Arkwright: 'Hold, Store, Display' Brief

Arkwright Scholarships Trust

Context

At the beginning of this year, myself and three others who had done well in higher Product Design arranged with our teacher, Mr Murray to see if we could complete an Arkwright scholarship despite being slightly. over the age limit. We joined this years Higher Product Design class and began working only later finding out that it was not possible for us to take part in the program and now use the time in class to do personal folio or work for other subjects.

As part of the course work for Arkwright, we had to design a product for their brief which, when we found out that the course was not going ahead, I decided to take forward for my personal portfolio. The brief was as follows; to create a product to hold and/or store and/or display another product. The brief was very open with only a few guidelines suggesting optimal sizes and exemplar products from previous years.



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Design idea one uses a shape memory polymer to suite a wide variety of situations based on user preference and imagination. The design is a small figure 140mm tall made from a shape memory polymer meaning that it can be heated by conventional means, for example, in an oven and moulded into any shape the user desires where it will set when cooled. Upon reheating, it will return to it's original shape to be moulded again, four examples are shown here.

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reviaty of objects . This unit comprises of two main components. The first is preferance, It interlockily joints witch can be to be customised ckwright range of positions are sheets of plastic witch would be manufactured that Scholarships Trust my polymers have the sizes and would clip in Leve reburn to their those when exposed to · Suction cup plastic is a ie, in this case heat. plastic sheet of biny suction cups to create the user to moved by or high Friction unit when beated maberial without set it to it's shape when servated. the use of adhesiry. four diagrams show . This allows the user to simply place ential uses. is un-gendered and their object on and it will stay in it a rouge of place. to appeal to a . The veriaty of sizes rarget market and positions allow for thickness to many uses such as ise risk of weak phone /tablet stand, jenellery storage, light holder, elt. such as joints Shown here is a carge pad, separate from the orm.

Design idea two is comprised of two main components, the first is an arm of interlocking joins which can be bent to face any direction at multiple heights and angles, and the second is a series of boards which attach on the end. The boards are ABS with a layer of suction cup plastic, a thin plastic the surface of which is made of tiny cup shapes which create enough friction to hold a variety of objects in place without the need for adhesives. The boards would be manufactured in a large range of sizes, all of which would clip onto the same frame allowing it to be used to hold any number of products such as smartphones or tablets for multimedia purposes, important notices or reminders, or other miscellaneous loose objects the user wants to secure.



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Design idea three addresses a niche market in the form Daruma dolls, a traditional Japanese good luck charm to help the user focus on long terms goals. Traditional usage entails having the doll visible as much as possible, even after the task is complete; this unit is a hand crafted and designed to be displayed as a 'special place' for the storage and display of Darumas. The unit is mostly two-dimensional, made of layers of oak to give a high quality feel, styled and painted to resemble a collection of traditional Japanese tree types such as sakura and bonsai-type trees.



a this design is intended to eleviate some of the mapple of storing . This write is also a modulor design withour clathing by employing magnets to areafe a modulow . The recieving pod con effect. Holding units would be used to magnetically altech components witch connect to create stain be only shape, size or the Sour examples shown. This to a receptor ous shown bellow colour the user desires. used to create objects like shower, sub-unit would be designed for a specific As well as space tubles, desk sorters or any other or general use. efficiency, this white application + user can imagile swite individual requirements allows the user to The modulation of the design offers complete easily dry elottes user preferance as · variations of the set shaper buy only the sub-write and here a potrisent the radius of corners and rounded ! rank fo example they ma lometion for beys and Fillibed or chargered it for gerenal iter Users can also be expective of the components would be made of shops. in the way they use the mostly ABS for durability Tackets / Teneles as demonstrated by and load-bearing copabilitys ingrano of one throwing with voriations their coat hastilly rather then and fake variens who it able. naving to · Conection meathed shows ansully would be used to join annels Hook for · On the side of each commel / component an holes, indented slightly witch allow connecting rods to "irap' in and monents Ponnels such as this cover on ride. witch do not connec have versitility of use, being able to quickly put itens on and grab them off in a hurry.

Design idea four uses electromagnetism to create a modular storage system for outdoor clothing and equipment. The base plate would be a sheet of highly magnetic steel mounted to a wall while a series of small, connecting components would provide a way to attach items such as coats, bags and shoes using powerful magnets. Shown here are five examples of types of holders, the idea is to provide a very quick way of hanging up and taking down items, for example, if you were in a rush you could simply grab whatever you need off the wall without rummaging about in a closet. This also has the somewhat novelty value of being able to toss objects onto the wall without much care or effort as the diagram of an ergonomic-doll is demonstrating.



Design idea five is also modular consisting of different panels and joins which allow the user to create any number of configurations, primarily types of shelves and tables. Shown here are four possible configurations using only five types of parts. The components would fit together using rods which would snap into place, colour coded to indicate which is required for the two parts the user wishes to join together. The nature of this product means that it is extremely expandable, new shapes and sizes can be added easily as well as variants on existing shapes such as chamfered or rounded corners or multi-coloured/illuminated components.

This unit is also a modular design comprised of barrie components witch connect to create structures such as the Sour examples shown. This could be used to conte objects like shelves, tables, deck sorters or pay other application + uson can imagine to suite individual requirements. · Variations of the set slapes such of the radius of consist and rounded / sisted or chargered adges would be available The components would be reall of postly ABS for dusability and lood-bearing tonabilitys with variations on rotours and fate pareers protlable. · connection meathed shows would be used to join the pannels. · On the side of each pound / component and holes, indented scrahtly witch allow convecting rodi to "rap' in and Join components · Pennels such as this cover any sides witch do not connect, unos on the onnecting rods Secure compos 1.1place aselle. ohti 141-00

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Users have versibility of use, being able to quickly put items on and grab then off in a hurry. . This design aims to orginise stationary and other items sound in the work environment of an artist, designer, office worker or other desk norker. · Diffirently stuped holes and extrusions can be utilized to hold and store stationary, paper, crasts items, tools and other resources with the user's requirements. . The unit will be montoled by Euged disposition molding (30 Printing) for accuracy of shape and to allow the manufactures to sell it as a file witch users con print is they have the sacilitys as well as off the shelle. . The unit would be available In PLA plastic due to it's ability to be used in comercially available Makerbet. printers and to allow it to bio-degrade aster it's use. Additionally, the off-the-shelve version would be manufactured from PDEA, poly-D-lacitate for increased Aurobility. School: Name:

Design idea six is designed to be an all-in-one desk tidy and document holder, a range of different shaped cut-outs and extrusions mean most stationary products and items which a designer, artist or desk worker might have can be held efficiently with ease of access. I designed this unit with 3D printing in mind; it is made of PDLA, a biopolymer which can be used on the widely recognised fused disposition modeller range by Makerbot as well as poly-Dlactate for increased durability.







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