

Feliks Topolski: Drawing Debden

By Jennifer Adam, Curator of the Bank of England Museum.

An exhibition in the Bank of England Museum showcases a series of drawings of the Bank of England's Printing Works from 1957, the year after it opened for production. The Bank of England's Printing Works at Debden, Essex, opened for business in March 1956. This was a landmark moment for the Bank. The spectacular new Production Hall accommodated the whole production line for the first time, creating a dramatic improvement in efficiency, security and working conditions compared to the old St Luke's Printing Works at Old Street.

To commemorate the move, the Bank of England commissioned artist Feliks Topolski to capture scenes of the new Printing Works in operation. This new exhibition displays Topolski's drawings and paintings together within the Bank for the first time. As a group, they form a compelling and engaging record — not just of the process of making money, but of the staff who carried out the work, and of the building itself.



Figure 1 Feliks Topolski, *The Printing Works 5.45pm, 1957* (Bank of England Museum, 1978/025).

Feliks Topolski

Feliks Topolski RA (1907–89) was born in Warsaw, Poland. He travelled to Britain in 1935 and quickly became part of the artistic scene, drawing for illustrated newspapers such as the *Illustrated London News* and the *News Chronicle*. This period saw the beginning of enduring friendships and collaborations with celebrated literary and artistic figures of the day — Augustus John, Grahame Green and George Bernard Shaw among others.

During the Second World War, Topolski worked as a War Artist for both Britain and Poland, covering scenes both in Britain and overseas. His drawings continued to be published, including coverage of an Arctic convoy to Russia in 1941. Later, he would document the liberation of Belsen, and the Nuremberg Trials.

In peacetime, Topolski continued to contribute to illustrated newspapers and also began his own illustrated broadsheet. The *Topolski Chronicle* was published twice a month, and would run from 1953 to 1982. Each issue focused on subjects or events which Topolski himself had witnessed, drawing them on the spot. These drawings became the raw material for his paintings and other large-scale artworks, including a monumental commission of the coronation of Elizabeth II for Buckingham Palace. The *Chronicle* also provided fodder for Topolski's own epic *Memoir of the Century*, an immense installation of his paintings in a railway arch under the Hungerford Bridge on London's South Bank, near to his own studio. One of Topolski's most famous commissions was for the seminal BBC TV series, *Face to Face*, for which Topolski drew the portraits of the 35 interviewees which accompanied each episode. These were political and cultural figures of the day, from Topolski's friend Augustus John to Martin Luther King, poet Edith Sitwell, racing driver Stirling Moss and photographer Cecil Beaton.

Topolski's work came to the Bank of England's attention in 1941. As War Artist, he recorded scenes of the London Blitz, including a bomb strike outside the Bank of England in January 1941. This had left a crater in a busy road intersection destroying the ticket hall of Bank Tube station beneath. By the time Topolski drew this, it was almost business as usual: in this picture, the crater has been bridged, and traffic is moving again. The censors, however, took a dim view of his showing a national institution and important transport hub at such a disadvantage, and the Ministry of Information withdrew the drawing from public exhibition.

A Bank official wrote of the image: '...I am not surprised that the censor had it withdrawn... the very vitality of Topolski's drawing gives the impression of a far worse disaster than the incident actually was'.⁽¹⁾ After some negotiation, and a promise that the picture would not be exhibited publicly, the



Figure 2 Feliks Topolski, *War Damage Outside the Bank*, 1941 (Bank of England Museum, 0603, Courtesy of The Estate of Feliks Topolski).

Bank of England was allowed to purchase the drawing — the first of Topolski's pictures acquired by the Bank.

Whether inspired by this or by Topolski's by then well-established reputation, 16 years later the Bank contacted him with a commission to create 'a contemporary record of scenes at the Works'.⁽²⁾ It was not the first time the Bank had marked a milestone in this way. During the rebuilding of the Bank's Threadneedle Street premises in the 1920s, Bank officials had commissioned a series of paintings for the new headquarters. Some were portraits of individuals or groups; others showed whole departments at work. Walter Monnington (1855–76) painted the interior of the Bank's Printing Works, then based in the former St Luke's Hospital, on Old Street.

From St Luke's to Debden

In the early days of the Bank of England, its banknote printing operations had been outsourced. But by the late 1700s it was considered too great a risk to send printing plates and banknote paper outside the Bank's own premises, so the operations were brought into Threadneedle Street. The Printing Department remained there until 1925, when it moved down the road to the converted St Luke's Hospital, on Old Street.

St Luke's was designed by George Dance Jr, RA in the 1780s, to house the St Luke's Hospital for Lunatics. The Dance building had an imposing 150-metre frontage between Bath Street and today's roundabout at Old Street and

(1) Letter from J A Giuseppi to F Davis, 16 May 1941 (Museum and Historical Research Files, HR24/05).

(2) Draft letter from the Bank of England to F Topolski (Museum and Historical Research Files, HR24/05).



Figure 3 Anonymous artist, *St Luke's Hospital*, 1815 (Bank of England Museum, 0218).

City Road. The Bank acquired the site in 1916, and converted it for use as its Printing Works, which were able to expand greatly from their previous cramped quarters inside the Threadneedle Street building. At last the printing halls were fit to meet the increasing demand the Printing Works faced following the First World War — for banknotes and other official printing such as bonds, certificates and custom stationery for the Bank's operations.

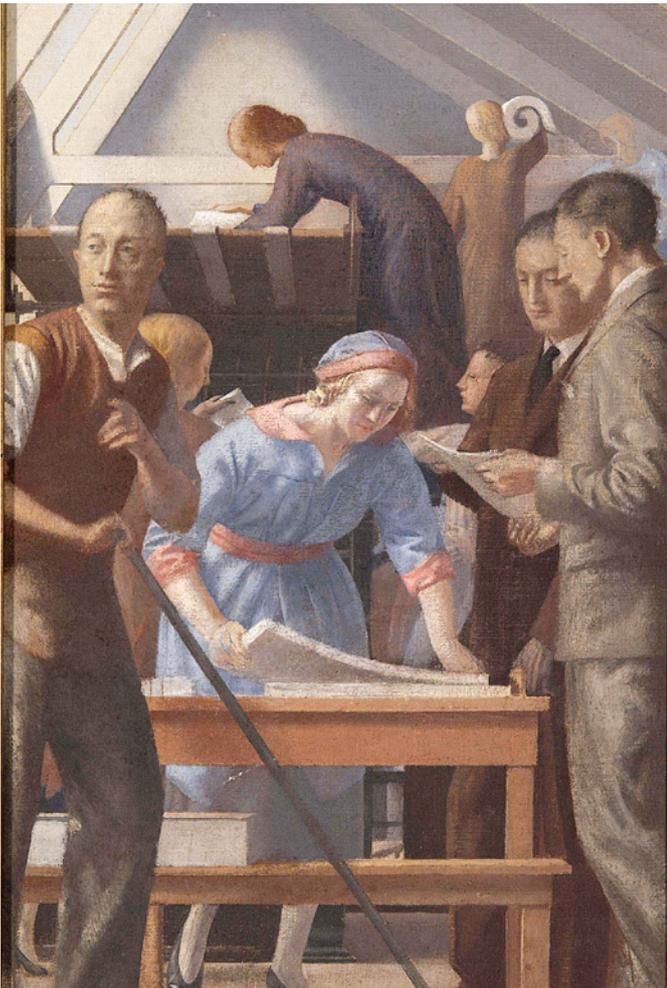


Figure 4 Walter Monnington, *St Luke's Printing Works*, c.1930 (Bank of England Museum, 1994/197/001).

By the end of the 1940s, however, St Luke's was operating at capacity, scarcely able to keep up with demand. Its printing halls, strong rooms and staff facilities were badly overcrowded. Staff wasted huge amounts of time moving part-printed paper around the building, between the strong rooms where the paper dried off between processes and various stages of printing carried out in different halls. This inefficiency made it difficult and costly to maintain adequate security, and poor working conditions made recruitment difficult. The Bank decided to find a new site and commission a new, purpose-built factory for its banknote printing operations.

A building project of this size was no simple process amid the restriction of the post-war period. National resources were focused on rebuilding homes and infrastructure destroyed by bombing. The Bank and its appointed architect, Howard Robertson, eventually settled on a site at Debden, Essex, which was also the location of a sizable new housing development, established to replace homes in London's East End that had been bombed during the Blitz. London County Council was keen to attract light industry to the town to provide local employment. As well as new local employees, staff from the former St Luke's Printing Works would still be able to reach the new site. The newly extended Central Line also connected Debden to central London, stopping practically at the doors of the Bank of England itself.

Robertson worked closely with the Bank and structural engineers Ove Arup to design the new premises around the complex and high-security process of creating banknotes. The new facilities offered greatly improved working conditions. Surrounded by fields, with extensive recreational facilities attached to the factory, the new Debden Printing Works was a far more pleasant place to be than the grimy, smoky surroundings of Old Street.



Figure 5 The new housing estate is visible in the distance, on the other side of the Central Line tracks. *Building work in progress at the Debden Printing Works*, May 1956 (Bank of England Archive, 15A/13/6/2).



Figure 6 The main production hall dominates the site, which is surrounded by fields, with the London Underground line on its northern edge. *Aerial view of the Printing Works, September 1955* (Bank of England Archive, 15A/13/6/2).

The building

Robertson and Arup collaborated on a striking new design for the Main Production Hall, a vast space more than 240 metres long. Its arched, reinforced concrete roof needed no supporting pillars, which maximised floor space for the production line and was the widest span of its type in Western Europe. This ceiling is a recurrent theme in Topolski's drawings, appearing in the background of many of his images.

The sheer space within the new hall enabled an immediate increase in efficiency. For the first time, the three printing stages and final quality control took place in a streamlined process within the same hall. A series of strong rooms along the side of the hall allowed for the secure storage of notes during the drying period between production processes, as well as reducing the amount of time spent moving part-printed notes around the Works. The effect was dramatic — within a year Debden was producing 25 million £1 and

ten shilling banknotes per week — three million more than had been possible at St Luke's.

The new layout also improved the security of the production line. An Inspectors' Gallery ran around the hall, with an uninterrupted view over the whole space. The gallery was faced with darkened glass, behind which Inspectors could keep watch; clear viewing slots at regular intervals allowed a sharper yet still discreet view of the work below. The staff were continually monitored — but it was an accepted part of the job, '...eerie at first, but after a few days you didn't notice'.⁽³⁾ The Inspectors appear in several of Topolski's works, looming quietly over the action.

The production process

The largest of Topolski's works here depicts the entire production line in one great panorama, labelled for each of the stages that took place in the Main Production Hall — litho printing, plate (intaglio) printing, counting finished sheets, numbering, and the final examination area, effectively the final quality control. The panorama acts as a key for Topolski's other sketches, in which he captured teams and individuals at work at each stage of that process. One notable feature of these drawings is the gender mix. Women made up a large proportion of the staff — on the production line, men mainly carried out only 'heavy' work, and most of the examiners at every stage were women.

The drawings show a tremendous eye for detail. They become distinctive portraits of the staff themselves, as well as recording the specific banknotes they are working on at each stage of the process. Topolski's style veers between sparing line drawings, and intense, strongly textured images typical of his expressionist style. But however he draws, Topolski captures both a sense of movement and of intense concentration.

(3) From a set of oral histories recorded by Epping Forest District Museum in 2006 (Bank of England Archive, 6A302).

Figure 7a Feliks Topolski, *The Main Production Hall, 1957* (Bank of England Museum, 1978/026).



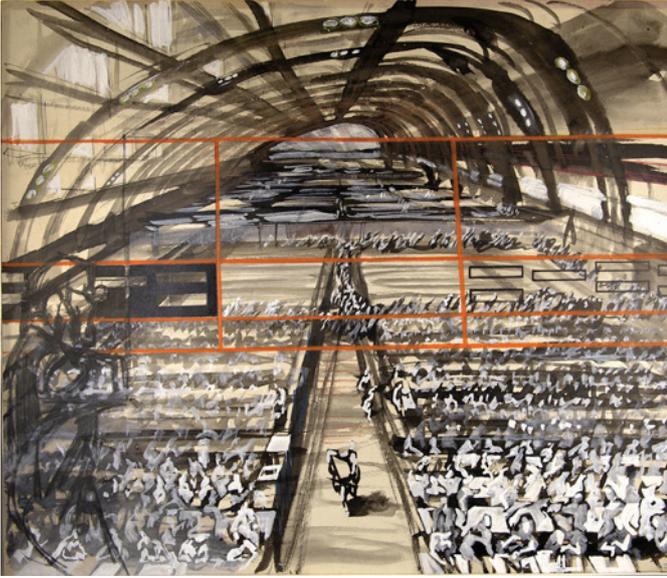


Figure 8 View from the Inspectors' Gallery at the west end of the Main Production Hall. Feliks Topolski, *The Main Production Hall*, 1957 (Bank of England Museum, 1978/035).

Banknotes were checked at every stage of the process, examined for printing errors along the way. After the background of the design had been printed by offset lithography, the sheets were plate printed. This technique, also known as intaglio printing, completed the design and produced the raised print that gives banknotes their distinctive feel. In an image of the Plate Printing Section, Topolski captures the overseer checking a finished note, as well as two women checking finished sheets, sitting underneath the massive printing machine itself.

After further checks and the counting of the sheets, the individual notes on each sheet were then given their serial number, using the third type of printing in the process at this time, letterpress. The sheets were then taken to an area outside the Main Production Hall to be cut into individual notes, which were then bundled for transport to quality

Figure 7b Feliks Topolski, *The Main Production Hall*, 1957 (Bank of England Museum, 1978/026).

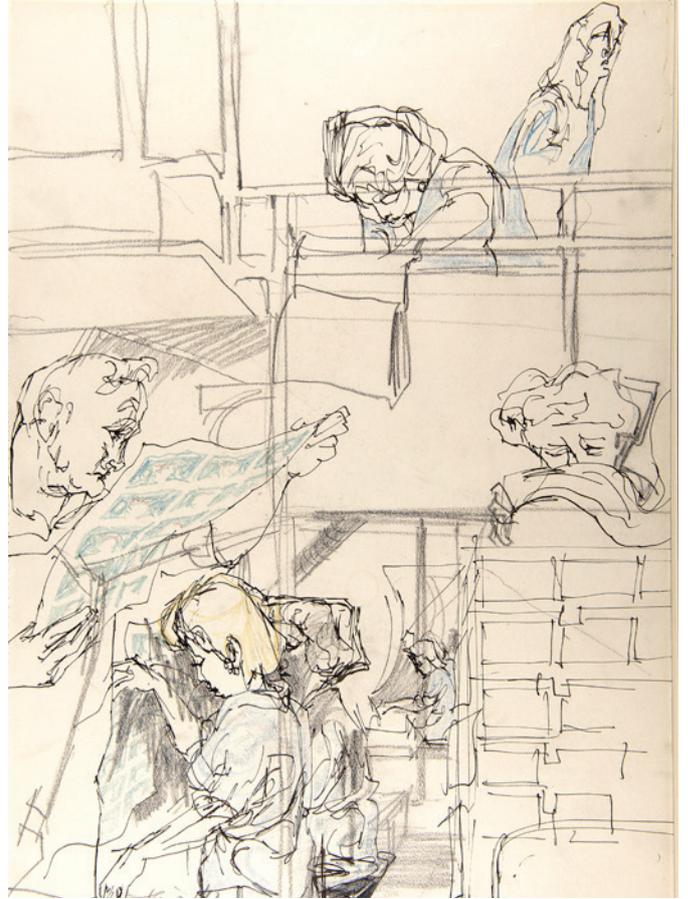


Figure 9 To the left, a man checks a sheet of £1 notes. Feliks Topolski, *Plate Printing Section*, 1957 (Bank of England Museum, 1978/022).

control. Finally, every single note was checked by hand for errors. There were so many examiners engaged in this labour-intensive process that it took up nearly a quarter of the production hall. As well as ensuring a high quality of finished product, this also ensured that notes leaving the Printing Works would have a consistent appearance. Then and now, it is easier to spot the difference in a counterfeit note when the genuine notes are identical. In some of Topolski's drawings of



Figure 10 A woman checks a finished £1 note for printing errors. Feliks Topolski, *Final Examination Area*, 1957 (Bank of England Museum, 1978/041).

the Final Examination Area the details of the specific £1 note design have been carefully recorded, including the minute red flash of the serial number.

Topolski was originally commissioned to produce two or three works, but the Bank eventually acquired his preparatory drawings as well, concerned that they could fall into other hands. Having both the paintings and drawings in our collections offers an insight into Topolski's creative process. He drew the sketches on the spot during his research visits to the Printing Works. This was the kind of eyewitness drawing that appeared in the *Topolski Chronicle*, and that had made his reputation as a reportage artist. Back at his studio in London's



Figure 11 Feliks Topolski, Painting: *Final Examination Area*, 1957 (Bank of England Museum, 1978/029).

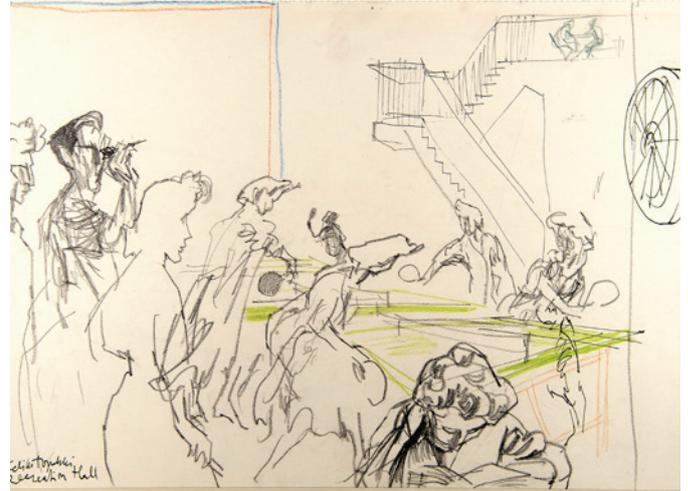


Figure 12 Feliks Topolski, *The Recreation Hall*, 1957 (Bank of England Museum, 1978/037).

South Bank, he worked these sketches into larger-scale paintings. At first sight, one painting of the Final Examination Area is a blur of figures. But on closer inspection, we can pick out recognisable portraits. Four women in the foreground can be identified by their distinctive hairstyles and posture as the women featured in one of Topolski's sketches.

The drawing gives a sense of the intense concentration needed for the task, as well as the speed — Topolski shows banknotes flicking rapidly through the women's hands. The work required intense attention to detail and great speed: each examiner was expected to check at least 15,000 notes per day.

The staff

Away from the Main Production Hall, Topolski also captured off-duty life at the Printing Works. When it opened, the town of Debden was still a relatively new community with limited opportunities for people to socialise. The social side of life at the Printing Works became hugely important. There was an on-site library and reading room, and a Recreation Hall for



Figure 13 Feliks Topolski, Drawing: *Final Examination Area*, 1957 (Bank of England Museum, 1978/034).

breaks during working hours. One drawing captures staff mid-game at table tennis and darts, still wearing the billowing blue smocks which protected their clothes while they were working. It's less clear from Topolski's drawing that the blue and red lines outline the proscenium arch of a stage, which was complete with lighting and sound equipment. The Recreation Hall was a regular venue for plays and revues by the staff music and dramatic societies.

Across the road there was the Printing Works Sports Club which became a central community focus for staff and their families. So much so, that the condition of turf on the pitches (football, cricket and hockey) caused greater concern to staff in the early months of the Printing Works than the fact that the boilers which powered the plant repeatedly broke down.



Figure 14 *The Recreation Hall from the Gallery, 1956* (Bank of England Archive, 15A13/6/2/2/7).

Conclusion

Topolski's images of Debden are both a timeless image of the building and staff at work, and a record of a way of manufacturing that has changed dramatically over the past 60 years. Today's Debden looks very different — technological advances and the addition of complex new security features have necessarily changed the production process. The checking process, too, looks very different. The banknote examiners drawn by Topolski could check thousands of notes per shift with a speed and accuracy that took technology several decades to beat. But in the past few years, imaging and processing power have finally overtaken human capability. Today's electronic banknote inspection systems can check 40 notes per second, including features that are invisible to human eyes. The introduction of this technology in 2010 all but eliminated significant printing and cutting errors in new banknotes.

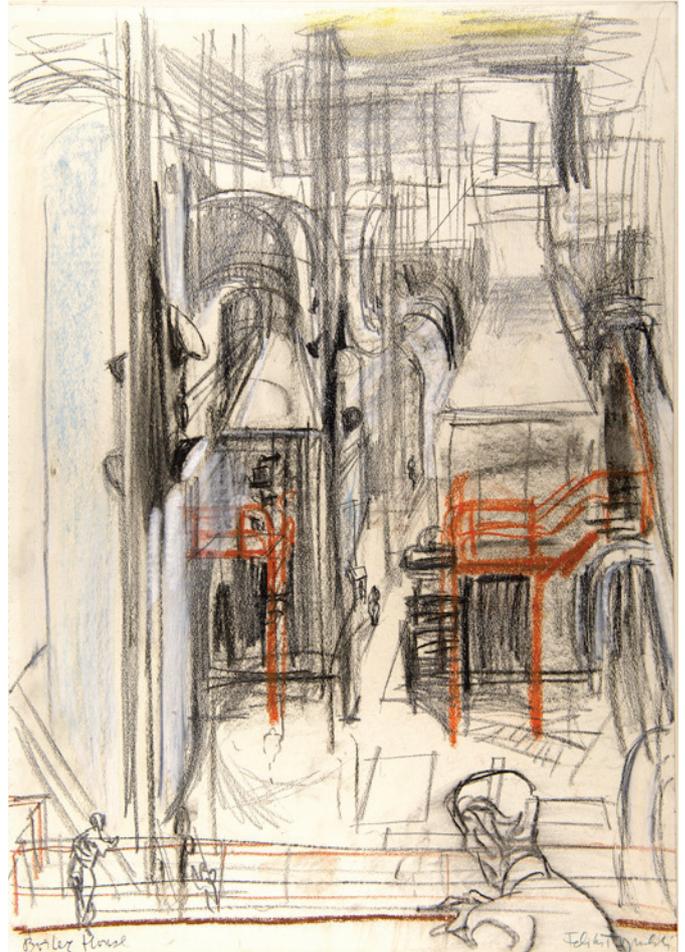


Figure 15 Feliks Topolski, *Boiler House, 1957* (Bank of England Museum, 1978/018).

In the 1950s, after they had been checked, banknotes were trolleyed away to be packed by hand into blocks of 5,000 notes. Today, after being checked for quality, finished banknotes are automatically counted, bundled and wrapped up ready for distribution. Conveyor belts move bundles around the final stages, improving security and efficiency by reducing the need for manual handling.



Figure 16 Feliks Topolski, *Final Examination Area, 1957* (Bank of England Museum, 1978/039).

The resourcing of banknote production has also changed. The Bank of England works closely with De La Rue to design its banknotes. De La Rue also acts as contractor within the Printing Works, and run the printing operation within the Main Production Hall on behalf of the Bank of England. One constant, however, is the striking architecture that Topolski captured — the imposing arches of the Main Production Hall under which all of the Bank of England’s notes are still produced.

The exhibition opens on 1 October 2018 and will run until Spring 2019. Alongside this exhibition, we are very interested in hearing from those who worked at Debden in the early years, and since. The exhibition has an online element, too, including digital interactives, additional resources, and images of all the featured works. The Bank of England Museum is open between 10.00 and 17.00 on weekdays, except Bank Holidays. For more information, please visit our [website](#), or follow our social media accounts on Facebook, Twitter and Instagram: @BoEMuseum.



Figure 17 Bundles of 5,000 £10 notes, wrapped and ready for distribution.

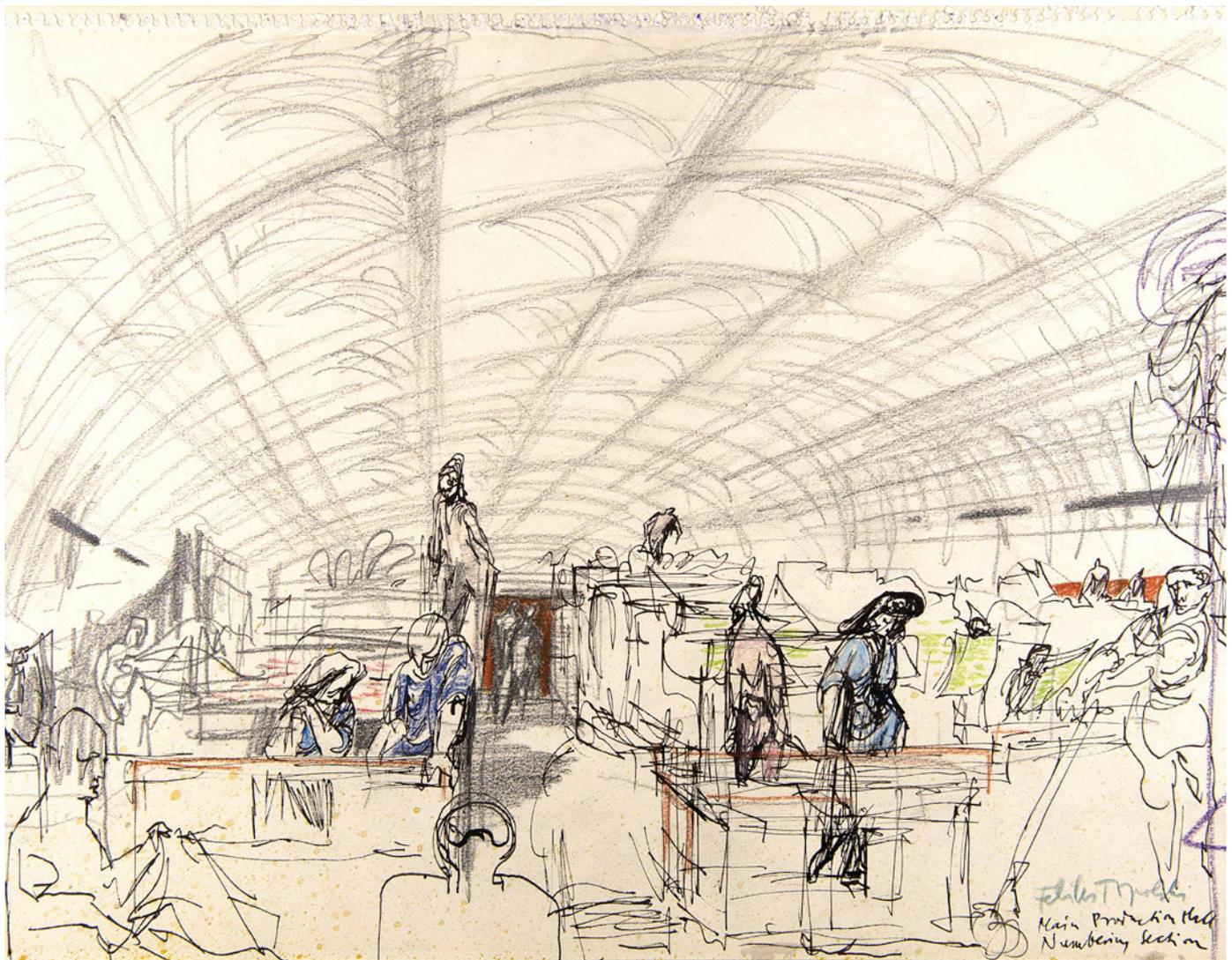


Figure 18 The numbering section, where the serial numbers are applied. Feliks Topolski, *Numbering Section*, 1957 (Bank of England Museum, 1978/031).

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