects of the “save and share” tool. Alternatively, the “save and share” overlay screen may simply cause the user’s new design to be electronically stored or “saved” into a computer memory without additional screens or information. The new design may be stored on computer memory residing in the local computing device operated by the user, the remote computing system operated by the entity maintaining the custom design website, or any other suitable computing storage device.

- [39] The “save and share” overlay screen may present various options for the user including, but not limited to a “get help” option, a “gallery” option, a posting option, a save feature, an e-mail feature, and a print feature. Any desired feature that relates to storing or sharing the custom design may be included in the “save and share” overlay screen. The users may wish to store the design for any purpose, such as working on it at a later time, thinking about the design before purchasing it, and the like. Users may wish to share their designs with others for purposes of obtaining feedback about the design, presenting the design to a friend, and the like.
- [40] For example, the user may select the “add to gallery” icon that is illustrated in Figure 4. Such an option would permit the user to store the electronic version of the user’s custom-designed article of footwear in a memory that is accessible by a plurality of users. Specifically, the entity maintaining the custom-design website would likely store the electronic file of the custom-designed article of footwear in a memory on its server. The memory may serve as the “gallery” in this example arrangement. The gallery may be accessible by one or more users. In some examples, the gallery may be accessible by any users, *i.e.*, a completely “public” gallery. In other examples, users must register with the entity to gain access to view the designs stored in the gallery. Users may be able to mark their designs “public”

or “private” or otherwise restrict access to view the custom designs in any suitable manner.

- [41] Designs stored in the gallery may be acted upon or viewed by other users in any suitable fashion. Users may provide feedback on the custom designs and/or may rank, score, or otherwise critique the custom designs. Users may be required to register with the entity maintaining the custom design website in order to provide such feedback or comments.
- [42] Users may also be able to vote for designs based on a variety of criteria, such as favorite colors, best design, most comfortable, etc. Any criteria may be used to judge the designs. Designs that “win” a vote for a particular category may be afforded prizes, accolades, free or discounted products, access to various events, and the like. Any type of reward may be given to a user for creating a winning design.
- [43] The user’s custom designs may also be posted to a social networking website. A user having an account or the ability to utilize another social networking website may be able to “post” a design on the social networking website. Many social networking websites have a user profile webpage that allows the user to post personal items for viewing by other users. The users may wish to display their designs on their user profile webpages offered by the social networking websites. Such social networking websites may be maintained by the same entity that maintains the custom design website, such as the manufacturer of the products, or they may be maintained by a third party, such as Facebook®, Twitter®, MySpace®, and the like. Users may also wish to post their design(s) on a personal website or on another web application. The users may be permitted to post their designs in any suitable manner.
- [44] For example, the “save and share” overlay screen illustrated in Figure 4 offers the users the ability to post their design on three different networks. Users have the option to accomplish a “post” by directly copying the link to the webpage storing the custom design on the server of the entity maintaining the custom design website. This would be similar to sending a “link” to another person or otherwise posting the “link” on a website or within an e-mail, text or multi-media messages, or another

electronic message. The link directs the user receiving such a message to the webpage that is saved on the server of the entity maintaining the custom design website.

- [45] The users may wish to share their designs with other users having access to the design tool's computing system (and thus its memory) or they may wish to share the design with others by sending them a link to the design (wherein the link is stored on the design tool's server) or an image of the design. The user also may be able to embed the computer code that creates the digital image on the user interface into a message so that the image of the custom design appears on the display of the user receiving the message. For example, if a user sends an email containing the embedded code for the custom design, the receiver of the email would see the image of the custom design within the email itself and would not be required to link to another webpage to view the image. Any suitable form of sending links to or images of the custom design created by the user may be incorporated into the systems and methods according to this invention.
- [46] The entity maintaining the custom design website may offer users a portion of memory for storing their custom designs. The memory may be private so that only the user may view the custom designs. The user may store incomplete designs in this memory for development at a later time. The entity maintaining the custom design website may require that users register for this privilege by providing personal information such as name, geographic address, email address, and the like.
- [47] The "save and share" overlay screen illustrated in Figure 4 also includes icons for emailing and printing the custom design. If the user selects the email icon, then an email with the custom design may be generated. The custom design may be included in the email in the form of a link or embedded computer code, as discussed above, or in the form of an "attachment," typical of including electronic documents in email communications.
- [48] In order to activate the functions available through the "share and save" feature of Figure 4, users may be required to have a user profile. Users without a profile may be required to register with the entity maintaining the custom design website. For

example, Figure 5 illustrates a login screen overlay that may appear when a user attempts to share a custom design. Users that already have existing user profiles may enter their identifying information, such as their email address and password, as shown in Figure 5. Users that do not have an existing profile may be required to register with the system. Figure 6 illustrates an example registration screen overlay that may prompt a user for registration information such as email address, screen name, password, date of birth, country of residence, gender, security questions and answers, and the like. Any suitable information may be required for registration.

- [49] In some circumstances users are not required to register with the system to save and/or share their custom designs. The entity maintaining the custom design website may offer incentives to a user to register a user profile, such as, but not limited to, permission to view and search custom designs created by other users, share custom designs created by the user, receive promotional items and prizes, receive insider information about products and events, and the like. Any such incentives may be provided for those users who register with the custom design website.
- [50] An aspect of the “save and share” tool may permit users to share the story behind their design with other users. As illustrated in Figures 7 and 8, a “share your story” overlay screen may appear when users select the option to share the story of their designs. The user may be permitted to name the custom design and provide description about the inspiration of the custom design. The inspiration may be a story written by the user to describe the manner in which the idea occurred to the user to create the custom design. The name of the design and the description of the design’s inspiration may be filtered for appropriate content.
- [51] Users may also wish to view the inspirations of other users during their design process. A user may wish to view the inspirations that others users have created. The user may select the “see what inspires others” icon from the “share your story” overlay screen. A second overlay screen may appear entitled, “see what inspires others,” as illustrated in Figure 8. The “see what inspires others” overly screen may include entries created by other users relating to the inspiration(s) for their custom designs. Such an inspiration may include, but is not limited, to information such as

a photograph of or other image representing the user that created the inspiration, the user's name, the user's screen name, the date on which the custom design was created, any text associated with the inspiration (*e.g.*, a story that describes how the user developed the design or what experiences or things helped to inspire the design), a photograph or other image of the custom design, and the like. If the custom design and/or the inspiration have been viewed or another user has commented on or voted for the design or inspiration, then the results of such views, comments, and votes may be posted on the "see what inspires others" overlay screen as well. Any suitable information may be included in the user's inspiration of the custom design.

- [52] Sometimes, multiple users may have contributed their inspirations for their custom designs or a single user may have submitted multiple inspirations for various custom design(s). Users may be able to browse the plurality of custom designs and inspirations. For example, a scrolling tool, such as the "previous" and "next" icons illustrated in Figure 8, may appear on the "see what inspires others" screen overlay (or any other interface, such as another webpage or website), that permits a user to scroll through the inspirations created by others.
- [53] The custom designs and inspirations for the custom designs may be searchable. A user may wish to search for custom-designs that were inspired by a particular team, a famous athlete, a mascot, a sport, an event, and the like. Further, users may wish to search for custom designs that were created within a certain time period (*e.g.*, during the last month, last year, or last week) or created by users living in a particular city or region of the country. Any search criteria may be used.
- [54] To facilitate searching, "tags" may be associated with a custom design or an inspiration for a custom design when it is created. Tags are parameters or system metrics that associate a keyword or phrase with a particular design. Such keywords and phrases are useful for later searching of designs. Either the user or the system will assign a tag to the custom design or the inspiration of the custom design. When the user wishes to create the inspiration for a custom design, the system may prompt the user to enter tags. The user may be prompted in any manner to select tags associated with the custom design. One such manner in which the user may be

prompted to select tags for the custom design is illustrated in Figures 7 and 8. Within the “share your story” overlay screen, the user is prompted to enter information about tags in the “add tags” window. Users may enter their own words as tags or may select from a group of suggested tag words. Users may be restricted from using profanity or other inappropriate words or combinations thereof via a filtering system used with the overall system design. Any restrictions may be placed upon the entry of the tag words.

- [55] The suggested tag words may be any topic or category that might be descriptive of the custom design. For example, words such as team, color, hiphop, city, fashion, kicks, sit goal, turf, field, stadium, score, champion, athlete, school basketball, baseball soccer mascot, and person may be suggested words for the user. Certain events such as “March Madness” or holidays may be used as tags to describe a design or inspiration. Further interests such as hobbies, community groups, and the like may be used as a tag.
- [56] As described above, any entity or user may be able to assign a tag to a custom design and/or an inspiration for a custom design. A user may assign tags to the design or inspiration during creation of the design or inspiration at any time during the design process. In a similar manner, the system itself may automatically or manually assign tag(s) to a design or inspiration. For example, the system may assign a metric identification number to all custom designs and inspirations. The system may also assign tags to the custom design or inspiration according to other aspects of the design or inspiration such as, but not limited to, the language that the user used to create the design or inspiration, the design’s creation date and/or publication date, the products name, type, and category, the gender of the user, the user’s name, the user’s age, the colors that the user selected for various portions of the product or footwear, the geographical location or region in which the user resides, whether the design or inspiration has been marked private or public, the manufacturer’s name for the product, the user’s hobbies or interests, and any other suitable attribute of the user and/or the design.
- [57] Other users or third parties may also be able to assign a tag to a user’s custom design or inspiration. For example, a user viewing an inspiration may realize that

the inspiration mentions a particular sports team. The existing tags may not mention the sports team. The user may be able to assign the sports team tag to the inspiration or may send a suggestion to the user who created the inspiration or the computing system that the sports team tag should be assigned to the inspiration. The users that created the inspiration or the system may have the ability to refuse to allow a suggested tag to be assigned to the custom design or the inspiration. The creating user, other users and third parties, and the system may have the ability to add and/or revise tags relating to a custom design or an inspiration at any time throughout and after the design process.

- [58] The tags assigned to the custom designs and the inspirations may be used as search terms. For example, users may be able to search the custom designs and inspirations based on any kind of criteria such as the information about the user that created the design, the design characteristics and date on which it was created, the tags assigned the custom design and/or inspiration by the user, the tags assigned the custom design and/or inspiration by the system or a third party, and any other criteria that may be associated with the custom design and/or inspiration. Any data collected about the user, the custom design, and/or the inspiration may be used as a tag so that the criteria may be searchable.
- [59] The tags represent a keyword or term assigned to the electronic information that represents the custom design or the inspiration. The tag may represent a type of metadata that is associated with the custom design or inspiration's electronic file so that the file may be found again via searching, browsing, and/or filtering.
- [60] When users view the custom designs and inspirations, they may choose to provide a comment on them and/or vote for one or more of them. Users may choose to provide constructive feedback or other comments on one or more custom designs and/or inspirations. Further, votes may be entered for a custom design or inspiration to reflect a user's choice for best design, most attractive design, most comfortable design, or any other criteria on which a vote may be based. The number of times a custom design or inspiration is viewed by another user may also be tracked and tallied. The tally of the number of times the custom design or inspiration has been

viewed, or provided a comment or voted upon may be posted and viewed in the “see what inspires others” screen overlay.

- [61] Users may search for designs and inspirations in any suitable fashion and based on any data that is collected about the design, the user, and/or the inspiration. The results may be generated based on the relevancy of the tag to the search criteria. Users may also search based on the most popular designs by number of votes or number of times others have viewed the designs (or any other popularity criteria).
- [62] Any of the search criteria or tags that are described above may be used to establish a platform to create feedback about the results. The feedback may be visual, audio, or a combination thereof. In some examples, the feedback may be a map, chart, graph or other document or image depicting the results for a particular search criteria or tag information. For example, a user may wish to view the geographic locations where the users reside that have submitted custom designs. To depict such a result, a map of the country (or any other geographic area) may appear illustrating the number of users having submitted custom designs from any given geographic location on the map. Likewise, a user may wish to view the gender of the users that have submitted custom designs. The results of this request may be a man and a woman with respective numbers near each that represents the number (or percentage of the whole) of designs submitted by each respective gender. Such visualization of the search results or criteria may take any form and can be based on any criteria, tag, or other information relating to the custom design and/or the inspiration. The visualization can also be based on any combination of tags, assigned metrics or other criteria. For example, the system could create map showing all designs relating to skateboarding in California. Similarly, the system could create a map of all designs relating to BMX biking in the southeastern portion of the United States. Other visualizations could be created for other tags such as designs relating to running shoes submitted by females in a certain age group. Other criteria could also be used.
- [63] The custom designs created by users may be used in a variety of manners. For example, an electronic file containing the image of the custom design may be saved for personal use by the user that created it or may be available for use by other

users. Such a file may be used as a desktop background or screen saver for a computing device. The file may also be uploaded to another website for use in another application. Any suitable use for the image may be offered.

- [64] Some of the custom designs may be afforded a special status or prize. Some designs may win prizes for originality or any other feature. Other designs may be voted on by the community of users to determine which custom design is the favorite amongst the community. The selected design may win prizes, entry to events, chances to meet a celebrity or famous athlete, or the custom-designed footwear may be manufactured and sold.
- [65] The above examples are described in terms of a single user engaging in a design of an article, such as footwear. Additional examples would include collaborative design of articles between two or more users. Such collaborative design functionality is described in U.S. Patent Application No. 12/470,338, filed on May 21, 2009, which is incorporated by reference in its entirety herein. All of the features relating to the design of articles discussed in this application may be utilized in systems and methods in which multiple users are engaging in on-line design, such as collaborative design.
- [66] Those skilled in the art will readily appreciate that the systems, methods, and/or computer interface features described above in conjunction with design and/or shopping for articles of footwear also may be used and/or practiced in conjunction with design other products, such as apparel (including athletic apparel, uniforms, etc.) and athletic equipment (such as balls, bats, gloves, bags, protective equipment, team gear, pads, hockey sticks, watches, socks, etc.).

V. Conclusion

- [67] While the invention has been described with respect to specific examples including presently preferred modes of carrying out the invention, those skilled in the art will appreciate that numerous variations and permutations of the above described systems and techniques may be made without departing from this invention. For example, the systems, methods, and/or user interfaces may include more, less, and/or different functionality from that described above, and the various features of

the systems, methods, and/or user interfaces may be activated or interacted with in various different manners (e.g., using different types of interface elements) from those described above. Also the various process steps may be changed, changed in order, some omitted, and/or include additional steps or features without departing from this invention. Various changes and modifications to the systems, methods, and user interfaces may be made without departing from the spirit and scope of the invention, as set forth in the appended claims.

What is claimed is:

1. A method, comprising:
receiving design input for a product from a computing device operated by a user;
associating the design input with an electronic file;
assigning one or more search tags to the electronic file; and
storing the electronic file in a searchable database.
2. The method recited in claim 1, wherein the product is an article of footwear.
3. The method recited in claim 1, further comprising the step of performing a search for the electronic file based at least in part on at least one of the search tags.
4. An apparatus, comprising:
a processor; and
a memory having stored therein machine executable instructions, that when executed, cause the apparatus to:
present a customizable product to a user;
present to the user a plurality of possible design selections for the customizable product; and
present to the user an option to share the design with other users.
5. The apparatus recited in claim 4, wherein the option to share the design with other users includes requiring the user to register a user profile with the apparatus.
6. An apparatus, comprising:
a processor; and
a memory having stored therein machine executable instructions, that when executed, cause the apparatus to:
present a customizable product to a user;

present to the user a plurality of possible design selections for the customizable product; and

present to the user a plurality of possible search tags for selection to assign to the customizable product.

ON-LINE DESIGN OF CONSUMER PRODUCTS

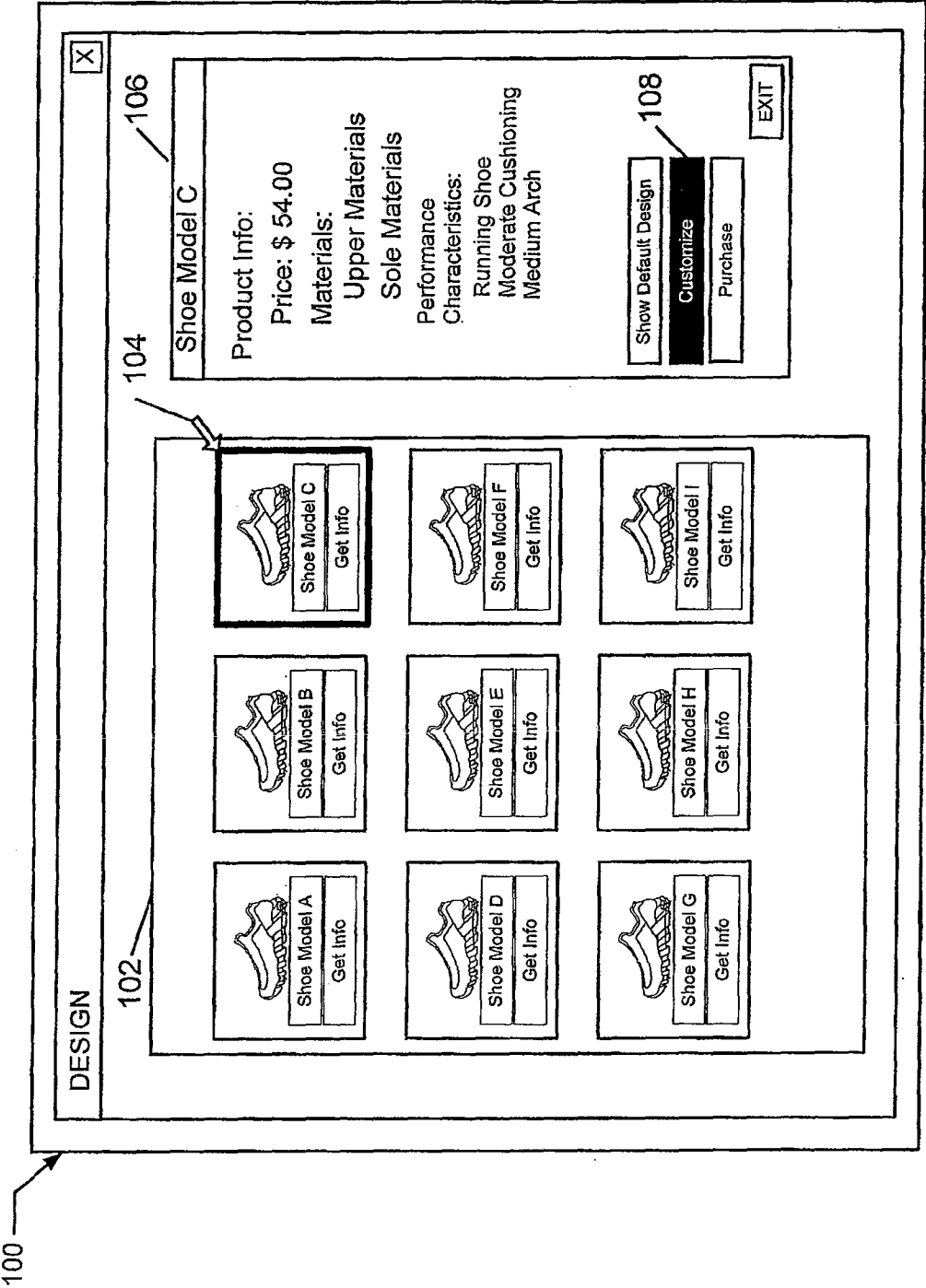


Fig. 1

ON-LINE DESIGN OF CONSUMER PRODUCTS

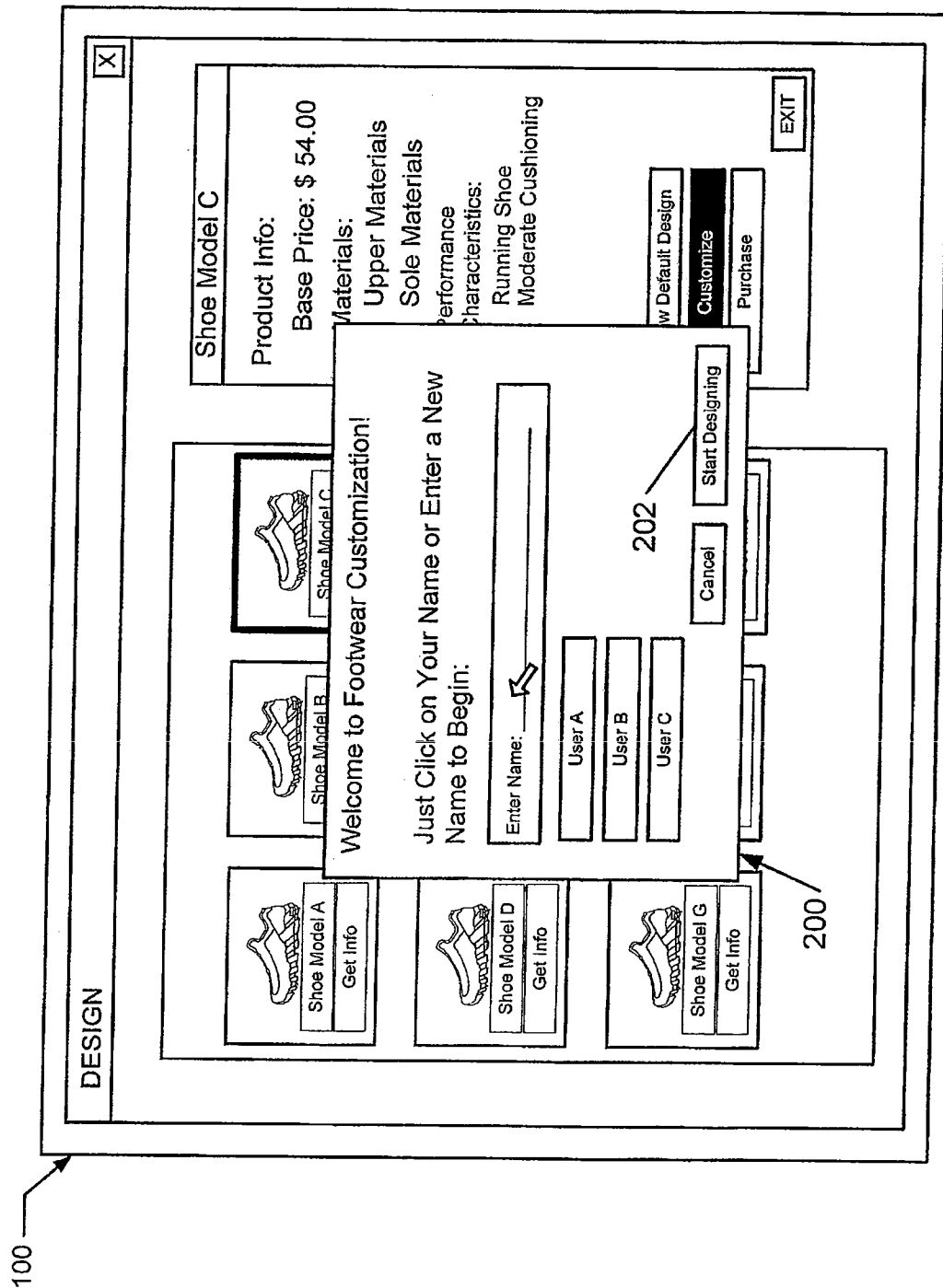


Fig. 2

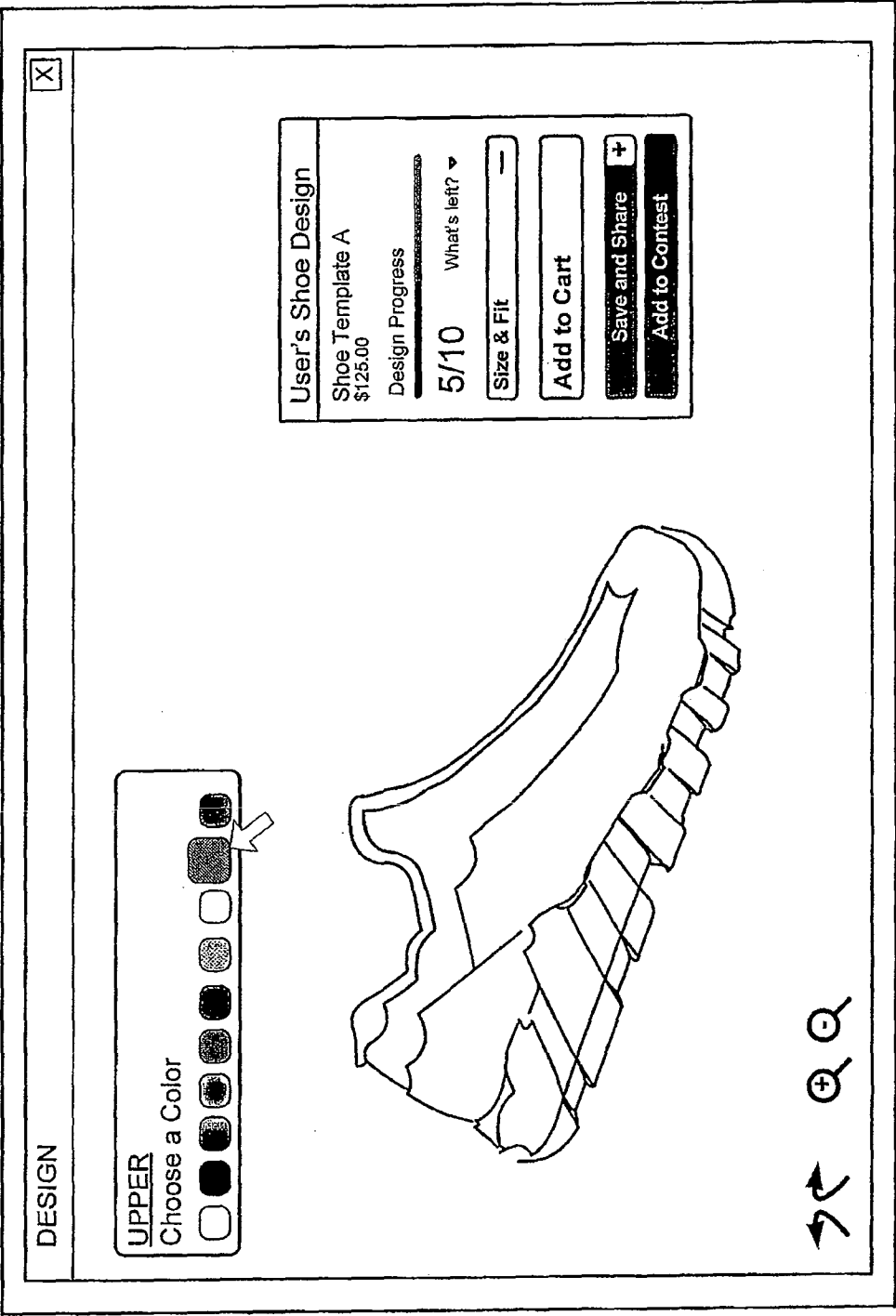


Fig. 3

ON-LINE DESIGN OF CONSUMER PRODUCTS

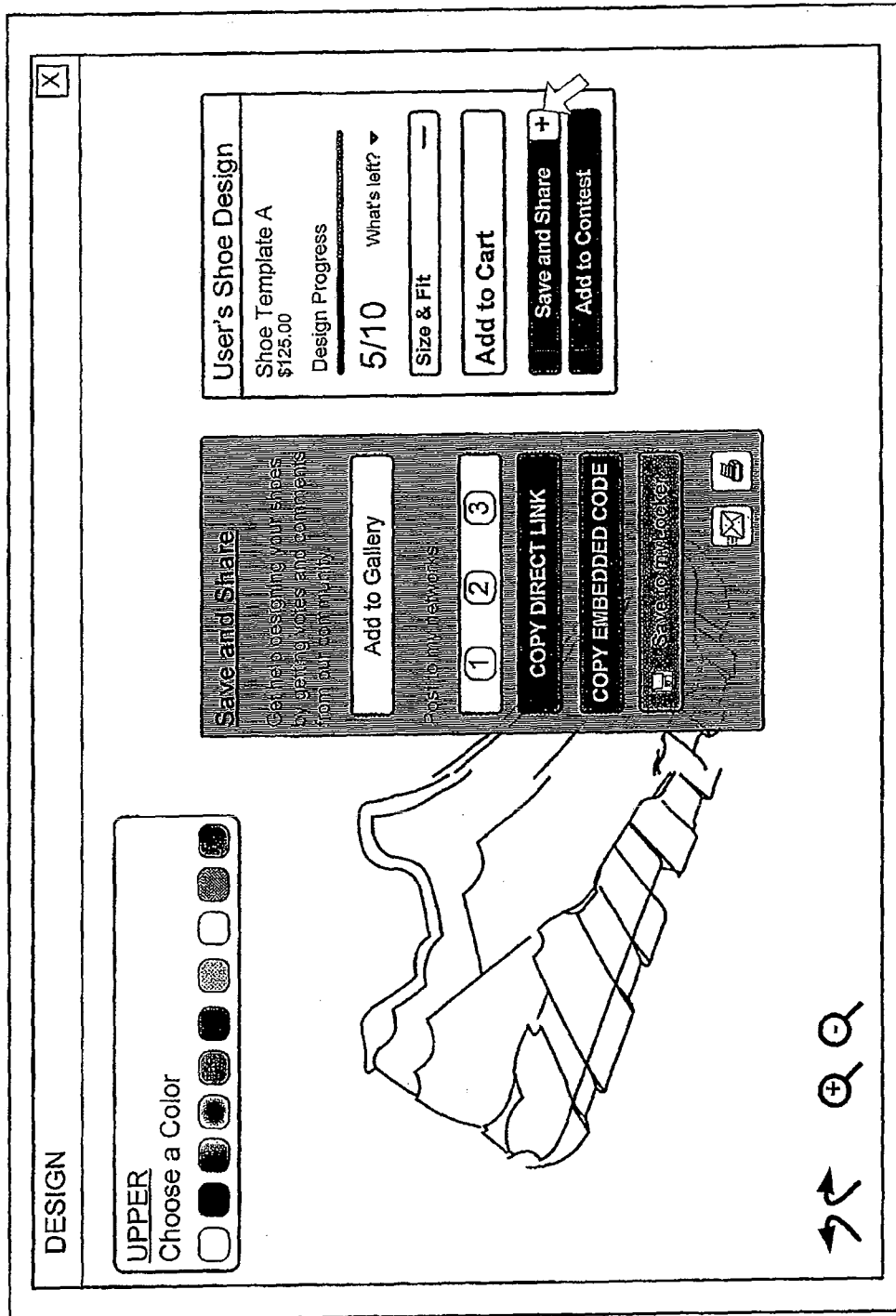


Fig. 4

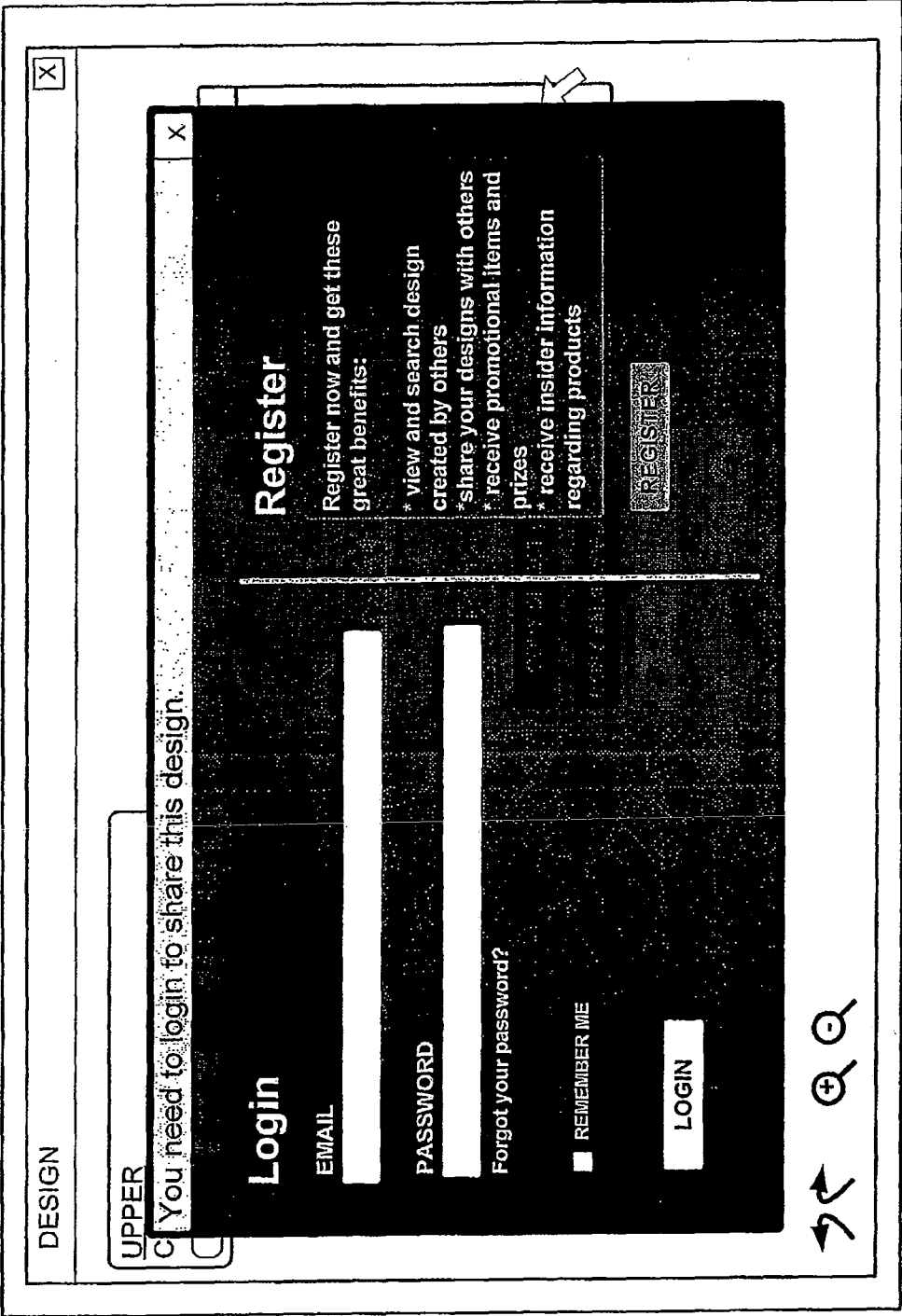


Fig. 5

DESIGN

UPPER

Chc You need to register to share this design.

Register

EMAIL

SCREEN NAME

PASSWORD

CONFIRM PASSWORD

DATE OF BIRTH

GENDER ☐ Female ☐ Male

COUNTRY

SELECT A SECURITY QUESTION

ENTER THE SECURITY ANSWER

☐ SIGN UP FOR AN EMAIL NEWSLETTER

ZIP CODE

I already have an account.

Navigation icons: back, forward, search, etc.

Fig. 6

ON-LINE DESIGN OF CONSUMER PRODUCTS

DESIGN

Share your story...

Name your design

My design was inspired by:

See what inspires others

Add tags

Suggested tags: team color hiphop city fashion kicks sit goal turf field stadium score champion athlete school basketball baseball soccer mascot person

Add to Gallery

Fig. 7

ON-LINE DESIGN OF CONSUMER PRODUCTS

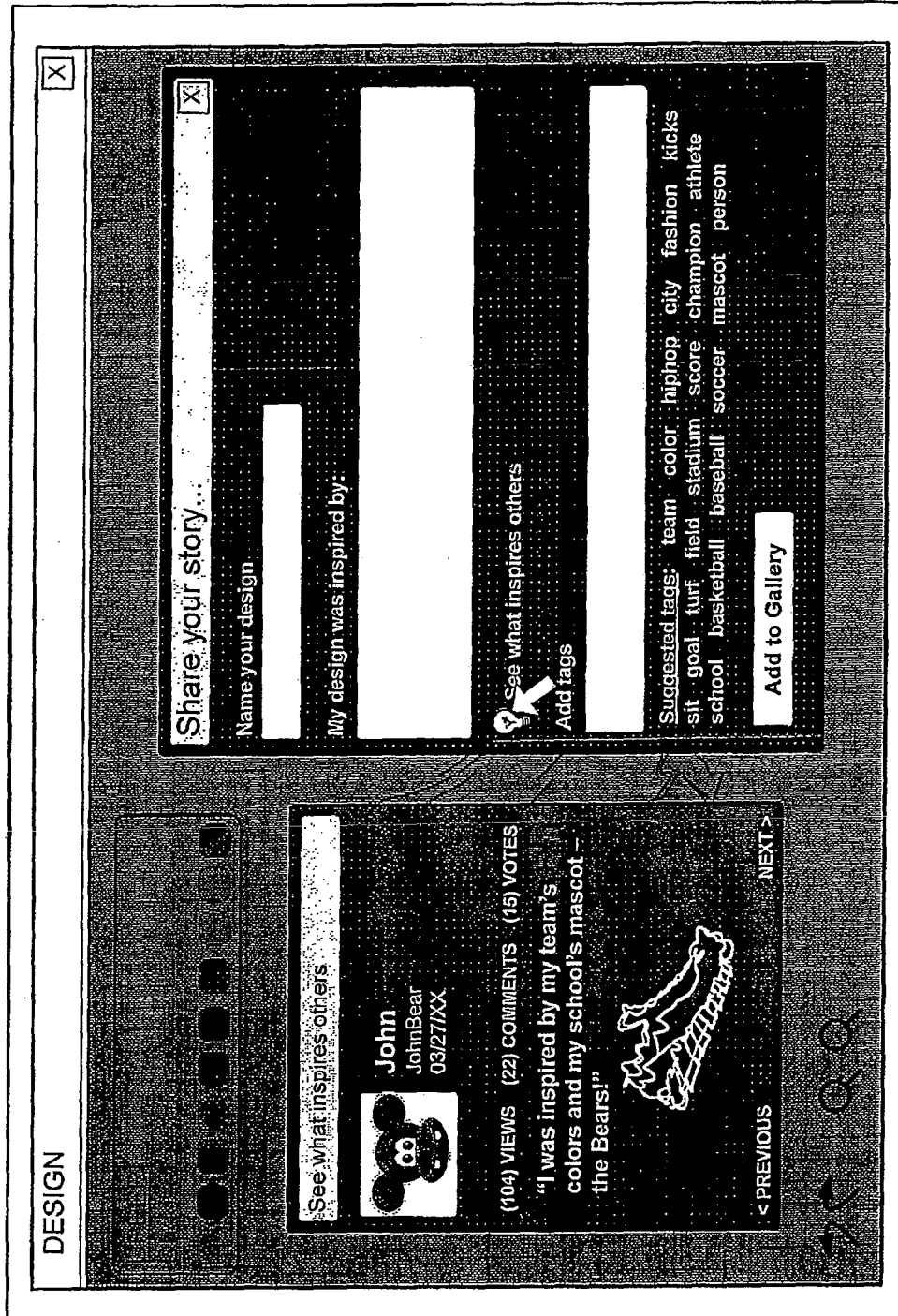


Fig. 8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/036619

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 3/00 (2010.01)

USPC - 705/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - G06F 3/00 (2010.01)

USPC - 705/26; 707/821, 828, 830

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MicroPatent, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0071242 A1 (ALLEN et al) 31 March 2005 (31.03.2005) entire document	1-6
A	US 6,741,265 B2 (GHOSH et al) 25 May 2004 (25.05.2004) entire document	1-6
A	US 2002/0156917 A1 (NYE) 24 October 2002 (24.10.2002) entire document	1-6
A	US 7,013,290 B2 (ANANIAN) 14 March 2006 (14.03.2006) entire document	1-6

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

22 July 2010

Date of mailing of the international search report

28 JUL 2010

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

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