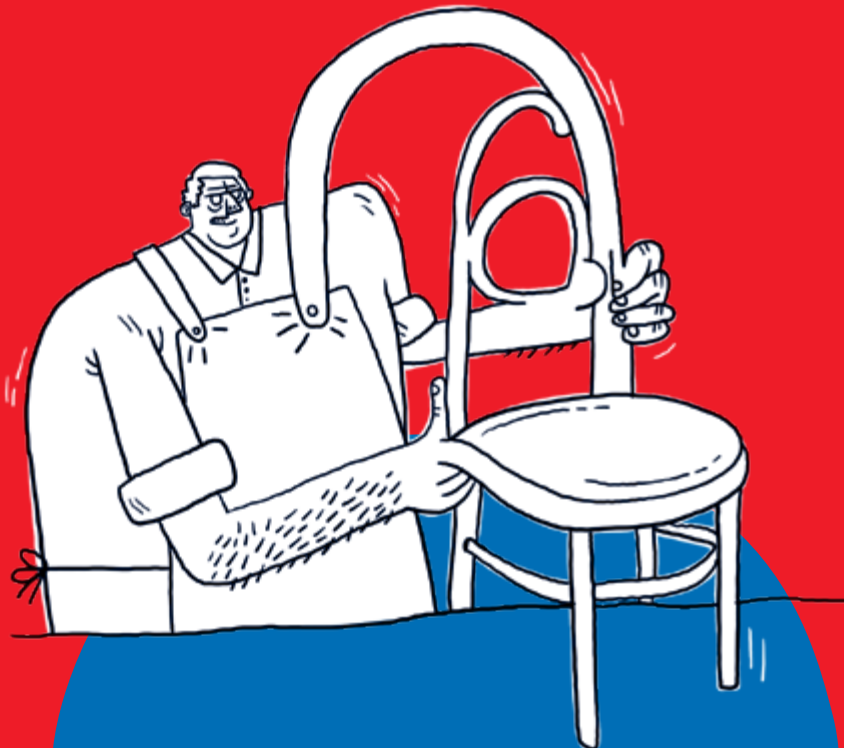
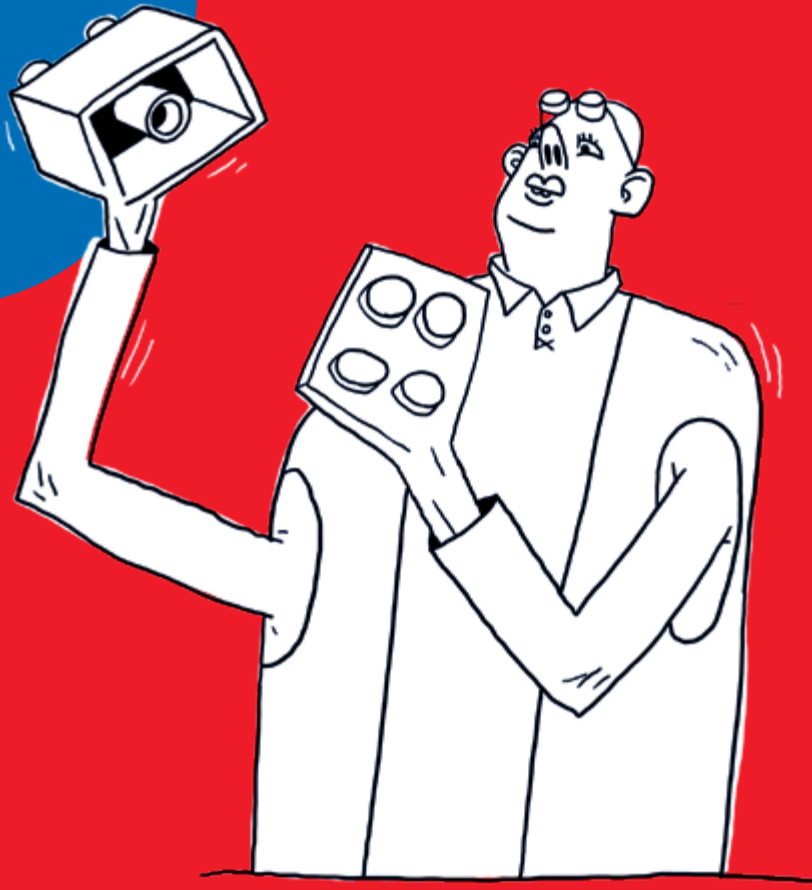


HOW IT'S DONE: DESIGN

Moravian Gallery



**HOW IT'S
DONE**



DESIGN



LIBUŠE
NIKLOVÁ
TOMCAT
1963



JINDŘICH
HALABALA
ARMCHAIR H-269
1930



LUDWIG MIES VAN DER ROHE

BRNO
CHAIR
1931



RAYMOND
LOEWY

COCA-COLA
BOTTLE
1955



PHILIPPE
STARCK

JUICY SALIF
1990



BOŘEK
ŠÍPEK

AJETO
VASE
1990



COCO
CHANEL

PERFUME
NO.5
1921



MICHAEL
THONET

NO. 14
CHAIR
1859



PAVEL
JANÁK
BOX WITH
LID
1941



HELLA
JONGERIUS

POLDER SOFA
2005



ETTORE SOTTsass
VALENTINE
TYPEWRITER
1969



PETER BEHRENS
KETTLE
1909



JOSEF
HOFFMANN

FLEDERMAUS
CHAIR
1907



MILTON
GLASER

NEW YORK
LOGO
1976



JONATHAN
IVE

iPHONE
2007



CHRISTOPHER
DRESSER
TEAPOT
1879



ALVAR AALTO
SAVOY VASE
1936



CHARLOTTE PERRIAND
LC4 CHAISE LONGUE
1928



TOMÁŠ
MAGLIČ

ŠKODA
LOGO
1923



HANS
LEDWINKA

TATRA 77
1934



LADISLAV SUTNAR
BUILD THE TOWN BUILDING
SET
1941-43



ARNE
JACOBSEN

ANT CHAIR
1952



RAY EAMES
CHARLES EAMES
LOUNGE CHAIR (670)
AND OTTOMAN (671)
1956

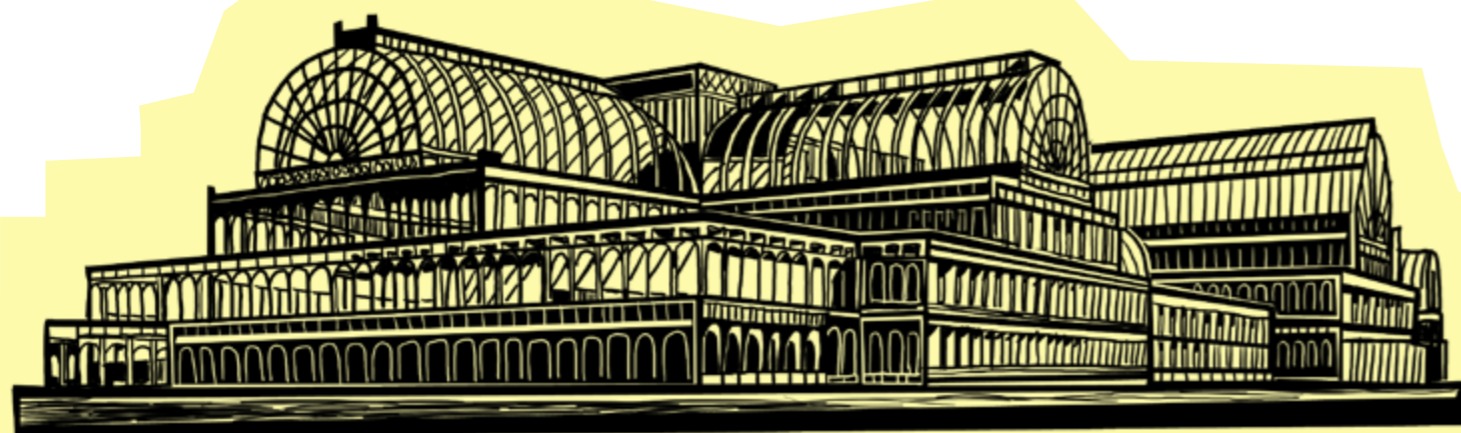


PATRICIA URQUIOLA
CHARLA CHAIR
2021

Conceived by Jiří Pecl, Silvie Šeborová, Jiří Franta, 2023
Written by Silvie Šeborová, Jiří Pecl, 2023
Illustrated by Jiří Franta, 2023
Cover illustrated by David Böhm, 2023
Translated by Andrew Oakland, 2023

© Moravian Gallery Brno, 2023





THE CRYSTAL PALACE

'So what started the Industrial Revolution?' asked Caroline.

'Some scholars say that it started in 1784, with the invention of the first mechanical loom. But the starting date's not the important thing. We shouldn't imagine the Industrial Revolution as sudden change. People didn't wake up one morning and go off to the factory instead of the field because someone somewhere had invented something. The process lasted almost a century, and the events within it concerned not only machines. Amid the great social changes, people started to have more children, for instance.'

'During the Industrial Revolution, how did people communicate without mobile phones and the internet?'

'Well, sometime around 1830 Great Britain became a great political and economic power with colonies all over the world. It was in Britain that the Industrial Revolution began. You're right to think that without

phones and the internet, and without aeroplanes to transport mail at speed from one place to another, it wasn't easy to find out what was going on in Asia, America or at the other end of Europe. So the idea was born for an international exhibition of industry and culture in London. The prime mover behind the Great Exhibition was Prince Albert, husband of Britain's Queen Victoria. He was keen to show off Britain's high-quality products to the world, and to arrange for their sale to other countries. Londoners built a new pavilion for the exhibition, the Crystal Palace. In his design for this, architect Joseph Paxton was inspired by a giant water lily. The building resembled a huge greenhouse in the shape of one. The exhibition was held in 1851. It was so successful that similar international exhibitions followed. Such exhibitions became a popular feature of the nineteenth century and beyond.'

'What a time that must have been!' sighed Sebastian. 'So many inventions and discoveries!'

'But as we know, the beginning of one thing often brings about the end of another. The new machines caused some of the artisan crafts we talked about earlier to disappear. For example, once people were using machines – trains, and later, cars – as means of transport, the need for saddlers diminished.'

'People still wear shoes,' Caroline pointed out.

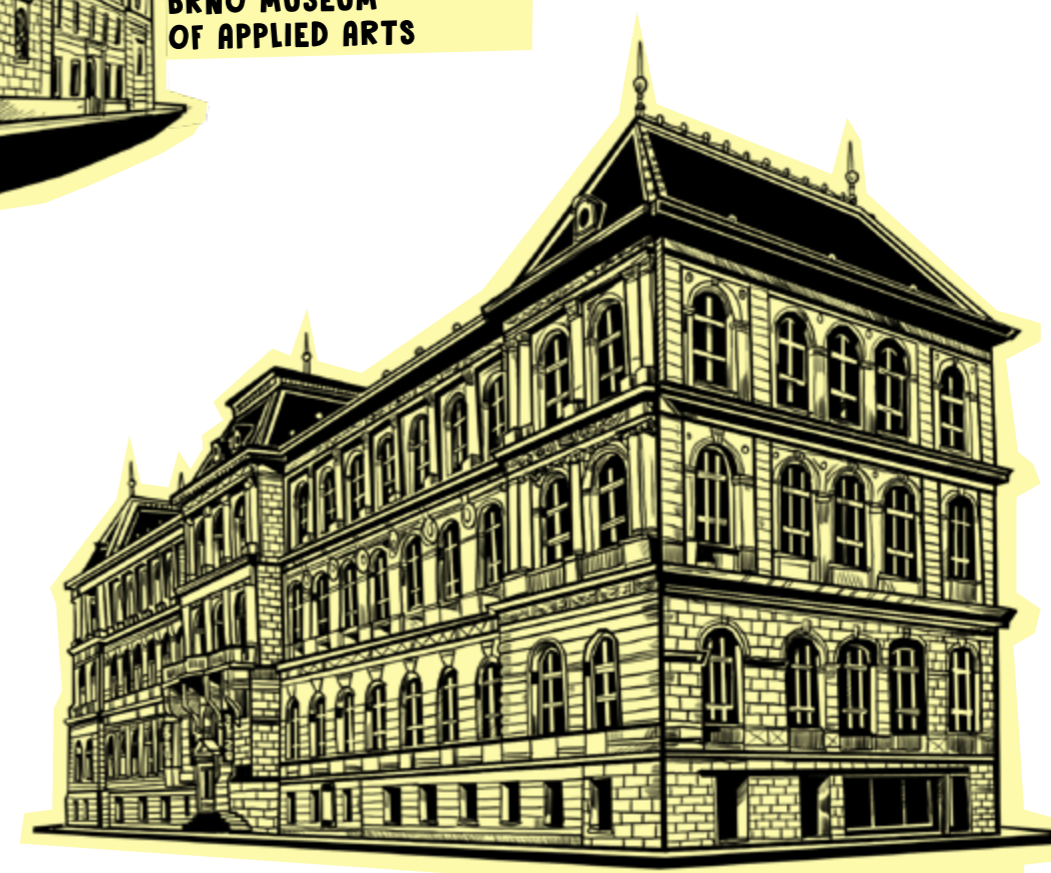
'That's true, but the making of them was no longer a job for one cobbler. What used to be work for a single artisan, starting with the design and ending with the finished product, came to involve many people. Like many other things, shoes were now made in factories, where labourers and office workers were employed

by an owner. That owner also needed someone to design his shoes. *Et voilà!* The designer enters the stage. Finally, design is a thing.

'As designers worked for different industries, design came to be divided into different disciplines. That's why today we have things like furniture design, graphic design and fashion design. Products like machines and means of transport fall under industrial design. Museums came into being to collect, classify and exhibit the products of designers. One of the most important of these, named for Queen Victoria and her husband Albert, opened in London soon after the Great Exhibition at the Crystal Palace. In the Czech lands, museums of applied arts were established in Brno and Liberec as early as 1873; the Prague Museum of Decorative Arts followed twelve years later. These museums are still open to visitors. Why would they not be? Everything that began during the Industrial Revolution continues to develop.'



BRNO MUSEUM OF APPLIED ARTS



PRAGUE MUSEUM OF DECORATIVE ARTS

Most famous chairs of all time

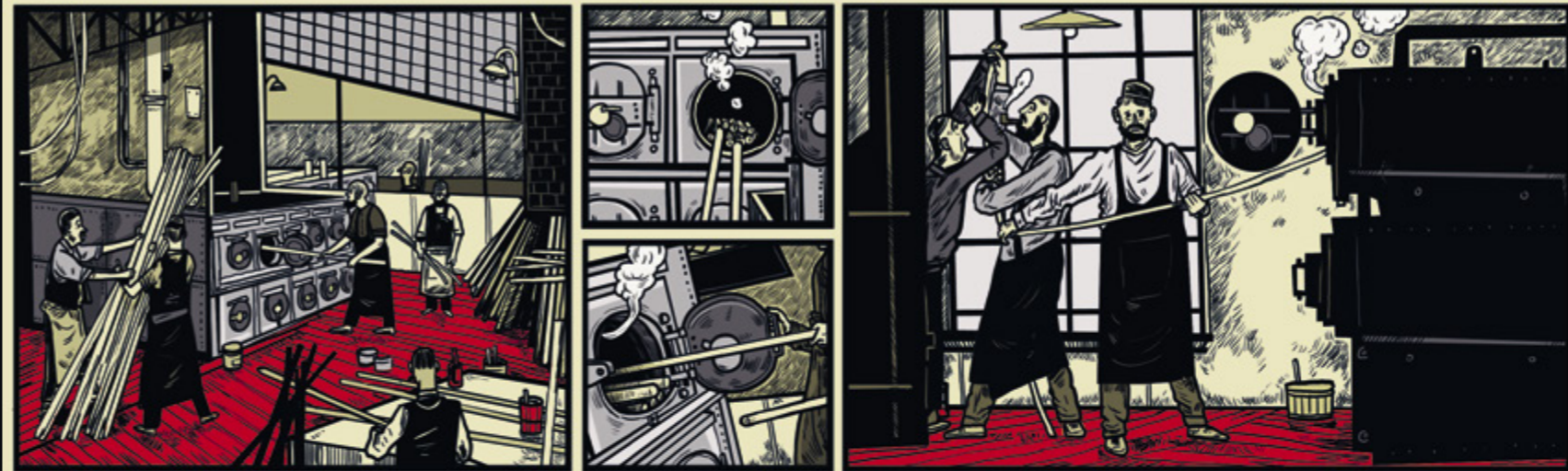
14



MICHAEL THONET WAS BORN IN GERMANY AT THE END OF THE 18TH CENTURY. A MAKER OF BENTWOOD FURNITURE, HE DEVOTED HIS LIFE TO MAKING HIS WORK BETTER, QUICKER AND CHEAPER THAN THE WORK OF OTHERS.



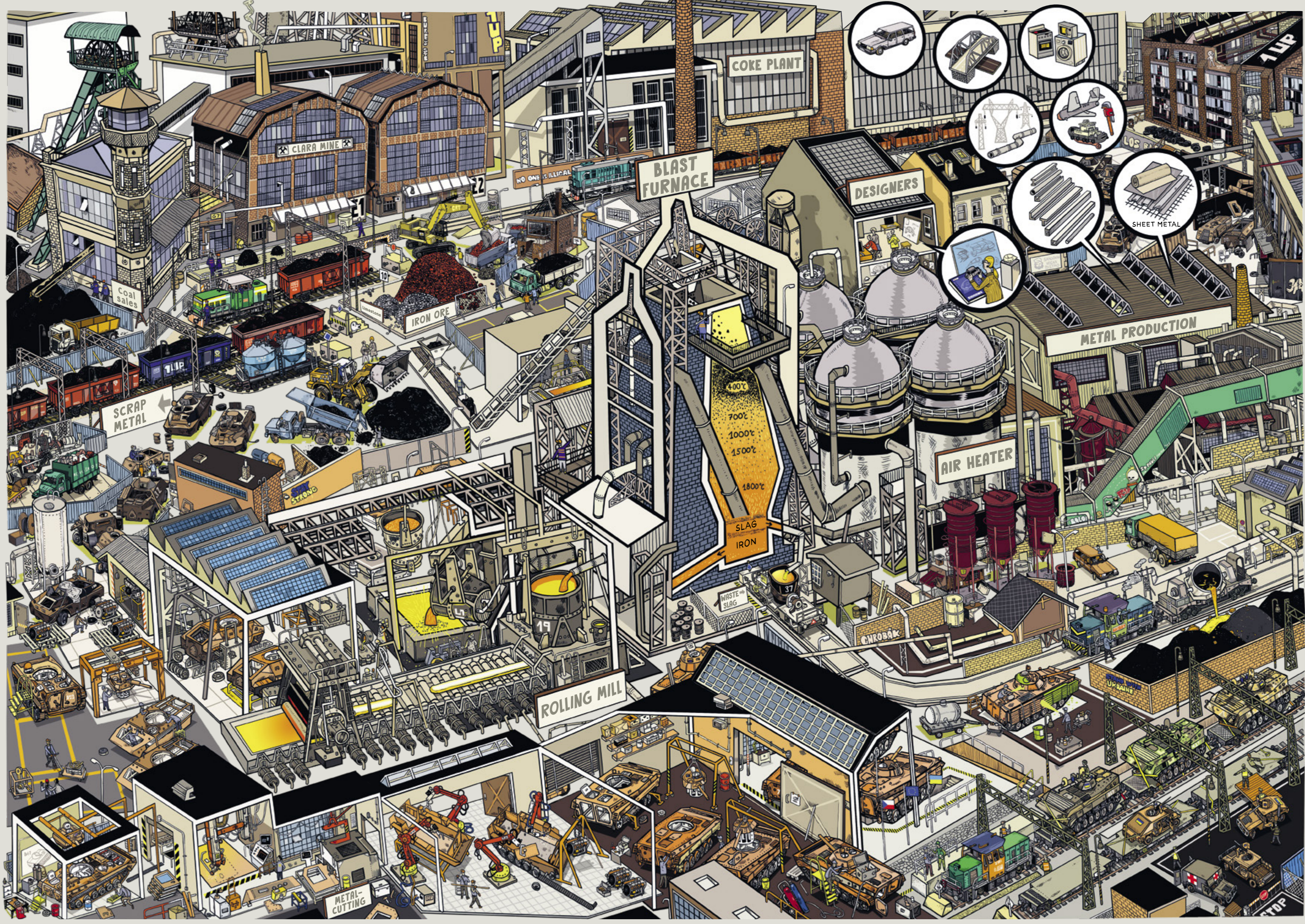
ALTHOUGH CURVED CHAIR BACKS HAD BEEN MADE IN ENGLAND SINCE THE 17TH CENTURY, PRODUCTION OF WHOLE CHAIRS IN THIS WAY HAD PROVEN DEMANDING AND IMPRACTICABLE. THE WOOD WAS FIRST CUT INTO THIN SLATS WHICH WERE THEN GLUED TOGETHER. FOUR LAYERS OF GLUE HELD TOGETHER FIVE SLATS, REQUIRING FIVE KILOS OF ADHESIVE.



THONET WISHED TO DO THIS DIFFERENTLY. HE DRIED THE WOOD AND CUT IT INTO SLATS, BUT ROUNDED ONES. THE SLATS WERE PLACED IN A STEAM BATH OVER ONE HUNDRED DEGREES CELSIUS IN TEMPERATURE. WHEN REMOVED FROM THE STEAM, THE SLATS WERE AS FLEXIBLE AS PLASTICINE.



ALMOST AS FLEXIBLE. IT TOOK TWO STRONG MEN TO BEND THEM. ONE END OF THE SLAT AND A STEEL BELT WERE CLAMPED TO A MOULD THAT MADE THE SHAPE OF THE BEND.



COKE PLANT

CLARA MINE

BLAST FURNACE

DESIGNERS

SHEET METAL

METAL PRODUCTION

ROLLING MILL

AIR HEATER

SCRAP METAL

IRON ORE

SLAG
IRON

METAL-CUTTING

400°
700°
1000°
1500°
1800°

CHROBÁK

UKRAINE

STRONG

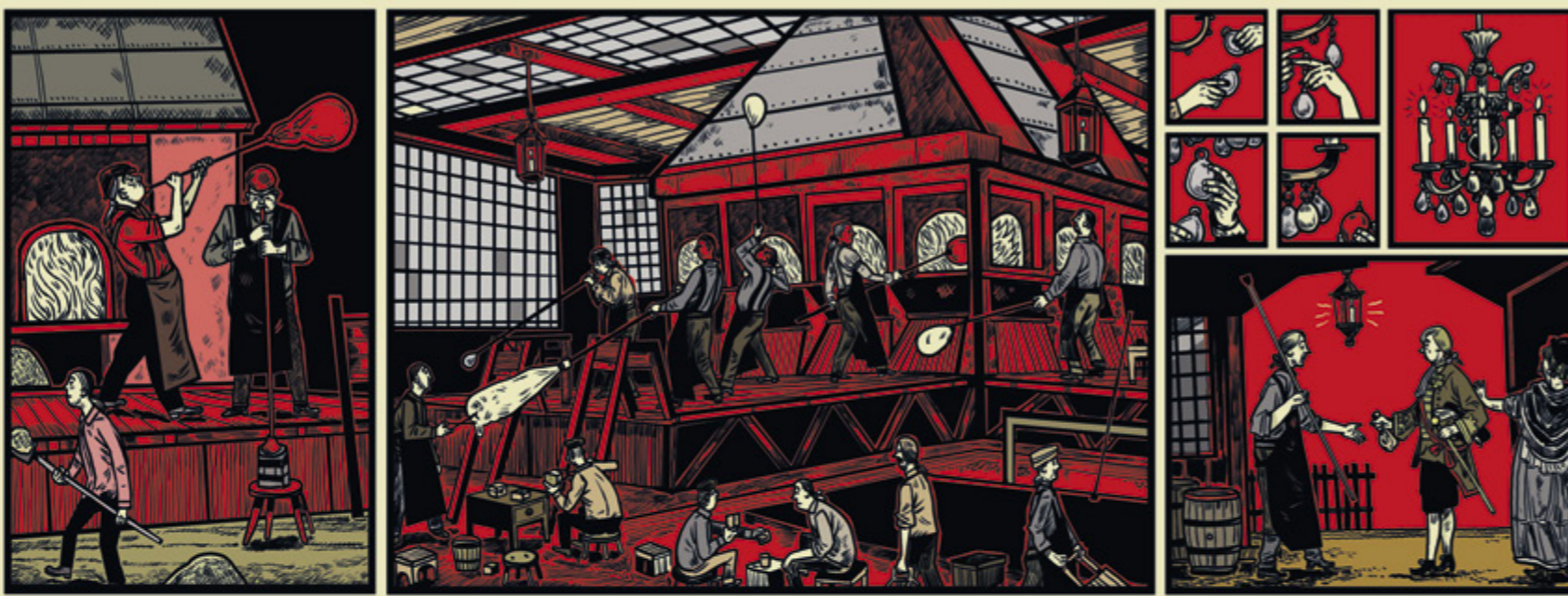
Coal sales

NO ONE IS ILLICIT

TUP

LOS PA

STOP



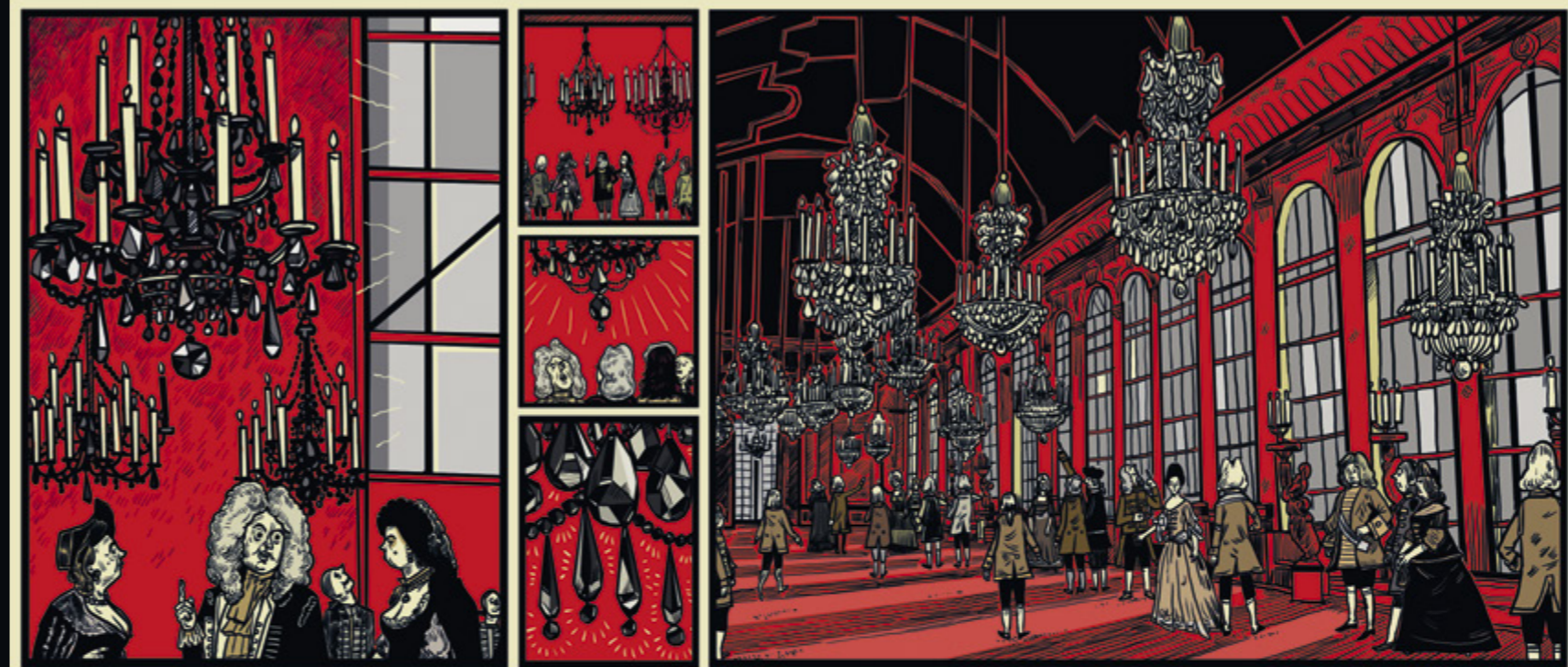
SUCH CHANDELIERS WERE PRODUCED IN GLASSMAKERS' WORKSHOPS. GLASS SAND WAS MELTED IN A FURNACE. WHILE THE GLASS WAS STILL HOT, SMALL PARTS WERE PRESSED OUT OF IT. THESE WOULD BE THE PENDANTS ATTACHED TO THE STEEL FRAME, HUNDREDS OF WHICH WOULD BE NEEDED TO MAKE ONE CHANDELIER. HOW COULD SOMEONE BE FOUND TO MAKE SUCH DECORATIVE LIGHTING FOR THE ENTIRE HALL?



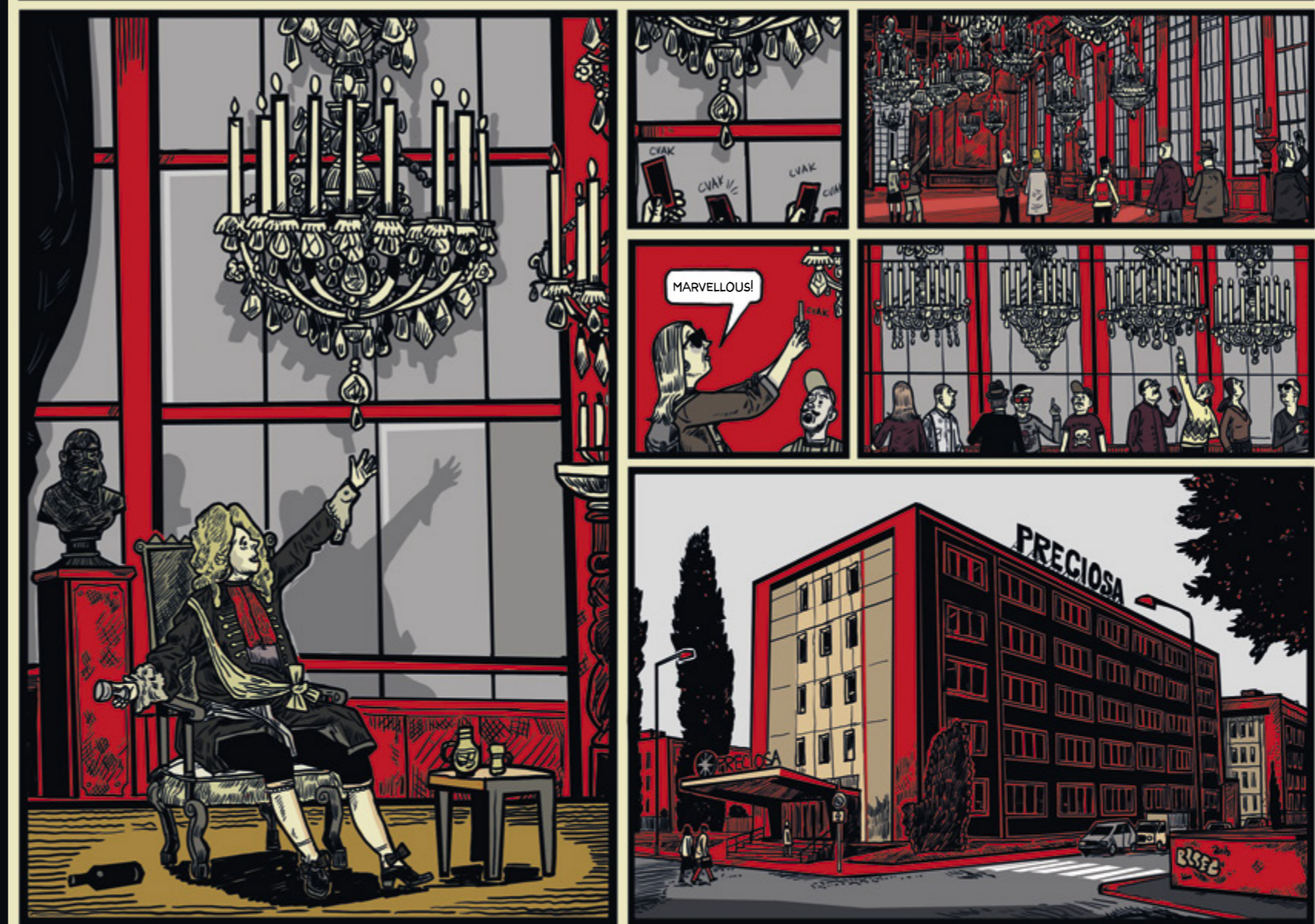
THE FIRST CHANDELIERS WITH DECORATIVE GLASS PENDANTS WERE PRODUCED IN FRENCH GLASSWORKS. BUT THEIR MAKERS USED SODA GLASS, TO WHICH LOUIS XV OBJECTED: 'IT'S NOT BRIGHT ENOUGH. I WANT SOMETHING MORE IMPRESSIVE! FORTUNATELY, IN THE EARLY 18TH CENTURY TECHNOLOGY FOR THE MAKING OF GLASS CHANDELIERS UNDERWENT RADICAL CHANGE: IT BECAME POSSIBLE TO CUT GLASS. THE SMOOTH SURFACES OF CUT-GLASS PENDANTS WERE NOT ONLY DECORATIVE, BUT THEY ALSO REFLECTED LIGHT AND SO INTENSIFIED BRIGHTNESS.



LOUIS WAS SO IMPRESSED BY THE BEAUTIFUL LEAD-CRYSTAL PENDANTS PRODUCED BY GLASSWORKS IN BOHEMIA THAT HE APPOINTED JOHANN FERDINAND BRANBERGER, MERCHANT AND GLASSMAKER FROM PRAGUE'S NEW TOWN, TO THE VERSAILLES COMMISSION. FOLLOWING A FRENCH DESIGN, BRANBERGER UNDERTOOK TO SUPPLY THE PALACE WITH CUT-GLASS PENDANTS OF EXTRA-HIGH QUALITY, PLUS GLASS PYRAMIDS AND VASES, CHANDELIER FRAMES, AND SPARE AND REPLACEMENT PARTS.



BRANBERGER WAS AS GOOD AS HIS WORD. ON THE DAY OF THE WEDDING, IN MAY 1725, THE HALL AT THE PALACE WAS ADORNED WITH TEN NEW CHANDELIERS, EACH FIVE AND A HALF METRES HIGH AND A METRE AND A HALF WIDE. LIGHT REFLECTED BY THE CHANDELIERS WAS FURTHER REFLECTED IN THE MIRRORS. THE GUESTS AT THE ROYAL CELEBRATION WERE SPEECHLESS WITH ADMIRATION!



KING LOUIS CONTINUED TO MAKE FULL USE OF THIS EXTRAORDINARY SPACE. AT MEETINGS OF STATE AND SOCIAL EVENTS, THE HALL SERVED TO SHOW OFF THE WEALTH AND POWER OF FRANCE. AS FOR BOHEMIAN GLASSMAKERS, THEY WENT ON TO SUPPLY ROYAL COURTS ALL OVER THE WORLD. THEIR CHANDELIERS ARE STILL RENOWNED FOR THEIR BEAUTY, PURITY AND FINE PROCESSING. WHAT'S MORE, THE GLASSWORKS WHERE THE VERSAILLES CHANDELIERS WERE MADE IS STILL IN OPERATION. CALLED PRECIOSA, IT IS IN NORTHERN BOHEMIA.

Cobbler and factory owner



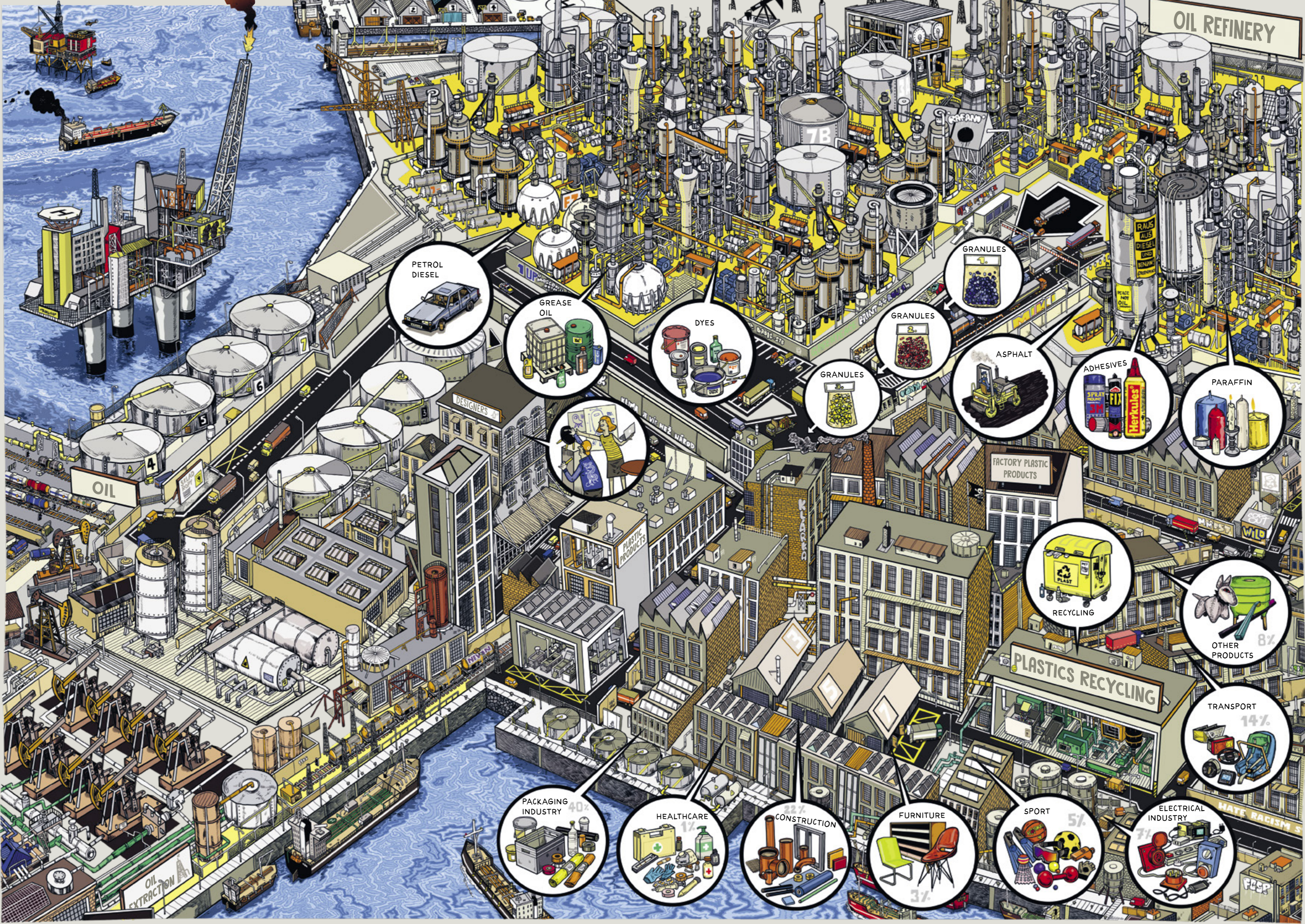
EVEN IN THE 19TH CENTURY, MOST PEOPLE WALKED BAREFOOT FROM SPRING TO AUTUMN, FOR THE SIMPLE REASON THAT THEY COULDN'T AFFORD LEATHER SHOES. THEN ALONG CAME TOMÁŠ BAŤA TO CHANGE THIS. TOMÁŠ'S FATHER WAS A POOR COBBLER WITH SIX CHILDREN TO SUPPORT. THE COBBLER'S CRAFT PASSED THROUGH THE GENERATIONS, SO IT WAS ALWAYS CLEAR WHAT TOMÁŠ WOULD DO FOR A LIVING.



WHEN TOMÁŠ, SISTER ANNA AND BROTHER ANTONÍN CAME INTO THEIR SMALL INHERITANCE AT THE CENTURY'S END, THEY BOUGHT A SHOEMAKING COMPANY. AFTER ANNA MARRIED AND ANTONÍN JOINED THE ARMY, TOMÁŠ WAS LEFT TO RUN THE BUSINESS ALONE. HE DIDN'T MIND THIS.



QUITE THE OPPOSITE, IN FACT. HE CAME UP WITH A NEW TYPE OF SHOE. ONLY THE TIP AND THE SOLE WERE MADE OF LEATHER; THE REST WAS MADE OF CANVAS. THIS HAD MANY ADVANTAGES. NOT ONLY WAS CANVAS CHEAPER THAN LEATHER, BUT IT WAS ALSO LIGHTER. THESE BAŤA SHOES WERE HALF THE WEIGHT OF OTHER POPULAR SHOES OF THE TIME. THE LEFT SHOE WAS THE SAME AS THE RIGHT, SO SAVING ON MATERIALS. BAŤA'S STAFF USED MACHINES RATHER THAN STITCHING THE SHOES TOGETHER BY HAND. TOMÁŠ BAŤA WAS ABLE TO PRODUCE A SHOE FROM START TO FINISH IN A SINGLE DAY.



OIL REFINERY

PETROL
DIESEL



GREASE
OIL



DYES



GRANULES



GRANULES



GRANULES



ASPHALT



ADHESIVES



PARAFFIN



FACTORY PLASTIC PRODUCTS



RECYCLING



OTHER PRODUCTS 8%

PLASTICS RECYCLING

TRANSPORT 14%



PACKAGING INDUSTRY 40%



HEALTHCARE 1%



CONSTRUCTION 22%



FURNITURE 3%



SPORT 5%



ELECTRICAL INDUSTRY 7%



OIL EXTRACTION

DESIGNERS



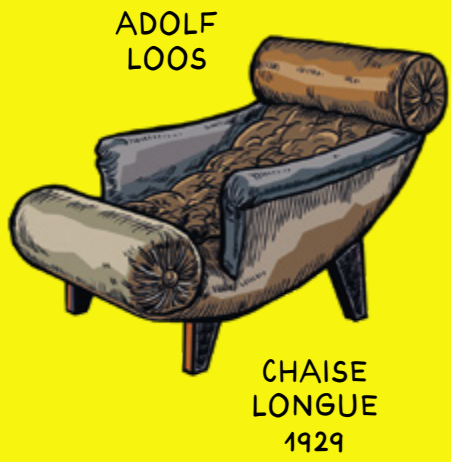
PLASTIC PRODUCTS

PLASTIC PRODUCTS

WILP

HATE RACISM

FESP



ADOLF LOOS

CHAISE LONGUE
1929



CHARLES RENNIE MACKINTOSH

ARGYLE CHAIR
1897



DIETER RAMS

TRANSISTOR RADIO 1
1956



We Can Do It!

J. HOWARD MILLER
POSTER
WE CAN DO IT!
1943



INGO MAURER
LUCCELLINO
WALL LAMP
1992



ROB JANOFF

APPLE LOGO
1977



RED AND BLUE CHAIR
1918

GERRIT RIETVELD



SHIRO KURAMATA

CHEST OF DRAWERS
1970



RON ARAD

BOOKWORM
BOOKSHELF
1993



TAPIO WIRKKALA

TAPIO WINE GLASSES
1952



VIVIENNE WESTWOOD

BAG
2020



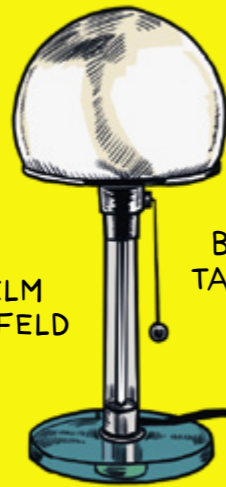
LEO FENDER

ELECTRIC GUITAR
1950



MARIANNE BRANDT

TEAPOT
1924



WILHELM WAGENFELD

BAUHAUS TABLE LAMP
1923



HENRY DREYFUSS

MODEL 302
TELEPHONE
1937



DOUGLAS SCOTT

ROADMASTER BUS
(DOUBLE-DECKER)
1954



MIUCCIA PRADA

DRESS
1996



LUDVIKA SMRČKOVÁ

DRINKING SET
1948



JOE COLOMBO

TOPO TABLE LAMP
1970



CLOCK
1913

JOSEF GOČÁR



CITROËN DS
1955

FLAMINIO BERTONI

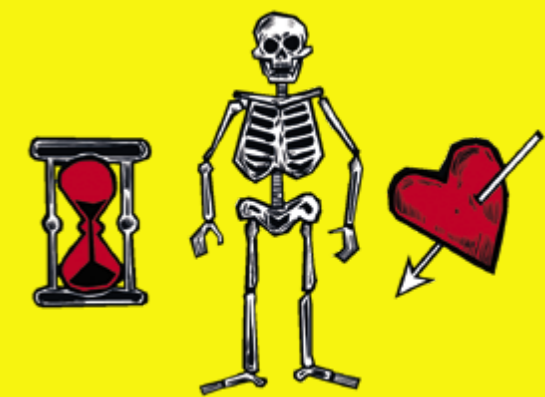


VERNER PANTON

PANTON CHAIR
1967



MICHELE DE LUCCHI
TOLOMEO LAMP
1987





HOW IT'S DONE: DESIGN