

Mark Champkin

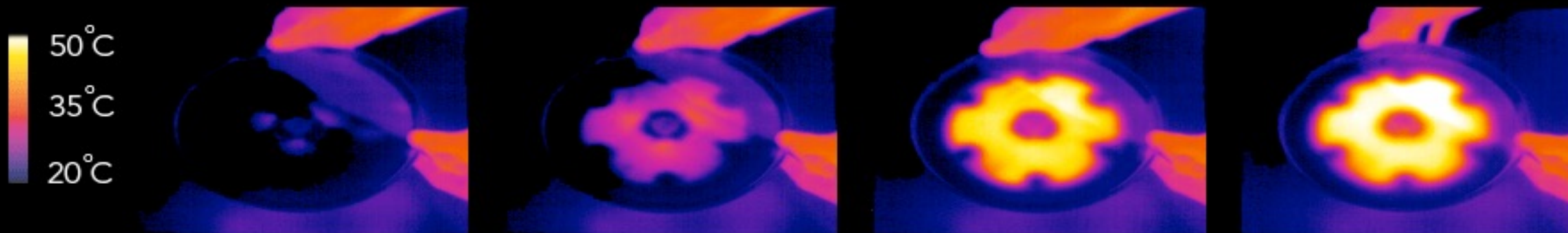


Royal College of Art



BRITISH INVENTION OF
THE YEAR 2002/3

W
WEDGWOOD



CROCKERY THAT HEATS TO 65 DEGREES AT THE TOUCH OF A BUTTON & CAN BE RECHARGED WITH HEAT ENERGY BY WASHING IN A DISHWASHER. PARTNERED WITH WEDGWOOD FOR TWO YEARS TO DEVELOP AND PATENT. FOR USE KEEPING FOOD AND DRINK WARM FOR LONGER.

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
2 October 2003 (02.10.2003)

PCT

(10) International Publication Number
WO 03/079869 A1(51) International Patent Classification: A47G 19/02,
C09K 5/06

(21) International Application Number: PCT/GB03/01318

(22) International Filing Date: 26 March 2003 (26.03.2003)

(25) Filing Language: English

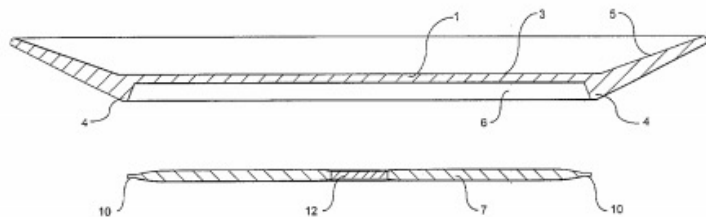
(26) Publication Language: English

(30) Priority Data:
0207065.4 26 March 2002 (26.03.2002) GB
0214656.1 25 June 2002 (25.06.2002) GB(71) Applicant (for all designated States except US): ROYAL
COLLEGE OF ART [GB/GB]; Kensington Gore, London
SW7 2BU (GB).(71) Applicant and
(72) Inventor: CHAMPKINS, Mark, Ross [GB/GB]; Royal
College of Art, Kensington Gore, London SW7 2BU (GB).(74) Agents: HEDLEY, Nicholas, James, Matthew et al.; Kil-
burn & Strode, 20 Red Lion Street, London WC1R 4PJ
(GB).(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CZ, CY, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**Published:**

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: TABLEWARE



(57) Abstract: An article of tableware comprises a surface (1) for holding food or drink, a layer of phase-change material (7) that is capable of being in a super-cooled state at room temperature (25 °C) and that is in thermal contact with the surface (1); in Figure 1, the phase change layer (7) is secured in recess (6). An initiator is provided for initiating the solidification of the phase change material, when in a super-cooled state, so that the heat given out heats the tableware. The thickness of the layer of phase-change material (7) does not exceed 6mm so that the phase-change material (7) can be regenerated using a standard 65 °C dishwasher cycle.

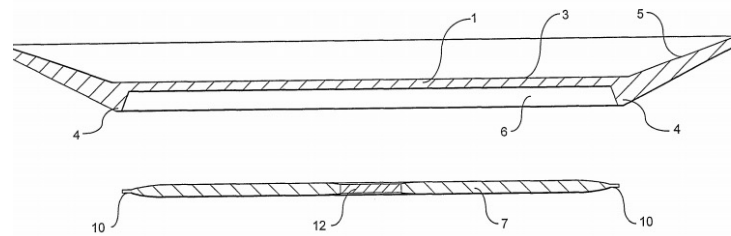


FIG. 1

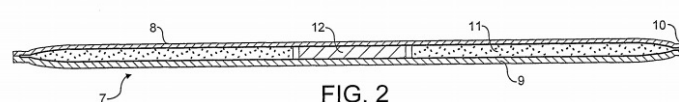


FIG. 2



2 / 2

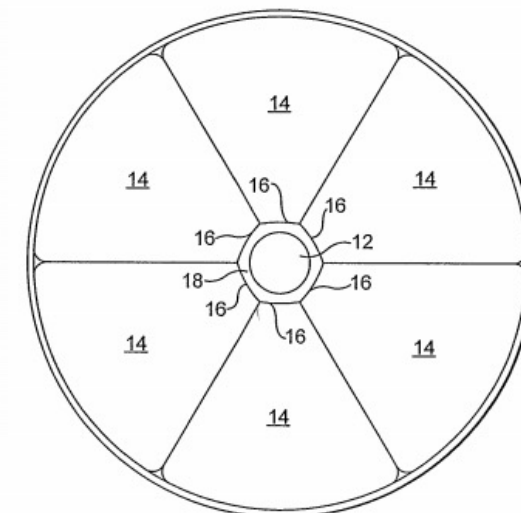


FIG. 3

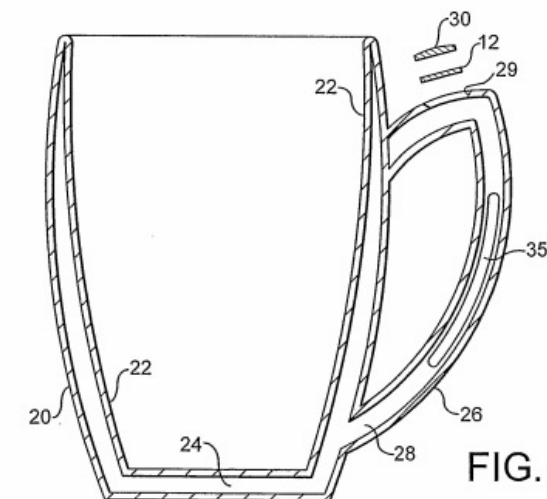


FIG. 4

SUBSTITUTE SHEET (RULE 26)



PRODUCTS THAT ENABLE PUPILS TO FOCUS IN LESSONS AND FULFIL THEIR POTENTIAL. THE BUSINESS WAS STARTED AS A RESULT OF TWELVE MONTHS OF ACADEMIC RESEARCH INTO THE BEST WAYS TO IMPROVE STANDARDS IN SCHOOLS





GREW A BUSINESS OVER 12 YEARS WITH ENTREPRENEUR PETER JONES THAT
CREATED OVER A DOZEN CONCENTRATE PRODUCTS SELLING IN STORES ACROSS
THE UK & EUROPE WITH SALES TOTALING OVER A QUARTER OF A MILLION UNITS

Back to School

Get them kitted out for the new term



sainsburys.co.uk

Sainsbury's
Try something new today

It's lunchtime!

Get your kids excited about packed lunches with our fun range of colourful bags and drink bottles



Above:
Power Rangers lunch bag
£7.99
The Dog lunch bag
£7.99
Desert force lunch bag
was £6.99, now £5.24
Disney Princess lunch bag
was £7.99, now £5.99
High School Musical 2
lunch bag £7.99



Hannah Montana lunch bag
was £7.99, now £5.99
Hannah Montana bottle
was £4.49, now £3.49



Dr. Who sound chip lunch bag
was £9.99, now £7.49
Dr. Who Cyberman bottle
was £4.99, now £3.49



Concentrate lunch box cooler **£8.99** each
This thermally insulating wet-suit style cooler bag will keep lunches fresh.



Concentrate water bottle cooler **£5.99**
This clever pen holder keeps their water cool and reminds them to drink when working.

concentrate



Concentrate fruit friendly lunch box **£8.99**
Protects fruit against being battered and bruised. Comes with two free pots.



Ben 10 lunch bag **£7.99**
Ben 10 bottle **£4.49**



Wall-E lunch bag **£7.99**
Wall-E bottle **£4.49**

sainsburys.co.uk 23



Concentrate lunch box cooler **£8.99** each
This thermally insulating wet-suit style cooler bag will keep lunches fresh.



Concentrate water bottle cooler **£5.99**
This clever pen holder keeps their water cool and reminds them to drink when working.

concentrate



Concentrate fruit friendly lunch box **£8.99**
Protects fruit against being battered and bruised. Comes with two free pots.



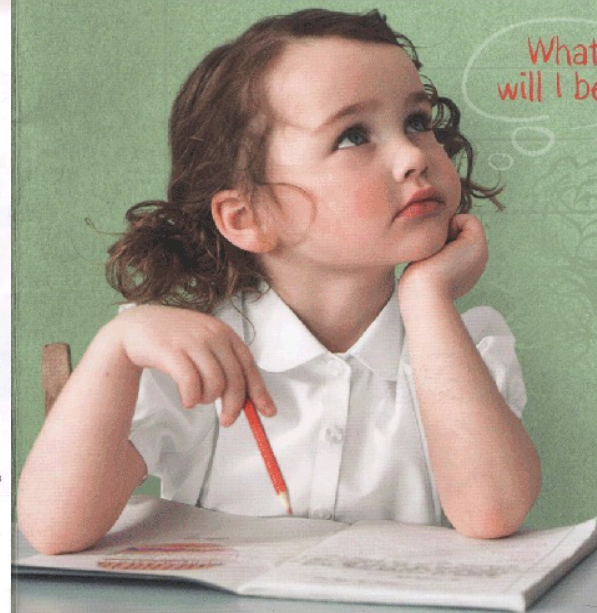
Ben 10 lunch bag **£7.99**
Ben 10 bottle **£4.49**



Wall-E lunch bag **£7.99**
Wall-E bottle **£4.49**

BACK TO SCHOOL

John Lewis



I want to be an INVENTOR

AWARD-Winning products for school children from Concentrate.

Mark Champkins (year 4) grew up to be the clever inventor of Concentrate. He's designed a range of ingenious products that will help to improve kids' well-being and concentration, so they can get the most out of their time at school.



Concentrate Food for Thought Lunchbox
Clear 340 96102 **£10**



Concentrate Bottlecoolerpenholder
Red, camo, pink 340 96006 **£5**



Concentrate Lunchbox Coolerbag
Red, camo, pink 340 96304 **£9**



Concentrate Chairpadbag
Doubles up as a bag and a cushion Red/black 340 96303 **£20**

concentrate

32 WHAT WILL I BE?



Now open on the Third floor

Beauty
Fashion accessories
Gifts and stationery
Hosiery
Jewellery
Men's fashion
Shoes, men's

G

MARGARET THATCHER

SOFT-SCOOP ICE CREAM AND NEW INVENTION POLICY



MARGARET THATCHER SERVED AS PRIME MINISTER OF BRITAIN THROUGHOUT THE 1980S AND WAS RENOWNED FOR HER STEELY DETERMINATION AND UNCOMPROMISING ATTITUDE. FEW PEOPLE KNOW, HOWEVER, THAT THE IRON LADY HAD A 'SOFTER' SIDE...

Before entering into the world of politics, Margaret studied Chemistry at Oxford University. Upon graduating she found work at food manufacturers J. Lyons and Co. as a research chemist. In the 1950s, as part of a small team, she was tasked with developing a method for whipping more air into ice cream. The resulting invention produced what we now call **SOFT-SCOOP** ice cream.

Margaret's innovation slashed manufacturing costs by using fewer ingredients. Soft-scoop ice cream had the added benefit of increased consumer appeal, as **THE PUBLIC LOVED THE LIGHTER, SOFTER AND MORE MALLEABLE** texture of this new ice cream. It also had the advantage that it could be pumped and dispensed through a machine, giving ice cream a new lease on life and heralding the age of Mr Whippy ice-cream vans and the 99 Flake.

MONEY FOR NOTHING

J. Lyons and Co. were able to charge significantly more for Margaret's innovative new soft-scoop ice cream than for regular ice cream, **DISPITE THE FACT THAT IT WAS MADE FROM ABOUT 90% AIR**. Thanks to innovations such as soft scoop, in 2010 the global market for ice cream was a staggering £40 billion.



JAMIE LEE CURTIS

WET WIPE NAPPY

ACTRESS JAMIE LEE CURTIS STARRED IN A STRING OF HOLLYWOOD BLOCKBUSTERS, INCLUDING A FISH CALLED WANDA, TRUE LIES AND THE HORROR MOVIE HALLOWEEN. SHE IS MARRIED TO COMIC ACTOR CHRISTOPHER GUEST AND IS MOTHER TO TWO CHILDREN, AND IT THIS LATTER ROLE THAT INSPIRED HER HANDY INVENTION.

Having partially suspended her acting career in the late eighties to bring up two young children, Jamie Lee became absorbed in the everyday trials and tribulations of childcare. One particular baby-care task alerted her to an opportunity for innovation, and so in 1987 she filed a patent for the **WET WIPE NAPPY**.



It's not often that you hear a famous Hollywood actress talk about her nappy-changing experiences, so **JAMIE LEE'S PATENT DOCUMENT IS A RARE BEHIND-THE-SCENES GLIMPSE OF A CELEBRITY'S DOMESTIC LIFE**.

Parents everywhere are all too familiar with the trials of nappy changing and having to juggle soiled and clean nappies and necessary baby-care products while trying to calm the infant at the same time. While the introduction of disposable nappies and moisturised cleaning wipes has gone a long way to simplifying the process, there is still room for improvement. The solution? The **Wet Wipe Nappy**.



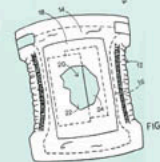
CHARLIE SHEEN

THE LIP-BALM DISPENSER

HOLLYWOOD ACTOR CHARLIE SHEEN HAS A COLOURFUL PAST. THOUGH HE'S STARRED IN A STRING OF SUCCESSFUL FILMS AND SITCOMS FROM PLATOON AND HOT SHOTS TO TWO AND A HALF MEN, AND WAS AT ONE POINT REPORTEDLY THE HIGHEST-PAID ACTOR IN HOLLYWOOD. IN RECENT YEARS HIS NAME HAS BECOME MORE SYNONYMOUS WITH ERRATIC BEHAVIOUR THAN WITH ACTING.

This is not a new development. Charlie's been in and out of rehab for drug and alcohol addiction since the late 1990s, but in an interview in early 2011 he demonstrated his increasingly odd perception about his life when he claimed he was 'on a drug called charlie sheen' and that he had 'tigers blood'.

HOWEVER, HIS DIZZY ACTIONS AREN'T LIMITED TO HIS HOLLYWOOD EXPLOITS. Over the last two decades Charlie has copyrighted a series of strange phrases, has leveraged the Sheen family name to

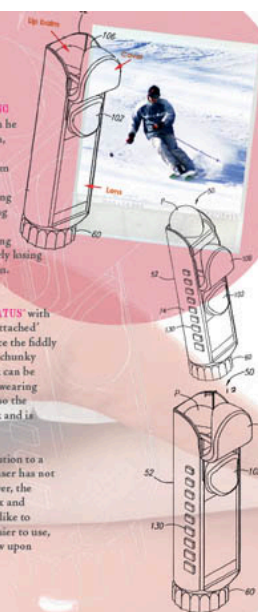


LIP SERVICE

CHARLIE'S CREATIVE OUTPOURING STARTED IN THE LATE 1990S when he was living in the ski resort of Aspen, Colorado. As a keen skier and snowboarder, he identified a problem with having to re-apply lip balm throughout the day to prevent getting chapped lips. Frustrated with having to take his gloves on and off in the cold to manipulate the tube's winding mechanism, and in doing so regularly losing the caps, Charlie designed a solution.

In 1999 he filed a patent for a 'CHAPSTICK-DISPENSING APPARATUS' with a 'slidably, pivotably, or hingebly attached' cap which cannot get lost. To replace the fiddly winding mechanism, he designed a chunky slider with which the lip-balm stick can be exposed or retracted – even whilst wearing gloves. Finally he added a lanyard, so the device can be worn around the neck and is readily to hand.

Despite providing an ingenious solution to a recurrent problem, Charlie's dispenser has not yet made it into production. However, the two leading manufacturers, Carmex and ChapStick, have stated they would like to develop new applicators that are easier to use, so it is just possible they might draw upon Charlie's design.



MICHAEL JACKSON

GRAVITY-DEFYING SHOES

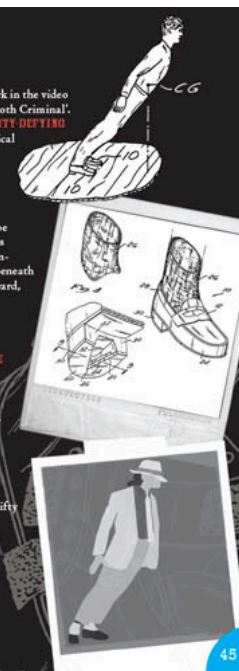
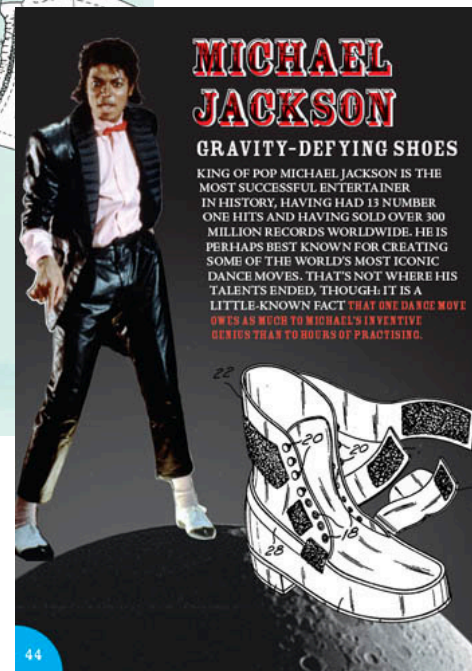
KING OF POP MICHAEL JACKSON IS THE MOST SUCCESSFUL ENTERTAINER IN HISTORY, HAVING HAD 13 NUMBER ONE HITS AND HAVING SOLD OVER 300 MILLION RECORDS WORLDWIDE. HE IS PERHAPS BEST KNOWN FOR CREATING SOME OF THE WORLD'S MOST ICONIC DANCE MOVES. THAT'S NOT WHERE HIS TALENTS ENDED, THOUGH. IT IS A LITTLE-KNOWN FACT THAT ONE DANCE MOVE OWES AS MUCH TO MICHAEL'S INVENTIVE GENIUS THAN TO HOURS OF PRACTISING.

You can see this particular 'move' at work in the video for his multi-million-selling single 'Smooth Criminal'. **MICHAEL LEANS FORWARD AT A GRAVITY-DEFYING 45 DEGREE ANGLE** – well past the physical limits of standing up. This would be completely out of the question without a pair of cleverly made shoes designed by Michael himself.

Michael's live shows made use of the shoe design constantly. During performances of 'Smooth Criminal', a set of mushroom-shaped 'hitches' pop up from the stage beneath the dancers' feet. They then shuffle forward, engaging a slot in the heel of their shoe over the head of the mushroom-shaped hitch and wedging the shoe in place.

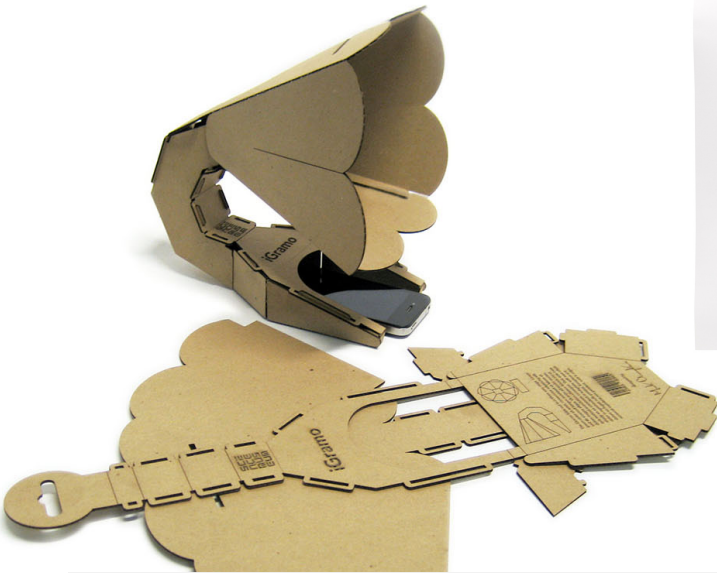
THE DANCERS ARE THEN FIXED TO THE STAGE, AS IF SOMEONE WERE HOLDING DOWN THE BACKS OF THEIR SHOES, enabling them to lean over beyond the point at which they would normally fall. After the move, the dancers shuffle backwards, disengaging the hitch, which would be lowered back into the stage.

In 1993 Michael filed a patent for this nifty footwear design.



FROM JAMIE LEE CURTIS TO FRANCIS FORD COPPOLA AND FROM MICHAEL JACKSON TO PRINCE, THE BOOK UNCOVERS THE UNLIKLEY INVENTIONS BY FAMOUS ACTORS, SPORTSPEOPLE, MUSICIAN AND POLITICIANS.

SCIENCE
MUSEUM



APPOINTED AS INVENTOR IN RESIDENCE AT THE SCIENCE MUSEUM WITH THE BRIEF TO CREATE PRODUCTS TO INSPIRE A LOVE OF SCIENCE AND ENGINEERING



CREATED 130 DIFFERENT PRODUCTS ...



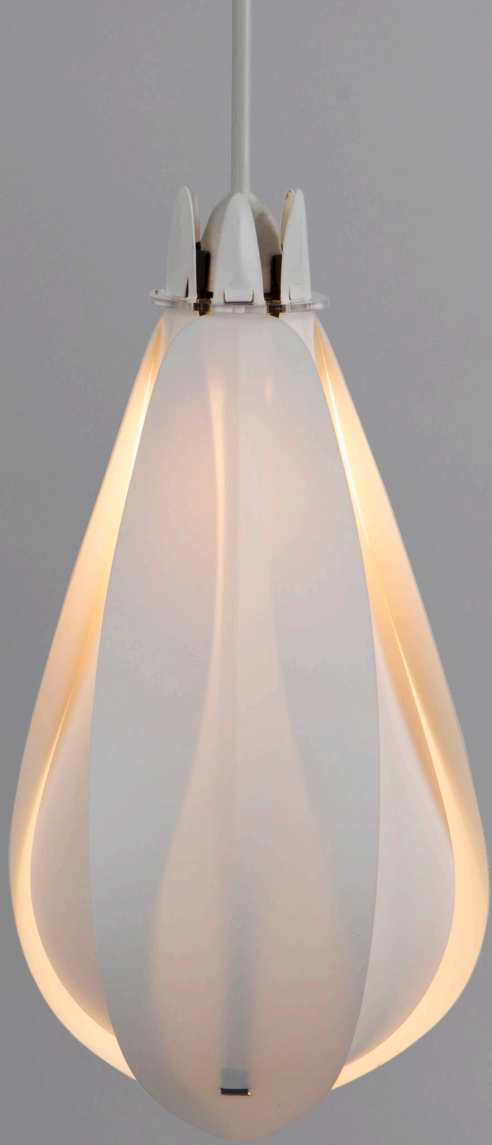
A BEST-SELLING RANGE OF PRODUCTS CALLED 'BEAUTY IN THE MAKING' THAT EACH ARE ILLUSTRATED WITH THE STORY OF THEIR MANUFACTURING PROCESS AND MATERIAL QUALITIES, TO CHANGE PERCEPTIONS AND THE VALUE PLACED ON EVERYDAY OBJECTS



PENCILS THAT SHOW HOW MANY WORDS YOU HAVE WRITTEN AS THEY WEAR DOWN. WITH DIFFERENT LEAD HARDNESS (9B THROUGH TO 9H) THE SCALE DISPLAYED CHANGES.



A LAMP MADE WITH A BIMETALLIC STRUCTURE WHICH OPENS AND CLOSES LIKE A FLOWER USING EXCESS HEAT FROM THE LIGHT BULB WHEN THE LIGHT IS TURNED ON AND OFF





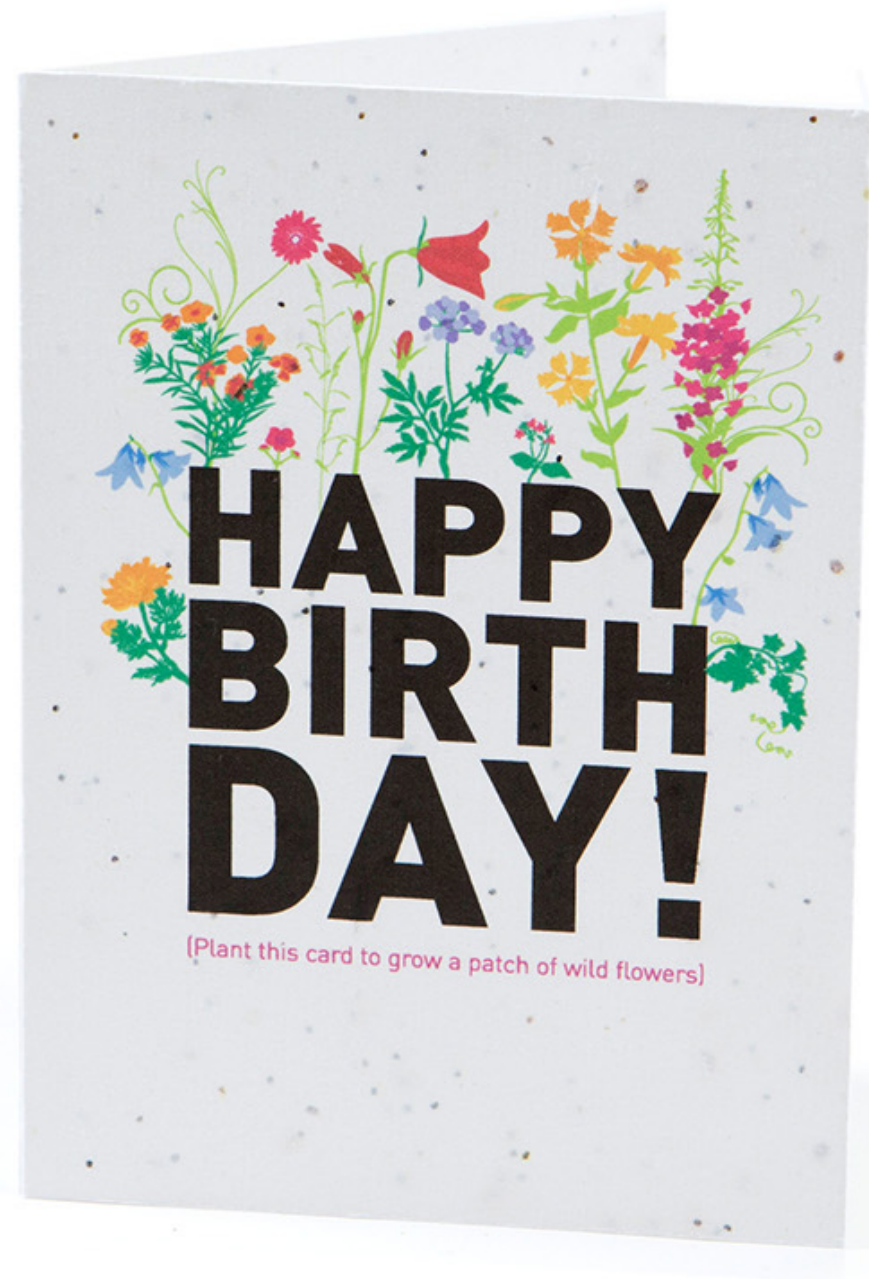
A WATCH THAT SHOWS HOW MULTIPLE COLOURS CAN BE MADE FROM CYAN, MAGENTA AND YELLOW. CIRCLES ROTATE AND DIAMETER CORRESPONDS TO WHICH HAND IT REPRESENTS (HOUR-YELLOW, MINUTE-CYAN, SECOND-MAGENTA)





BIOBAUBLES: BIODEGRADABLE BAUBLES THAT CONTAIN A SAPLING PLANTED IN EARTH. CAN BE PLANTED AFTER CHRISTMAS TO REPLACE THE TREE CHOPPED DOWN THAT YEAR. BAUBLE PROTECTS SAPLING FROM COLD AND ANIMALS UNTIL TREE GROWS THROUGH.

BIOBAUBLE DEVELOPED INTO SEEDED CARDS. PAPER CONTAINS WILD FLOWER SEEDS WHICH GERMINATE WHEN PLANTED SO THE RECIPIENT RECEIVES BOTH A CARD AND SOME FLOWERS





Plant this can to grow a patch of wild flowers



THE BLACK HOLE LIGHT: 70TH BIRTHDAY PRESENTED COMMISSIONED BY
THE SCIENCE MUSEUM FOR PROFESSOR STEPHEN HAWKING. SPIRAL OF
NEON SHOWS THE PATH LIGHT TAKES AS IT FALLS INTO A BLACK HOLE





British Museum
It is a pleasure to open the Information Age exhibition today at the British Museum and I hope people will enjoy visiting.
Elizabeth R.

British Museum
It is a pleasure to open the Information Age exhibition today at the British Museum and I hope people will enjoy visiting.
Elizabeth R.

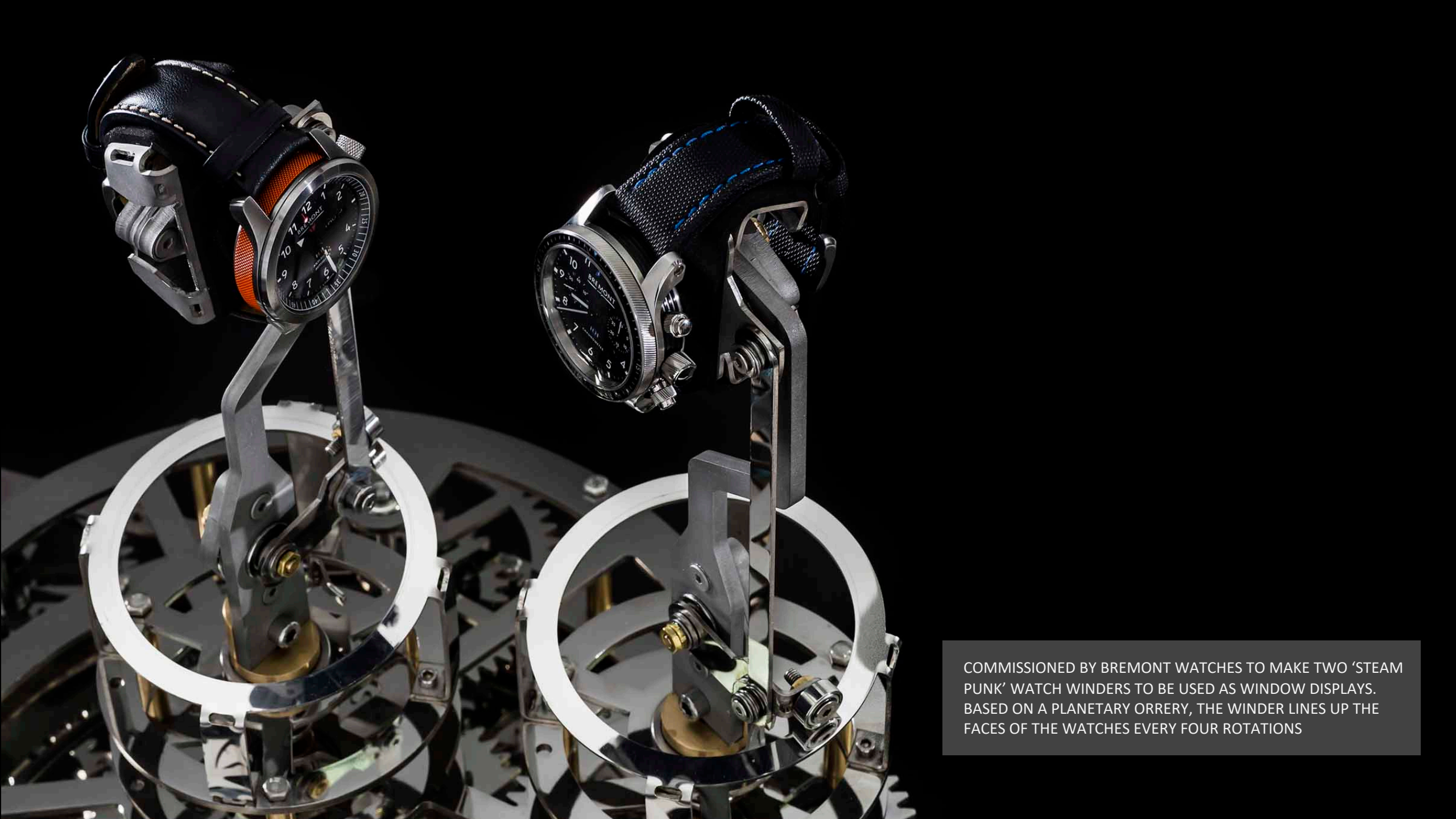


BOUQUET FOR THE QUEEN. COMMISSIONED FOR THE OPENING OF THE 'INFORMATION AGE' GALLERY AT THE SCIENCE MUSEUM. MADE FROM COMPUTER PUNCHCARDS, TICKER TAPE AND COPPER





DESIGN AND MANUFACTURED A PAIR OF 'TALKING BINS' FOR THE MOTHER ADVERTISING AGENCIES TO SUPPORT THE LAUNCH OF MILK BRAND THAT USED SUSTAINABLE PAPER PULP PACKAGING



COMMISSIONED BY BREMONT WATCHES TO MAKE TWO 'STEAM PUNK' WATCH WINDERS TO BE USED AS WINDOW DISPLAYS. BASED ON A PLANETARY ORRERY, THE WINDER LINES UP THE FACES OF THE WATCHES EVERY FOUR ROTATIONS









TEDx LONDON TALK ENTITLED 'WHY EVERYONE SHOULD INVENT' ON A
SPEAKERS PANEL INCLUDING TALVIN SINGH, AL MURRAY & STEPHEN HAWKING



GLASSES WITH LIQUID FILLED LENSES WHOSE PRESCRIPTION CAN BE ALTERED. 20'000 PAIRS MANUFACTURED FOR A PILOT IN GHANA. A \$5 PAIR OF GLASSES TO ENABLE KIDS TO ENGAGE IN THE EDUCATION SYSTEM (1 IN 3 PEOPLE IN GHANA NEED SOME FORM OF SIGHT CORRECTION)



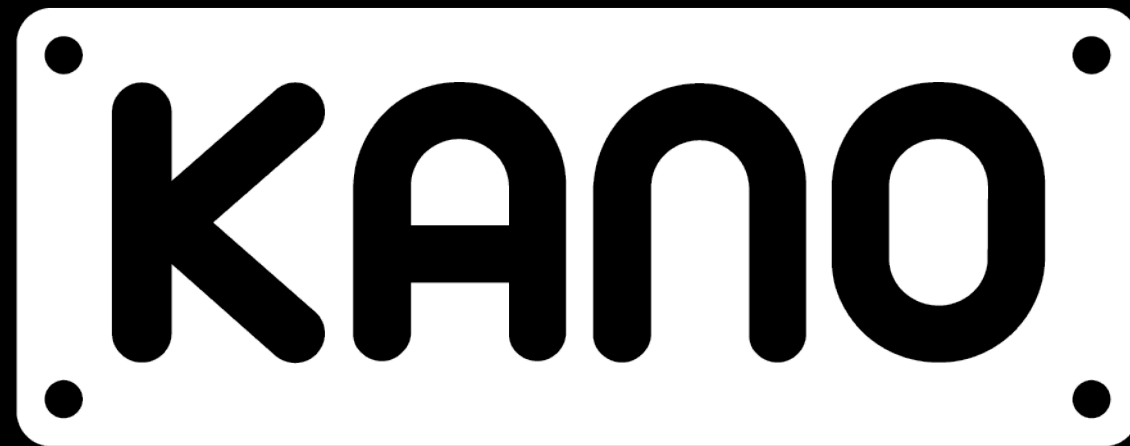
AFTER TRIAL, REDESIGNED GLASSES TO REMOVE SYRINGE AND HAVE
LIQUID TRAPPED IN FRAMES WITH AN ADJUSTMENT DIAL



SAMSUNG

SMART School 

WORKED FOR 18 MONTHS ON SAMSUNG SMART SCHOOL INTERNATIONAL INITIATIVE TO DEVELOP A FRAMEWORK FOR THE 'CONNECTED SCHOOL'



‘MAKE LEARNING
TO CODE ...
AS SIMPLE AND
FUN AS LEGO’





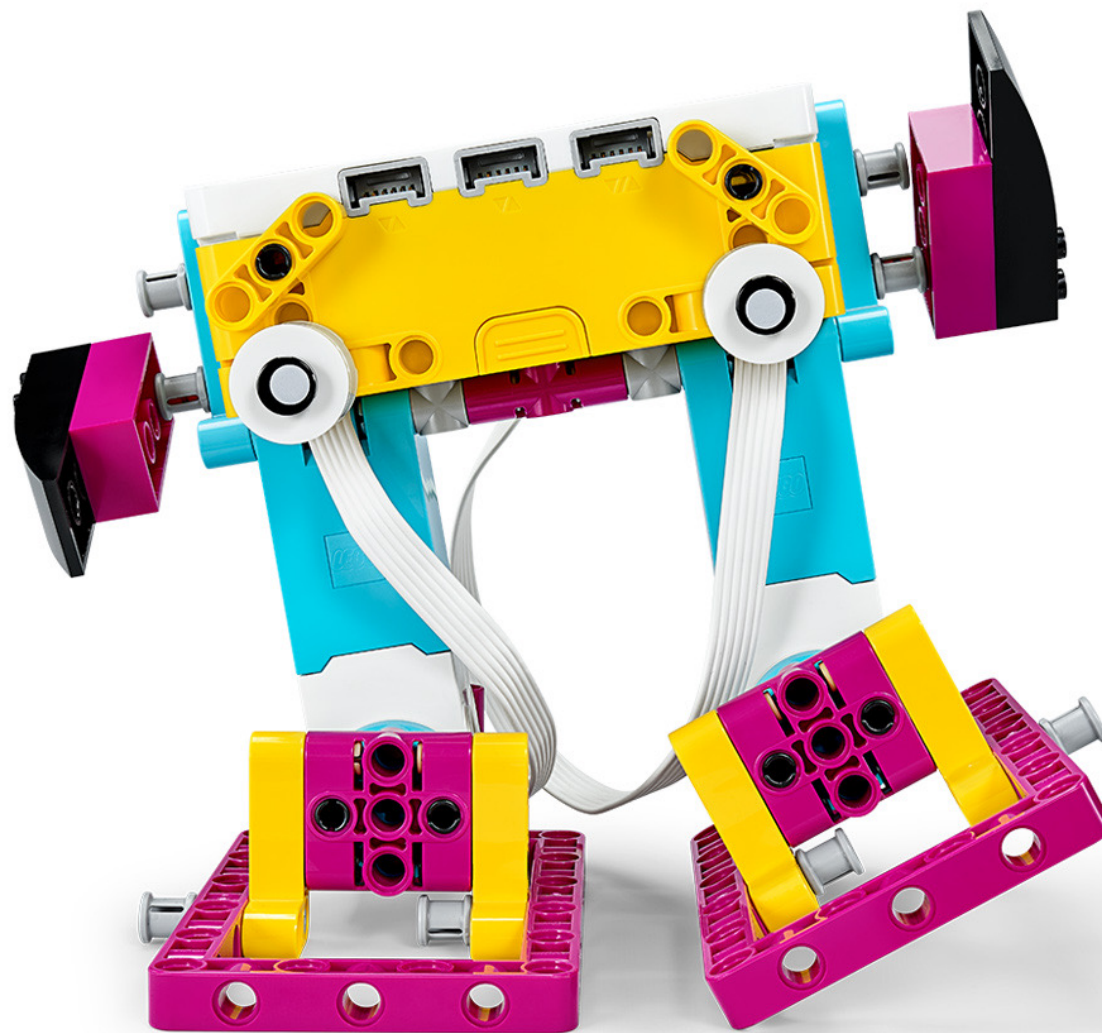
A RANGE OF 'LEGO-LIKE' USB SENSORS (TILT, SOUND, IR TRIPWIRE, HUMIDITY & PROXIMITY)



PROGRAMMABLE DISPLAY, CAMERA AND SPEAKER KITS ELEVATING THE KANO BRAND AND DEMONSTRATING HOW COMPUTING IS MOVING BEYOND COMPUTERS



CREATIVE DIRECTOR FOR THE BUILD AND CONNECT CATEGORY RESPONSIBLE FOR THE LAUNCH OF LEGO BOOST IN 2017. FIVE MODELS THAT YOU CAN BUILD AND CONFIGURE USING A VISUAL PROGRAMMING LANGUAGE.



COLLABORATED WITH LEGO EDUCATION TO INCORPORATE LEARNINGS FROM BOOST AND THE RETAIL-FOCUSED VERSION OF MINDSTORMS TO HELP CREATE LEGO SPIKE PRIME.