RAILWAY ART

C. Hamilton Ellis
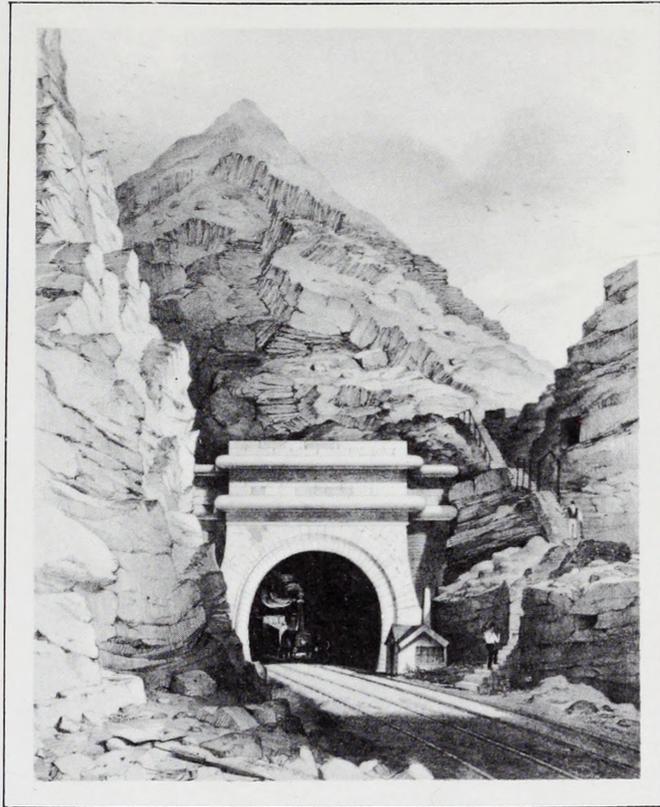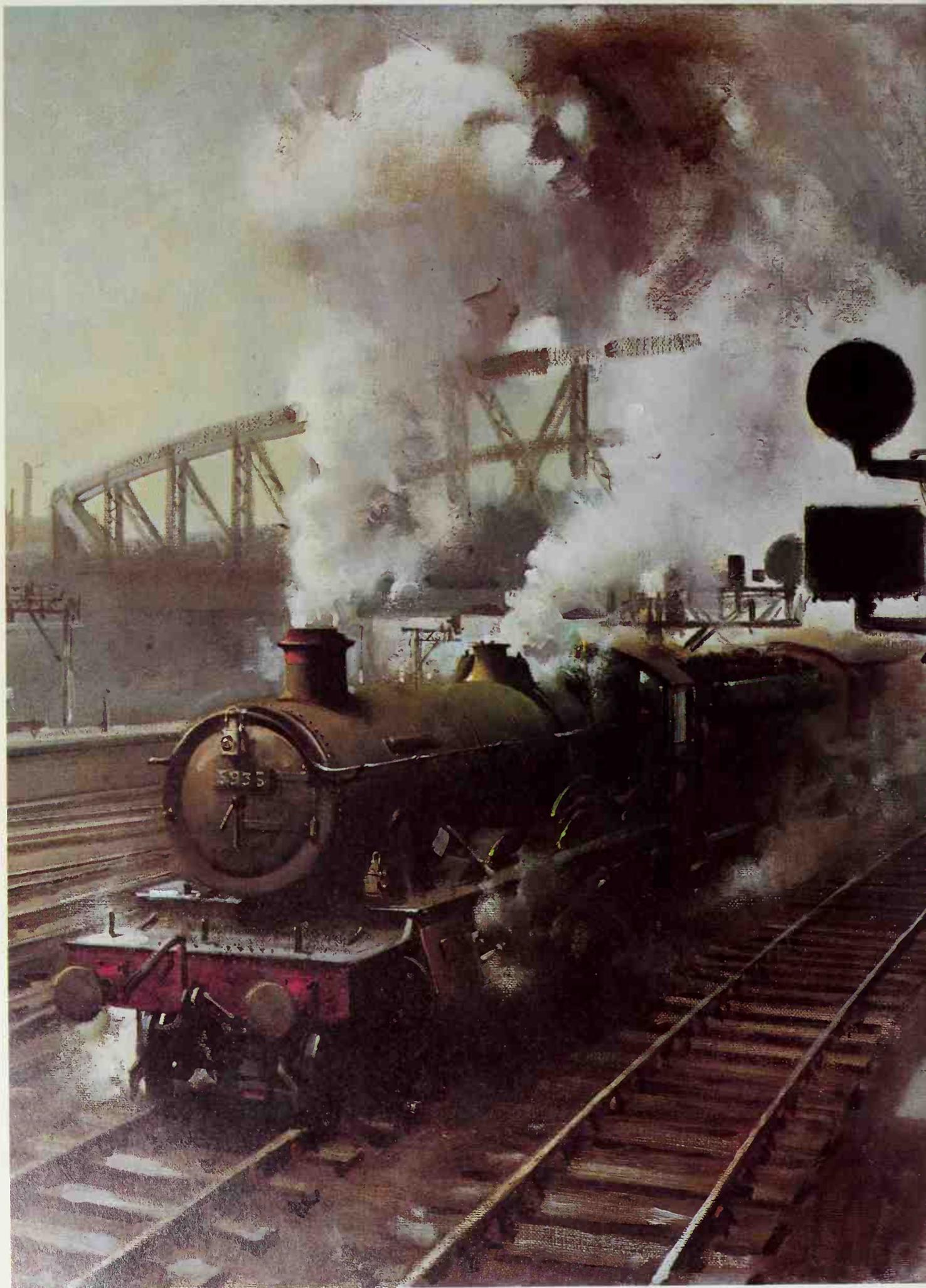
RAILWAY ART

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by C. Hamilton Ellis

Edited by Susan Hyman

Page 1 *West Entrance, Summit Tunnel, Manchester
and Leeds Railway. Lithograph by J. C. Bourne.*
Frontispiece *Detail from 'Departure from
Paddington' by Terence Cuneo, 1975.*
Page 3 *Detail from a print of the Leipzig and
Dresden Railway, 1839.*
Below *'Scotia No. 90' built by the Western
Railway of Canada in Hamilton, Ontario, 1861.*
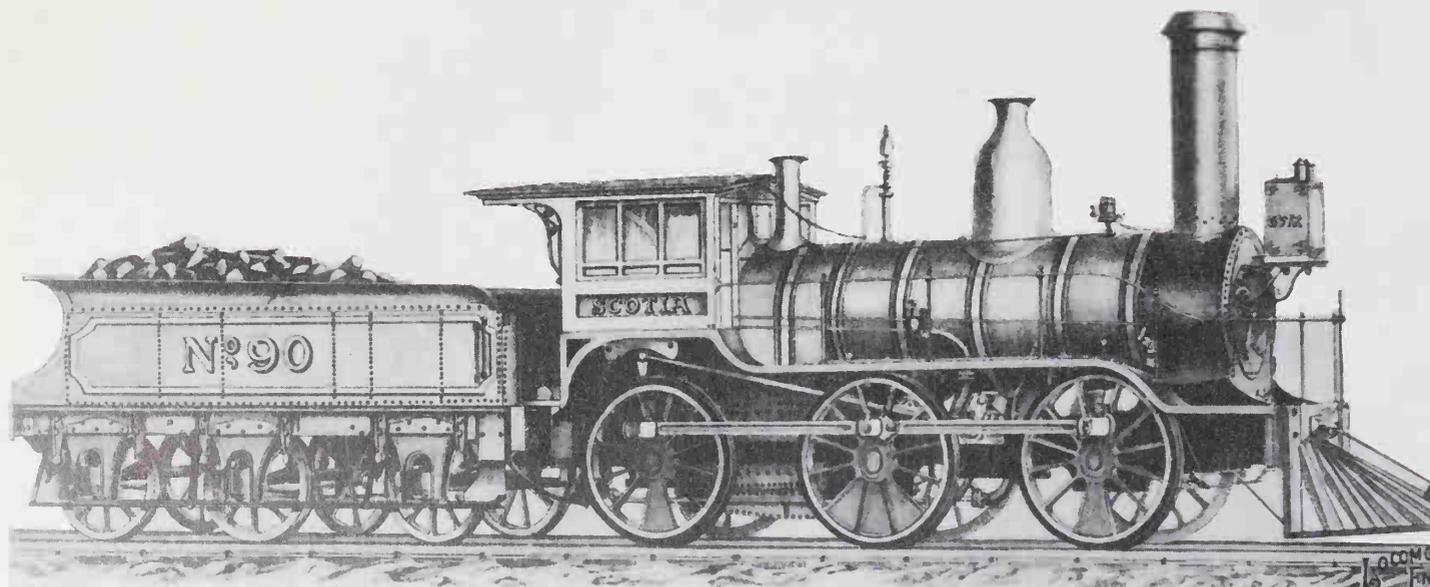
CONTENTS

INTRODUCTION:
THE NEW PRODIGY

Comparatively recently, by which one means the early sixteenth century, German miners in Transylvania—and even in Alsace—mounted their rolling tubs on flanged wooden wheels, running on rounded timber rails. They made what nineteenth-century lumberjacks were to call pole-roads. These practical essays in Central and Eastern Europe marked the real beginning of railways. So contemporary woodcuts from this period may be described as the first examples of railway art. These illustrations to treatises on mining, such as Agricola's (alias Bauer's) *De Re Metallica*, were strictly representational.

Who was to foresee what a unique, majestic machine was to emerge from purely utilitarian causes? Its only precursor, and that developed towards perfection over countless centuries, had been the great sailing ship. Beautiful aircraft were yet to be born.

This is not to be a book on railway history, but one concerned with the impact of the railway on a world which, apart from a few dreamers, had never imagined such mechanical advance: the impact upon its social habits, and upon artists who gladly, hopefully, but often penuriously, tried to make a living out of this new phenomenon which quite unexpectedly struck a few of them as being beautiful as well as useful.

Even as late as 1825, the steam railway was regarded as something to do with collieries, by such people as were even aware of its existence. But in that year the Stockton and Darlington Railway was opened in the English North East as a public line for the conveyance of coal from the mines of County Durham down to the Tees. Its inaugural train included an experimental passenger coach, and crowds, apart from the invited guests, climbed aboard the coal wagons for this novel ride. The occasion was recorded in a drawing by J. R. Brown of singular beauty, a drawing which might safely be described as the first work of pictorial *art* to have been concerned with the mechanically-propelled railway.

Let us briefly discuss four representations of that early opening, including Brown's drawing and three other examples. The first-named, as suggested, is as nearly faultless as anyone who was not there can now believe.

Terence Cuneo's painting is recent. There is romance and imagination in his historical reconstruction, but it is of the best sort, comparable to Dickens describing the French Revolution or Margaret Mitchell engaged with the American Civil War. The other two Stockton and Darlington illustrations are both contemporary with the event. While admiring Brown's meticulous observation and Cuneo's erudition, and the artistry of both separated by more than a century, we should nevertheless recognise

Above left *Terence Cuneo's modern version of the Stockton and Darlington opening is a beautiful pastiche. It is technically accurate—even, according to contemporary report, in the red-hot state of the J-shaped stack of 'Locomotion.' The racing stage coach cannot be vouched for, but doubtless someone tried his horses against the prodigy.*

Below left *Likewise, J. R. Brown's drawing—a fairly recent discovery—is of extraordinary accuracy as well as great charm.*

the value of all these scenes. The importance of the older works is that they were made by men who had scarcely seen such a wonder before, but who endeavoured to convey and record it.

Dobbin's account is appropriately work-horse stuff. He was doing his best, as did his faithful namesake in Thackeray's *Vanity Fair*. But he produced neither a draughtsmanly nor an artistic representation of what was possibly his first train — certainly apart from what was to be seen about contemporary collieries. This supposition would explain why his representation of a locomotive shows much smaller wheels than those of the Stephenson 'Locomotion' in 1825.

The fourth of these representations is another contemporary with the event, but this time anonymous and abstracted from a large composite plate. The locomotive is better portrayed and proportioned than Dobbin's; what is most significant, however, is that the delineator conveyed what was then the almost unknown *railway scene*. There was the valley, with the small town up the modest hill, dominated by its steepled parish church and below, the quiet river passing through the single-arched bridge. But

Train of Waggons crossing the Turnpike Road near Darlington
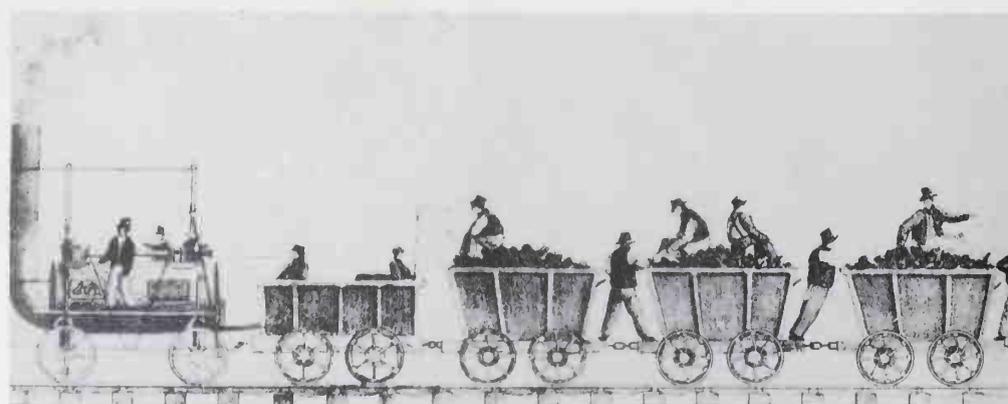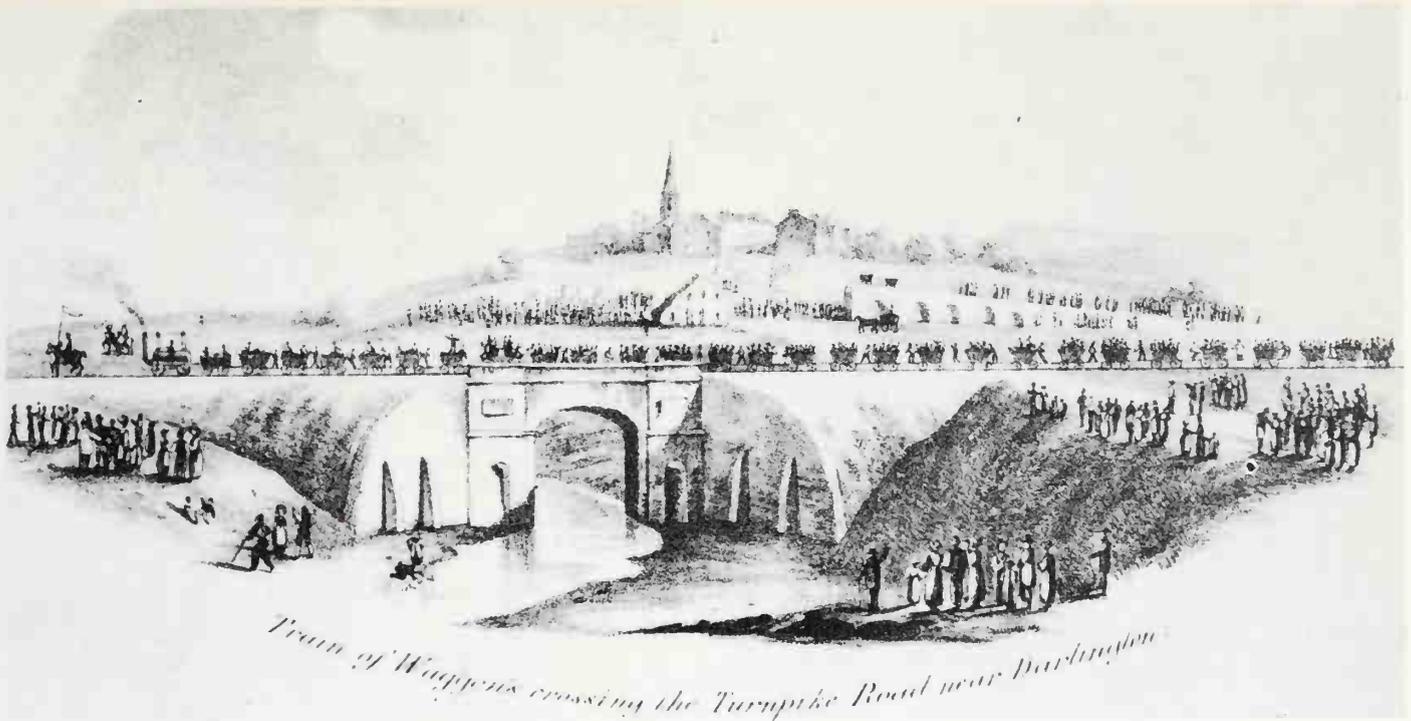
that last was no mere culvert, any more than it was the old hump-back found in more depressed country. It was a real bridge—because it had to be. The rails had to be as nearly as possible level; and, apart from aqueducts, that ideal went back to the Causey Arch in that same country of north-eastern England, built in the eighteenth century and serving a railway with horse traction. It has long ceased to serve commerce, but remains and is protected as a classic structure.

So this anonymous drawing is important in its depiction of the impact of the train on the landscape. What was the effect of that impact on different sorts of people? Some detested it, as was natural with anything revolutionary, whether technological, economic or social. Some received the New Prodigy with delight, particularly in the post-colonial but still scarcely developed continent of North America.

For impact, let us lead off with an entirely disinterested person who, being young, was ready to welcome such change; a great, and then recent ornament of a distinguished acting family, of whom one can only say, after so many, many years: 'Dear Girl!'
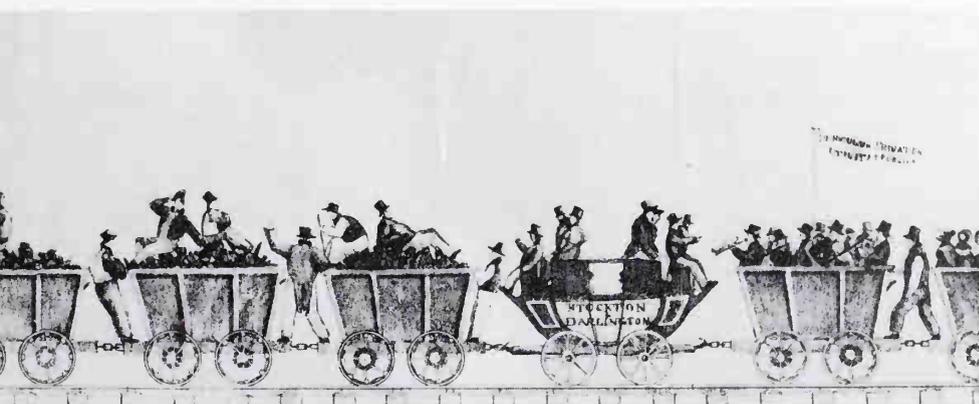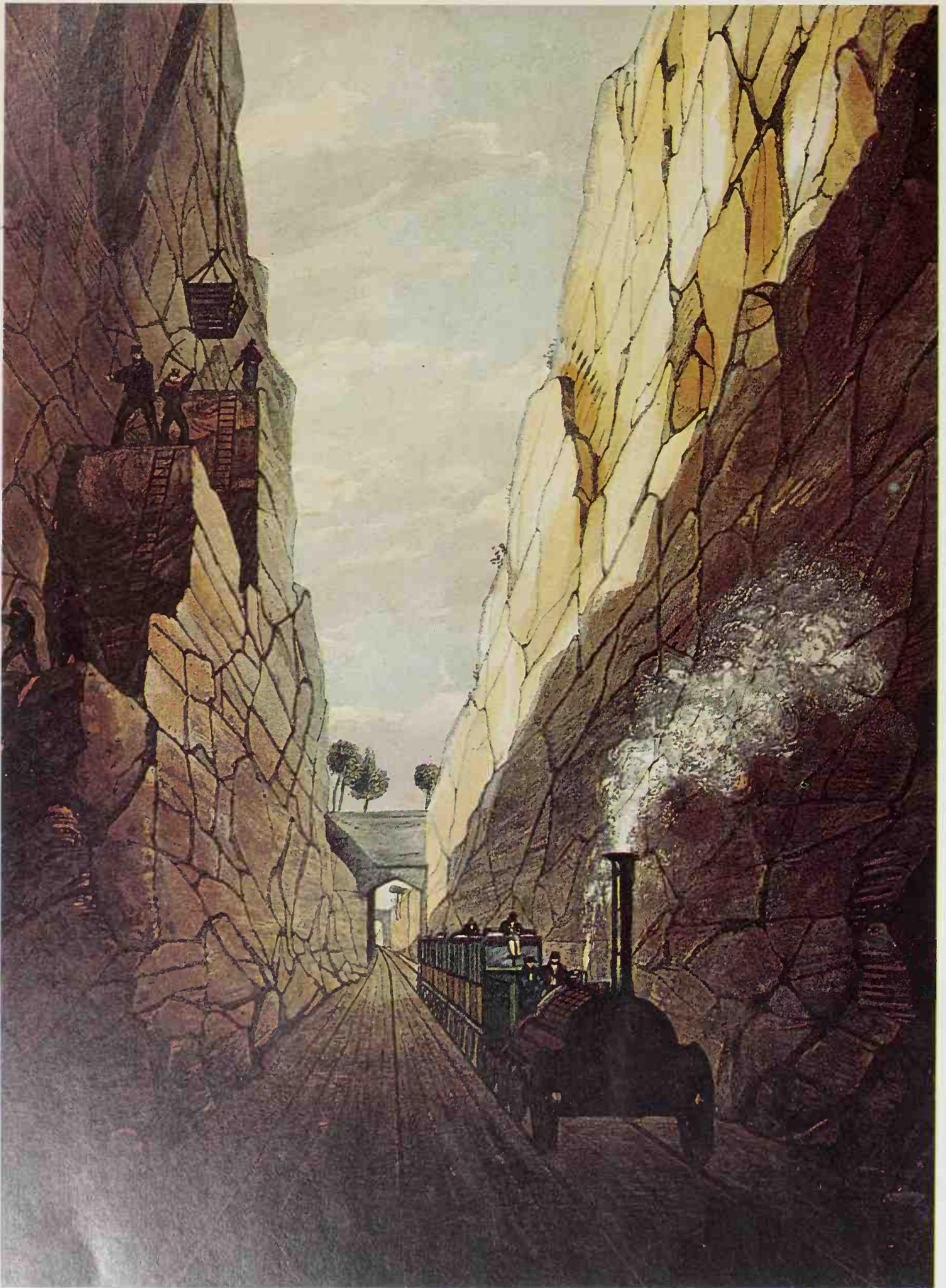
THE
IRON HORSE

Fanny Kemble, a young London actress, was enthralled and astonished by her first experience of the railway:

"We were introduced to the little engine which was to drag us along the rails. She (for they make these curious fire-horses all mares) consisted of a boiler, a stove, a small platform—a bench, and behind the bench a barrel containing enough water to prevent her being thirsty for fifteen miles. She goes upon two wheels, which are her feet, and are moved by bright steel legs called pistons... The reins, the bit and the bridle of this wonderful beast is a small steel handle, which applies or withdraws steam from the legs or pistons...The coals, which are its oats, were under the bench, and there is a small glass tube affixed to the boiler which indicates by its fullness or emptiness when the creature wants water. This snorting little animal which I felt rather inclined to pat, was then harnessed to our carriage."

In the summer of 1830 Fanny had been invited to join a party on a trial run of the Liverpool and Manchester Railway. As the guest of honour, she stood beside George Stephenson himself on the bench of his locomotive 'Northumbrian'. Afterwards she recorded the novelty and excitement of this incomparable new means of travel:

"The engine was set off at its utmost speed, thirty-five miles per hour, swifter than a bird flies. You cannot conceive what the sensation of cutting the air was; the motion as smooth as possible too. I stood up, and with my bonnet off, drank the air before me. When I closed my eyes the sensation of flying was delightful and strange beyond description...no fairy tale was ever so wonderful."

The impression of exhilarating flight was a common one among early railway travellers. Sydney Smith, an English clergyman and essayist, believed that the locomotive had actually conquered time and space: "Man has become a bird: he can fly quicker and longer than a Solan goose." But this enthusiasm was not universally shared; for many the experience of rushing along at speeds hitherto unknown and pronounced fatal by sound medical opinion was alarming in the extreme. Thomas Creevey, a Member of Parliament and a passionate opponent of the railway, recorded that "the quickest motion is to me *frightful;* it is really flying and it is impossible to divest yourself of the notion of instant death upon the least accident happening". *The Quarterly Review* confidently predicted that Parliament would "limit the speed to eight miles per hour, which is as great as can be ventured on with safety!"

In truth trains were actually safer than stage coaches, whose passengers

Left *Olive Mount Cutting, Liverpool and Manchester Railway.* One of *Thomas Talbot Bury's early lithographs printed by Rudolf Ackermann.* *The cutting was the first major rock excavation and caused immense trouble; unexpected veins of soft shale and quicksand constantly threatened to drown the workings and water flooded the masonry lining. On the left navvies are still at work.*

Above *Yorkshire Labourer. Behind him a contemporary colliery and the Middleton Railway, the first to be built under an Act of British Parliament in 1811, with a locomotive on Blenkinsop's rack-rail.*
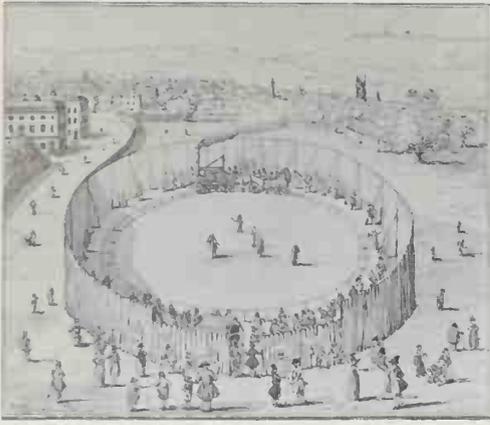
Above *Euston Square, 1809, by Thomas Rowlandson. Richard Trevithick's novel engine, 'Catch-me-who-can', takes the first fare-paying passengers behind steam.*

Below right *Thomas Stevens' beautiful woven silk picture of 'Locomotion'.*

ran the risks of bad weather, sometimes crude roads and the constant danger of highwaymen. Railway passengers themselves were often responsible for mishaps, recklessly boarding moving trains, jumping off to pick up their hats, or trying to get on the tops of carriages to enjoy the view. Spectators could be equally careless; at Eton school, the authorities objected to the proposed Windsor branch on the grounds that the boys could not be stopped from wandering onto the tracks and playing tricks. When railway accidents occurred, however, they tended to be spectacular and struck the public imagination forcibly. For the first time passengers had to entrust their lives to the operation of an anonymous machine and the diligence of unknown engineers, mechanics and signalmen. The possibility of disaster was always present. Rudimentary signalling and frequent engine breakdowns resulted in collisions. Wooden carriages caught fire and passengers, who were often locked into their compartments, faced the terror of being burnt alive. Carelessly repaired locomotives could break down at speed, faulty couplings leave carriages behind, broken wheels cause derailment, tracks could give way, bridges collapse, embankments slip. Charles Dickens, who narrowly escaped death in a derailment, recorded his experience with horror: "No imagination can conceive the ruin of the carriages, or the extraordinary weights under which the people were lying, or the complications under which they were twisted up among iron and wood, mud and water." In *Dombey and Son* the train assumes the image of "the triumphant Monster Death", remorseless, inhuman and indomitable. Very suitably, it cuts Mr Carker to bits.

Still, neither genuine nor imagined dangers of trains—excessive speed was alleged to cause premature childbirth; people were supposed unable to breathe in tunnels—ever seriously deterred the public from using them. An immense unsatisfied demand for passenger travel awaited the arrival of the railways and their coming precipitated a revolution in communications and social mobility. Government orders could be promptly despatched and promptly delivered. Businessmen, profiting from the expansion of economic activity, were able to travel more frequently and more swiftly. But for most people the railway simply meant freedom, the emancipation from the narrow environs of local life.

In Britain before the 1830s, uneven roads (save on the turnpikes) and cumbersome communications divided the country into disparate and sometimes isolated geographical areas. For most men their 'country' still meant their own locality, their district or county. Many people had never left their own parish and most had never been farther than the nearest market town. Travel was a luxury enjoyed only by the rich and their servants; soon it was to provide opportunities and diversions not only for the middle classes but for the poor as well. Sir Walter Scott wrote about "the increasing powers of steam which...in doing so much for the commercial world, promises also for the sociable" and looked forward to a time when social visits would be less arduous, picturesque scenery more accessible and seaside holidays available to all. Samuel Smiles, Scottish moralist, compared the "iron rail" to a "magician's rod. The locomotive gave a new celerity to time. It instantly reduced England to a sixth of its size. It brought the country nearer to the town and the town to the country".

Some, however, regretted the passing of a more leisurely way of life. Matthew Arnold pitied the man unaware that the trains "only carry him from an illiberal dismal life at Islington to an illiberal dismal life at Camberwell". John Ruskin complained that railway travel "transmutes a

man from a traveller into a living parcel" and longed for the days of the stagecoach "when there was something more to be anticipated and remembered in the first aspect of each successive halting place than a new arrangement of glass roofing and iron girding".

Ruskin, in his increasing invectives against industrial society, was perhaps the most prescient, certainly the wittiest of the early critics. Much contemporary reaction to the railway generally revealed an unfounded optimism, a firm Victorian belief in progress and a confident hope in economic and political improvement. Thomas Carlyle saw signs that "mechanism is not always to be our hard task master but one day our pliant all-administering servant". George Stephenson himself hoped that railways would promote a new egalitarianism and prophesied a day when "working men will ride about the land in chariots". Dr Arnold, the Headmaster of Rugby School, was jubilant: "I rejoice to see it and think that feudality is gone forever. It is so great a blessing to think that any one evil is really extinct." Arnold was correct in believing that the powers of the paternalist aristocracy were waning; what he did not foresee was that they were soon to be assumed by a new class of industrial capitalists.

Railways were not invented in the nineteenth century. There are various illustrations in German technical publications of the 1550s showing primitive hand-propelled carts running along wooden rails in and around mines, while more sophisticated tramways using horse power were in common use in the coalfields in the north-east of England in the early eighteenth century. Further progress had to await the production of the workable steam locomotive by Richard Trevithick, with later refinements including those of George and Robert Stephenson, and the production of iron and steel in quantities sufficient to be used for laying tracks. The first public railway to use steam locomotives at its inception was the Stockton and Darlington, opened on 27 September 1825 between the two towns in England. The line was established on the same basis as a canal or a turnpike, which could lead to confusion, for the tracks were shared by freight trains, horse wagons and even a rail stagecoach run by another enterprise. Passengers were usually hauled in horse-drawn stage coaches on flanged wheels between coal trains, but a regular passenger service was not established until 1833. The second line of importance was the Canterbury and Whitstable Railway, in Kent, which opened on 3 May 1830 with both a freight and a passenger service.

The first real main-line railway in Britain was the Liverpool and
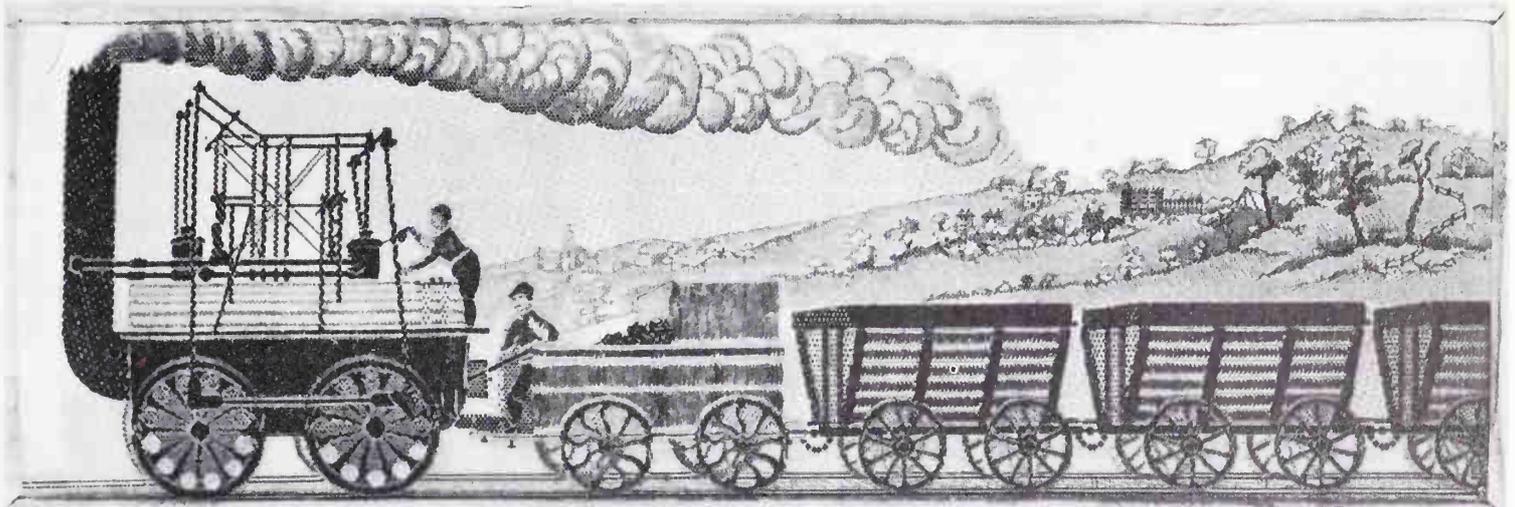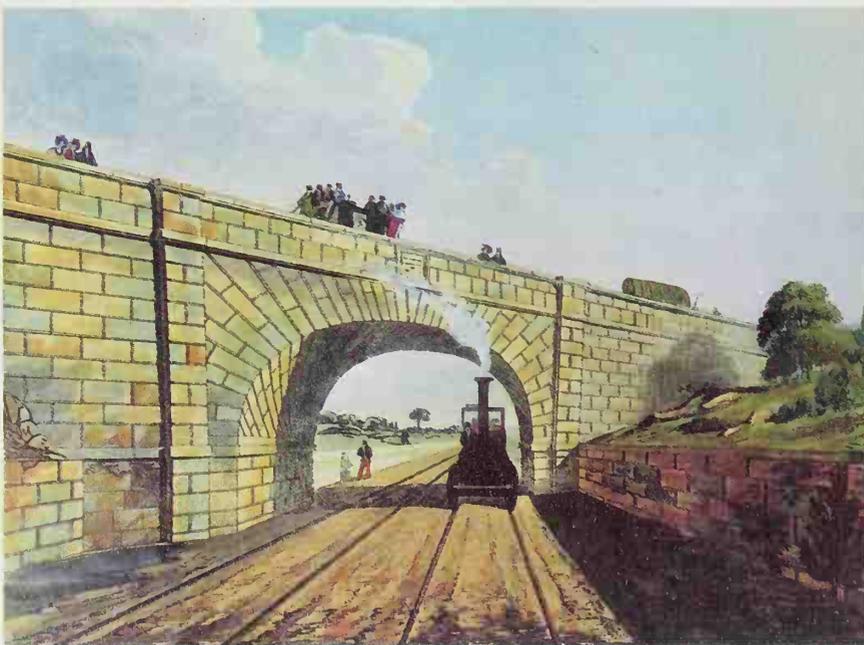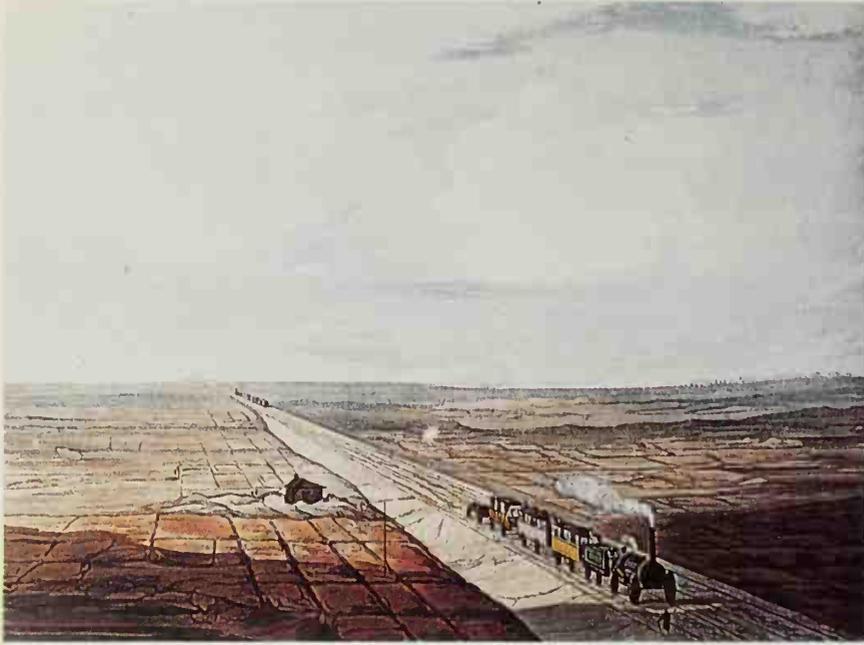
Top left *Chat Moss by Thomas Talbot Bury.* The dreaded and supposedly bottomless bog swallowed up tons of material before George Stephenson completed his four-mile embankment for the Liverpool and Manchester Railway.

Middle left *Watering at Parkside, Liverpool and Manchester Railway,*

Above 'Rain, Steam and Speed —
The Great Western Railway.'
J. M. W. Turner painted exactly what
those eight words conveyed to him,
having regarded the passage into a
squall of a Great Western train over
Maidenhead bridge. Reproduced by
courtesy of the Trustees, The National
Gallery, London.

Thomas Talbot Bury, early 1830s.
'The Station where Mr. Huskisson fell.'
A rudimentary stopping point, no
platform as yet.

Bottom left Liverpool and Manchester
Railway. Rainhill skew-bridge in the
early 1830s, site of the famous trials.
Bury lithograph for Ackermann.

Manchester. The increasing quantity of cotton manufactured in Manchester in the early nineteenth century was too great to be carried by canals to Liverpool, the nearest port. Northern merchants and bankers promoted the line in Parliament and in 1826, after four years of heated debate, the company was granted a charter. Unprecedented engineering challenges, including the barely visible marvel of an embankment crossing the treacherous bog of Chat Moss, Lancashire, prodigious cuttings through rock and the construction of costly viaducts and tunnels caused numerous delays. As late as 1829 the famous Rainhill trials were held to decide whether power should be supplied by horses, stationary engines attached to pulleys or by steam locomotives; the power, speed and the reliability of George Stephenson's 'Rocket' quickly decided the issue.

On 15 September 1830, the world's earliest 'modern' railway was inaugurated amidst intense publicity and public fanfare. Not only was the Liverpool and Manchester the first public railway to be operated entirely by steam locomotives, but it was also the first to operate both freight and passenger cars on a timetable and independently to control and own all traffic on its line; it had up and down roads, quite decent stations and even signalling of a primitive sort. A crowd estimated at half a million people, seated in grandstands, perched on roofs and clinging to the sails of wind-mills, watched the inauguration which included eight of Stephenson's locomotives drawing thirty-three carriages filled with dignitaries and national politicians. The Duke of Wellington had a special car decorated in crimson and gold and hung with banners, and four separate bands played throughout the ceremonies. The festivities were marred by the death of William Huskisson, an MP from Liverpool and a staunch sup-porter of the railway, who disembarked at a stop halfway along the line and was run down by the 'Rocket'. Despite this accident and certain political tensions, the inauguration was a sensational success. Nevertheless, the promoters of the railway realised that to establish their prodigy with a conservative public, they had not only to make it solid and safe, but to make it in some way *familiar.*

Some sort of connection with previous forms of travel was deemed essential. According to class and type, people had been riding in coaches, occasionally in brakes, *chars-à-banc* or common wagons. So each original first-class carriage was made to resemble three stage-coach 'insides' conjoined on a railway frame. The mail-coach had been superior to the stage-coach, so was its railway counterpart, with the passengers seated four to a compartment instead of six, having paid some sort of supplement or reservation fee. Earliest second class carriages were of the *char-à-banc* type, with cross seats and a light awning, anticipating the 'toast-rack' tram. Wagon passengers rode in boxes on wheels for some years. Holes
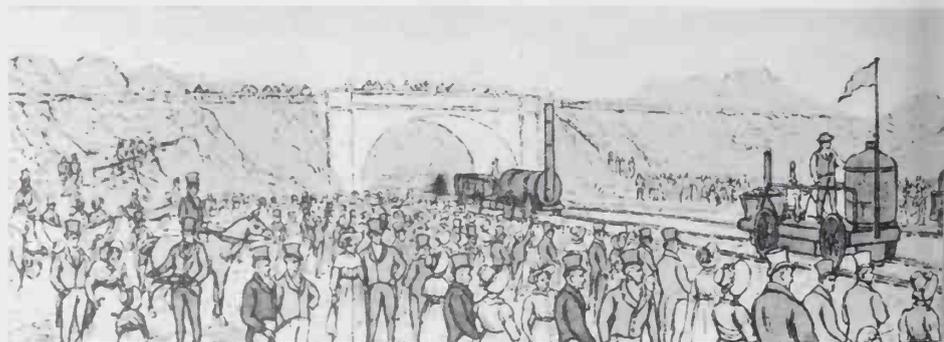
bored in the floors of some of the wagons let the rain out and kept the passengers' feet cold. This was the primordial third class. So was familiarity served and it paid off.

Pictures of railways before the 1830s are rare. The opening of the Stockton and Darlington Railway and the Rainhill Trials were not well documented. Published illustrations of George Stephenson's early loco-motives, beautifully painted and ornamented, remain scarce. But the directors of the Liverpool and Manchester recognised the publicity value of prints, and engravings, lithographs and aquatints appeared in advance of the line's actual opening. People were ready to see what these strange, new things looked like. As the Liverpool and Manchester Railway arrived, and its early and even more ambitious successors like the Grand Junction, the London and Birmingham, the Great Western and the South Western in the same decade, they were described in pure line and modest colour. To this day, many of the prints remain extraordinarily beautiful, though inevitably there were many bad and childish ones. To counteract a flood of hostile caricatures, pamphlets and broadsides, the company enlisted the help of one of the greatest publishers of the time, Rudolf Ackermann, famous for his books on topography and travel and for his pioneering technical advances in the new field of lithography. Thomas Talbot Bury was commissioned to produce a series of engravings in aquatints which would establish a sympathetic image of the railway. His cheerful back-grounds, elegantly dressed ladies and gentlemen and spotless trains have a rather prim look. Ackermann also issued, in 1831, the two so-called 'long prints' by I. Shaw entitled *Travelling on the Liverpool and Manchester Railway.* Each print – there were several varieties – consists of two trains, two passenger trains of first and second class coaches on one, and two goods trains on the other, including one with cattle. Many other artists and draughtsmen produced railway prints, but probably the finest are those by John Cooke Bourne, at once draughtsman, artist and historian. The earliest railway artists portrayed a new phenomenon that was to dominate their lives and those of their descendants.

Although railways provided a new subject for artists, themes related to technology and science were popular among painters of the late eighteenth century. It was the High Victorians with their concern for respectability, decorum and 'beauty' who made such subjects anathema. Before the effects of industrialization were fully felt, the divisions between the arts and sciences scarcely existed. New industrial inventions prompted curiosity, pride and excitement; poets composed paeans to mines and foundries. Erasmus Darwin, who was both physiologist and poet, wrote an ode to Steam, and Wordsworth, in his *Preface to the Lyrical Ballads of 1802,* wrote that "Poetry is the breath and free spirit of all knowledge; it is the
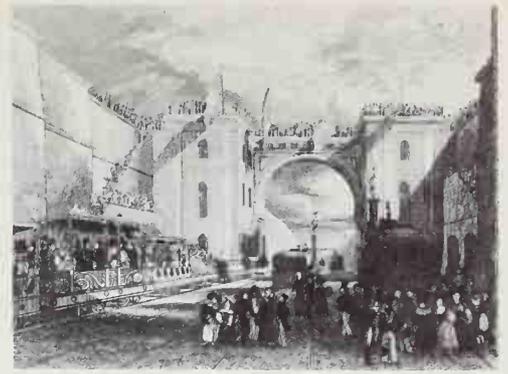
Above *Moorish Arch, Edge Hill. September 15, 1830. Etching by I. Shaw. The opening of the Liverpool and Manchester Railway. On the left the Duke of Wellington's ornately decorated train with the locomotive 'Northumbrian'. Crowds of spectators cheer from the top and steps of the massive portal.*

Below *Rainhill Trials, 1829. The Stephensons' 'Rocket' (right) and Ericsson's 'Novelty' (with flag) are well drawn; Hackworth's 'Sans Pareil' (under skew-arch) is just recognisable; Burstall's 'Perseverance' (over waved hat) is entirely spurious.*
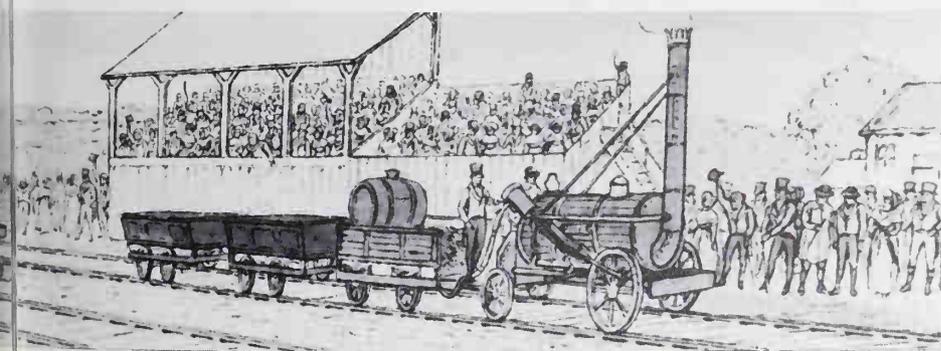
Above *'The Pleasures of the Railway'*
with a nasty dig at 'Northumbrian'and
her men.

Top right *Liverpool Road Station,*
Manchester. A drawing for the Liverpool
and Manchester Railway by I. Shaw.

Bottom right *Crossing of St Helen's*
and Runcorn Gap Railway over the
Liverpool and Manchester Line.
Ackermann lithograph, early 1830s.
Stephenson 'Northumbrian'below;
Braithwaite and Ericsson 'William IV'
on bridge. On the right another route
used for horse-drawn vehicles.

impassioned expression which is the countenance of all science". Aesthetic theories of the "industrial sublime" and the "industrial picturesque", derived from the essays of Edmund Burke and Sir Uvedale Price, even led to a vogue for industrial touring. Enthusiastic parties were guided into mines, refineries, ironworks and factories; the 'romantic' qualities of canals and viaducts were noted in guidebooks. Topographical views of country estates included not only architectural ornaments, but also bridges, aqueducts and even in one or two cases primitive railways. Coalbrookdale in Shropshire became a popular site for artists because of its vast industrial complex situated in an unusually beautiful landscape. Both J. M. W. Turner and John Sell Cotman sketched there and Philip de Loutherbourg's *Coalbrookdale by Night*, with its sky ablaze from the glow of the massive foundries, is a fine example of this new sensibility. Julius Caesar Ibbetson painted coal mines and Joseph Wright of Derby is famous for such scientific tableaux as *An Experiment on a Bird in the Air Pump*. A later artist, John Martin, himself an engineer, used industrial motifs more pessimistically in his large Biblical paintings. In *The Last Judgement* the damned are appropriately carried to hell in third class railway carriages.

Turner's *Rain, Steam and Speed*, painted in 1844, is advanced in style, but in spirit belongs with the work of these older artists. Painted in Turner's seventieth year, it reveals the response of the Romantic imagination to industrialism and the new phenomenon of the railway. Although the precise setting of the painting, Brunel's Maidenhead Bridge on the Great Western Railway, is known, Turner's painting is clearly not reportage or the simple representation of a particular event. The title itself suggests that Turner was concerned not merely with grasping the essentials of appearances, but with translating into paint the extraordinary new sensation of speed and industrial power. His painting is unique in its visionary power, but it is the vision of an old man confronting the forces of a new age.

The genesis of *Rain, Steam and Speed* is documented by a fortunate coincidence. Lady Simon, travelling on an Exeter to London train, had a peculiar encounter which she related afterwards to George Richmond, a Royal Academician and diarist. Richmond recorded that

"In the coach seated opposite her was an elderly gentleman, short and stout, with a red face, and a curious prominent nose. The weather was very wild, and by-and-by a violent storm swept over the country, blotting out the sunshine and the blue sky and hanging like a pall over the landscape. The old gentleman seemed strangely excited at this, jumping up to open the window, craning his head out, and finally calling to her to come and observe a curious effect of light. A train was coming in their direction, through the blackness, over one of Brunel's bridges, and the effect of the locomotive, lit by the crimson flame and seen through driving rain and whirling tempest, gave a peculiar impression of power, speed and stress."

Lady Simon withdrew into the carriage thoroughly drenched, while the old man leaned back into his seat with closed eyes, as if trying to commit his experience to memory. It was not until the next year, at a private viewing at the Royal Academy, that Lady Simon saw *Rain, Steam and Speed*, recognised the view, and realized that the eccentric old man had been Turner himself. Overhearing a critical bystander say "Just like Turner, ain't it? Who ever saw such a ridiculous conglomeration?", she is reported to have contemplated the philistine with an icy disdain and to have replied, "*I* did".
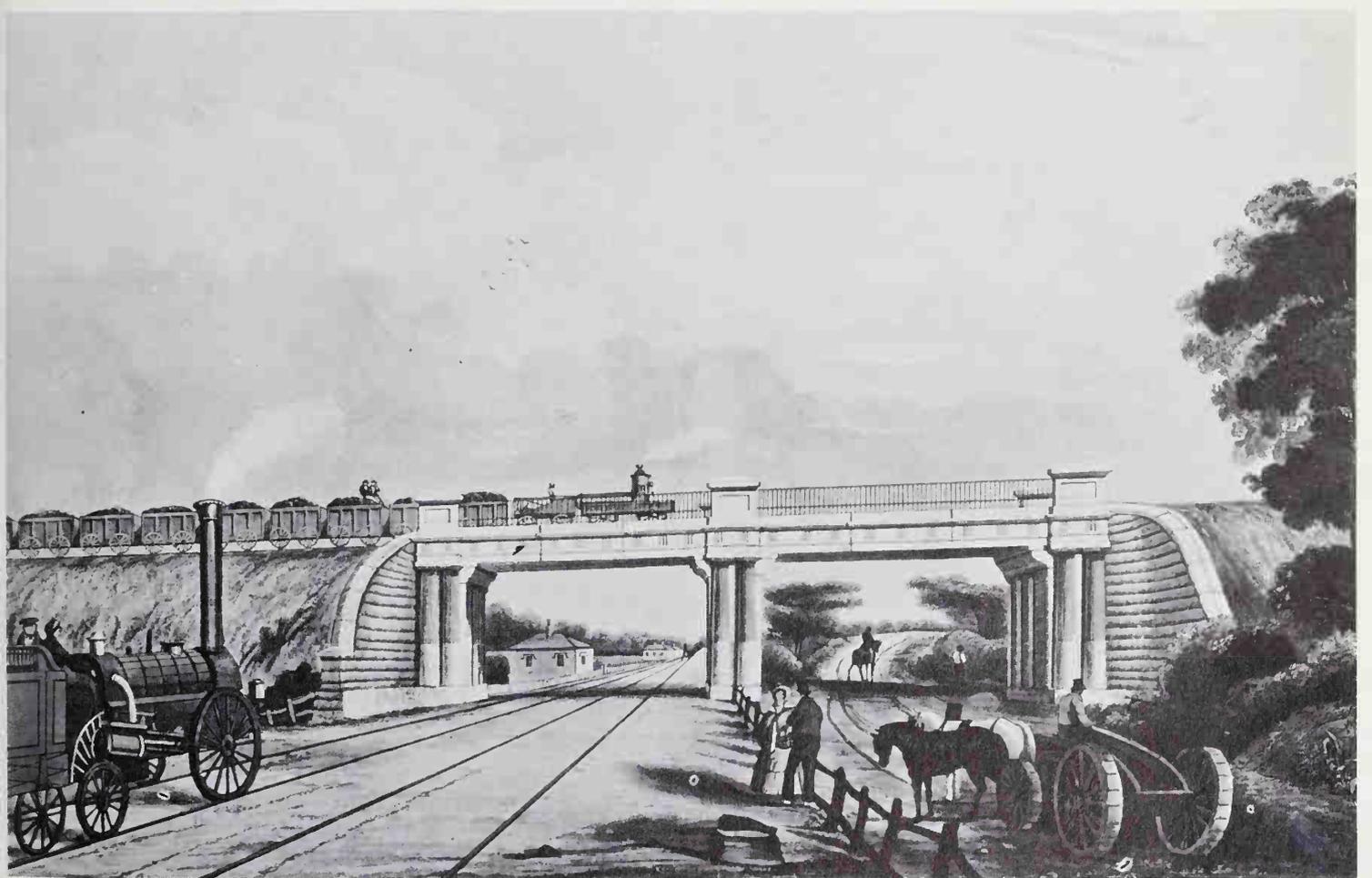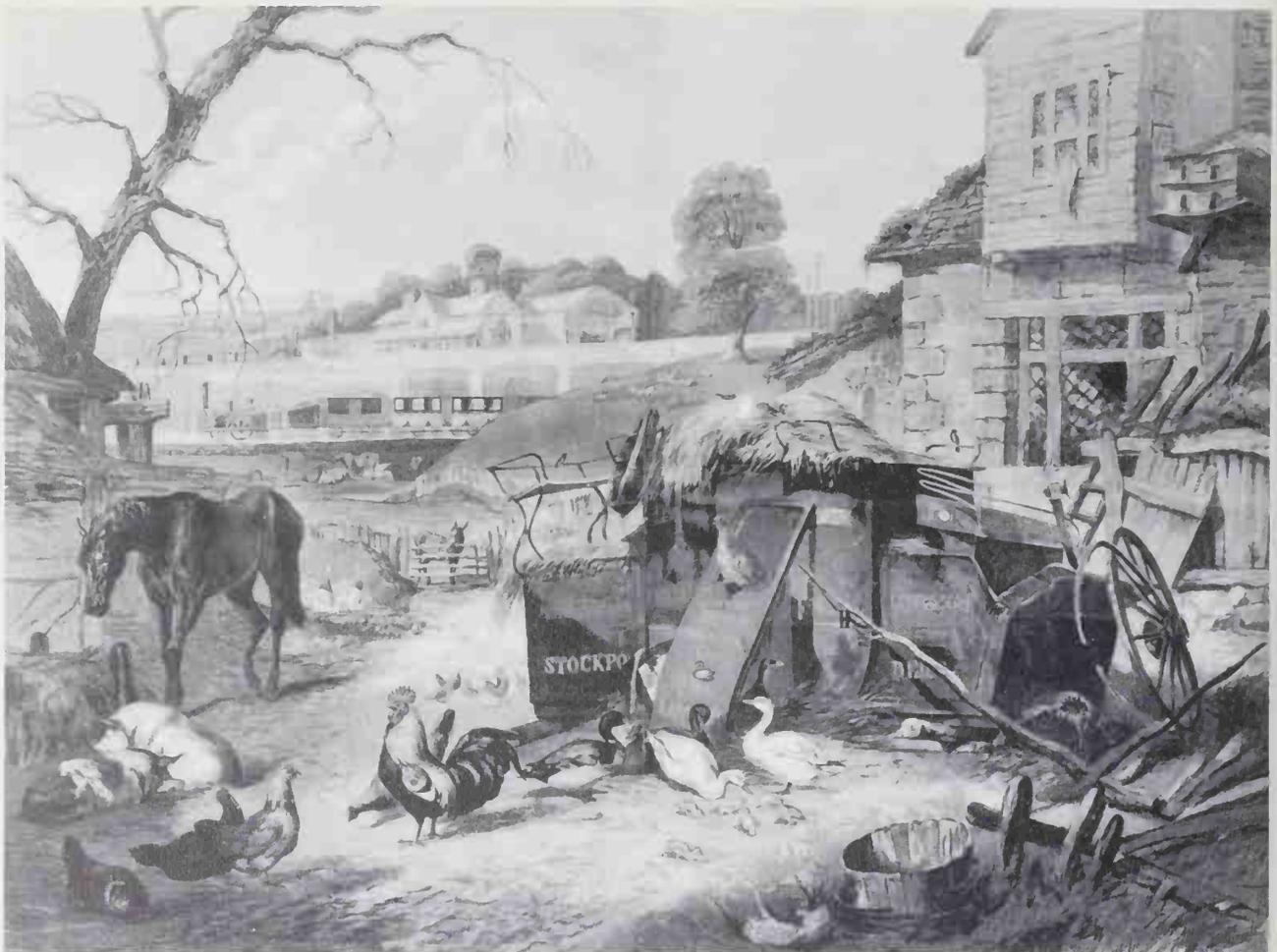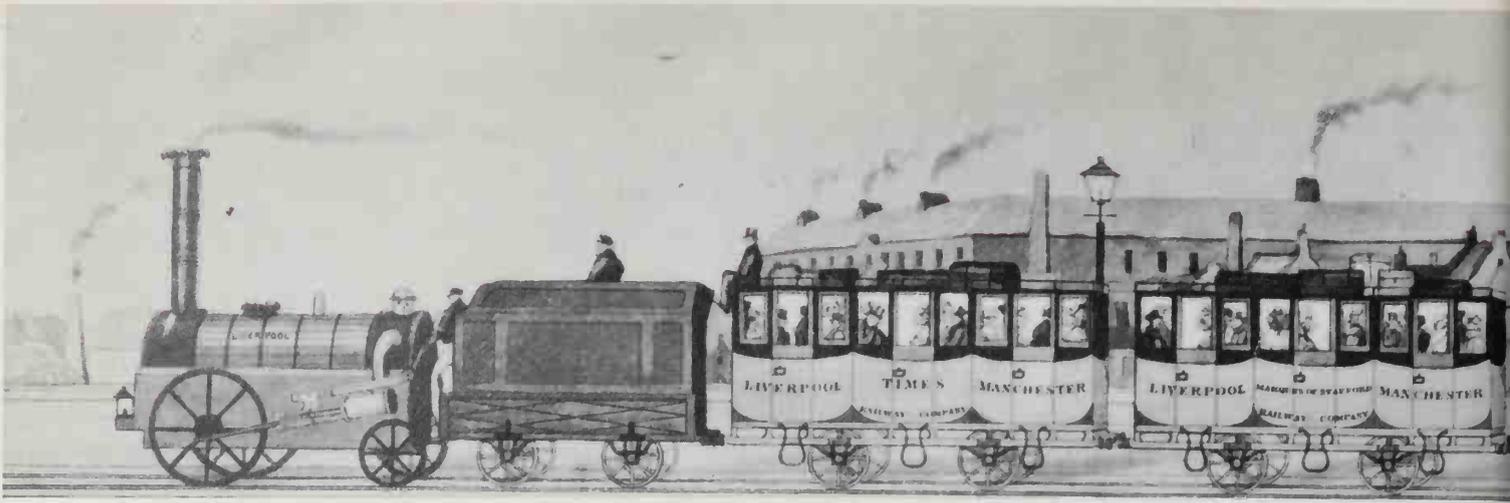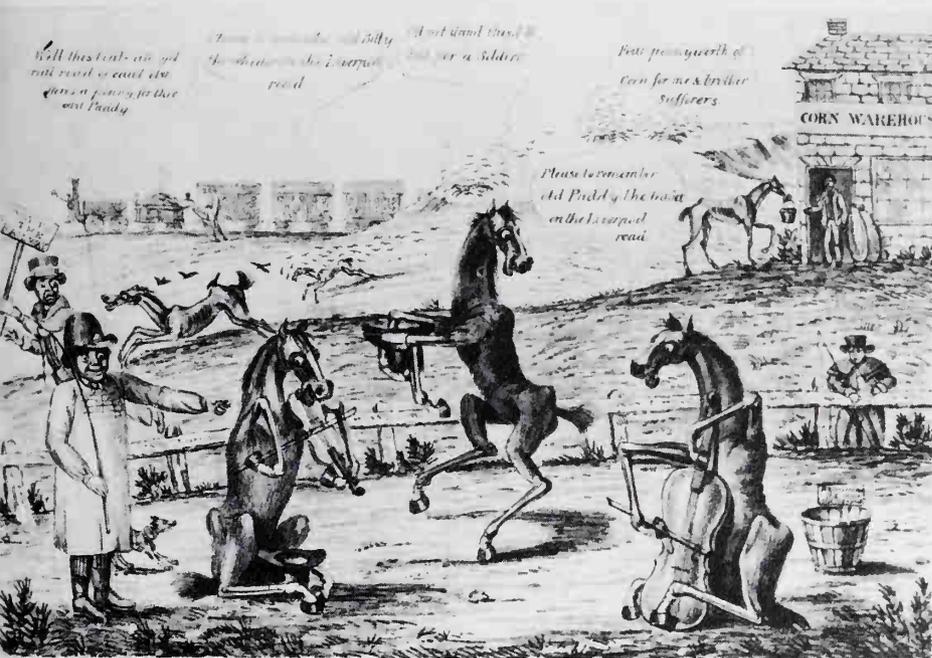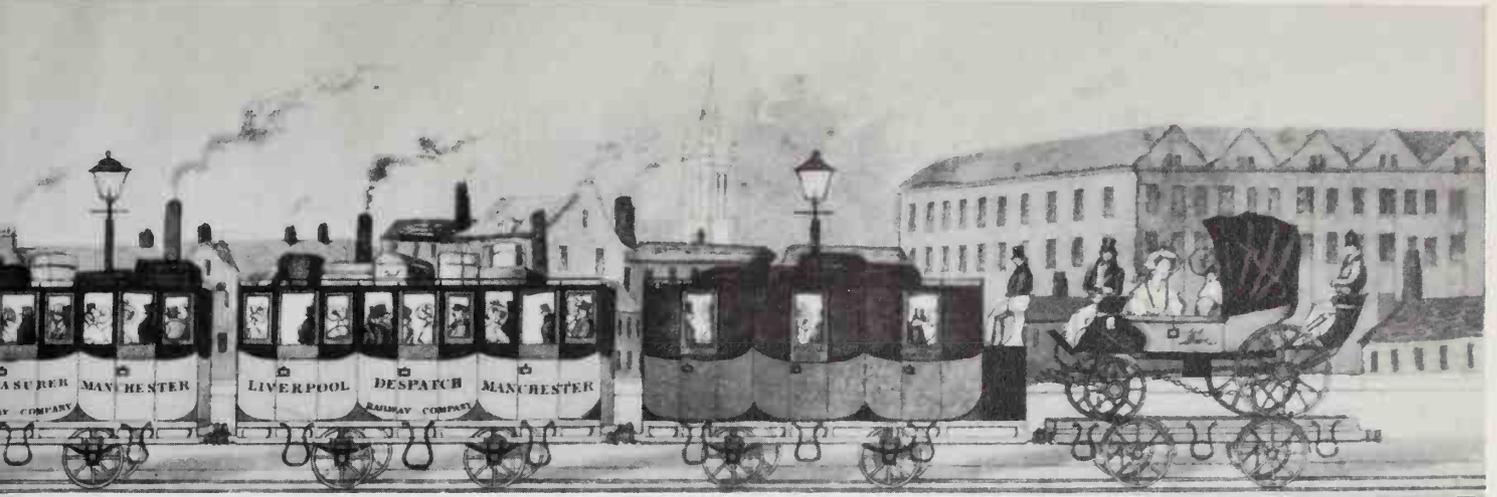
Ackermann Long Prints by I. Shaw of the Liverpool and Manchester trains in the middle 1830s. Top *The first-class, mail, with private coaches attached;* Above *Livestock.*

Far left *'Past versus Present',* a coloured lithograph of the 1840s. Sad end of the Stockport-Derby Stage. A train appears behind the debris.

Left *Sad Redundancy of Coach Horses. More ill feeling.*
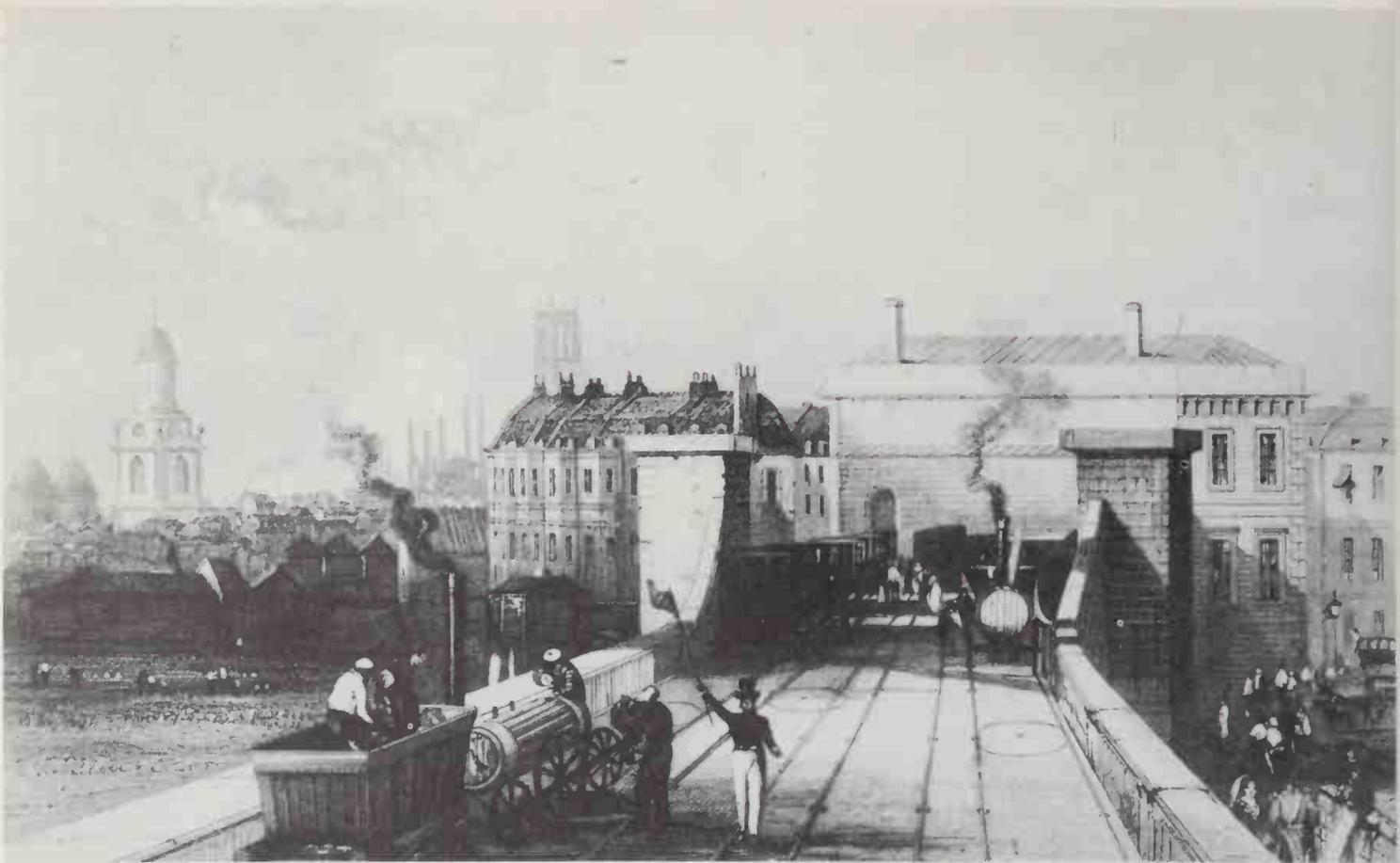
Above *London and Greenwich Railway. London's first railway aroused much interest in 1836, and was extensively portrayed. This early German reprint shows curious beer-barrel engines and an early signalman.*

Right *Music Cover. 'The Opening Day of the Greenwich Railway, a Comic Song', one of many popular ballads of the time. The caricatures are from life.*

Above right *Hetton Colliery. One of the cradles of steam locomotion. Original lithograph by J. D. Harding; undated, probably 1820s.*

Far right *Lea Bridge, Stratford-atte-Bow. G. Harley's drawing of the Eastern Counties Railway, circa 1840. Industrial motifs harmonized in a pastoral setting.*
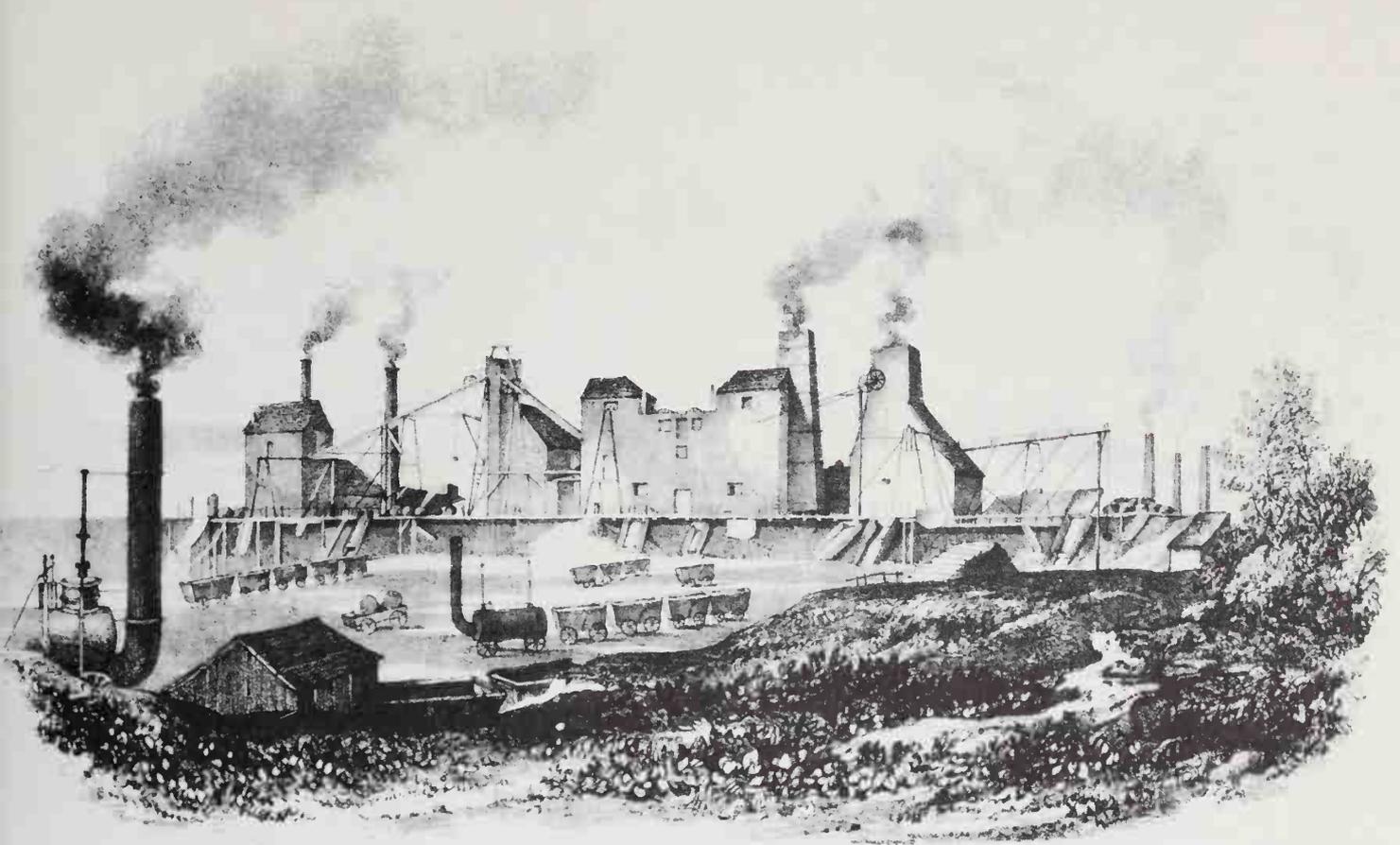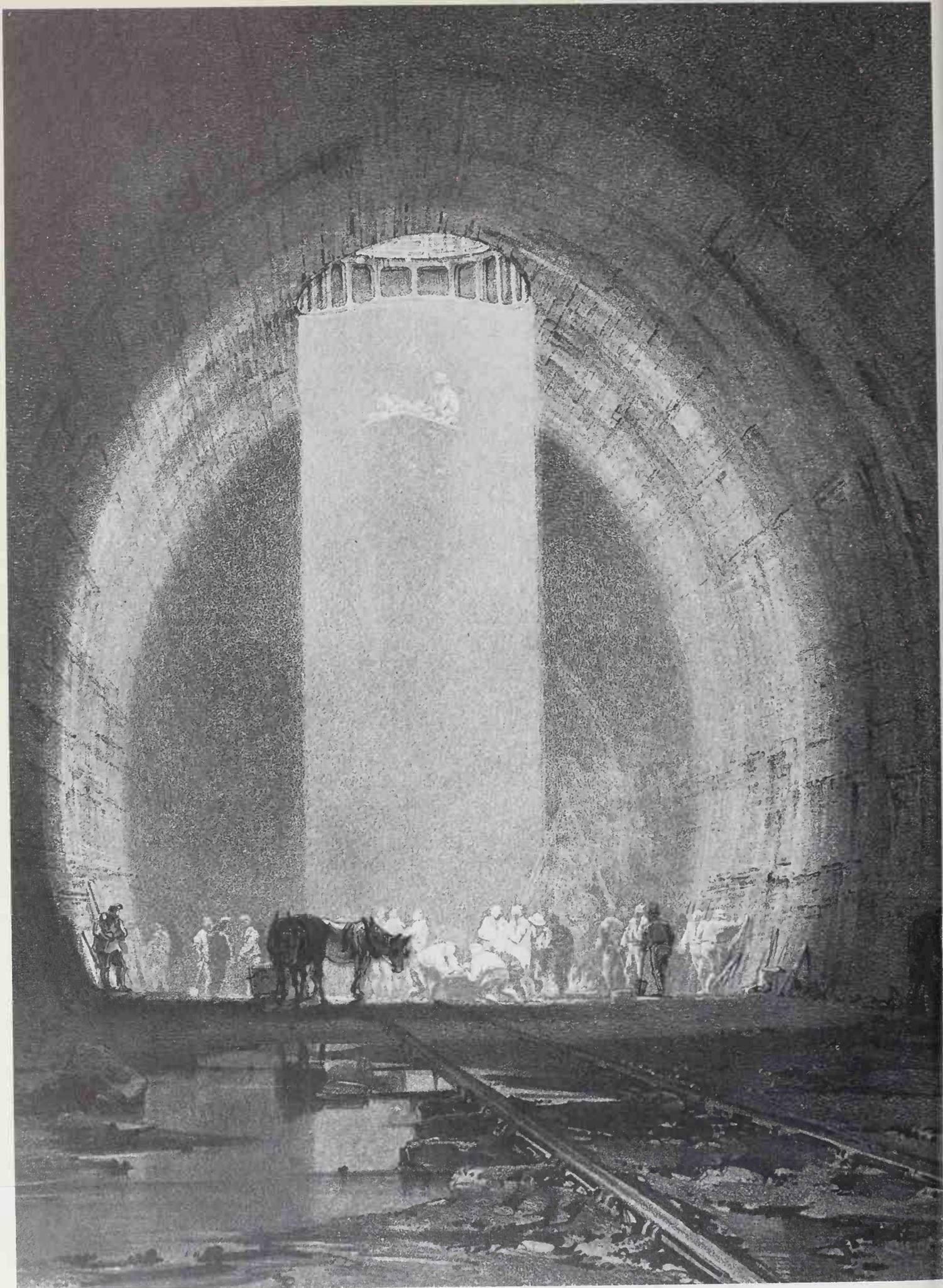
THE NEW
LANDSCAPE

In the two decades following 1830, railways transformed the face of Britain, the Continent and the United States. Primitive railways had been used in the mines of Europe, but their potential for development into a public service had not been generally recognized. In the early years of the nineteenth century, writers, economists and officials from both Europe and America visited England to observe the effects of industrial advances there. In 1818 a French government surveyor, after an inspection of the collieries at Middleton, Yorkshire, presented a paper at the French Academy of Sciences entitled *Notice sur les chemins de fers anglais*, advocating the construction of railways in France. American observers had been present at both the Rainhill Trials and the opening of the Liverpool and Manchester line. At least two pamphlets on this railway were issued in pirated editions and the first public steam service in the United States began shortly after in South Carolina in 1831. In addition the circulation of English railway prints in Italy, Spain, France and Germany did much to create a climate of favourable opinion in those countries.

Britain quickly took the lead in introducing the steam railway into other countries, providing engineers, machinery, experienced labour and, often, capital. Stephenson's engines were widely exported, and in the 1840s Thomas Brassey held railway contracts in Italy, France, Switzerland, Spain, Belgium, Holland, Denmark, Norway, Austria and Russia. Continental railways usually followed the English in observing a formal class system in the design of carriages with separate compartments. The companies themselves, often because of a lack of private capital, were frequently government-owned or controlled and competition was rarely allowed. In many countries railway construction was dependent upon political stability, with the result that widespread expansion often occurred decades after the railway 'boom' in England.

The French were slow in adopting locomotives and equally slow in establishing passenger services. In 1832 Lyons and St Étienne were connected by a 38-mile freight railway, the first publicly-operated steam line on the Continent. Its engines were provided by Marc Séguin who came from an enterprising and inventive family—his uncles, the Montgolfiers, were pioneers of ballooning—and who had studied under George Stephenson in England. The Paris to St Germain Railway of 1837 was one of the first lines to start from Paris, and carried some of the earliest French passenger trains. Marie-Amélie, the Queen of France, was a passenger on its inaugural run and, unlike many other lines, it proved to be a great financial success. But the July Monarchy of Louis-Philippe was ineffective in promoting railways. Debates raged about their organization

Opposite *Grand Construction, 1837. Lithograph by John Cooke Bourne. One of the working shafts of the London and Birmingham Railway's great tunnel through Kilsby Ridge and one of the finest examples of Bourne's work. As well as these small working shafts to the hilltop, there were two giant shafts. The shafts became workable only after thirteen pumps had moved nearly two thousand gallons of water a minute for nine months. The tunnel, completed in 1838, is still used for inter-city electric trains.*
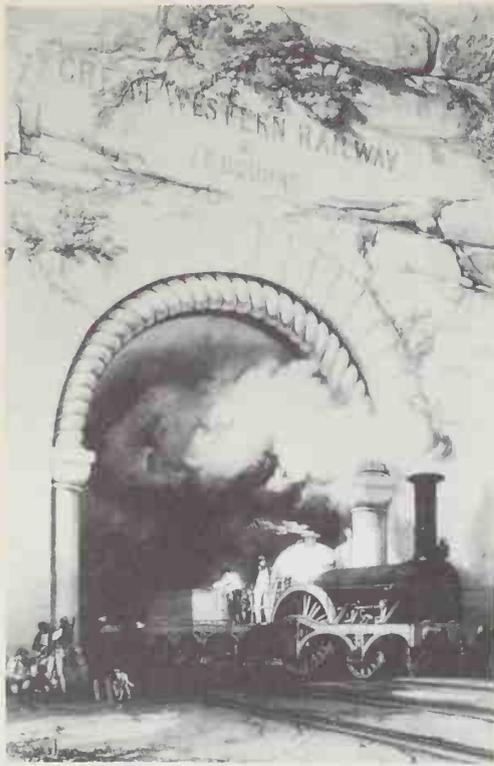
Above *Title-page to Bourne's 'History of the Great Western Railway.' The engine is Daniel Gooch's 'Acheron', at the west end of No. 1 Tunnel, Bristol.*

Opposite *'Policeman Sibthorpe' in the 'Punch' cartoon, is bringing the railway industry to the High Court of Parliament. Colonel Sibthorpe, MP for Lincoln, was a particularly virulent opponent of the railways.*

and safety, and capital necessary for construction was in short supply. The Paris to St Germain Line was opposed as "a scientific plaything" and as late as 1840 a Professor of Economics argued that in spite of their attractiveness and speed, the railways were too expensive to carry freight and would never replace the peasant on foot with a sack on his back.

From the beginning, railways in Germany were considered from a strategic political and military viewpoint. As early as 1828 Goethe predicted the unification of the German states as a result of good highways and future railway development. In 1835 King Ludwig I of Bavaria opened the first public steam railway, the four-mile *Ludwigsbahn* connecting Nuremburg and Fürth. Both its locomotive, 'Der Adler', and its top-hatted driver were English. Four years later the sixteen-mile Berlin to Potsdam route was opened by Crown Prince Friedrich Wilhelm of Prussia with the prophetic words, "No human arm will ever stop the progress of this car which will roll through the world". The Franco-Prussian war and the Austro-Prussian war both confirmed the decisive strategic importance of the railway (as did the Civil War in the United States). Separate lines continued to be built by the independent German states, but the railways were finally brought under central control shortly after Unification in 1871.

Italy also recognised that railways could play an important part in unifying its separate states, but internal politics and strategic difficulties hampered progress. The generally anti-progressive King of Naples opened a five-mile route from Naples to Portici in 1839. About two decades later Pope Pius IX enjoyed riding in a private car fitted with a gold-filigreed, velvet-curtained platform from which he could administer the papal blessing as he travelled. But a chaotic lack of organization continued even after the Unification of 1870 and in 1905 the Italian railways were finally taken over by the State. In other parts of Europe, the Semmering Line in Austria, opened in 1857, and the great Alpine tunnels of Switzerland facilitated travel and communications. Belgium was noteworthy in establishing as early as 1835 a state-owned and ordered railway system.

In England, once it was seen that the steam railway would not only work but make money, expansion was swift. In 1846, during the peak of the 'Railway Mania', 272 separate bills were approved in Parliament. Lawyers, clerks, surgeons, apprentices, merchants, tradesmen and officers of the Army and Navy abandoned their professions to become civil engineers. In London and other major cities vast new stations were constructed, entire neighbourhoods torn down and rebuilt. But the impact of the railway was not confined to the great urban centres of England, for it came not simply to the industrial and mining areas of the country; it came also to places which never had imagined it; places which had moved slowly from the feudal system, through gradually-developing squirearchy into the Whig and Tory world of the Four Georges, wherein little changed. Across the country remote villages suddenly experienced the effects of the Industrial Revolution. Perhaps the principal impact was the impression of magnificent solidity, the permanent purpose, of the railroad. Plumes of smoke appeared across unspoilt meadows and fields. Suddenly, quite apart from new and noisy engines, there came mighty earthworks, majestic bridges and viaducts which transformed the landscape.

These changes were greeted with enthusiasm by some, consternation and dismay by others. Whigs and capitalists supported new bills; the Church and the Tories opposed them. Those who had investments in canals and turnpikes, as well as coachmen, coachmakers and innkeepers, naturally

registered protests. But the fiercest opposition came from Tory land-owners, who resented compulsory encroachment by the government on their property and often exacted the most exorbitant prices for the invasion of their land. Lady Hastings fretted that a proposed line would spoil the view from her windows, and many people shared her feelings. Since the Enclosures, the countryside had looked very stately and orderly: the early railways made vast gashes and scars across it such as had never been known before; it took a long time for people to forgive such outrage. Some landowners also feared, especially in 1848, incursion by militant mobile mobs.

Criticism of a quite different sort came from those who recognised that industrial progress was a mixed blessing, dangerous to the environment and disruptive of traditional patterns of life. One Member of Parliament voiced the fear in the early 1830s that

> "the whole country was to be traversed and dissected by iron roads, and when-ever there was a hamlet or a cattle track, a market or a manufactory, there was to be a railroad; physical objects and private rights were stamped under the chariot wheels of the Fire King. Mountains were to be cut through; valleys were to be lifted, the skies were to be scaled; the earth was to be tunnelled; parks, gardens and ornamental grounds were to be broken into; the shrieking engine was to carry the riot of the town into the sylvan retreat of pastoral life; sweltering trains were to penetrate solitudes hitherto sacred to the ruins of antiquity; hissing locomotives were to rush over the tops of houses".

Though histrionic in tone, the MP's remarks are accurate enough in their description of the changes actually taking place. There was considerable concern over the indiscriminate destruction of ancient monuments. Danger to the environment was also seriously debated. George Stephenson was invited to testify before a Parliamentary committee on the effects of the railway on the animal population. John Stuart Mill protested that the beauty of the Mickleham valley would be spoiled by a projected line. Wordsworth, who had praised new technology in a sonnet entitled *Steamboats, Viaducts and Railways* and prudently invested in railway shares, hardened into opposition when he saw the solitude of the Lake District threatened by the Kendal and Windermere Railway. Rhetorically, he demanded,

> "Is there no nook of English ground secure
> From rash assault?"

Meanwhile massive earthworks and civil engineering projects, unparalleled in magnitude and grandeur since the time of the Romans, appeared on the new routes. Tunnels, arches, viaducts and bridges expressed a new vision of industrial design. The bridges of Thomas Telford were beauties, especially those in North Wales, where road passengers to Ireland had already the sight of the succeeding and increasing prodigies of that of Conway and its superb companion across the Menai Strait. These were joined by new marvels when the Chester and Holyhead Railway supplanted the old Holyhead Road.

Telford had already accustomed people to the iron bridge, not only as a modern improvement but also as a thing of beauty in the landscape. One of the most beautiful of these early iron bridges is the perfect rainbow arch at Craigellachie in north-eastern Scotland. But neither suspension bridges (which Telford so splendidly designed), nor iron bows giving a hump-

Above *Horse-runs in Tring Cutting, London and Birmingham Railway. Bourne lithograph, 1837. Horse-gins hazardously hauled up man and barrow together.*

Opposite *The Driver. The scene is believed to come from the London and Birmingham Railway in the 1840s, and might belong—if Phiz had done coloured plates for 'Dombey and Son'—with a memorable journey of Mr Dombey and Major Bagstock, Tommy Traddles firing the engine.*

backed crossing of river or ravine, would do for the new steam railways. For them, the rails had to be on a constant level. Robert Stephenson's Conway and Menai bridges both had rectangular, tubular iron spans stretching between great stone towers. The trains began to run between London and Holyhead across these splendid bridges in 1850. In deference to public taste, heavily influenced by the Romantic Movement, there had to be suitable embellishment. Telford had already given his iron road bridges supporting towers with battlements and turrets. When the younger Stephenson came to the parallel railway bridges, he went further. Those at Conway were like great crenellated barbicans. His second tubular bridge below Bangor was altogether too revolutionary for traditional decoration, so it received towers in the shape of Egyptian pylons. Distinctly Egyptian-looking recumbent lions in stone were mounted in pairs at each end, like guardians to the great bridge. The romantic love of decoration in the form of picturesque ruins extended even to I. K. Brunel, who decided to leave one of the tunnel mouths on the Great Western Railway unfinished in order to suggest a ruined medieval gateway. To increase the poetic effect he even had ivy trained over it.

The earlier long tunnels easily frightened people. They had to be made to look, as well as to be, extremely substantial. They were given in many cases very imposing-looking portals, often towered and castellated as if to repel an invading enemy. Indeed, the consideration was a real one. Behind the building, in 1841, of the northern portal of Clayton Tunnel through the Sussex Downs on the London to Brighton line, was the still latent fear of French invasion through the flat lands of south-eastern England. Scorn was frequently expressed for the businessmen responsible for these innovations. Lord Marney, in Disraeli's *Sybil*, expressed aristocratic contempt for the new breed of middle-class capitalists:

> "Railroads are very good things, with high compensation, and manufactories are not too bad, with high rents; but, after all, these are enterprises for the canaille, and I hate them in my heart."

Opposition dwindled during the century, as the rich themselves profited from their railway shares. A marquis who had forced a railway to construct two expensive tunnels in order to pass five miles away from his house, asked belatedly that he be connected to the line, but had to build

his own branch at a cost of £160,000. Still a few staunch resisters remained. A country gentleman from Carlisle who died in 1868 bequeathed the bulk of his estate to a nephew on the sole condition that he should not at any time travel on the Carlisle and Silloth Railway.

In time, acceptance grew and eventually the Right Wing (Land, heavily compensated) and the Left Wing (Business) could wholly applaud. The Aesthete fell between two stools. He had to serve one or other of them to make a living, and often chose to do neither. That could be managed, given adequate private means, as in the case of John Ruskin, whose money came from one of the most famous producers of sherry, and who detested the new railways from their first appearance. He described as "impertinent folly" any sort of ornament as applied to railways, since those who used them were always in a hurry, and therefore miserable. He quite rightly protested at the uselessness of adornments on functional design:

> "Better bury gold in our embankments than put it in ornaments on our stations. Will a single traveller be willing to pay an increased fare on the South Western because the columns and the terminus are covered with patterns from Nineveh? ... Railroad architecture has, or would have, a dignity of its own if it were only left to its own work."

Well before Ruskin, Charles Waterton, a great naturalist, had been so annoyed by the excesses of the navvies building a new canal close by his land that he wished the new railroads well if they were about to beggar the canals. All in all, the railways met a massive resistance on the aesthetic side, and it is no wonder that the companies sponsoring them did all in their power to beautify them, even though their efforts did arouse Ruskin's scorn.

The cityscapes of Britain were also transformed. Not only were there railway bridges, depots, roundhouses and tunnels, but railway stations and station hotels were among the most important architectural achievements of the nineteenth century. Although stations started rather modestly, often with simple wooden sheds, they soon adopted the revolutionary feature of vast arched iron and glass roofed sheds, first used in greenhouse construction and later in exhibition building. Stations such as Euston with its huge Doric portico, King's Cross with its massive lunette and St Pancras with its fantastic gothic skyline became symbols of the new age. The railway hotel, often built in an ornate style completely at odds with the functionalism of the station behind, was another new monument in the urban scene. Ruskin's *Stones of Venice* opened with a definition of what distinguishes "architecture from a wasp's nest, a rat hole or a railway station", but it can also be argued that the station's use of new materials played a crucial role in the development of modern architectural forms. A critic in *Building News* claimed that "Railway termini and hotels are to the nineteenth century what monasteries and cathedrals were to the thirteenth century. They are truly the only representative building we possess ... the leaders of the art spirit of our time".

New construction, however, often resulted in social upheaval, the destruction of old buildings and the uprooting of entire communities. *Punch* ironically suggested that St Paul's Cathedral be razed to the ground and a new station be erected on its site. *The Times* criticized the displacement of the occupants of buildings for whom no provision or financial compensation was offered by the railway companies. In *Dombey and Son*,
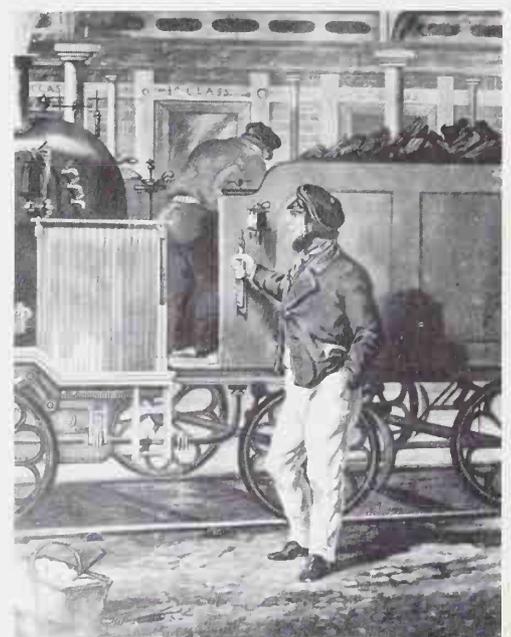
Dickens provided a vivid picture of the impact of the London and Birmingham Railway on Camden Town:

"The first shock of a great earthquake had, just at that period, rent the whole neighbourhood to its centre. Traces of its course were visible on every side. Houses were knocked down; streets broken through and stopped; deep pits and trenches dug in the ground; enormous heaps of earth and clay thrown up; buildings that were undermined and shaking, propped by great beams of wood. Here, a chaos of carts, overthrown and jumbled together, lay topsy-turvy at the bottom of a steep unnatural hill; there, confused treasures of iron soaked and rusted in something that had accidentally become a pond. Everywhere were bridges that led nowhere; thoroughfares that were wholly unpassable; Babel towers of chimneys, wanting half their height; temporary wooden houses and enclosures, in the most unlikely situations; carcasses of ragged tenements, and fragments of unfinished walls and arches, and piles of scaffolding, and wildernesses of bricks and giant forms of cranes, and tripods straddling above nothing. There were a hundred thousand shapes and substances of incompleteness, wildly mingled out of their places, upside down, burrowing in the earth, aspiring in the air, mouldering in the water, and unintelligible as any dream. Hot springs and fiery eruptions, the usual attendants upon earthquakes, lent their contributions of confusion to the scene. Boiling water hissed and heaved within dilapidated walls; whence, also, the glare and roar of flames came issuing forth; and mounds of ashes blocked up rights of way, and wholly changed the law and custom of the neighbourhood.

In short, the yet unfinished and unopened Railroad was in progress; and from the very core of all this dire disorder, trailed smoothly away, upon its mighty course of civilisation and improvement."

The men who had built the canals—the heavy labourers, frequently immigrant Irish, or Scots Highlanders—were called 'Navigators' because they were often imagined to have something to do with inland navigation. To be sure, they or their fathers had built the canals. They became 'navvies' in common parlance and built the first long railways. The navvy is the hero of Ford Madox Brown's pictorial allegory of nineteenth-century society, *Work*, and appears in numerous prints depicting the construction of the lines. Yet by many they were regarded as a race apart, respected and even feared by those whose virgin lands they suddenly penetrated. They lived in shanty towns and fought for fun, being necessarily men of great strength. Their appetites were immense, and contractors did not stint them. Their natural desires were served by polyandrous women who followed their camps ('tally-wives' was a nice early Victorian euphemism for these adventurous females). Tales of wife-selling were common. In the 1880s one had been sold for a shilling, although another fetched only fourpence; complaints about the desertion of children were common. A navvies' spree, which happened once a week wherever they were, was to be avoided. There were oceans of beer and gin was cheap. The local people put up the shutters and locked up their daughters.

Moreover the navvies lived up to their reckless reputation with a spectacular bravado; in the Kilsby tunnel on the London and Birmingham Railway three men were killed as they tried to jump, one after the other, over the mouth of a shaft in a game of follow-my-leader. Yet there is another side to the story. Navvying had become skilled labour. The men worked prodigious hours, seven days a week. A old navvy was rare; many died from consumption of some sort, alcoholic poisoning or syphilis; many more were claimed in accidents or buried alive in tunnels.

Opposite *Building the Retaining Wall near Park Street, Camden Town, 1836. A Bourne lithograph for the London and Birmingham railway.*

Below *'I come to dine, I come to sup, I come, I come... to eat you up!' George Cruikshank's Railway Dragon invades a peaceful family dinner.*

The Railway Dragon
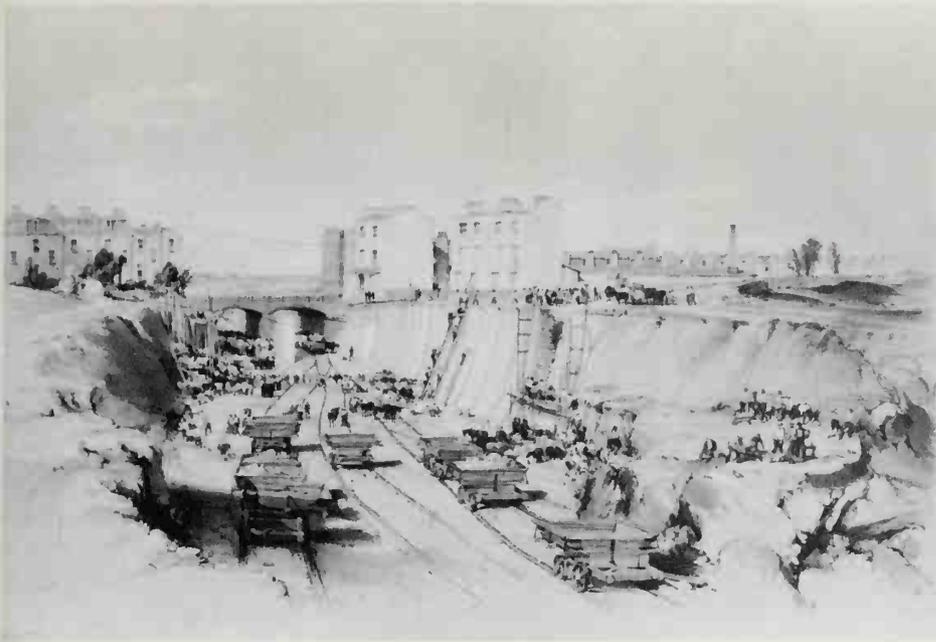
Such men also built the great railways of Western Europe. Some of them continued on to other continents, working in Asia, Africa and South America. In Sweden they were called *Rälaren*, and they continued their work into the twentieth century, their last task being the construction of the Inland Line from Central Sweden to the Lapland borders in the 1930s. In North America, they completed the first rail link between the Atlantic and Pacific coasts in the 1860s. Many of these were either tough Irish immigrants who had left Europe with little to lose, or paid-off soldiers from the American Civil War, with serving soldiers to protect them against naturally resentful Indians who found themselves being dispossessed by the Bad-Medicine-Wagon backed by swift, sharp businessmen. West of the Rockies came in immigrant Chinese.

Early prints of the great bridges, arches and viaducts usually show them as an adornment to the landscape rather than as a blot upon it. Artists harmonized the new constructions into pastoral and romantic views rather than suggesting that the landscape itself was being transformed by a new technology. Spectacular engineering projects stirred the public imagination and their functional beauty was genuinely appreciated. Great viaducts and cavernous cuttings appealed strongly to the imaginations of the artists themselves. The industrial revolution coincided with a Romantic movement that made Englishmen more acutely conscious than ever of the beauties of the natural world and of their traditional landscape, into which the railways merged along with other man-made elements—hedges, farms, roads and canals. The reaper with his sickle and the ploughman guiding the stilts of his wheel-less wooden plough continued their work under the shadow of the towering viaduct. George Eliot wrote of the terrain she knew best:

"Our Midland plains have never lost their familiar impression and conservative spirit for me; yet at every other mile since I first looked on them, some sign of world-wide change, some new direction of human labour, has wrought itself into what one may call the speech of the landscape ... there comes a crowd of burly navvies, with pickaxes and barrows, and while hardly a wrinkle is made in the fading mother's face or the new curve of health in the blooming girl's, the hills are cut through, or the breaches between them spanned, we choose our level and the white steam-pennon flies along it."
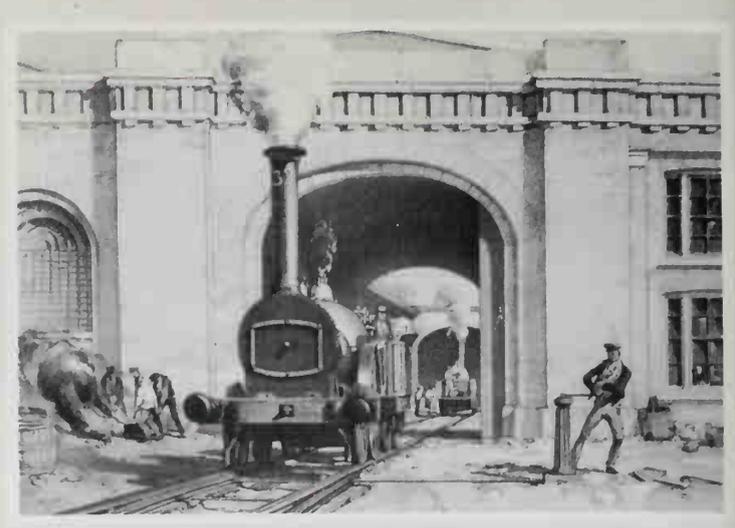
Below *Building the Stationary
Enginehouse. Bourne lithograph,
London and Birmingham Railway.
It was short-lived: cable haulage on the
Euston Incline was an intolerable
nuisance. Dickens described the effect of
the railways on Camden Town in
'Dombey and Son.'*
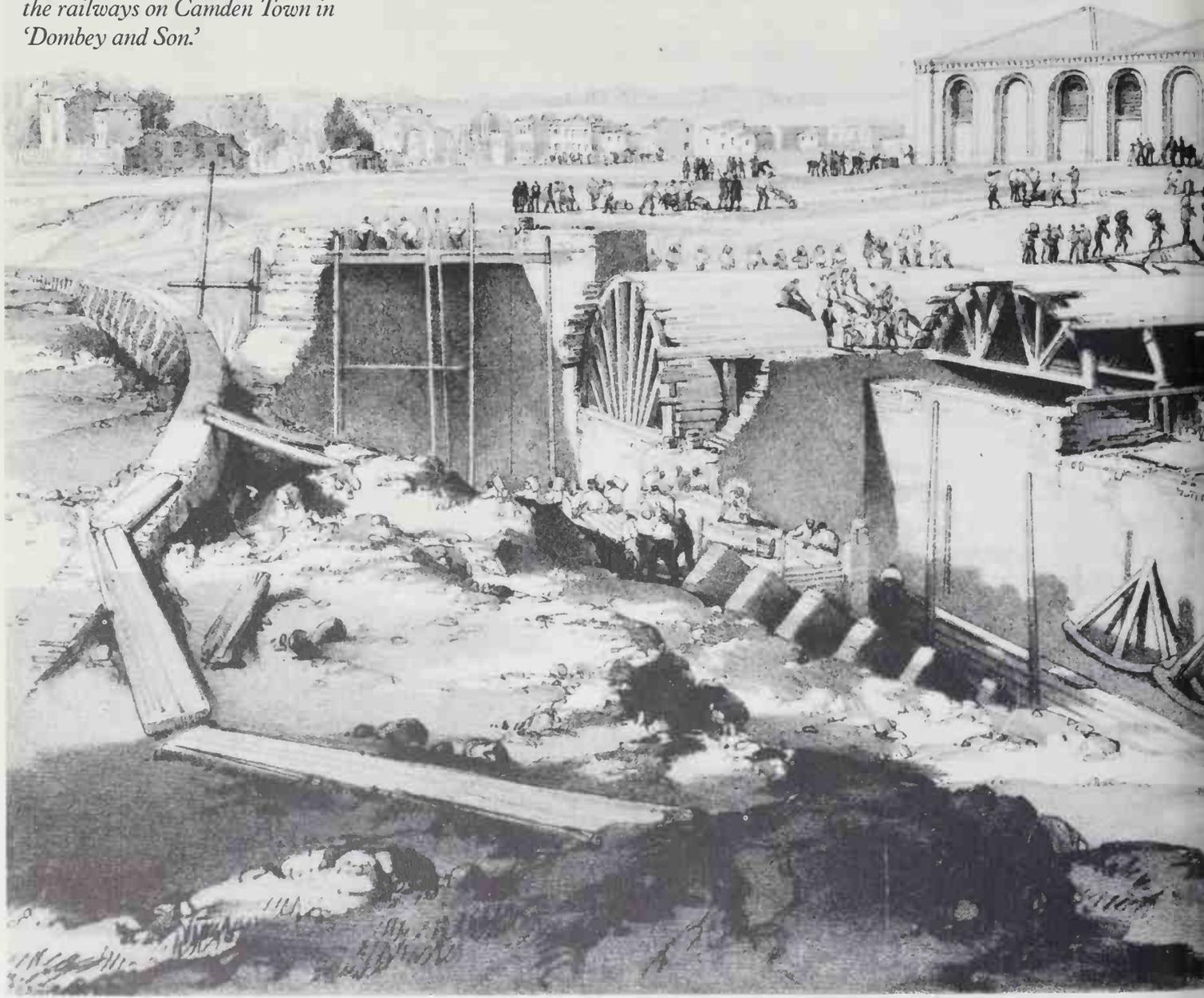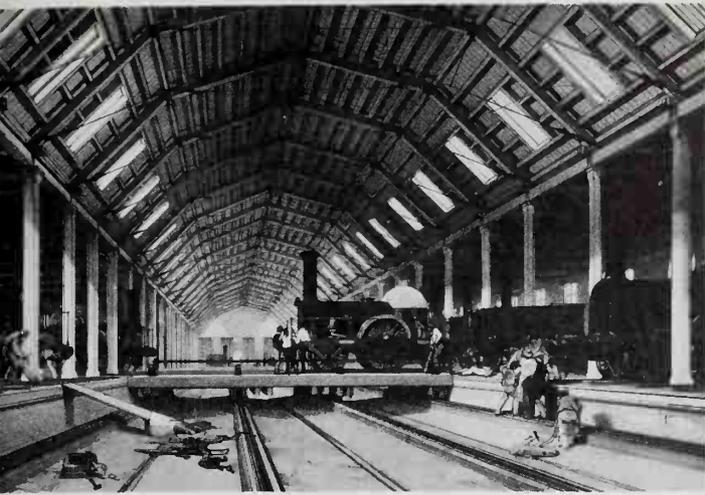
Far left *Kilsby Ridge again. Bourne lithograph. With the incipient tunnel flooded by hitherto unsuspected quicksands, these engines were installed by Robert Stephenson to keep workings and tunnels dry. The sub-contractor had died of shock.*

Middle left *The Entrance to the Engine House at Camden Town. Lithograph by Bourne.*

Left *Engine House, Swindon. A Bourne plate of singular magnificence, showing the big traverser, and engines of the 'Firefly' class in the middle 1840s.*

BUILDING THE STATIONARY ENGINEHOUSE. CAMDEN TOWN. APRIL 26TH 1837

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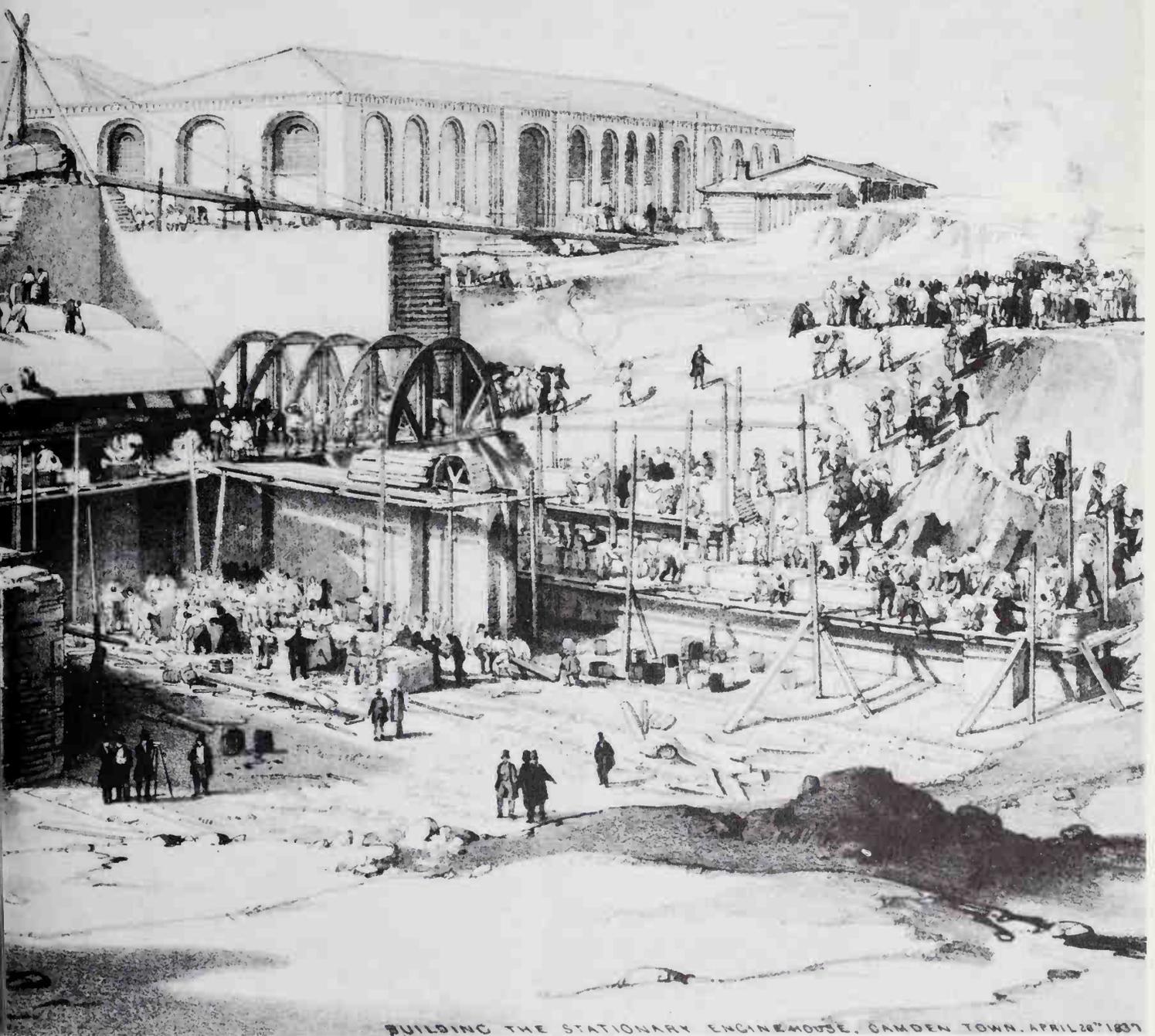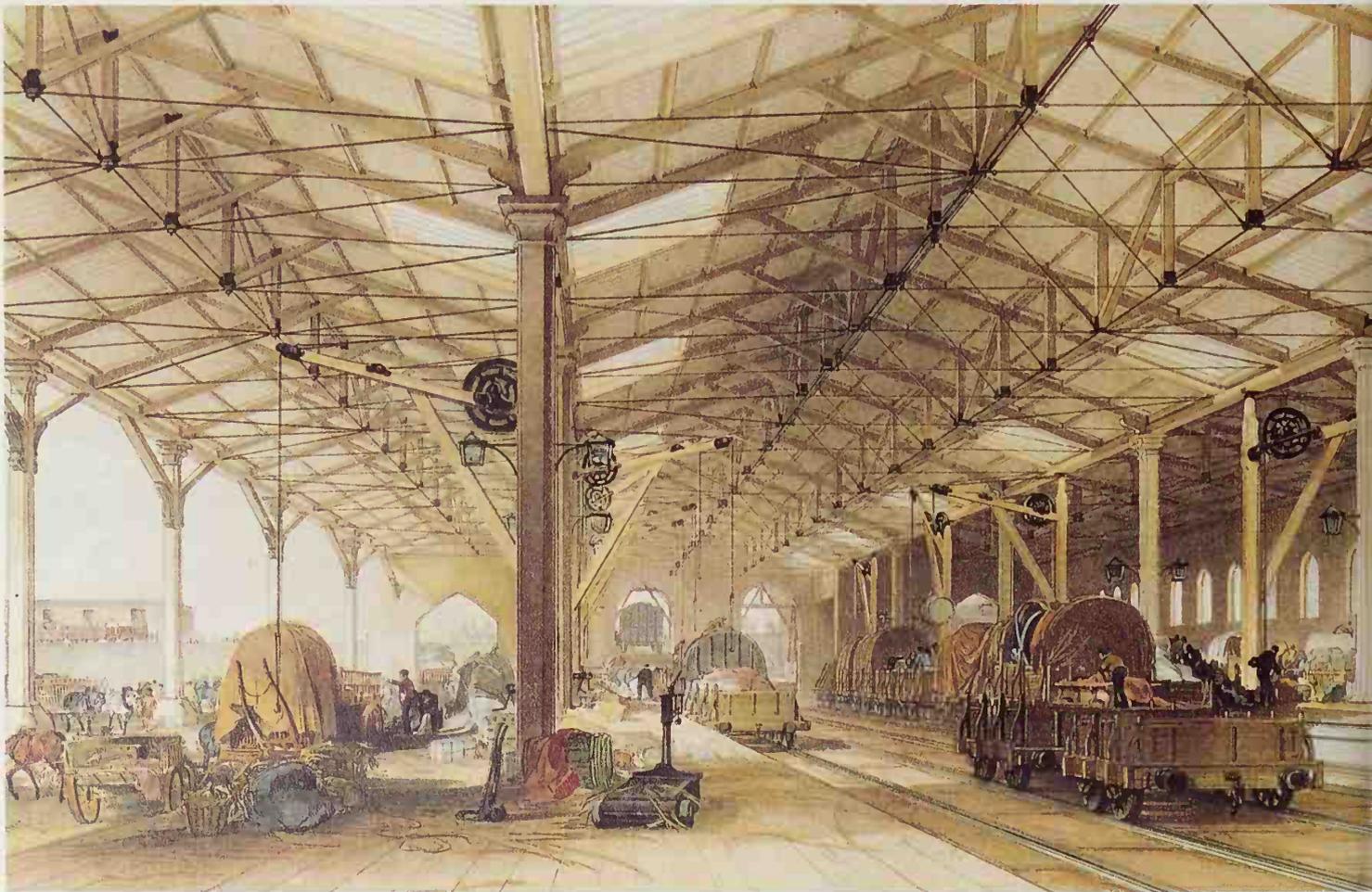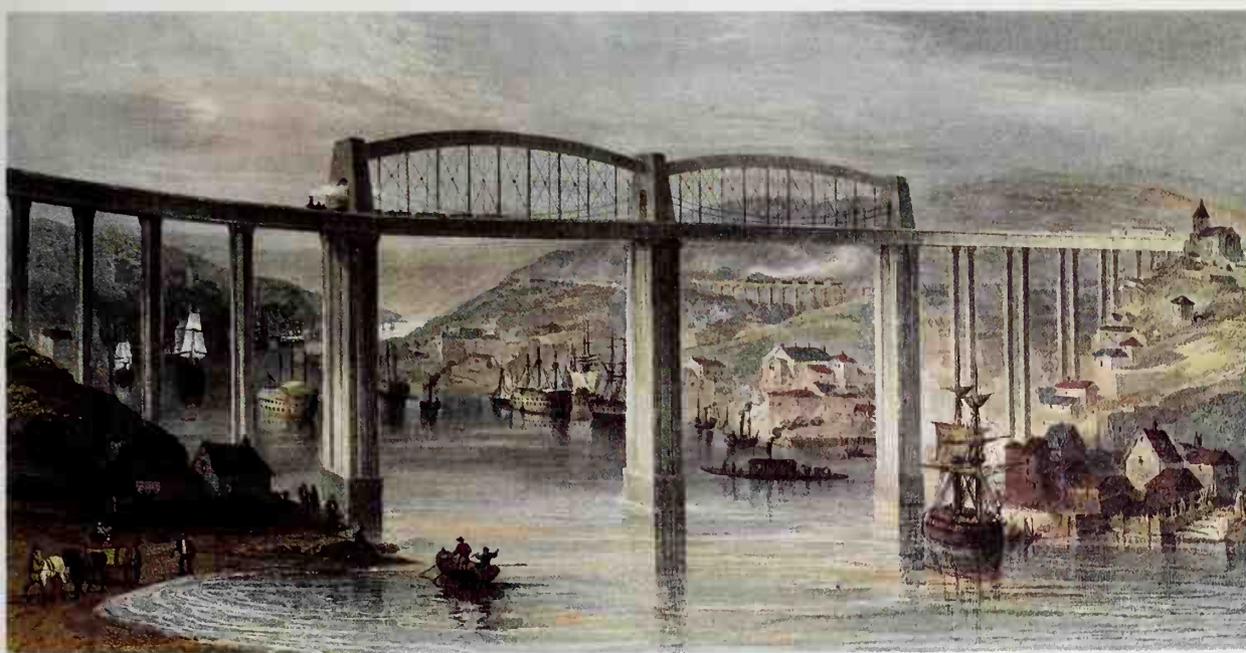
Above left *London Road, Brighton. Rastrick's viaduct, looking west. The Downs slope down to the infant city, with its working windmills. A train meanders in from Lewes; washerwomen gossip. Bombing is still a century ahead.*

Left *Bristol, Temple Meads: The Goods Station, a Bourne lithograph for the Great Western Railway.*

Top *Steam and Stucco. Bangor, North Wales. Save for its being painted brown, the representation of the locomotive is admirably correct. It is an express engine of the Allan/Buddicom type built at Crewe.*

Above *Railway Bridge over the River Tamar. A plume of white smoke indicates the progress of a train over a harbour filled with sailing craft.*
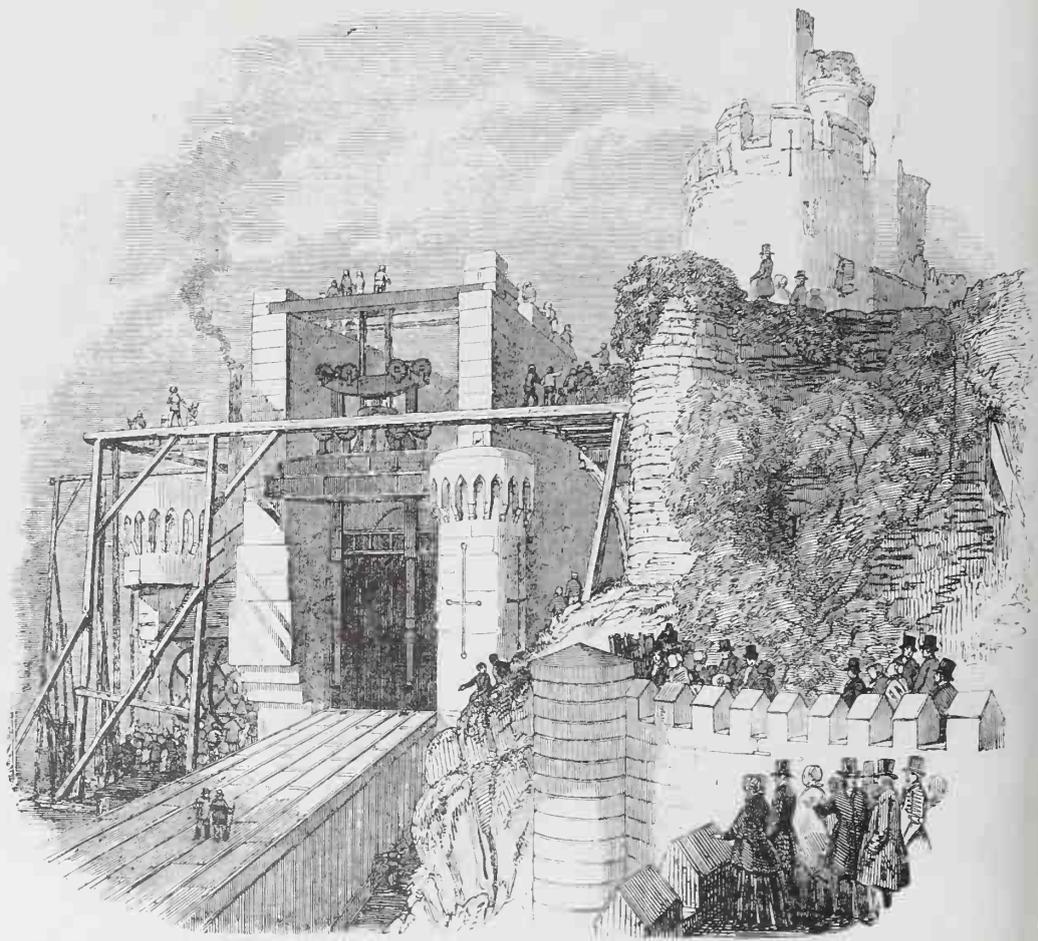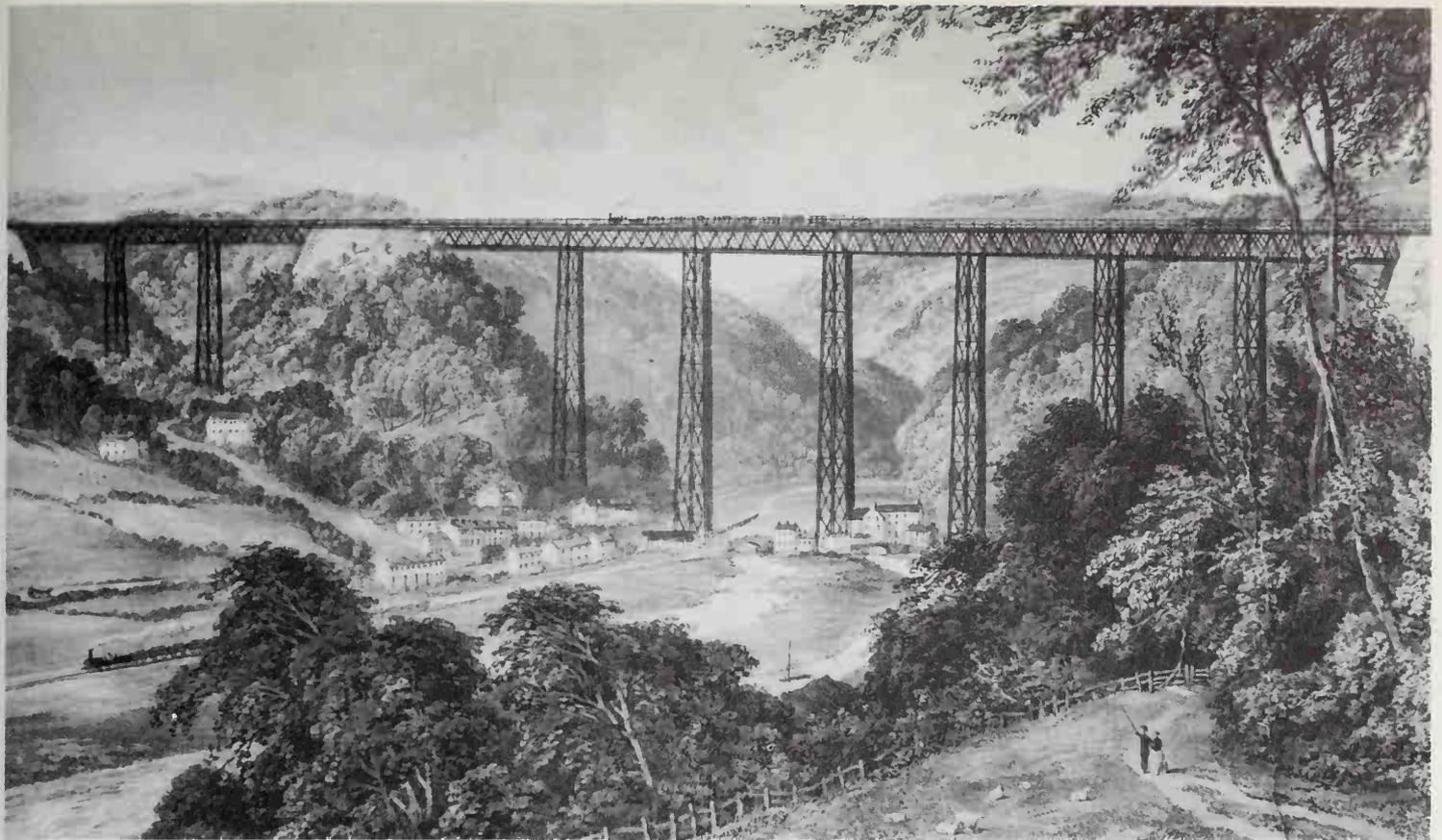
Above left *Italianate Improvement.
Palladian southern portal of Primrose
Hill Tunnel, London. It still stands,
begrimed with the smoke of many years.*

Far left *Baronial Beautification. Robert
Stephenson's Conway Bridge in
construction, designed to harmonize (as
much as possible) with the castle and
breached rampart behind.*

Above *Crumlin Viaduct, Newport
Abergavenny and Hereford Railway,
lithograph by Newman. Traditional
village life continues under the shadow
of the massive viaduct. Admiring
spectators in the foreground point to
the passing train.*

Left *'The Express Galop', by Charles
d'Albert. Music cover of the late 1840s.
An unusual night view.*
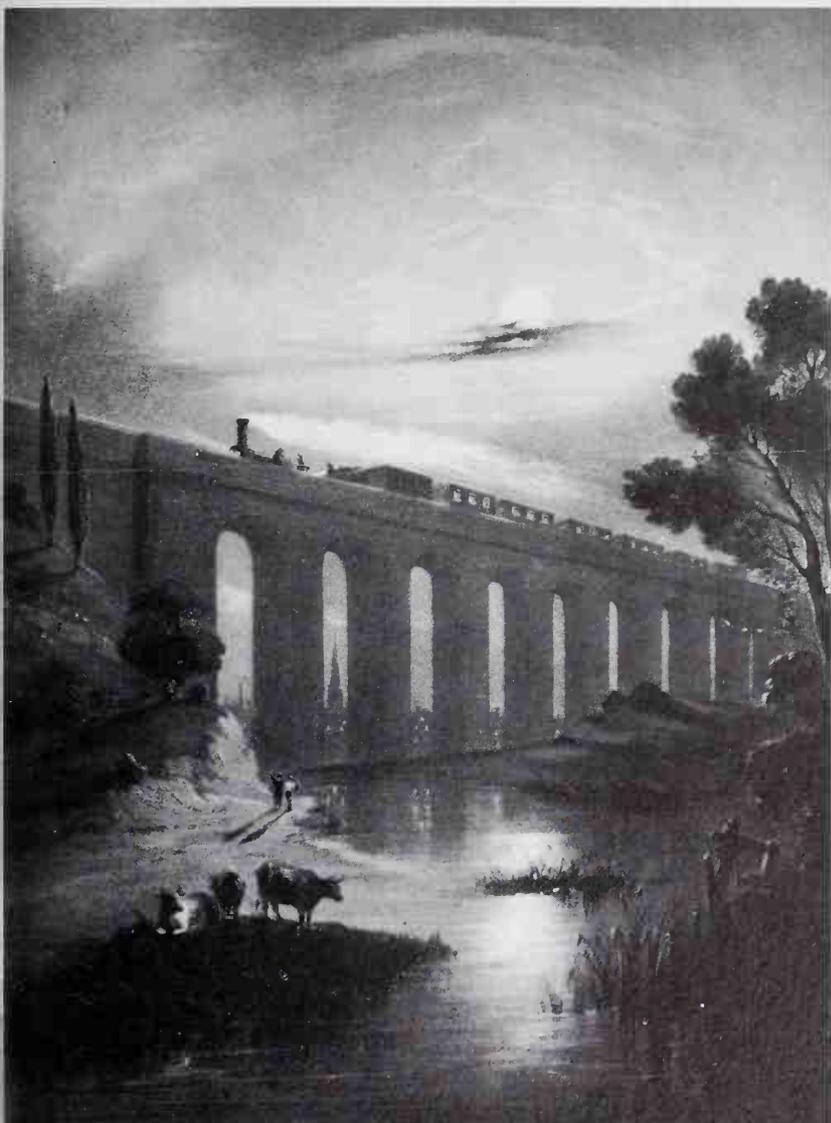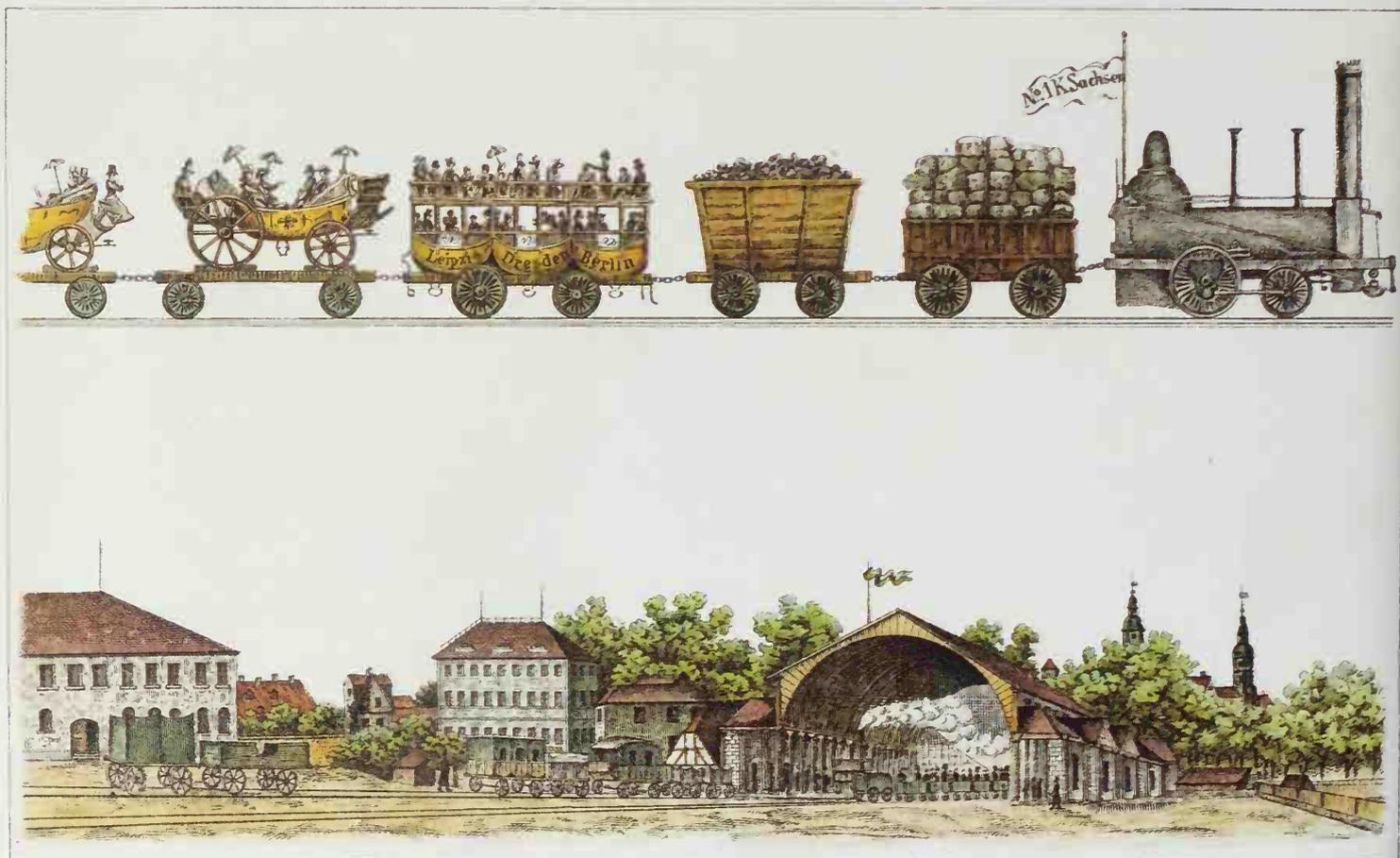
Top *Naples and Portici, 1839. The first railway in the Italian peninsula, still divided between Papal and other potentates. A fashionable assembly has turned out for the inauguration.*

Above *Leipzig and Dresden Railway, Saxony. Commemorative drawing of the Leipzig terminus, and a supposed train. For 1839 the station is ambitious but the locomotive mechanically impossible. The Quality in their private landaus are*
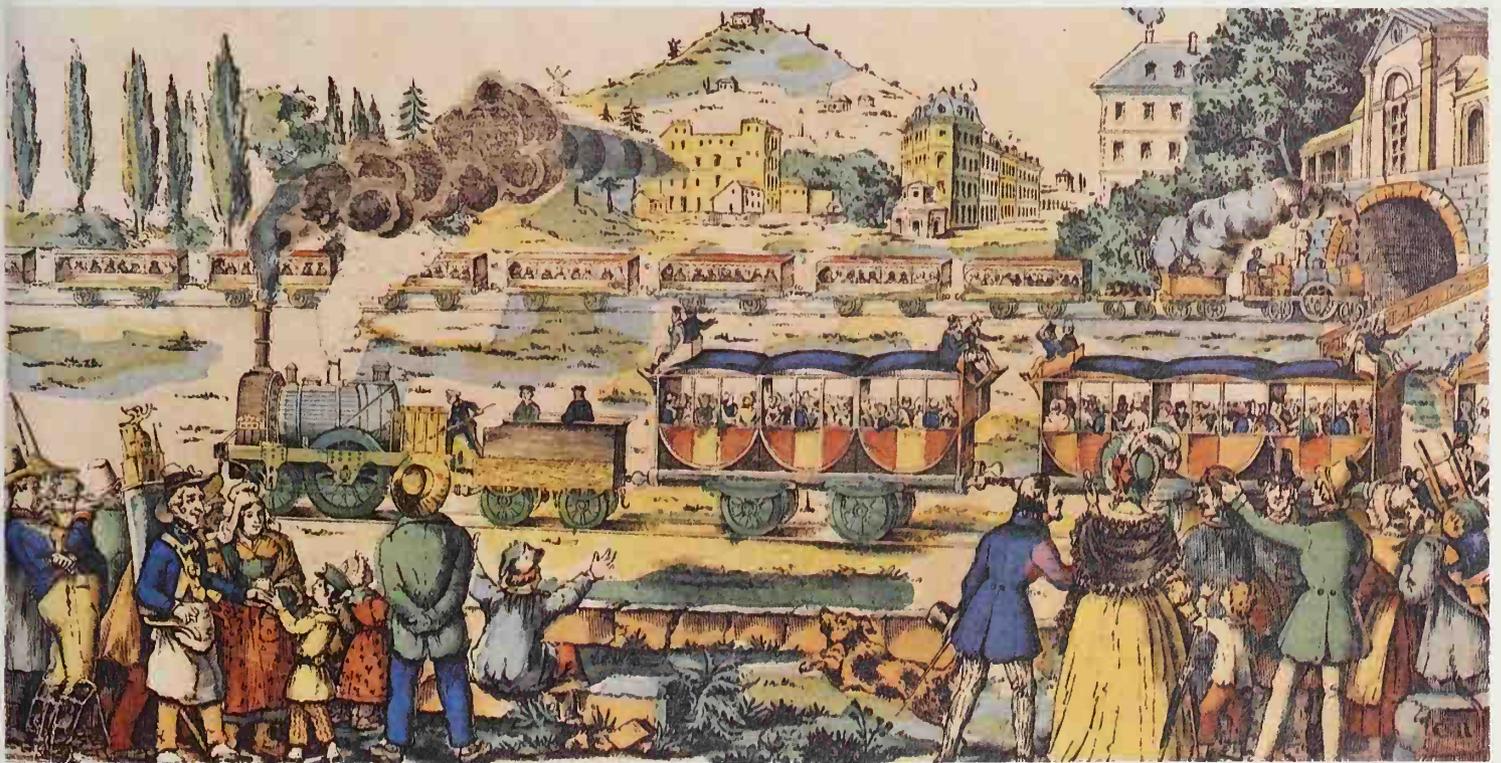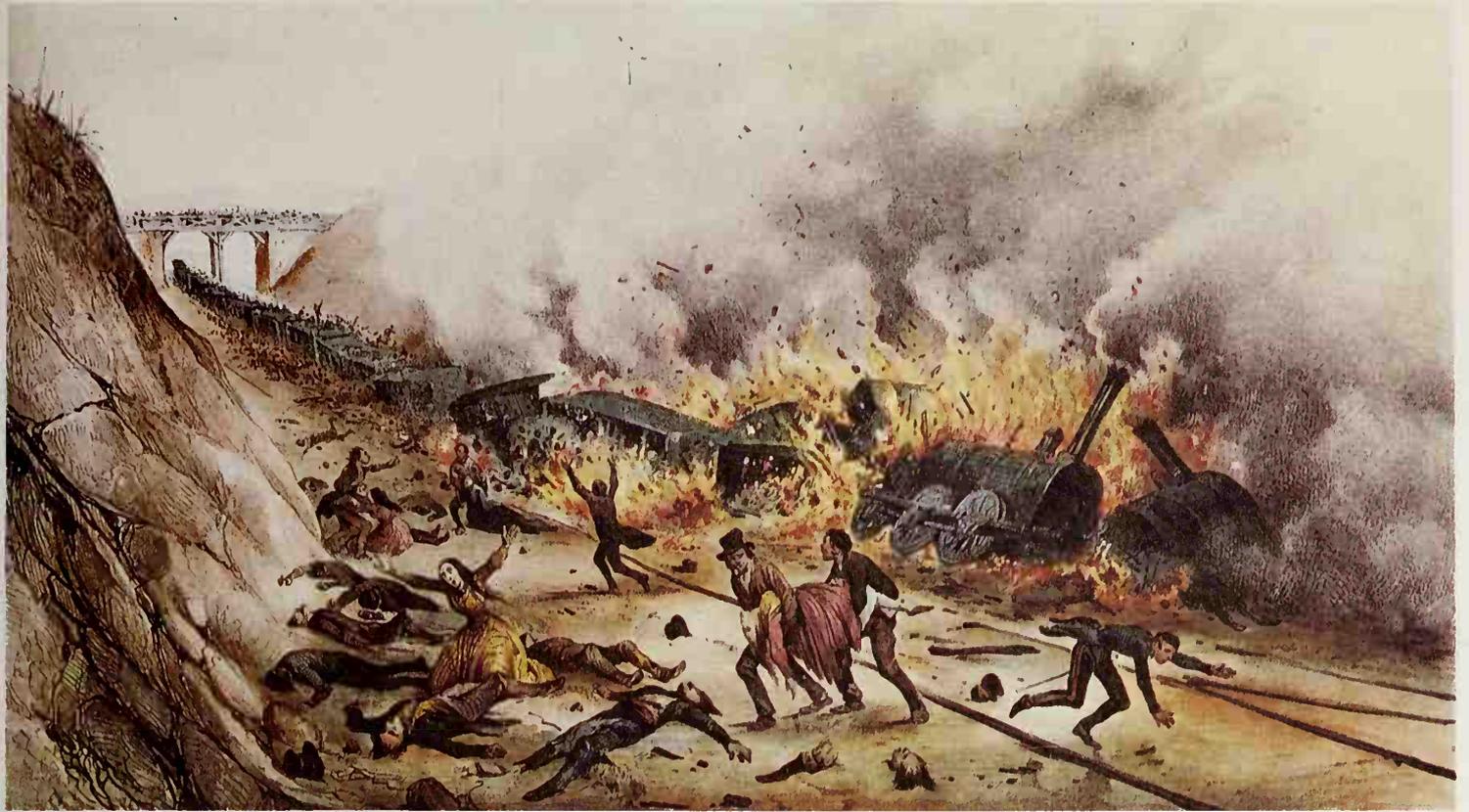
significantly larger than the passengers in the carriage.

Top *Hell-fire and Bloody Death.* Versailles still attracted nobility and gentry in 1842 under Louis-Philippe, and on May 8th fifty-seven of them were killed on their way back to Paris, in the world's first truly horrific railway accident. The leader of the two engines broke an axle, was overtaken by the second, and then over-run by the locked carriages, which quickly caught fire from scattered blazing coke. The trapped passengers were burned alive.

Above *Le Chemin de Fer.* Early coloured print of arrival and departure at one Paris terminus. Note the figures riding 'à l'Impériale' atop the carriages.
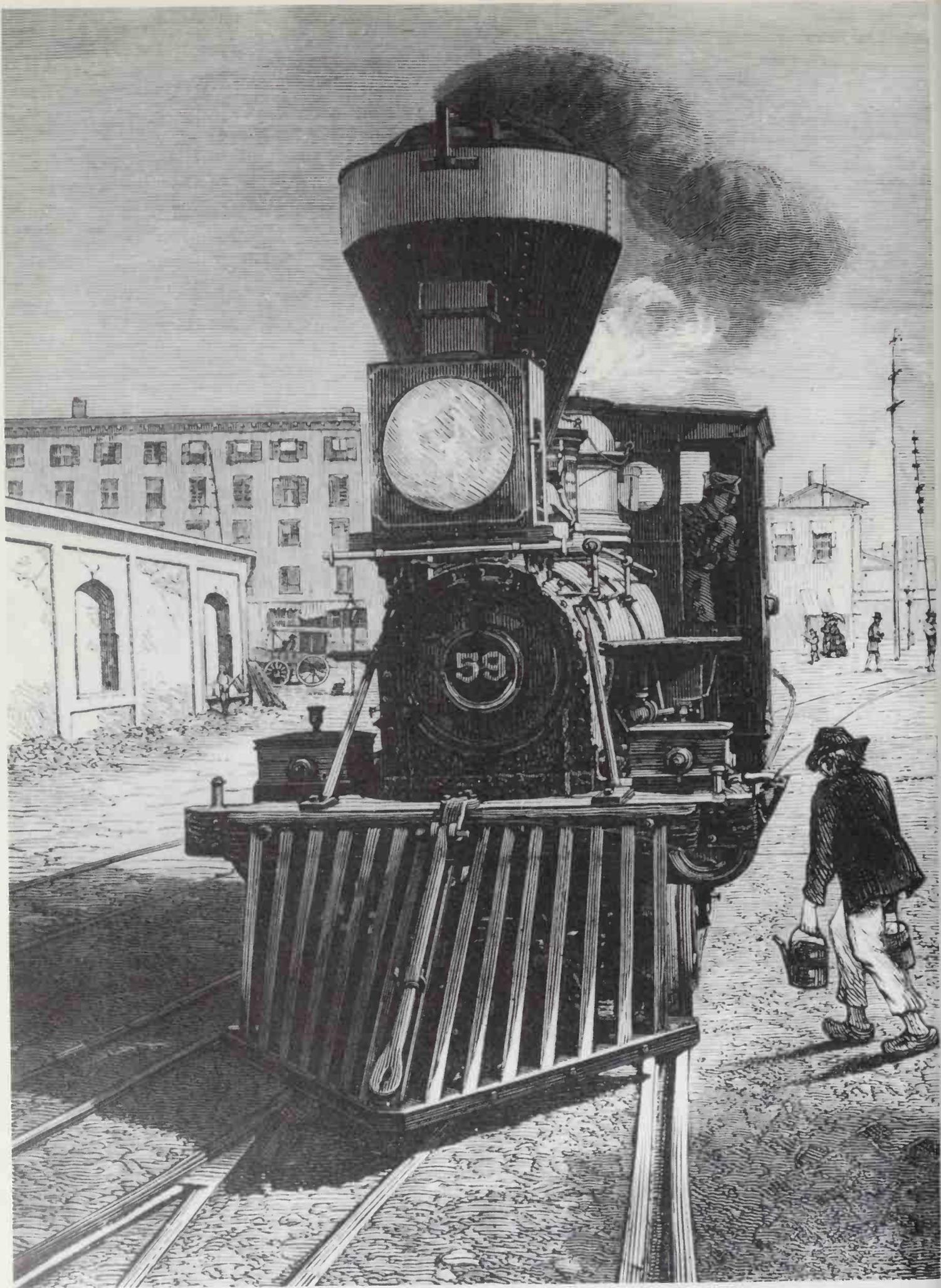
ACROSS AMERICA

In America, the railroad advance was greeted with joy, while in Europe there had been landed resentment and opposition. The new American railroads were built at first as feeders to great waterways, but soon as inter-city conveyance on a grand scale. Get the road through, however devious and roughly built! The New York Central and its allies, which it gradually absorbed, chose a water-level route, heading up to Buffalo on the Great Lakes system. The Pennsylvania Railroad struck out over the Alleghenies. For both, the goal was Chicago. From Baltimore, Maryland, the Baltimore and Ohio Railroad, a senior of American companies, pushed out towards the promising Middle West.

Henry David Thoreau wrote this description of the railway from the seclusion of his hand-built log cabin on Walden Pond:

> "The Fitchburg Railroad touches the pond about 100 rods south of where I dwell... when I meet the engine with its train of cars moving off with planetary motion, when I hear the iron horse make the hills echo with his snort like thunder, shaking the earth with his feet, and breathing fire and smoke from his nostrils (what kind of winged horse or fiery dragon they will put into the new mythology I don't know), it seems as if the earth has got a race now worthy to inhabit it."

Thoreau's ability to combine an enthusiasm for industrial progress with a deeply romatic love of nature is a peculiarly American trait. It is rooted in a mythic American ideal; a vast, unexplored, unsettled continent offered limitless opportunities, the chance to build financial empires, realize Utopian dreams or develop new technologies. Ralph Waldo Emerson called the railway "a magician's rod in its power to evoke the sleeping energies of land and water".

The idea that the mechanical power of the railway fulfilled an ancient prophecy provoked some extraordinary rhetoric, often biblical in tone. Under the unlikely title, *Statistics and Speculations Concerning the Pacific Railroad* are the remarks:

> "And the Iron Horse, the earth-shaker, the fire-breather, which tramples down the hills, which outruns the laggard roads, which leaps over rivers, which grinds the rocks to powder and breaks down the gates of the mountains, he too shall build an empire and an epic. Shall not solitudes and waste places cry for gladness at his coming?"

The development of the railway appealed equally strongly to the American's belief in social progress. Daniel Webster praised railways for breaking

Opposite *The Face of the American Locomotive. An engine of the 1860s with its characteristic cow-catcher.*

Right *The New England Scene. 'The 9:45 Accommodation, Stratford, Connecticut', 1867, by Edward Lamson Henry. Carriages, stage coach and common buggies bringing country people to catch the '9:45 Accommodation' (British: 'ordinary').*

Below left *Niagara, 1855. A Currier and Ives print showing John Roebling's two-level stiffened suspension bridge across the Niagara River below the Falls. The lower level carried horse-drawn vehicles; the upper level was designed for railways.*

Below right *'Lackawanna Valley.' National Gallery of Art, Washington. Gift of Mrs Huttleston Rogers. George Inness truly conveyed the mid-nineteenth-century American scene in the original Eastern States. The trains have come, the town has grown out of the old settlement, a stately church and a massive roundhouse have arisen. Already there is a 'wrong side of the tracks'.*

Above *Sunday on the Union Pacific, 1874. Puritan piety prevails. Sabbath services, often required by state legislatures, became increasingly elaborate.*

Below *The Union Pacific Heading West. Nebraska in 1868.*

down natural barriers and holding forth the promise of national unity and social equality. Emerson noted in his journal,

"I hear the whistle of the locomotive in the woods. Whenever that music comes it has its sequel. It is the voice of the civility of the nineteenth century saying, 'Here I am!"

A startled French visitor attested to the national obsession observing that a typical American "has a perfect passion for railroads; he loves them as a lover loves his mistress".

Resistance to the railways was practically non-existent. In 1843 Hawthorne published *The Celestial Railroad*, a satire on the prevailing faith in progress. Clergymen opposed the desecration of the Sabbath and in the 1850s the Vermont legislature ruled that trains could run on Sunday only if the conductor passed through the cars reading the scriptures to the passengers. Tavern owners, innkeepers and businessmen in towns where stage and canal travellers had formerly had to make involuntary stops encouraged local statutes forbidding steam-driven vehicles. Tracks were destroyed, trains were ambushed, crews picked off by sharpshooters. But the final triumph of the railways was never in real doubt.

The railway in America united the states, opened the way to the settlement of the vast lands beyond the Mississippi and literally created civilization out of wilderness. While European construction followed old land routes, in America the rails created new ones. Western cities were founded by trains which carried walls, lumber, signs, pianos, billiard tables and all the other necessities of culture. Construction crews had merely to pause for dealers to appear, organizing town lots, staking out streets and avenues. Because there were no landowners to appease, tracks were laid down the main streets of towns, immediately altering the prestige of real estate: American towns came to have, very often, a 'right side' and a 'wrong side' of the railroad tracks. On the latter would be the mills and the shanty town area. On the former would be the best business establishments, superior frame-houses, and surely several churches. The 'wrong side' would frequently be where the prevailing winds took most of the smoke from industry and transportation. At train-time the locomotive and its brigade-of-cars (lovely old American expression!) would march majestically down the original main street, clanging its engine-bell, which from the beginning was made obligatory when entering or leaving stations or passing other trains. It would be one of the events of the day, and business people and loafers alike turned out to watch it, quite apart from those who came to meet or see off visitors and those who were themselves travelling. Moreover, railways created business; the valley or trading post or prairie through which the train passed knew it had a future, but a place unconnected to a railroad was headed for oblivion. Government grants promoted the quick construction of new routes; the Homestead Act encouraged the settlement of new territories. Farmers, fortune hunters, gold seekers, explorers and hunters began the great migration west.

In 1842, Charles Dickens made a celebrated tour through the settled parts of the United States on a train trip which both fascinated and appalled him. He noted the unique character of the carriages, the gregariousness of the conductors, and the inquisitiveness of his fellow passengers. He was surprised to see ladies travelling by themselves. Being a married man he was allowed in the ladies' car; ahead of him in the train was the smoking

car, and in his English innocence he had thought at first that somebody in it was plucking open a feather pillow, only to find that it was spittle from men who combined smoking and chewing and found the open windows more convenient than the central aisle. The nature of the scenery struck him as untamed and the trains themselves as extremely dangerous:

"There are no first and second class carriages as with us; but there is a gentlemen's car and a ladies' car: the main distinction between which is that in the first, everybody smokes, and in the second nobody does. As a black man never travels with a white one, there is also a negro car; which is a great blundering clumsy chest, such as Gulliver put to sea in, from the kingdom of Brobdingnag. There is a great deal of jolting, a great deal of noise, a great deal of wall, not much window, a locomotive engine, a shriek and a bell.

The cars are like shabby omnibuses, but larger: holding thirty, forty, fifty, people. The seats, instead of stretching end to end, are placed crosswise. Each seat holds two persons. There is a long row of them on each side of the caravan, a narrow passage up the middle, and a door at both ends. In the centre of the carriage, there is usually a stove, fed with charcoal or anthracite coal, which is for the most part red-hot. It is insufferably close; and you see the hot air fluttering between yourself and any other object you may happen to look at, like the ghost of smoke...

The train calls at stations in the woods, where the wild impossibility of anybody having the smallest reason to get out, is only to be equalled by the apparently desperate hopelessness of there being anybody to get in. It rushes across the turnpike road, where there is no gate, no policeman, no signal: nothing but a rough wooden arch, on which is painted 'WHEN THE BELL RINGS, LOOK OUT FOR THE LOCOMOTIVE'."

By European standards American railways were still quite primitive. The open aisle in the car (sometimes referred to as an 'elongated spittoon') was seen by some as an indication of the nation's democratic spirit. The car was the equivalent of the already well-established canal packet and the rising omnibus—entered from the end with a passage down the middle. First and second class were not referred to, although carriages were separated into 'best cars' and 'accommodation cars'. However, in *Across the Plains* Robert Louis Stevenson noted that on the long hauls west, "equality did not extend to the emigrant". He watched with mixed feelings the way a troublesome drunk was thrown off the back platform of a moving train and, picking himself up, immediately pulled a gun on the conductor, who just put hand on hip and stared contemptuously after him as the train gathered speed. Local inns often served as stations and train conductors wore no uniforms; their attempts to collect fares were often resented and a Senator from the West, on his first train journey, attacked the conductor who tried to take his ticket. Hasty construction often resulted in serious accidents; there were the dangers of attacks by Indians and train robbers, collisions with stray animals (leading to the early adoption of the 'cow-catcher' on the front of the locomotive), as well as the presence of card sharpers and confidence men inside the trains themselves.

Ironically, it was a chain of events directly connected to the Civil War which led both to the expansion of the railway service in the United States and to the amelioration of travelling conditions. Railways, from the very start of the war, were recognized as being a crucial factor; the North, being more heavily industrialized than the South, had a rail network twice as large, with superior track equipment and connections. Trains served as vital supply routes and as a means of rushing troops to the front. Sherman's

Above 'American Express Train', a
Currier and Ives lithograph of 1864.
The brightly painted cars and the
elaborately decorated locomotive express
American pride in the railway. In the
background, a side-wheel steamboat.

Above right The Transcontinental
Dream. 'Westward the Course of
Empire Takes Its Way'. A Currier and
Ives print, 1868. Towns sprang up along
the great transcontinental rail route. In
the bottom left corner construction
continues. Vast plains lie ahead.

Right Baldwin's 'Tiger' for the
Pennsylvania Railroad, 1856. American
manufacturers produced wondrous
coloured lithographs in the gorgeous
styles of the pre-Civil War period, and
circulated them to lure fresh customers.
The death knell of decorative locomotives
came when a story got about that
Commodore Vanderbilt's private car
was finished in plated gold. The
Commodore wisely painted his engines
black in the future.
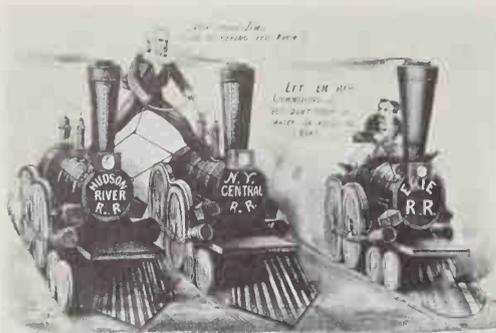
THE GREAT RACE FOR THE WESTERN STAKES 1870

Above *Railroad Politics and the Robber Barons. Commodore Vanderbilt, of the New York Central and Hudson River, challenges the rascally Jim Fisk of the Erie Railroad.*

Right *'The Golden Spike'; East Meets West. Promontory Point, Utah, May 10, 1869. Oil by Thomas Hill, filled with portraits of those who were actually there for the great event, as well as those who should have been.*

Far right *The Union Pacific Depot at Omaha. An ambitious early train shed.*

decisive march through the South was made possible by a single line of track which the Confederates never managed to cut for more than a few days at a time. However, in 1862, when the outcome of the war was still uncertain, President Lincoln became anxious about the isolated and almost unguarded Pacific coast. The Confederates had many friends in Europe and there was fear of an attack being launched in their support from California. There had been talk of a transcontinental railway route since the 1850s, but endless disputes raged over whether it should run through the north or the south. In 1862, with no Southerners present to voice their objections, President Lincoln, long a staunch supporter of the railway, signed the Pacific Railroad Act.

Two companies were awarded contracts. The Union Pacific with a veritable army of 10,000 freed slaves, ex-soldiers, and Irish and German immigrants, started laying track from a point in Nebraska, later fixed as Omaha. They were accompanied by a moveable city of saloons, brothels and gambling houses. The Central Pacific built eastward from San Francisco mainly using Chinese labour recruited from that city and later from China itself. It was the greatest and probably the most perilous engineering feat that had ever been attempted. Military escorts were scarce and Indians often ambushed advance parties and destroyed equipment. The Central Pacific was driven through the Sierras in the face of deep snows and solid rock. The two lines finally met in May, 1869 at Promontory Point, Utah, a desolate spot north of the Great Salt Lake. The moment was dignified by the driving home of a gold spike from California and a silver one from Nevada. The Central Pacific's 'Jupiter' and the Union Pacific's No. 119 drew slowly forward to touch pilots on 10 May 1869. The Union was complete, at least physically, linked by the great route which had been forced across wide hostile prairie and through great and daunting mountains.

Photography had advanced in the preceding years and an historic shot was made on wet-plate, at Promontory Point just after the meeting of the two engines. The locomotives are fully recognisable. The company seems to be exclusively male. A man in a uniform-cap on the pilot-bar of 'Jupiter' is passing a bottle of wine to one in a wideawake hat on the front of No. 119. The photographic artist was Colonel Charles Savage. Photo-engraving not having arrived yet, the print, faithfully redrawn and lithographed, appeared in *Leslie's Illustrated Newspaper* three weeks later. Not everybody was pleased. It was not at all in the puritan tradition bequeathed by the New England colonists.

Among those far from amused was Leland Stanford, President of the Central Pacific Railroad. It was a rough, boozy, picture and furthermore, *he* was not in it. Thomas Hill, a painter who, like most, had to live by his commissions and clients' requirements, was therefore engaged to make a respectable picture, placing Stanford in the foreground with Parson Todd making an invocation to the Almighty. Many other people who had not even been there, such as some useful politicians and Brigham Young, the Mormon tycoon, who was in a huff because the railroad had bypassed his holy city, were studiously included. Some ladies were added to gentle the picture's condition. Somewhere in the background is the recognisable stack of the Union Pacific engine No. 119. Tom Hill had produced something of which Frith in England might have been proud, with very valuable portraits, including those of the absentees. The painting hangs now in the State Capitol at Sacramento, California. The late Lucius Beebe remarked that it contained seventy figures painted from life.
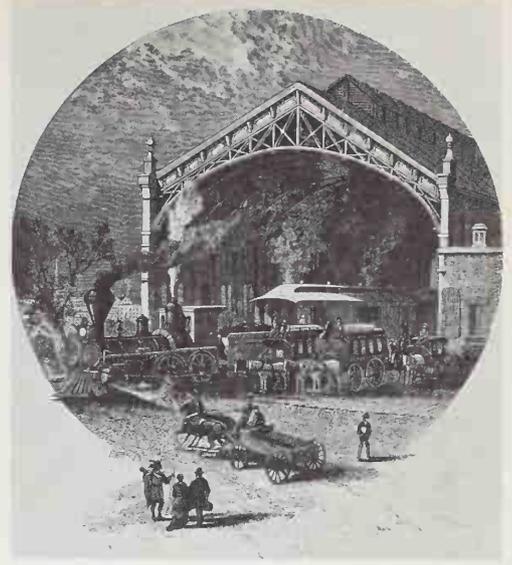
Across the Plains and over the Sierras now ran the American train. Engines were light, but serviceable. G. M. Pullman had, since 1865, produced quite superlative cars, and was already facing rivals. In the East a man named Webster Wagner had mounted competition and in the far west the Central Pacific Railroad had put on what were called Silver Palace cars. Someone noted about this time that they were superior to Pullmans. Robert Louis Stevenson, as an emigrant Scotsman to the Pacific Coast, went by the sort of train considered adequate for persons like him, which was pretty grim. He spent hours, rolling across the plains of Nebraska, on top of a freight car, that being preferable to the Union Pacific's barely-adapted day-coaches which, he remarked, had begun to stink abominably.

The transcontinental route, the boom in railway building after the Civil War and the rigours of long distance travel meant that amenities such as lavatories, steam heating, sleeping compartments and dining cars were introduced early on American railways, often some years in advance of those in Europe. The introduction of Pullman Limited trains put to rest the notion that America was a classless society, and on all trains carrying Pullman cars passengers were strictly segregated. By the 1880s the great Robber Barons, such as Commodore Cornelius 'the public be damned' Vanderbilt, owned personal trains or private cars of unparalleled splendour, which were customarily lent to presidential candidates on their 'whistle stop' campaign tours.

Railways in America became a national preoccupation. They conquered the public imagination and permeated the world of the melodrama and the popular novel. Engineers made splendid heroes, encountering a steady diet of Indians and collapsing bridges. Heroes constantly snatched heroines from the path of oncoming locomotives, while hundreds of millionaires' children were saved by intrepid but impecunious firemen. Train robbers, like Jesse James and Butch Cassidy, became legendary. A new cast of characters appeared including the 'news butcher' who sold periodicals and postcards of questionable propriety, the professional gambler, the smoking room raconteur, the virginal lady traveller protected only by her hatpin and the baggageman whose special talents were directed towards smashing luggage and directing it to the wrong location. Locomotives, often named after well-known generals or the heroes of Greek mythology, became famous in their own right. New terms like 'highball',

Above *Trestle-Bridge on the Pacific Railroad. Wooden trestle bridges had an indefinite life-span.*

Opposite *Buffalo Stop! Shooting for sport on the track of the Kansas-Pacific.*

'high iron' and 'gandy dancer' became common usage in a flood of railway stories, railway songs, railway articles and political speeches.

Railroads were also a popular subject among documentary draughtsmen working for magazines and newspapers, and illustrators of popular fiction and childrens' books. Trains appear in countless advertisements and in the masses of literature issued by the railway companies, often accompanied by cheap coloured illustrations. But railways were seldom depicted by serious painters. There are specific reasons for the neglect by ambitious artists of such a popular subject, and they have much to do with the history of art in America. The first vernacular American painting was folk art, either the product of the village craftsman or the itinerant portraitist. Even in the 1800s painters were still unsure of their status and relied heavily on traditional European formulas. Portraits and history painting were strongly influenced by the Old Masters which, while conferring on them a certain prestige, did not confer on them much public patronage. Artists who could afford the passage studied in the academies of England, France and Italy; they were less concerned with contemporary society than with the aesthetic ideals of former civilizations.

American landscape painters, on the other hand, were very much concerned with the discovery and depiction of a national landscape. But they were imbued with the current romantic ideal of unspoiled nature, and their patriotic pride was strengthened by the realization that America, much more than Europe, corresponded to Rousseau's concept of a primeval paradise. This Utopian vision of man living harmoniously in nature is expressed in works such as the *Peaceable Kingdom* by the naive painter Edward Hicks. The Hudson River School, led by Thomas Cole, was dominated by the image of the virgin continent, free from the blights of industrialization and urban life. Their works, in contrast to classical landscape, portray a kind of epic wilderness, sublime, untamed and awesome. These artists celebrated the grandeur of American landscape almost in retrospect; they recorded countless unsullied prospects shortly before they disappeared completely. It is not surprising that they were unable to combine Thoreau's love of nature with his admiration for technology; Thomas Cole himself protested against the railway running through the once wild land near his home in New York State.

Genre painting in America did not emerge as a separate branch of painting until the middle of the nineteenth century; it followed European prototypes closely, emphasizing anecdotal and moralizing themes and depicting rural and frontier life. Edward Lamson Henry, who had studied under Courbet in Paris, may have been the only genre painter who specialized in illustrating the railway. Some of his pictures were historical recreations of portraits of famous engines; others, such as *The 9:45 Accommodation, Stratford, Connecticut,* capture the bustle and anticipation of passengers waiting at the station. This painting is also interesting as an illustration of the importance of the depot in small town life. Fine frame houses border it on one side, while farm implements appear in the foreground. Stagecoaches, animals, and spectators surround the station, while the entire population of the town seems to have assembled on the hastily constructed wooden platform. Another railway painting of importance is George Inness' *Lackawanna Valley,* commissioned by the Delaware, Lackawanna and Western Railroad in 1854. Inness was a landscape painter of the romantic school and was apparently not immediately enthusiastic about his subject; yet in his picture he has managed to

harmonize the machine with the natural beauty of the setting. His panorama shows the burgeoning community of Scranton, Pennsylvania, with a train in the right centre, two other trains on the winding track behind, and the railroad's new roundhouse in the background. Hills and trees envelop the industrial buildings, and animals in the pasture continue to graze peacefully.

The best, and perhaps the finest, illustrations of the railways in nineteenth-century America came from the firm of Nathaniel Currier and James Ives. The development of lithography made the mass production of prints possible. Costing between thirty-five cents and four dollars, they were a truly democratic art form, collected by farmers and millworkers to decorate their homes and by the gentry to add to their collections. These "Coloured Engravings of the People", representing almost every aspect of contemporary America, form a massive documentation of the life of the day. Among the seven thousand prints are episodes from history, portraits, landscapes, scenes from the city, the country and the frontier, sporting, religious and political subjects and pictures of clipper ships, steamboats and railways. The lithographs were unusual in their use of colour—almost all illustrations of the period appeared in black and white—and in their unpretentious, vigorously descriptive style. The enormous variety of their subject matter, comparable only to the flourishing of genre in the newly-formed state of seventeenth-century Holland, reflects a strong sense of American pride and national identity.

The prints of railways combine a respect for technical detail with a love of romantic and dramatic settings. Locomotives are shown shooting their sparks into the black night sky, trains moving through brightly coloured autumn landscapes, across ravines, rivers and the great plains ablaze with prairie fires, carving their way through mountainous frontiers, snowbound in a New England blizzard. Symbols of American enterprise, progress and opportunity, they suggest the excitement and optimism of Walt Whitman's vision of a new age:

"I see over my own continent the Pacific railroad surmounting every barrier,
I see continual trains of cars winding along the Platte carrying freight and
    passengers,
I hear the locomotives rushing and roaring and the shrill steam-whistle,
I hear the echoes reverberate through the grandest scenery in the world."

Top 'The Modern Ship of the Plains'.
Robert Louis Stevenson recorded his own
journey in an emigrant's train.

Above 'Home for the Holidays'. The
title suggests England, but the location is
obviously in the Eastern United States.

Right Hotel Car on the Chicago and
Northwestern, late 1860s. Bed and board
on the cars. Below the folded upper bunks
diners toast each other in the elegant
saloon.
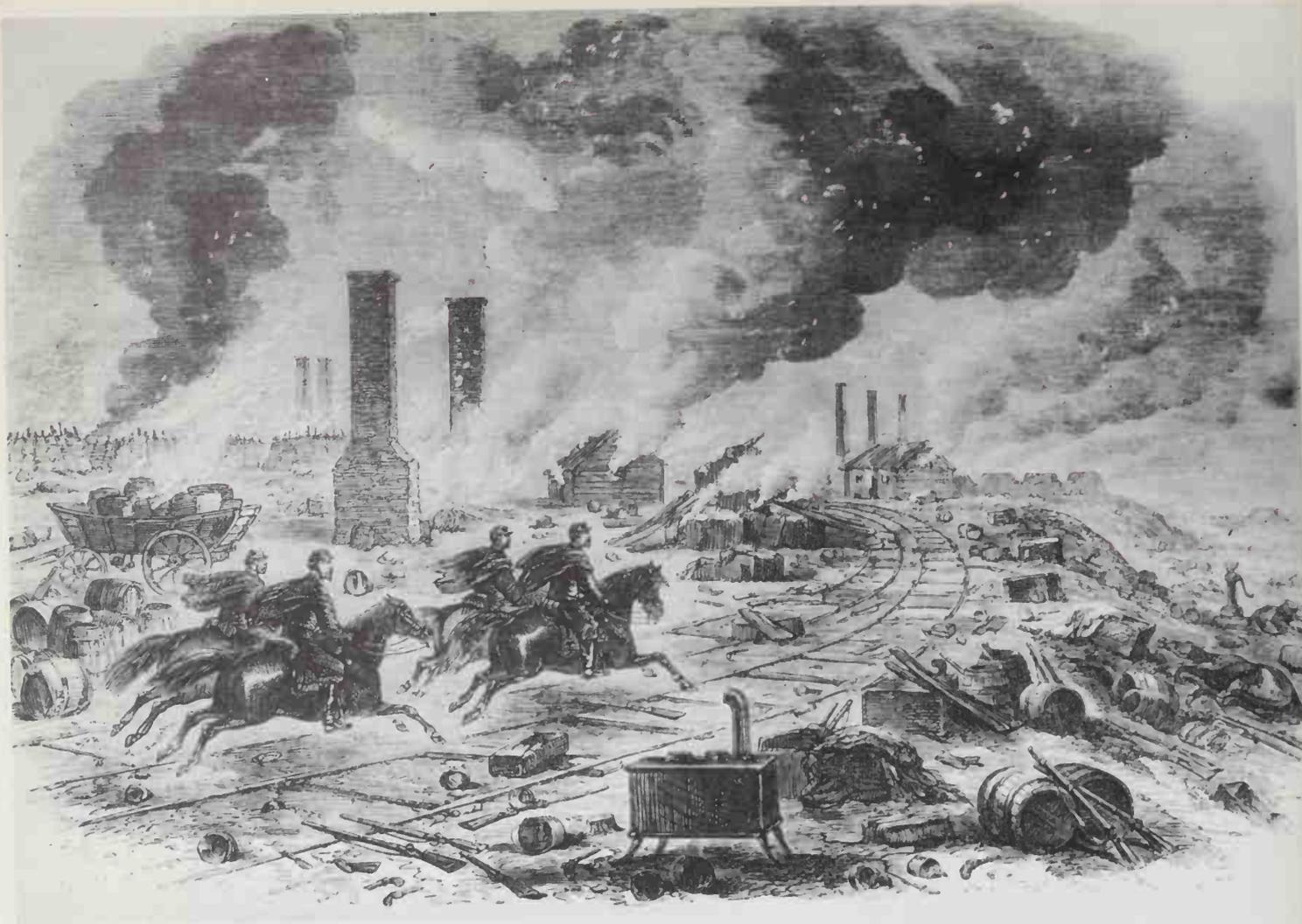
Above *Capture of Manassas Junction during the American Civil War. Federal cavalry ride into the abandoned and burning depot.*

Right *Destroying a Railroad. 'Lift rails, heat 'em red, then wind 'em round trees like taffy!'*

Above right *The war was largely won by superior technological resources — and railroads. At first Southern dash was formidable, as in this ambush on June 17, 1861.*

Far right *A Railroad Battery. The Federal side was very good at this sort of thing, mounting not only cannon but huge mortars against their opponents. They also used observation-balloons towed by locomotives.*
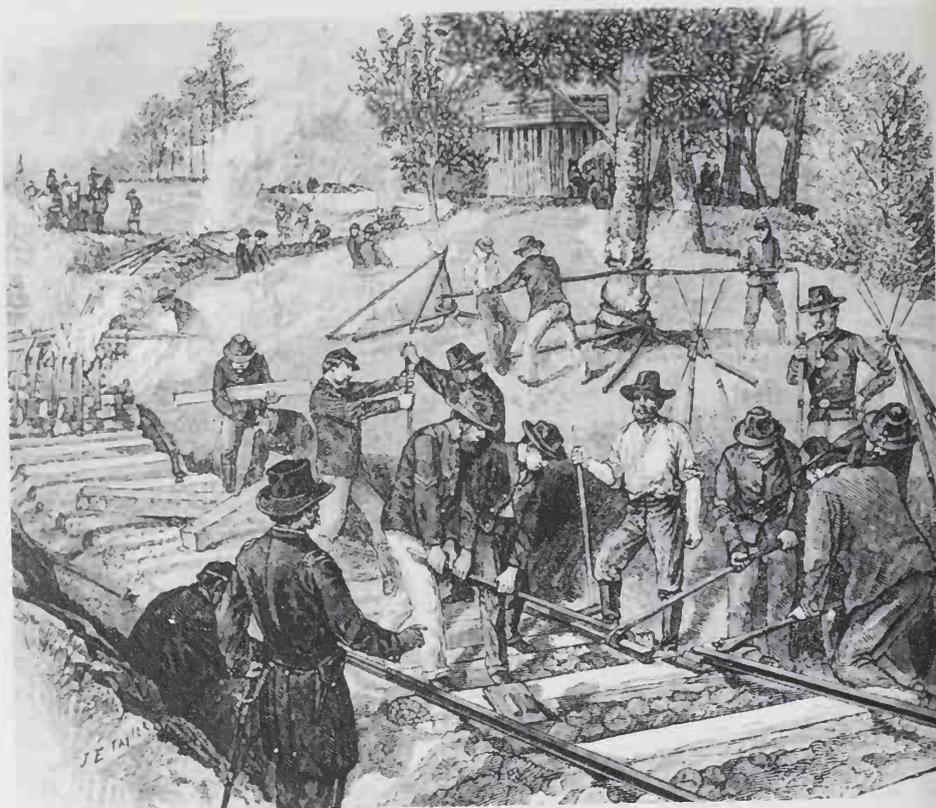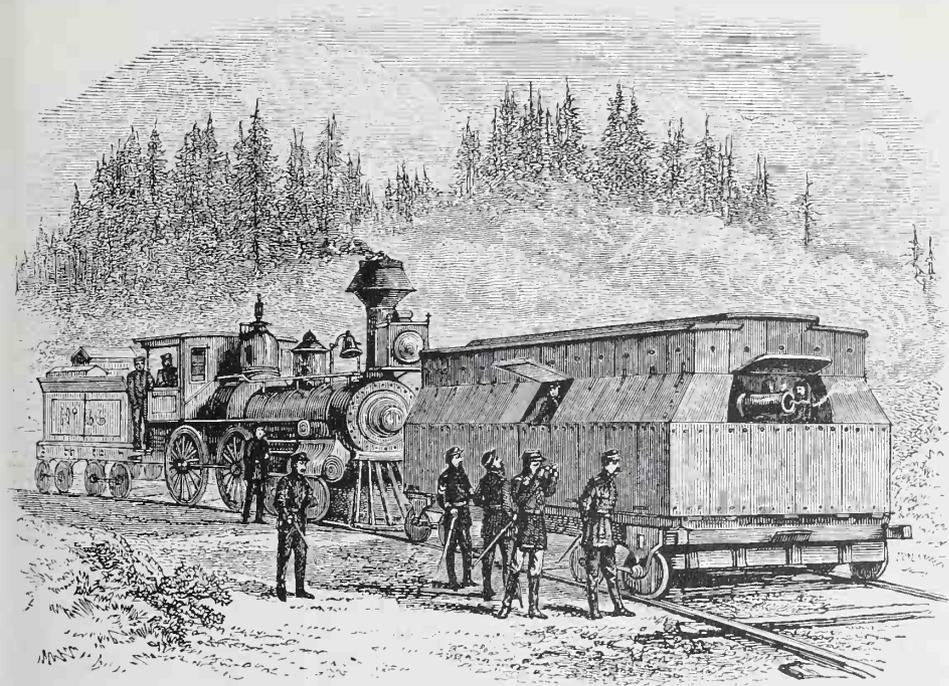
Above *'American Railroad Scene: Snow Bound', a Currier and Ives print that portrays the hazards and drama of a new form of travel.*

Right *Union Pacific at Weber Canyon, Utah. Print dated 1868-69. Note the wooden bridge, the rudimentary tunnel and the beginnings of an early settlement.*
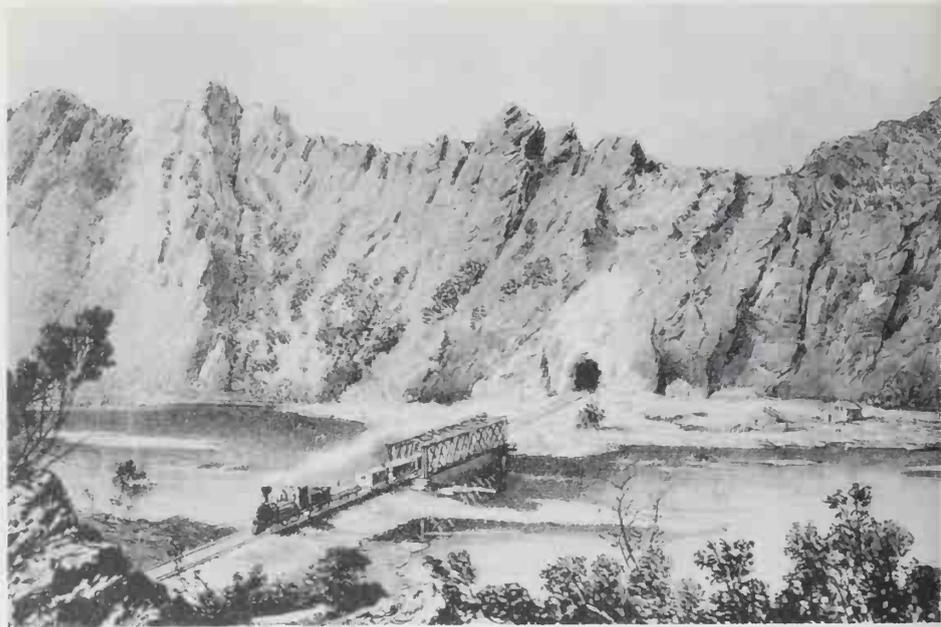
Above right *'The Great West', a print by Currier and Ives. The train has just passed through one of the new communities established on its route.*

Far right *'Lightning Express Trains Leaving a Junction'. A Currier and Ives print. A Pullman Palace car is on the right. In the background are freight-cars marked 'From Ocean to Ocean'.*
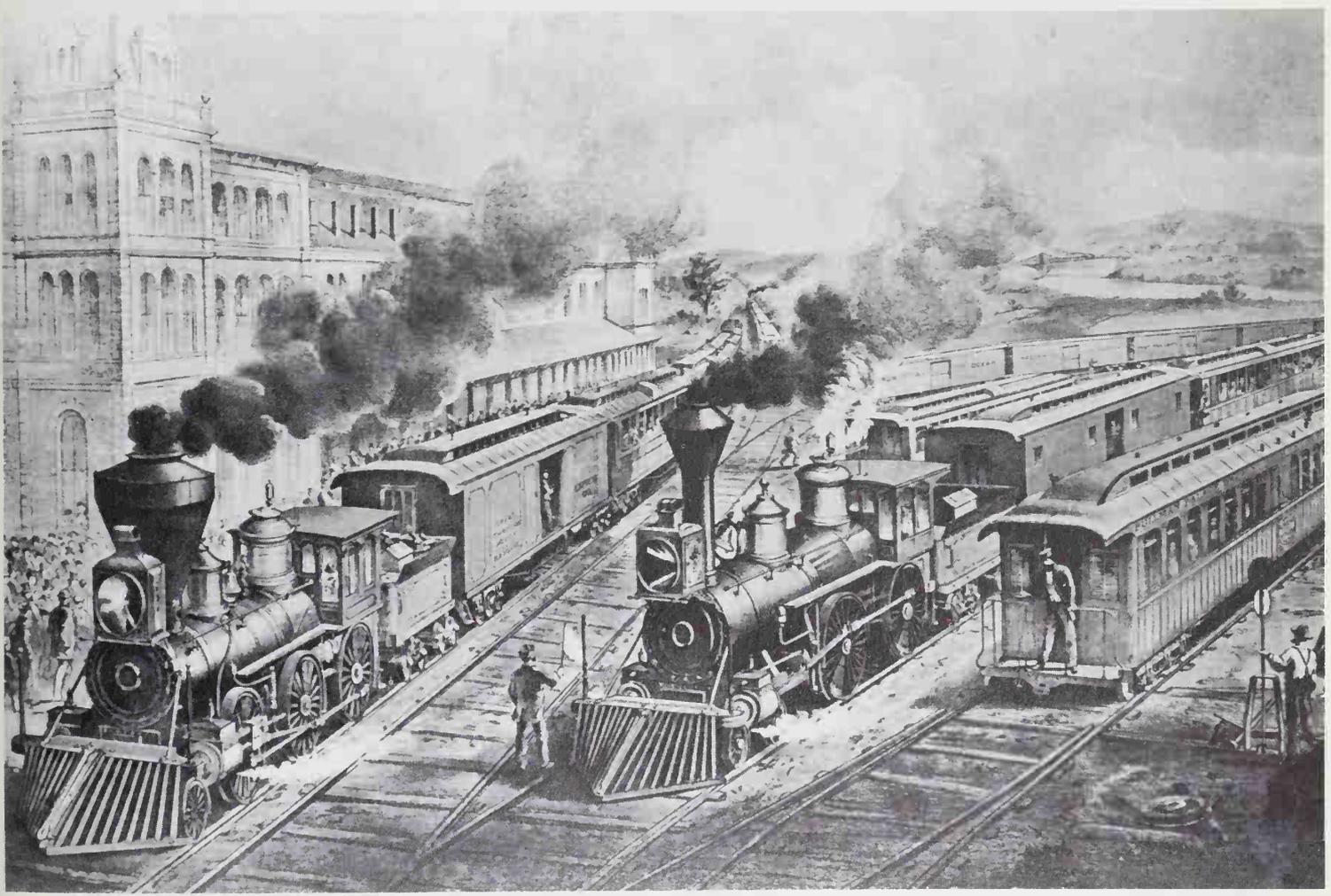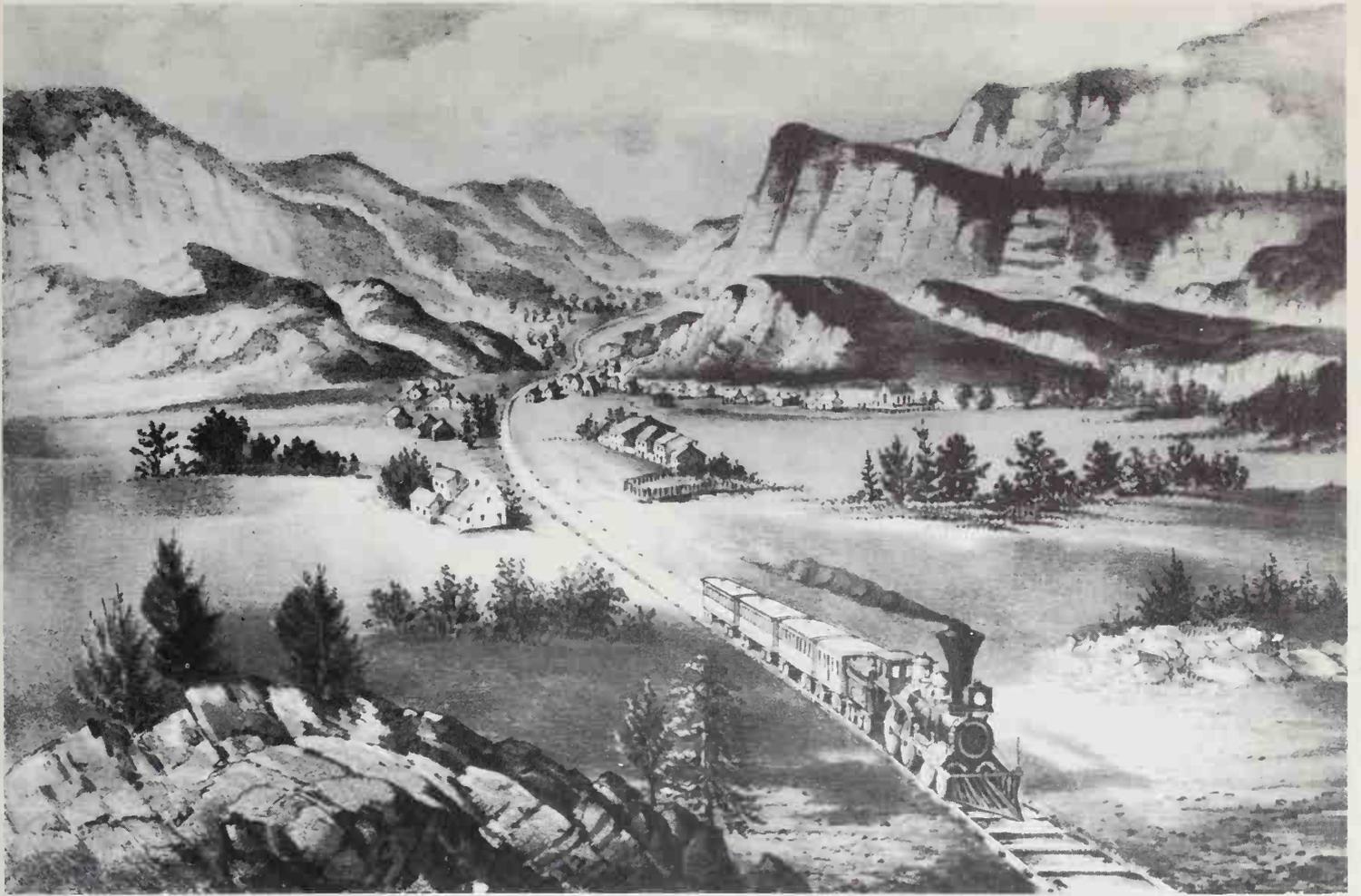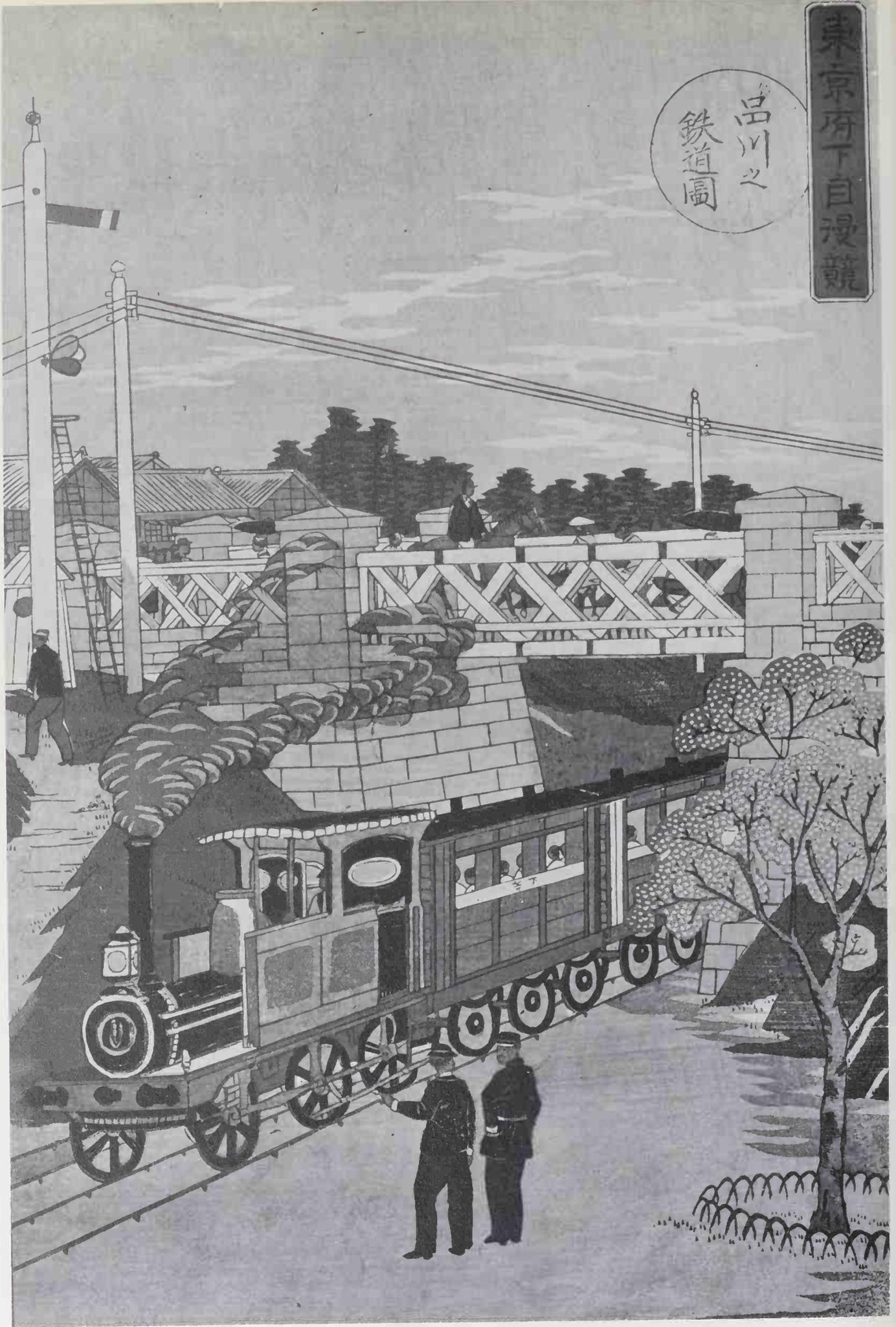
RAILROAD EMPIRE

During the nineteenth century the railway spread throughout the globe. Not only did it rival shipping as the world's primary means of transport, but it also became apparent that no nation which lacked a well-organized rail network could achieve economic and political power. In some countries, such as Canada and Russia, railways served as a unifying force. But expansion in Asia, Africa and South America came about as a direct result of economic and political colonization. Railways carried European settlers to new lands; they provided a quick and efficient means of transporting local labour and new materials to industrial centres and finished products to the coast for export. By linking distant areas, they strengthened the hand of central authority and weakened provincial loyalties. Though often represented as a civilizing force—Matthew Arnold called railways "the most persuasive missionary that ever preached in the East"—the civilization offered often consisted of the disruption of local lifestyles, and the introduction of western capitalist values and industrialization.

When Thomas Carlyle remarked that history had assigned Englishmen "the grand industrial task of conquering half or more of this terraqueous planet", he was not exaggerating. By 1900 Britain had laid down over half the railways in Asia and two-thirds of those in Africa. Cecil Rhodes' Cape to Cairo scheme may have been a dream, but it was a dream rooted in economic reality. British investments and loans to foreign governments provided the financial backing for railways throughout the world; British navvies and British engineers often supplied the necessary skills and labour. British locomotives, track gauge and passenger carriages became a model in most of the countries under her influence; the open type of American car, however, was increasingly adopted over wide areas for ordinary purposes. It made a good coach but a bad sleeper.

The mutiny of 1857 which revealed Britain's precarious hold over India led to the construction of a strategic railway system there. Howard Russell, the correspondent for *The Times*, wrote from Calcutta in 1858,

"One is weary of thinking how much blood, disgrace, misery and horror had been saved to us if the rail had been but a little longer there, had been at all there, had been completed at another place. It has been a heavy mileage of neglect for which we have paid dearly".

Under the leadership of Lord Dalhousie, the Governor-General, work proceeded, despite the dangers of rebels and bandits and the difficulties of rugged terrain, alternating seasons of monsoon and drought and the lack of a trained labour force. By 1863 over 2,500 miles of track had been laid; by the end of the century India was spanned by a great railway system,

Opposite *'Japan Becomes a Modern State'. For the Japanese artist who never before had seen a train, this attempt after the opening of the first Japanese railway from Tokyo to Yokohama was singularly creditable. One can recognise what he had seen in the little, British-built tank engines. A print by Huisige III of great charm. The engine and semaphore are remarkably accurate.*

distinguished by 'Victorian Oriental' stations in its major cities and special awnings on its carriages to protect passengers from the midday sun.

British colonial railways—as opposed to imperial ones—had been going for some years before that. Jamaica and British Guiana both had a railway by the end of the 1840s; the former being the oldest British colonial railway (1845) and the latter the very modest first railway in South America, where expansion was to be very largely under British financial and mechanical influence. Australia built her first steam railway in 1854 (Victoria) and New Zealand in 1863. These Antipodean railways all began with short lines running inland, as did South Africa's, from Durban (1860) and from Cape Town (1863). Few realized the enormous expansions to come, save perhaps Cecil Rhodes.

In Africa development was mainly colonial until the end of the century, by which time expansion had spread widely under British, Dutch and French influence. The discovery of diamond mines in Kimberley in 1871 spurred new progress, but, because of political rivalry, Cecil Rhodes' projected line never reached further north than Rhodesia and during the South African War many important lines were sabotaged and had to be reconstructed. Man-eating lions and derailments caused by strolling elephants could make both construction and travelling dangerous. Railways on the east coast of Africa did not appear until the 1890s when material and rolling stock was imported from India. In Egypt, the terrain was easy railway country from the Delta upstream towards the Sudan. Even before the Suez Canal was completed, with the French and the British interests much engaged, railways were opened up from Alexandria to Cairo, and thence to Suez. People were ferried from the Mediterranean to the Red Sea by the new trains. While French interests, thanks to Ferdinand de Lesseps, were predominant in the Canal area, British ones moved in on the new railways. Even in the 1860s the current Viceroy—later Khedive— under the Ottoman Empire was very enthusiastic. From the second Great Exhibition in London in 1862, he bought an express engine of Benjamin Conner's Caledonian design. When the unfortunate engine went down with the ship conveying her, His Viceroyalty immediately ordered another, and
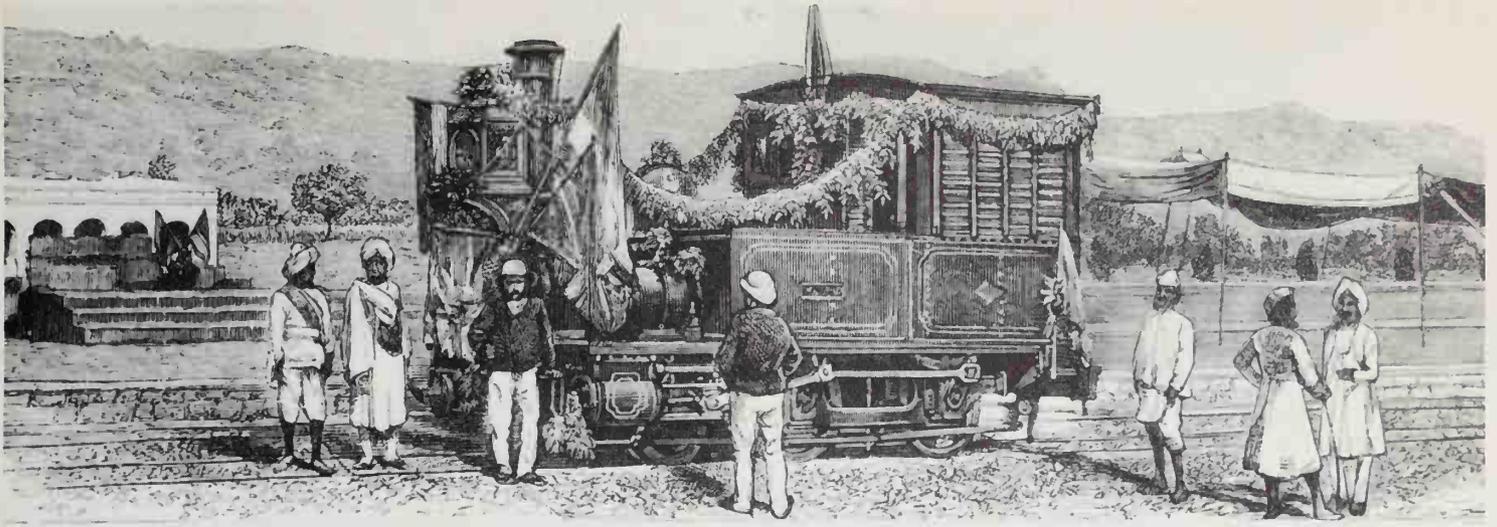
got her safely to the banks of the Nile. She lasted in Egypt for many years. The Viceroy already had other engines from England, notably from Robert Stephenson. Several were dressed up in gorgeous colours, and gildings beyond description; two of them were for the Viceroy's personal use, with bunker-mounted *coupées* to match and separate carriages for his ladies in purdah and his attendant ministers. In the Turko-Arab lands at the turn of the century the Hedjaz railway was partly opened for the pilgrimage to Mecca, although it has not yet attained its end. Much of it was destroyed by T. E. Lawrence's saboteurs.

Major railway construction, mainly British backed, began in South America in the 1850s. English influence throughout the continent was strong; the station at São Paolo in Brazil was said to be inspired by the Houses of Parliament in London. Lines tended to be more efficient at transferring natural products to the coasts for export than in transporting passengers. As late as 1908 the journey from Guayaquil to Quito in Ecuador, which now averages twelve hours by rail, took two weeks.

Australia, with a geographical area almost as great as the United States, depended on railways for communications and internal unity as well as for the distribution and export of perishable products. However, Australia did not develop a unified railway policy; its different states operated seven independent systems with three different track gauges, which are still not entirely uniform. In 1917, when the Trans-Australian line was completed, travel from Sydney to Perth still involved four breaks of gauge. Only now is there an Indian-Pacific transcontinental express. In New Zealand, with a government-controlled programme, the railways played an important role in linking newly settled areas of population and in providing access to major harbours.

In the 1860s Canada was still a loose confederation of states with railways serving local areas. West of the Rockies lay British Columbia. It was quite isolated from the rest of Canada, with luring opportunity for settlement from the east if only it were accessible from that direction. There was a strong possibility that it might be quite peacefully annexed by the United States. To reach it became a race between the Northern Pacific and the Canadian Pacific. The latter was to be a work of art, as a railway, as the Union Pacific and the Central Pacific had been in the United States in the late 1860s. Its survey would have been a nightmare to lesser men than those who had undertaken it, men such as the old Canadian pioneer Sandford Fleming, the American contractor William

Van Horne (who won a knighthood from Queen Victoria when all was done), and the Hudson's Bay Company tycoon Donald Smith, as coldly analytical a man as ever went from Scotland to Canada. There were engineers such as the man whose name is chiefly remembered in that of Rogers Pass, high up in the Rockies.

Nobody could have suspected any sort of sentiment in Donald Smith but when the company was on the brink of bankruptcy, he backed his personal fortune on it. Sir John MacDonald, the first Prime Minister of the Dominion of Canada, was equally enthusiastic, but it was principally Smith who kept the outfit going, right over the enormous mountains. When nothing seemed to be going right he sent a telegram containing the single word "Craigellachie", the old war-cry of the Clan Grant, which means, by implication, "Stand fast!"

The railway stood fast. When at last the rails were united high up in the Selkirks of the Rockies, on 7 November 1885, it was Smith who drove the last spike, looking like a Gaelic Druid with a long white beard and, incongruously, a flat-topped bowler hat on his head as well as a spike-hammer in his hands. On 28 June 1886, the Canadian Pacific Railway was completed by the passage of the first through train from Montreal, Quebec, to Port Moody, British Columbia. Trains on the Canadian Pacific Railway, known to some as the 'Queen's Highway', traversed the entire continent in one week and became famous for their luxurious accommodation.

In Russia, too, the railway was a means of expanding and consolidating territory, but industrialization was slow and financial backing so precarious that the Tsar had to ask the nobility to give the labour of their serfs without charge. The first fifteen-mile line between St Petersburg and Tsarskoe Selo, an amusement park, was opened in 1836. The engine, built by Robert Stephenson, was blessed according to the rites of the Greek Orthodox Church, while the Tsar and members of the royal family dashed holy water on the wheels of the locomotive. In 1851 the nearly dead-straight line between St Petersburg and Moscow was completed. In 1891 work began on the great 4,000-mile Trans-Siberian Railroad linking the west with Vladivostok on the eastern coast. Construction proceeded slowly due to slipshod direction by unscrupulous contractors and a certain lack of enthusiasm among political prisoners engaged to lay the track, but when the line finally opened in 1911 it was an instant success; with subsequent connections to Peking and Tokyo, it provided the first relatively quick passage for Western Europeans to the Far East. Although service tended to be slow and inefficient, the train itself, with its drawing and smoking rooms, international library and carriages variously decorated in Grecian, French rococo and Imperial Chinese styles, was one of the most elegant in the world.

In Japan modernization progressed rapidly after 1869 when the great feudal lords ceded their lands to the Emperor. It was then possible to connect the old capital of Kyoto with Tokyo. Due to a lack of national capital, the line was financed by a loan of £1,000,000 from England and opened amidst great celebrations in 1871. The Emperor, arrayed in his state robes, rode on the first train in a special carriage with a compartment for brewing green tea. Railways were not accepted so easily in China where they were regarded as a 'barbarian' invention and a symbol of foreign intervention. The first line between Shanghai and Woosung was completed by English engineers in 1876. Only a year later, however, the
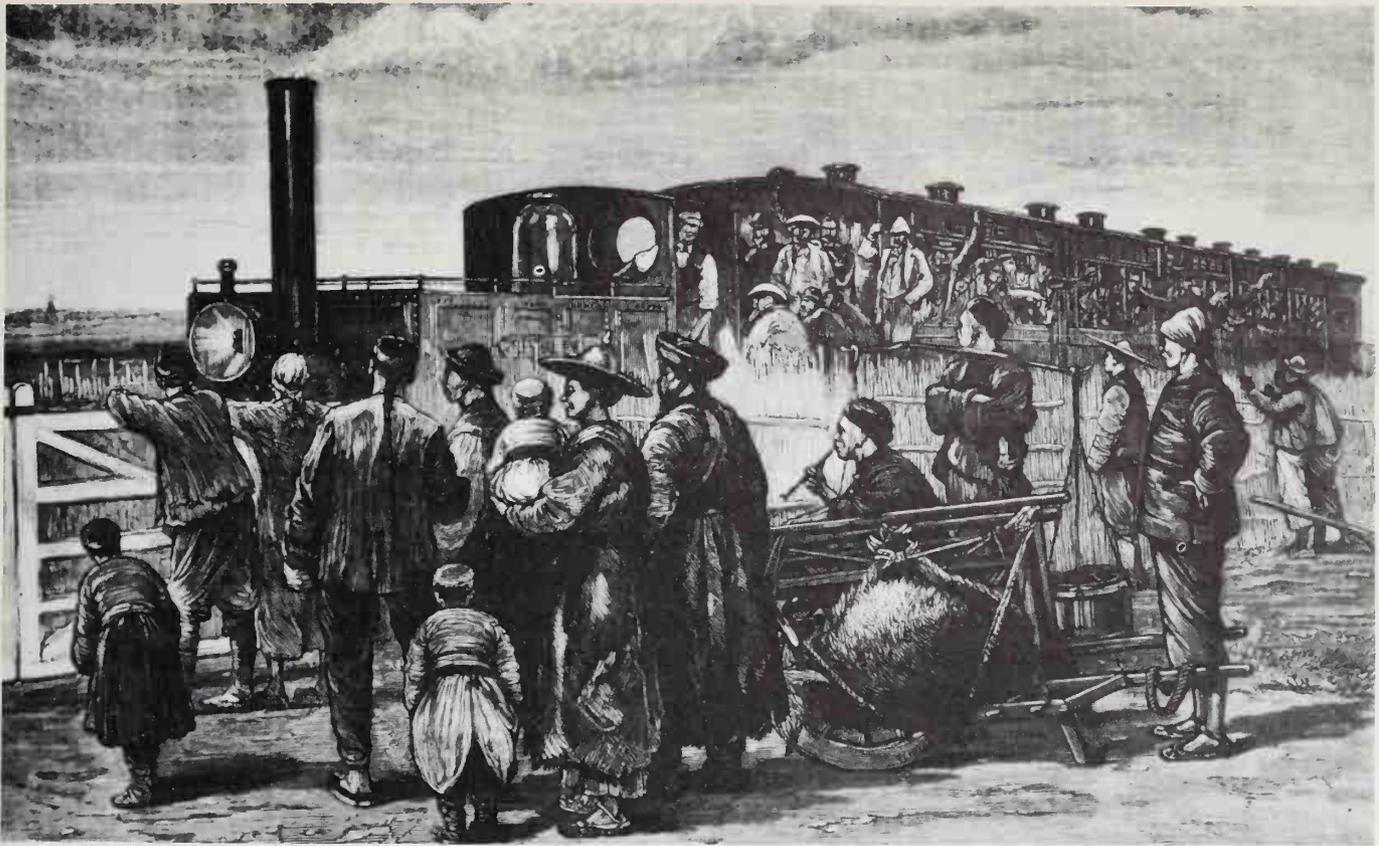
Chinese government bought the line, ripped up the tracks and equipment, and shipped them to Formosa where they were allowed to rust on the beach. On the site of the Shanghai station they built a temple to the Queen of Heaven.

In Russia and Prussia, the policy behind the building of the railways was strongly strategic, with the State in commanding position. Belgium, from the beginning in 1835, favoured State ownership and achieved the most compact railway system in the world without having absurdly duplicated routes built in the holy name of competition, as particularly distinguished Britain and the eastern United States, with disastrous economic results later on. Continental Europe favoured construction which followed topographical contours. Great rivers invited the new railways to follow them, on such remarkably direct routes as the Rhine Valley from the Low Countries to Basle, or the great Paris, Lyons and Mediterranean Railway's line along the Rhone.

Illustrations of the new lines appear frequently in European journals, but paintings, when they exist, tend to be the work of European colonials. An exception is Japan, where the enthusiasm of the native population for the new lines is reflected in contemporary drawings and prints. Many of these are beautifully coloured and detailed, although traditionally conventional. When painting a bird, a grasshopper or a fish, a Japanese artist sat down and looked at the sitter for a responsible time, then went home in a contemplative frame of mind and drew it. In painting a lady, he painted, most meticulously, her gorgeous raiment over a conventional human form which scarcely could be called a portrait. So the artists of the time earnestly regarded the first train they ever had seen, went home, drew it and coloured it. Some of their results were grotesque, but others were singularly accurate, even to a recognisable Naylor safety-valve on an imported English locomotive. The British-colonial sunshades on the carriages also came out quite convincingly.

Invasion of China. First train from Shanghai to Woosung, 1876. British financed and equipped, the Chinese government regarded it as a barbarian intrusion, bought it up and closed it down.

Above *Rangoon in 1877. Opening of the first railway in Burma. Woodcut signed J.R.B.*

Right *Manchuria: an Unofficial Frontier, 1911. Transfer between the Russian-owned Chinese Eastern Railway and the American-equipped, Japanese, South Manchurian Railway. Porters carry umbrellas, canes, golf clubs and other requisites of life in the East.*

Above right *An Indian Railway Station. Different classes of colonial society meet on the platform.*

Far right *First Class in India, 1870s. The traveller in the upper bunk enjoys a hookah while his boots are polished.*

日露戦争
電報實記
馬賊湖洲
鉄道破壊
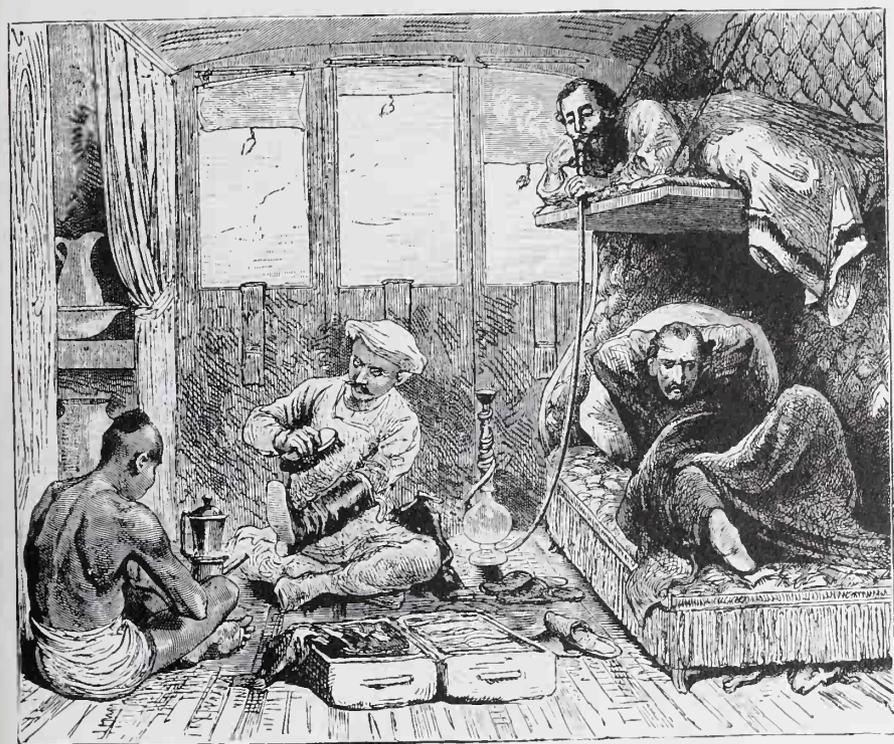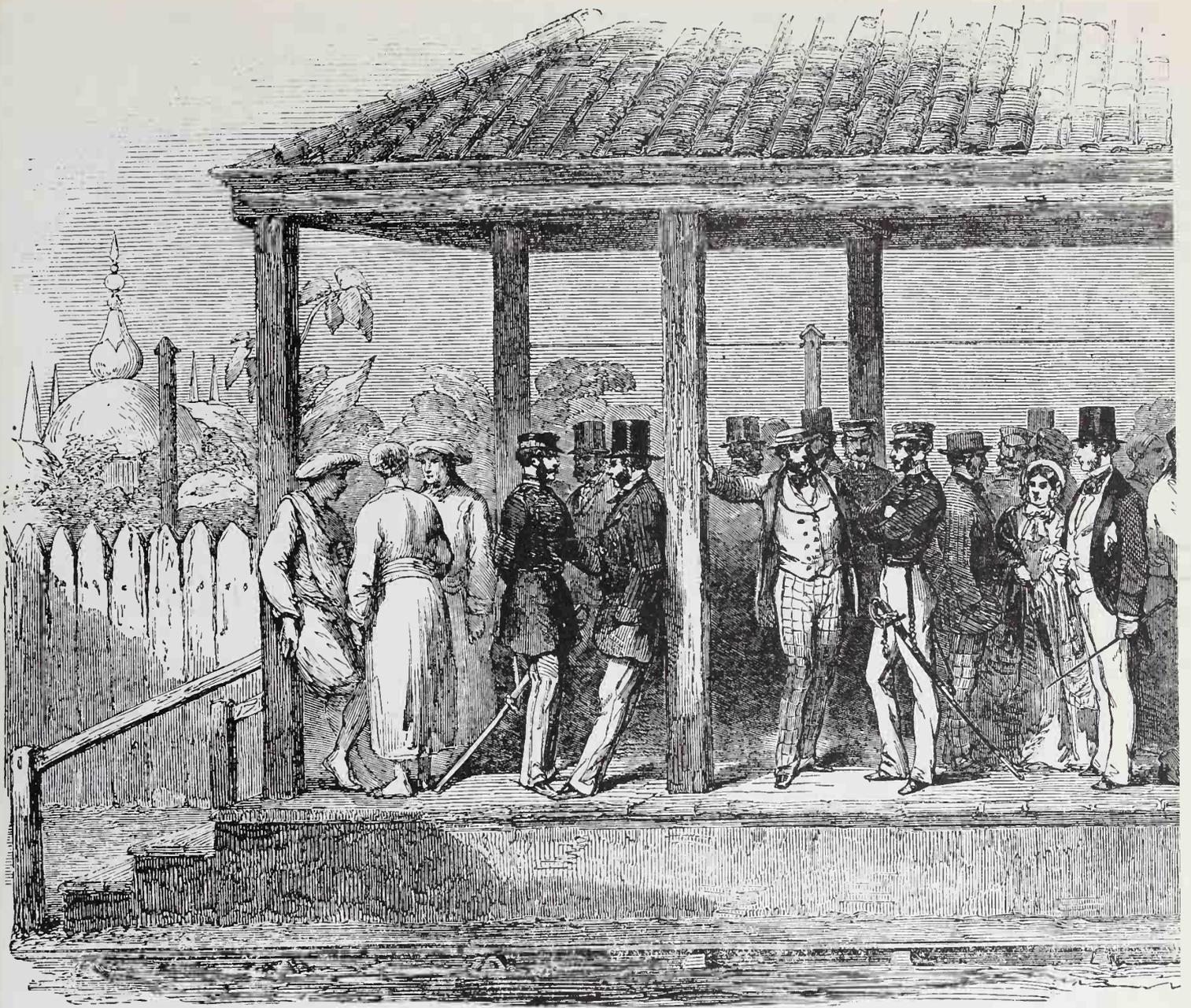
Above *Scene from the Russo-Japanese War, 1904. Japanese troops hard at work destroying a strategic line.*

Right *The First Railway in Japan. The native artist does not appear quite assured in his depiction of the unfamiliar locomotive; the rickshaw, bottom left, is more convincing.*

Far right *Nihanbushi Railway Station. An early terminal in Japan; the atmosphere is distinctly Western.*
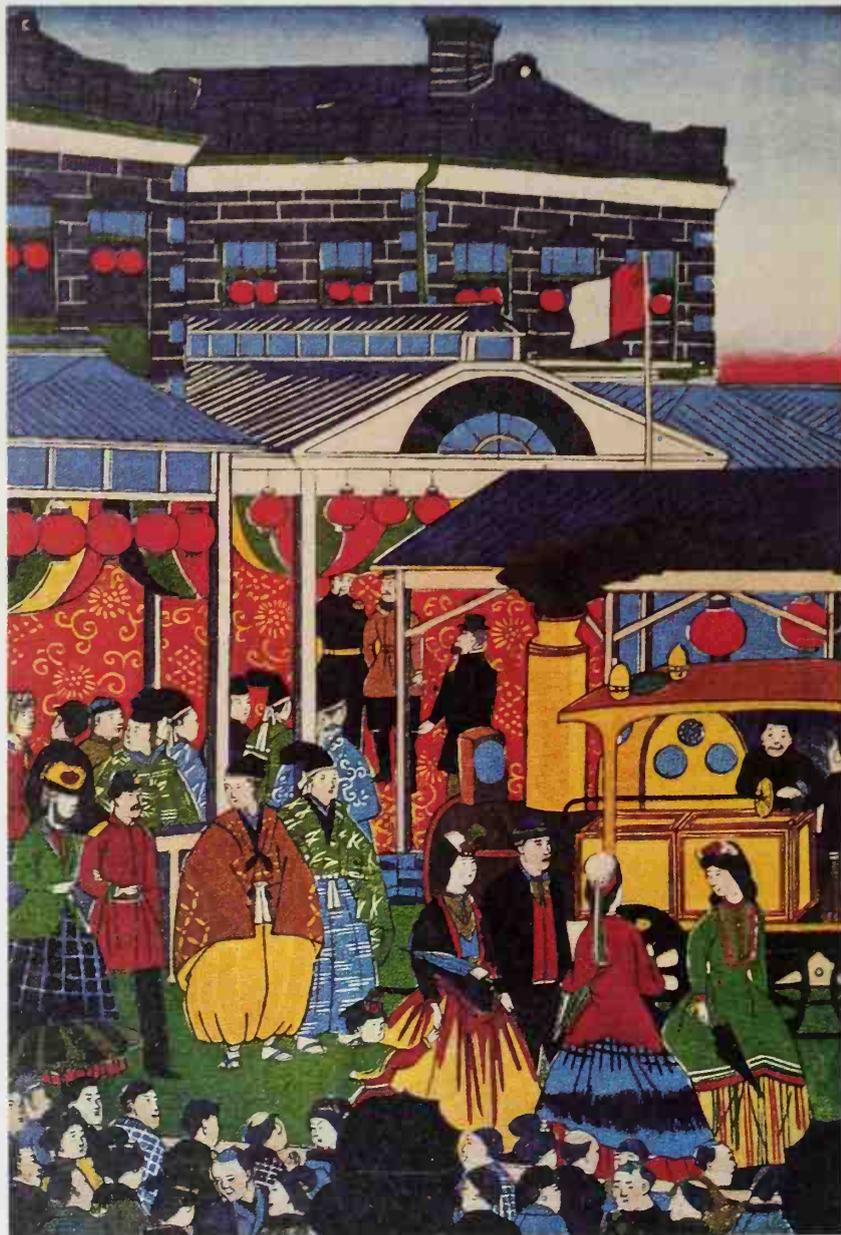
Right *Grand Trunk Railway. Canadian practice was very near that of the United States. Snow-ploughing in Upper Canada, late 1860s.*

Centre right *Railway Across the Frozen St Lawrence, a wood-engraving of 1880. The railway in competition with horse-drawn sleds.*

Bottom right *Colonial sleeping car on the Canadian Pacific Railway, 1888. A sombre mother feeds her baby; a modish group on the right finds diversion in cards.*

Far right *Old Australia: Christmas Journey. 'Notice: To stop Express, wave the tin flag. At night, light candle in lantern'.*

STORIES FROM DAILY LIFE

Queen Victoria noted of her first train journey from London to Windsor in 1842 that it had taken "half an hour free from dust and crowds and heat and I am quite charmed with it." Encouraged by Prince Albert and her own propensity for sea-sickness, the Queen became quite fond of travelling by train, and her enthusiasm clearly established the railway's respectability. Others, however, were not amused, as is evident in this conversation from Disraeli's *Sybil*:

"'You came by the railroad?' enquired Lord de Mowbray mournfully, of Lady Marney.
'From Marham; about ten miles from us,' replied her ladyship.
'A great revolution!'
'Isn't it?'
'I fear it has a dangerous tendency to equality,' said his lordship, shaking his head. '. . . Equality, Lady Marney, equality is not our *métier*. If we nobles do not make a stand against the levelling spirit of the age, I am at a loss to know who will fight the battle. You may depend upon it that these railroads are very dangerous things.'"

Lord de Mowbray's fears were quite justified. Britain, as the first nation to develop the railway, was also the first to feel its social impact. And though class distinctions were scrupulously respected the railway acted in general as a great leveller. Communications between city and country were so improved that the *Yorkshire Post* observed in 1866 that

"the highest questions of politics and literature are discussed with as much knowledge and vivacity in a country tavern or a secluded manor house as in the smoking room of a London club".

The carriage of mails by train was authorised as early as 1838, while the railways brought national politicians face to face with supporters outside their own constituencies for the first time, thus contributing to the politics of mass democracy. In the 1860s Gladstone began stumping the country, making speeches at mass meetings of middle-class reformers and working-class societies. Patterns of business investment changed as the general public eagerly bought up railway shares, while the great industrialists, as in America, achieved new political power.

The publication of timetables and the emergence of Bradshaw's guides in 1839 encouraged the adoption of Greenwich or 'railway' time throughout the country, with only a few villages holding to local time. Bradshaw's timetables proved immensely useful. After a quick consultation Sherlock

Opposite *'Waiting for the Train'. Beauty at Willesden Junction. Tissot's fashionable traveller equipped with bouquet, rug, umbrella, book, bag, shawl and scarves.*
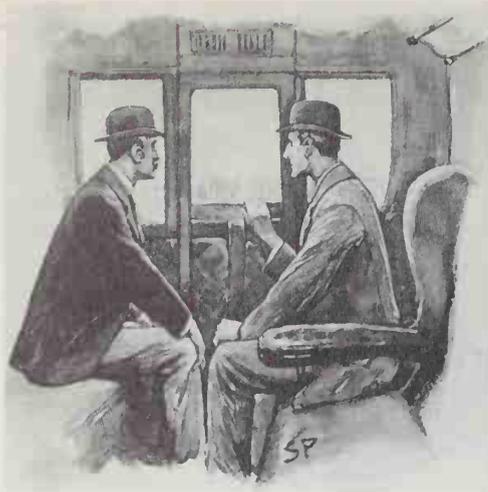
Above *'The view was sordid enough'.*
One of Sidney Paget's original
illustrations of Sherlock Holmes and
Dr Watson. From 'The Strand
Magazine'.

Opposite *'A Mile a Minute'. Everybody*
happy in the second class!

Holmes and Dr Watson were often able to rush to the scene of a crime just in time to prevent a tragic dénouement; disgruntled houseparty guests were able to plan hasty, inconspicuous retreats. Jules Verne plotted out Phineas Fogg's journey around the world from a Bradshaw. A writer of 1885 compared the achievements of Bradshaw to those of Julius Caesar and commented,

"We are of the opinion that one of the most valuable periodicals issued from the monthly press is that which bears the name of *Bradshaw* and that it contains data which even the statesman and the philosopher may ponder".

The railway had its most revolutionary effects in changing urban social patterns and in making travel and holidays more accessible but, while promoting social change, it also rigidified class distinctions. By 1851 the population of Great Britain was greater in urban districts than in rural ones. By 1890 seventy-two per cent of the population was concentrated in the cities. Many new towns, such as Crewe, owed their existence to the railway; Windermere did not exist—except as a large lake—before the first train arrived there in 1847. In London the creation of the first underground lines and the development of electric railways and tram lines made commuting possible, and extended the geographical area of the city.

Gustave Doré, among illustrators, conveyed a very good impression of the London underground railway, which was worked for more than forty years by steam locomotives. There had been various proposals, and even curious experiments, with smokeless or fireless engines, but none prevailed until the earliest appearance of electric trains towards the end of the century. Few people liked the steam Underground, although some doctors recommended the inhalation of its sulphurous vapours as a treatment for asthma. However, many found it very useful indeed at a time of fearsome traffic congestion of horse-drawn buses and cabs, on the streets. Secret lovers used it in off-peak hours. The trains were by no means bad for their period, "brilliantly" lit by town-gas from collapsible rubber bags mounted on the carriage roof in long boxes. The engines condensed the exhaust from their cylinders but the smoke (at first from coke) was allowed to look after itself in the long tunnels under central London. People were thus excused the fog underground, but still inhaled lots of other fumes.

Suburban lines made it possible for people, even of modest means, to work in the heart of the city and live in the country, or even at the seaside. But commuting also encouraged the segregation of classes, according to financial and social status, into separate residential areas, each with its own way of life. A new urban pattern emerged: an inner commercial centre surrounded by mills, factories and slums, then by monotonous terraces of working class housing. Further out were lower middle-class estates, then the self-contained 'railway suburb' for the better off. At an even greater distance from the centre of the city were the grand villas and estates of the rich.

Modern holidays are also the product of the railway age. Before the middle of the nineteenth century, there were only two types of travellers, those who were on holiday all the time and those who almost never were. What distinguished the aristocrat or gentleman from the rich businessman was not the size of his income, but the fact that it was unearned and enabled him to do as he pleased with his time. By the 1850s, however, the annual holiday had become a regular part of family life. For the well-to-do,

travelling became more comfortable, although at first the upper classes had considered sitting opposite complete strangers exceedingly improper, especially for women. That soon passed. During the 1870s Pullman and other cars were introduced with supplementary fares to exclude the wrong sort of people. Sleeping compartments and dining cars appeared, as did lavatories, which were enthusiastically received; a Midland carriage equipped with third-class ones was sent to the Paris exhibition of 1889, where it caused such a sensation that it was awarded the Grand Prix. Before their general introduction some long-distance travellers had bought ingenious sanitary bags, worn discreetly beneath the massive clothing of the day. Men managed furtively at stops.

But the widespread availability of travel created problems as well. A shocked correspondent from Birmingham reported that due to increased railway traffic,

"the principal inns often have their beds engaged nine days deep; and last week so great was the difficulty of procuring accommodation that the Countess of Chesterfield was obliged to sleep at the Acorn in Temple Street".

Spas had been fashionable since the seventeenth century and seaside resorts, at first promoted for their medicinal advantages, began to be frequented for reasons of pleasure as well; George III bathed regularly at Weymouth to the accompaniment of fiddles. When spas and the seaside began to be invaded by the middle classes, the rich deserted England for the resorts and watering places of the Continent or travelled to remoter districts in the Lake Country and Scotland.

Meanwhile the greater availability of third class accommodation and the introduction of excursion fares and tours made travel accessible to all but the poorest. Excursion trains became popular; even in 1838 a special service was arranged for the residents of Bodmin to witness a public execution in a neighbouring town. In 1841 Thomas Cook introduced his first excursion tour to a temperance demonstration; shortly afterwards he was conducting parties of over a thousand to visit Chatsworth and other important country houses. After one such trip, Cook relates that a grateful participant said to him, "Sir, I wish I could tell the world how I feel of what we working people owe to you". The Great Exhibition of 1851 owed its success, at least in part, to the railway; its promoters took early steps to encourage the railway companies to offer special fares. Seaside resorts boomed as day return trips became available; trains could carry as many visitors in a week as the stage coaches in a year. In 1855 Cook began his excursions abroad, complete with chaperones and hotel coupons. The age of mass tourism, even of the package holiday, had begun. *Blackwood's Magazine* denounced the invasion of Italy by Cook's "uncouth droves", although *The Times* noted enthusiastically that "Londoners go in swarms to Paris for half the sum and in one third the time, which in the last reign would have cost them to go to Liverpool".

In painting there were no successors to Turner. A year after the exhibition of *Rain, Steam and Speed* at the Royal Academy, David Cox sent in a composition entitled *Wind, Rain, Sunshine* in which a train figures insignificantly. He returned to this theme in romantic watercolours like *The Night Train,* but primarily he remained a landscape painter. Interior views, indeed, fetched customers more than elaborate paintings of trains at that time, while line drawings in book and magazine illustrations

Above left 'First Class — the Meeting' by Abraham Solomon, 1854. Solomon's revision of a first version in which the father was asleep and the girl unabashedly flirting with the young officer.

Far left 'Second Class — the Parting'. Exhibited with the preceding picture at the Royal Academy in 1854. Solomon went regularly from his home in Gordon Street to Euston Station to ensure the accuracy of his depiction.

Above 'Travelling Companions' by Augustus Leopold Egg, 1862. The two sisters seem unaware of the passing landscape; only the swaying tassel on the window blind indicates motion.

Left 'Return to the Front, circa 1855'. James Collinson's scene is probably Waterloo Station, London, for the coachwork suggests the London and South Western Railway in mid-Victorian years. The soldier's uniform is gorgeous, but his situation grim, for he is off to the Crimea.

Top 'Tickets, please!' Early trains had no corridors so guards had to collect tickets from the platform at stops. Robert Musgrave Joy. 1851.

Above 'Tickets, please!' Tenniel's illustration to 'Alice Through the Looking-Glass'. Alice crosses the Third Square. Alice's hat is a replica of those in Egg's 'Travelling Companions'.

blossomed, especially under the sponsorship of *Punch, Harper's, The Illustrated London News* and other papers. One of the most charming is Tenniel's, in *Alice Through the Looking Glass,* where Alice crosses the Third Square by railway and is examined by the Guard, first through a microscope, then through a telescope and then through an opera-glass. Tenniel depicts Alice sitting opposite a gentleman dressed in white paper, who bears a distinct resemblance to Disraeli, with an anthropomorphic goat in the next seat.

By the 1850s the railways were accepted as a normal element in the social scene, but as a utilitarian feature, not as a subject for high art. With widespread industrialization, technology was no longer considered picturesque, and Victorian artists were reluctant to paint the harsher actualities of their age. Views of scenic towns and villages found a ready market, but there were few depictions of the new industrial cities. The inclusion of a train would have been considered indecorous in a landscape painting. Artists who treated industrial themes at all concentrated on the simple dignity of the labourer. But trains themselves only suggested what one critic dubbed "the hideous prose of modern life". The products of industry were not considered proper subjects for the painter concerned with ideal beauty or the high moral purpose of art.

The Pre-Raphaelite "truth to nature" never included the truth of the new industrial landscape. F. G. Stephens made a plea for motifs from technology in an issue of the Pre-Raphaelite journal *The Germ,* published

in 1850, but he did so in the face of the Brethren's opposition to a new materialistic age governed by machinery. Walter Bell Scott did paint a series of murals depicting the history of science and manufacture for a picture gallery in Northumberland, but the movement as a whole turned to the world of legend, mythology and poetry. Walter Crane's *Triumph of Labour* was Arcadian. However, the Pre-Raphaelites paved the way for a new art of social realism in two important ways. Original themes inspired by contemporary society, such as Dante Gabriel Rossetti's *Found,* Holman Hunt's *The Awakening Conscience* or Ford Madox Brown's *The Last of England* made modern subjects more respectable by endowing them with a grave moral import. Moreover, the methods used by the Pre-Raphaelites were adopted by later painters. The painstaking exactitude with which moss and brickwork were depicted could also be applied to the painting of bonnets and top hats, race courses and railway stations.

In the middle of the nineteenth century a taste for contemporary narrative or genre developed, largely encouraged by a new generation of men who had made their money in industry; John Sheepshanks, a cotton manufacturer from Leeds and one of the most important collectors of his time, felt more comfortable in buying English art than Old Masters. The size of pictures was itself an issue; the middle classes bought small genre paintings, while large canvases in the grand manner found support in official circles. Moreover, the Victorians liked to see themselves represented; in their biographies, novels, journalism and social surveys, as well as in their art, they were lavishly documented. There was already a strong narrative tradition in English art; beginning in the eighteenth century, painters illustrated popular novels such as *Pamela* and *The Vicar of Wakefield.* Victorian painters themselves often preferred to paint period pieces; they were especially wary of modern dress which they considered ugly and soon dated. They received little support from critical opinion or academic theory. Art was still ranked according to its seriousness and importance, history painting being considered most worthy, while genre remained a "low subject". But the financial rewards for painting modern subjects were considerable and artists gave the public what it wanted.

What the public wanted was a story or anecdote represented by people in more or less modern dress against a more or less modern setting, painted with precise detail and a respect for sentiment and morality. And it wanted respectability and decorum. Victorian narrative painters show little inclination for satire or self criticism; their scenes from daily life lack the gusto and honesty of Hogarth and Rowlandson. Artists chose those subjects from the contemporary scene that proved popular and one of those subjects was travel. Not only did this offer the painter the chance to observe with a nice particularity the differences between the different classes of travel, but on occasion, to contrast them as well. The 1850s and 1860s were also a time of war and emigration, and themes relating to separation and departure were topical. A new type of railway picture developed—not a depiction of the locomotive or of the train making its way through the countryside, but an interior view of the railway carriages or a scene from a station platform. Augustus Leopold Egg's *Travelling Companions* shows two upper-class young women, presumably sisters, travelling in a railway carriage on the Continent. The landscape beyond has been identified as Mentone and the two women are simply and exquisitely dressed. They travel comfortably, one sleeping peacefully, the other reading, and beside them, on plush seats, is a basket containing food

Above 'The Railway Station'. W. P. Frith's famous painting of 1863. The place is the great London terminus of Paddington, which apart from diesel trains has changed little over more than a century. Frith's canvas made him a lot of money, and he painted a facsimile. Many of the characters were genuine, including the detectives (right), and the man arguing with the cabman (centre), a political refugee, much alarmed at having his likeness published.

Right 'On the Line'. A parody of Frith's 'The Railway Station'. Lord Salisbury, as a policeman, is arresting W. E. Gladstone. Queen Victoria leads the German Emperor by the hand. Bismarck dispenses information in the middle; on the far left Parnell is represented as a dog in a top hat.

Bishopsgate, London. 'Arrival of Christmas train, Eastern Counties Railway'. 'Illustrated London News', 1850.

and a bouquet of flowers. Charles Rossiter's *To Brighton and Back for 3/6d.* shows the opposite extreme of travel, a crowd of lower-middle-class people crammed into what had by then become a fourth-class coach. The sides are open. A wet south-westerly wind is blowing over the countryside, so umbrellas, scarves and shawls are being set to windward. Beyond the low partition, a young mother nurses an infant. In foreground, left, are a middle-aged man and his wife, their boy and girl gazing in silent consternation at the small girl who is being discreetly sick through an inadequate napkin over the seat-back. The enamoured young things on the right remain blissfully unaware of this accident, not uncommon on crowded excursion trains.

In Abraham Solomon's paintings *Second Class—the Parting* and *First Class—the Meeting,* there is the obvious moral of self-betterment. In the harsh, advertisement-plastered second-class compartment, poor Young Hopeful is travelling to join his first ship as its lowest form of animal life, with his mother trying to cheer him up and his sister on the verge of tears while he tries to keep his upper lip stiff. An old sailor behind looks across with sympathetic memories. Mother is apparently a widow untimely. In the *Meeting,* some years have passed and Young Hopeful has achieved gold-braided dignity as he sits in a well-appointed first-class compartment, gazing at a young lady who is obviously making eyes, while he ingratiates himself with her genial and prosperous sire. In a first version, the old gentleman was shown as being asleep, with the young people much closer together. It was condemned as being bawdy. The two pictures were exhibited as pendants at the Royal Academy in 1854, when people were particular.

The most successful painter of stories from contemporary life was William Powell Frith. In his two-volume autobiography—he was no modest man—he wrote of his hesitation in choosing such subjects. Once

he invited suggestions for them from the public, and was appalled by them: a man finding a mouse in his pie; a pickpocket at work; a fat woman being helped into a boat. Moreover, like others, he was deterred by what he considered unpicturesque modern dress. In the 1840s he took his first tentative step in a modern direction with his painted illustrations of Dickens. Eventually he realized his particular *métier* was the vast panorama, a microcosmic view containing all classes and types of society, full of anecdotal and dramatic incident. *Ramsgate Sands,* showing life at the seashore and *Derby Day* were enormous successes; Frith worked on each canvas for over a year, draughting rough outlines, posing models for every figure, making sketches for every group, using photography to help with backgrounds. His painstaking labours resulted in paintings with a rather static, tableau-like quality. Though fascinating they are a kind of hybrid art, a cross between painting and literature, weaving endless plots and sub-plots into a narrative whole.

In 1860 Frith began work on *The Railway Station,* an immensely profitable venture. Instead of exhibiting it at the Royal Academy, he sold it to Flatou, a dealer, for £4,500. After charging the public admission fees to see it, Flatou resold the reproduction rights for £16,000. To the Victorians, railway stations still conveyed glamour and excitement though Frith was doubtful about his subject:

> "I don't think the station at Paddington can be called picturesque, nor can the clothes of the ordinary traveller be said to offer much attraction to the painter."

But he meticulously represented the decorative metal-work of Brunel's building and the Great Western Railway obligingly posed its best available locomotive for him. In the foreground baggage is being loaded on to the carriages, a mother sees her two boys off to school, a soldier kisses his plump baby goodbye, and a honeymooning couple is surrounded by their wedding party. A dark bearded man, his dress and binoculars suggesting that he is off to the races, is arguing with a cabby over a fare. The model was an Italian political refugee, and tutor to Frith's daughters, of whom the painter wrote, "He was a noble man, whose head was wanted for a very different purpose from that to which I put it". On the far right detectives arrest a criminal boarding the train. They

> "were painted from two detectives well known at that time...they were admirable sitters and when I complimented them on their patience they took small credit for doing what they had often done for criminals of a deeper dye, namely standing on the watch, hour after hour, in the practice of their profession, waiting for a thief or a murderer".

Frith's talents for observation and complex narration involving all classes of society are well displayed in *The Railway Station. The Times* complained that the work belonged to a class of art, "natural, familiar and bourgeois, as distinguished from the epic, ideal and heroic", but Frith himself was pleased with the results. He later wrote,

> "My desire to discover materials for my work in modern life never leaves me ... and though I have occasionally been betrayed by my love into the somewhat trifling and commonplace, the conviction that I was speaking — or rather painting —the truth, the whole truth and nothing but the truth, rendered the production of real life pictures an unlimited delight".

Above *'To Brighton and Back for 3/6d.'*
Fourth class on the London, Brighton
and South Coast Railway, c.1860.
Happy couple unaware of infantile
accident behind them. Oil by Charles
Rossiter of an early excursion train.

Right *'Can't help it Marm. No luggage*
allowed by Excursion Trains!'
Anonymous pen drawing of the 1850s.

Above right *'Seats for Five Persons'.*
Local train, third class. The crowd
reacts differently to the discomforts of
overcrowding; the courting couple at
right seem pleased by their predicament.

Far right *Getting home from the*
Crystal Palace on a Fête-Day. The
low-level station—and train—at their
worst! Drawing by W. McConnell,
early 1860s.

Above *'Leaving Home' by Frank Holl. In the 1870s Holl was one of the contributors to 'The Graphic'. He was noted for his sympathetic and unsentimental depiction of the poor.*

Right *Departure of the Emigrants. 'Gone' by Erskine Nichol, 1876. A new genre of platform scene.*

Far right *'The Emigrants' by Erskine Nichol, 1864. An Irish couple starting out to seek a better life.*
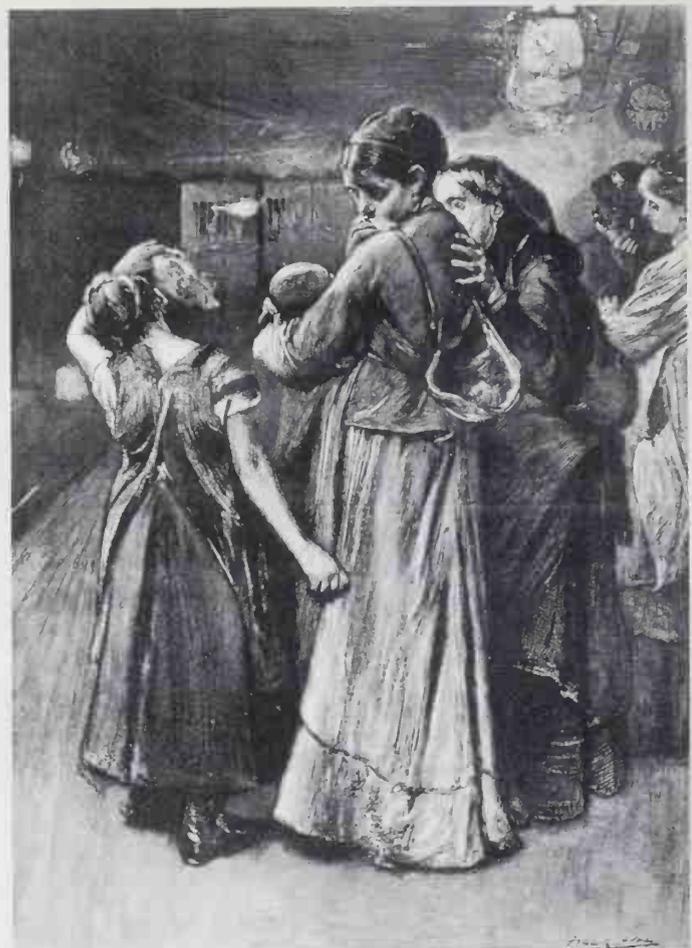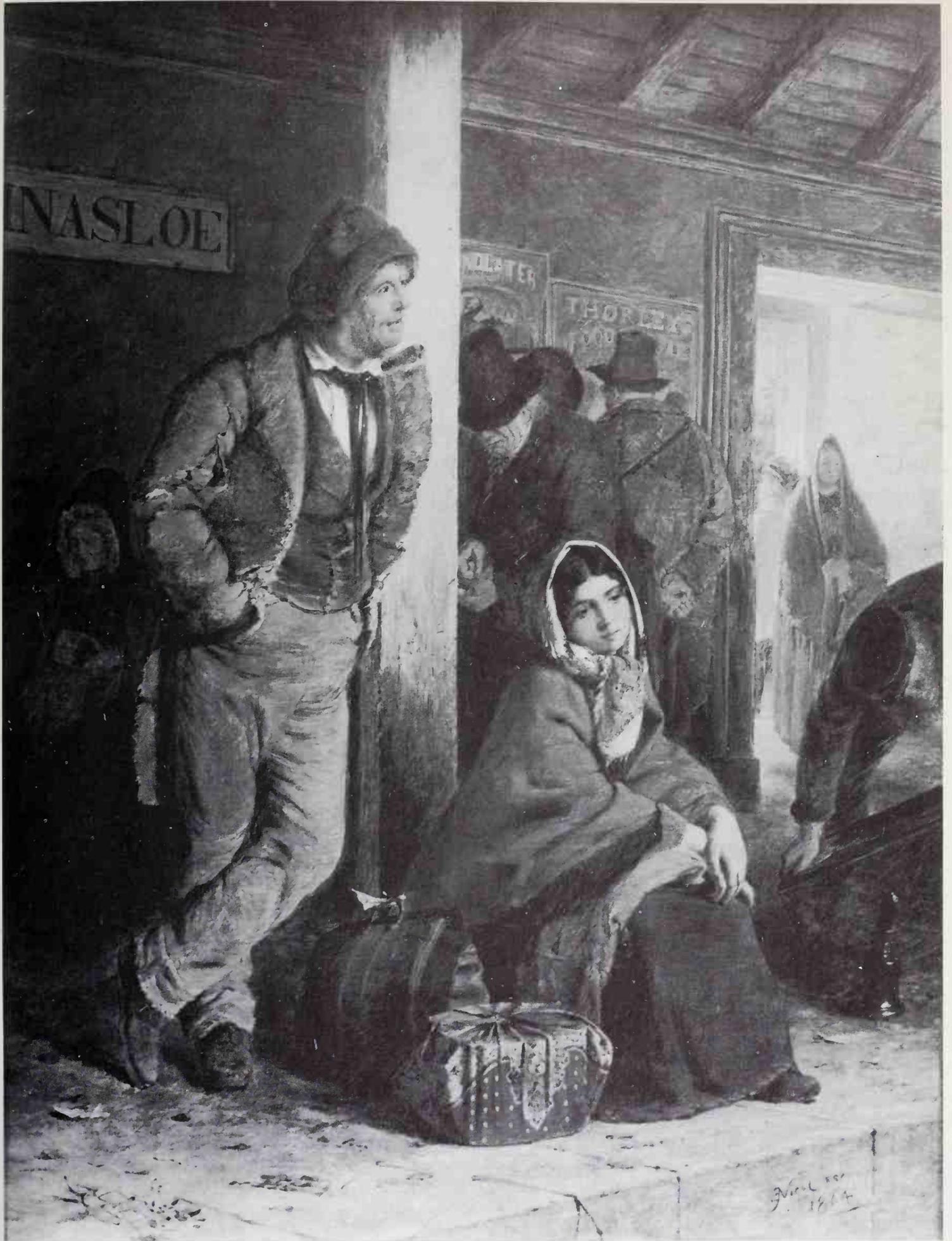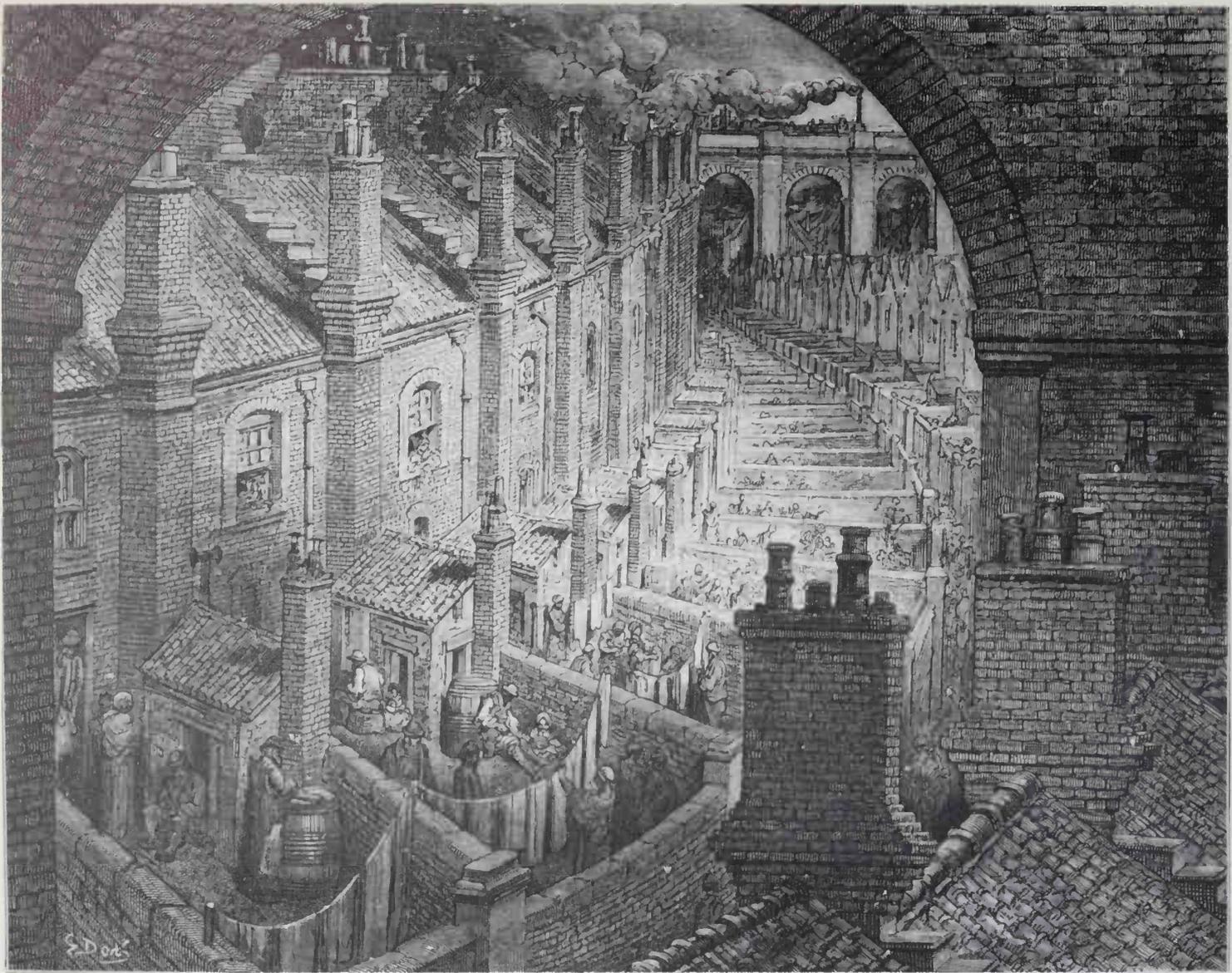
Above 'Over London by Rail': The London Gustave Doré saw.

Above right Grey Day in Stockport. It frequently was so! Above, the soaring pride of the London and North Western; below, open outfalls by the shortest route.

Right 'The Workman's Train' by Gustave Doré. Metropolitan Railway, early morning. The station is probably Gower Street, now Euston Square, London.
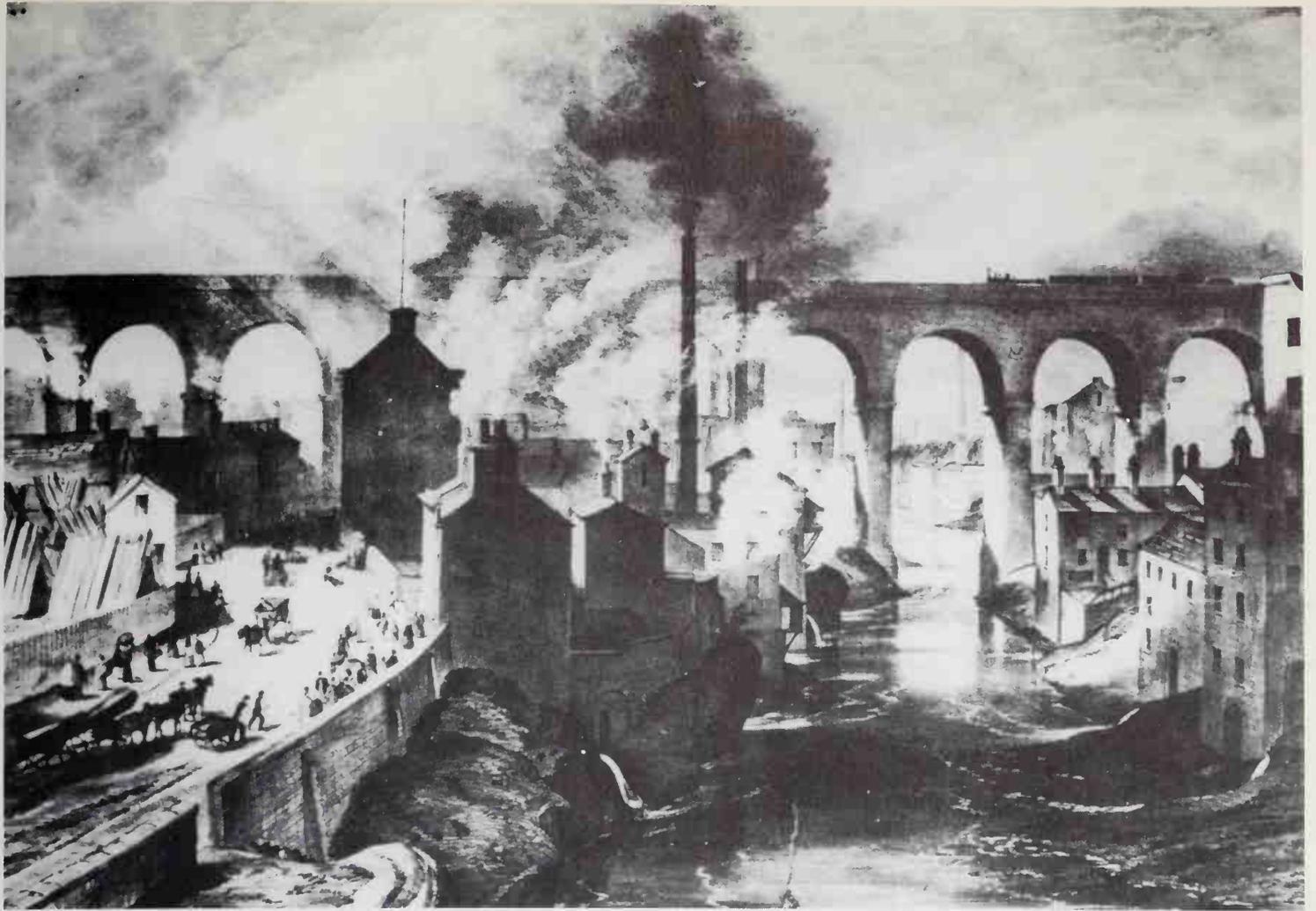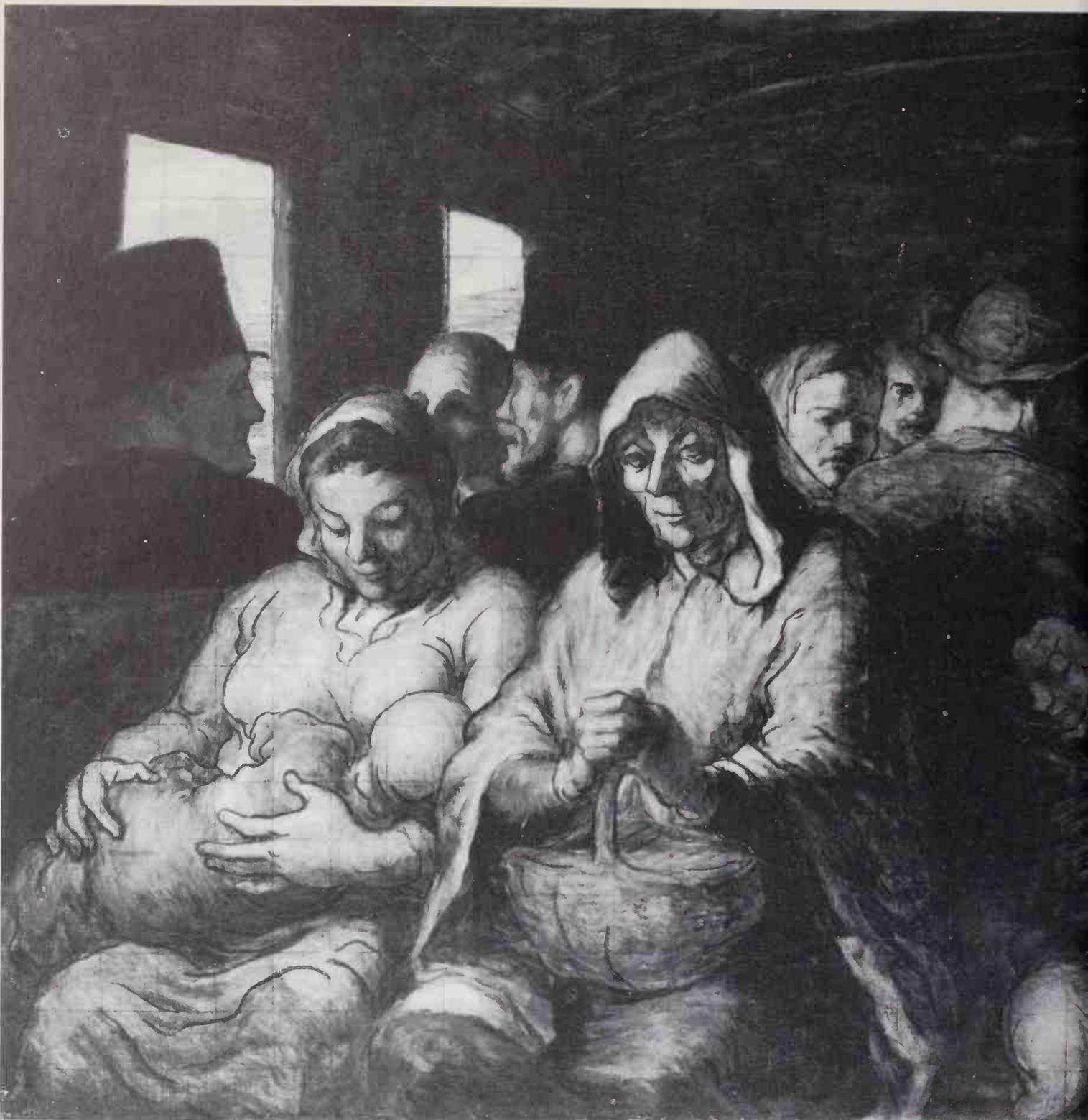
Above 'Third Class'. Daumier's 1862 oil differs from his earlier caricatures in his sympathetic portrayal of the passengers themselves.

Top right 'Waiting Passengers' by Honoré Daumier.

Right 'Tout ce qu'on voudra!' 'My wife away on the express! Twelve leagues an hour! Lovely invention, steam!' Daumier's comment on the benefits of the early railway.
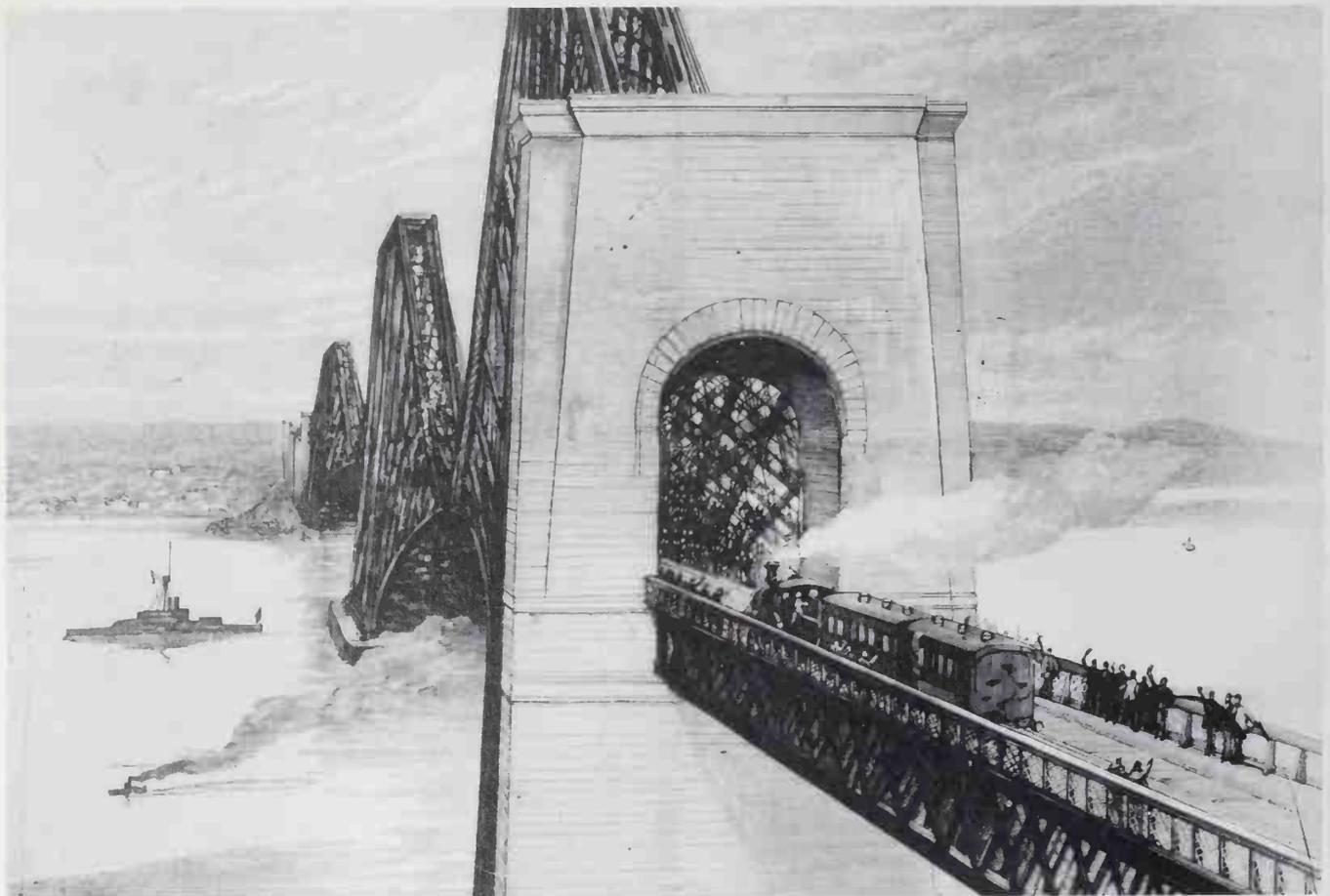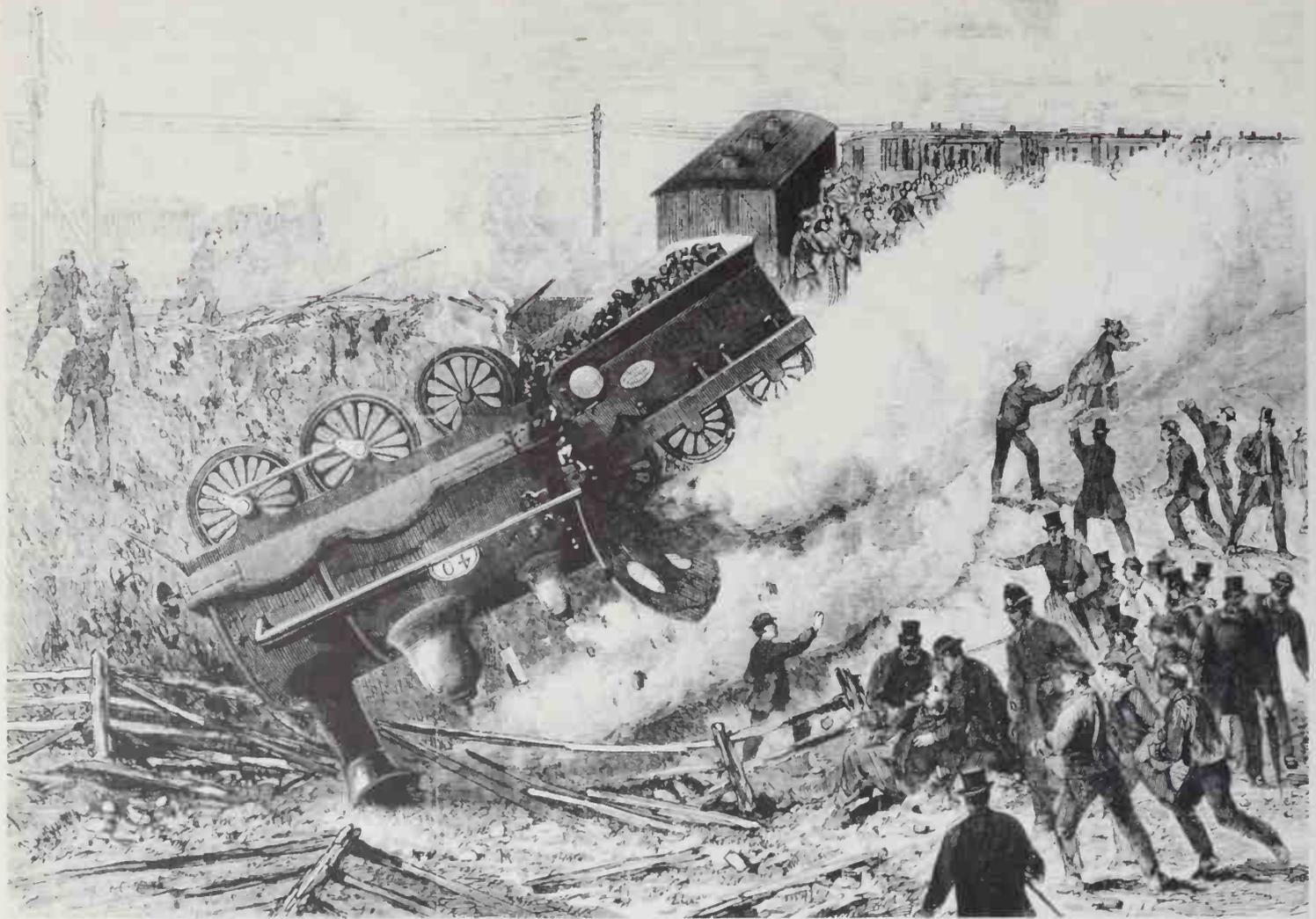
Above left *Accident on the Brighton Railway. From the* Illustrated Times, *1868.*

Far left *Opening of the Forth Bridge, 1890.*

Above *'Ten Minutes for Refreshments!' A grey German dawn is breaking. Ulm? Or even Halle? A drawing by Adolf Menzel.*

Left *'The Dining Saloon in the Train de Luxe. A visit to the South of France'.*

THE NEW VISION
OF MODERN LIFE

When English journals were still decrying "the hideous prose of modern life", French critics were applauding it. In a famous conclusion to his review of the Salon of 1845 Baudelaire wrote:

> "The heroism of modern life surrounds us and presses upon us. There is no lack of subjects, nor of colours to make epics. The painter, the true painter for whom we are looking, will be he who can snatch the epic quality from the life of today and can make us see or understand, with brush or with pencil, how great and poetic we are in our cravats and patent leather boots. Next year let us hope that the true seekers may grant us the extraordinary delight of celebrating the advent of the new".

In the social, political, literary and artistic thought of nineteenth-century France the subject of contemporaneity became a crucial issue. Daumier's motto, *"Il faut être de son temps"* became the rallying cry for a new generation. Writers such as Balzac, de Maupassant, Victor Hugo, Eugène Sue, the Goncourt brothers, Alfred de Musset and Flaubert documented the life of their own society. George Sand, influenced by socialist and humanitarian philosophy, described "a conception of art which would be neither classic nor romantic and would correspond to the modern idea of Man". Émile Zola recorded the social history of the Second Empire, and in *La Bête Humaine* he devoted a novel to the subject of the railway and railway workers.

As writers turned to contemporary themes, French painters rebelled against the authority of the Academy and the dominance of history painting. But the desire to portray modern life was of a different kind from that of modern subject painters in England. The French were not interested in anecdote and sentiment, much less in decorum. Gustave Courbet, the leader of the Realists, wrote that "painting is essentially a concrete art and does not consist of anything but concrete things". "Each epoch," he believed, "must have its artists who represent it and express it for the future." The social purpose of art was to portray the everyday world as it really was, however harsh, however banal. The aim of the artist was to free himself from idealized images and aesthetic preconceptions. Edmond Duranty, in a short-lived journal, *Réalisme,* denounced the abundance of

> "Greek visions, Roman visions, medieval visions, visions from the sixteenth, seventeenth and eighteenth century, with the nineteenth century absolutely forbidden".

Addressing painters, he appealed, "the man of antiquity created what he saw . . . create what *you* see".

Opposite *'Ludgate Hill'. Jacques-Émile Blanche has captured the essence of the 1880s, from the hansom cab to the London, Chatham and Dover Railway.*

'Station in the Snow' by Maurice Vlaminck. Waiting at a provincial French terminal in Louville.

Politics and art are inextricably intertwined in the history of nineteenth-century France. Art debated its social purpose; political thinkers debated the role of the artist. Utopian socialist movements sought not merely to come to terms with new technology, but to develop an alliance between art and industry. The revolutionary philosopher Saint-Simon welcomed technology as a means to social reform and individual freedom. The most influential advocates of industrial development and railway construction during the period between 1830 and 1840 were all followers of Saint-Simon, and their ideas, in turn, influenced the new realistic school of artists and writers. Early misgivings about the abuses of the industrial revolution sprang less from humanitarian sentiments than from the establishment's fear of social revolution.

Under the July Monarchy of Louis-Philippe, public funds were scarce and the wealthy were reluctant to invest capital in the railways. In 1842 a national policy was adopted establishing a system of seven main lines radiating from Paris. The construction of the lines was allocated to private companies on a monopoly basis. In the prosperous period of the Second Empire many mining, banking and industrial projects were established and a vast programme of railway building undertaken. By 1859 France had tripled the route mileage of her railways in 1851, and by 1870 she had almost as extensive a system as Great Britain. The latter part of the century also was a time of rapid urban expansion, especially in Paris. Massive city planning was realized under the Baron Haussmann, including the building of vast, ornate stations.

Offenbach opened his heady portrayal of Parisian high life in the Second Empire, *La Vie Parisienne,* in one of these new stations, with a first chorus sung by the railway employees, and a second by the lucky arriving passengers. Honoré Daumier, in a more ironic tone, chronicled the changing Parisian scene, with its restless crowds, sharp class divisions, and its masses of urban travellers. In the 1840s he produced sixteen lithographs depicting the mishaps and discomforts of the new railways, passengers drenched by showers on the top of an excursion train or carried stiff as logs from their freezing compartments; a decade later he produced more than fifty drawings on the same subject for *Charivari* and *Le Journal Amusant.* In 1871 Gustave Doré published *London, A Pilgrimage,* with a series of illustrations describing the newly industrialised city and the intrusion of the railway into already congested districts.

By the 1870s the railway was regarded as a potential subject not only for illustration and caricature, but for high art. Théophile Gautier and even the academician Thomas Couture had suggested that trains and railway stations might provide inspiration for the artist. Degas' notebooks contain a list of city themes including "smoke of locomotives, of high chimneys, factories, steamboats". Manet was a great admirer of railways, considering them the epitome of contemporary life. He thought of railway drivers as 'modern heroes' and looked forward to painting them, though in his one picture with a station setting, *La Gare St Lazare,* of 1873, the passage of a train behind the mother and child in the foreground is indicated only by billowing clouds of steam. In 1879, however, Manet wrote a letter to the Municipal Council applying for a commission to decorate the conference hall of the new Hôtel de Ville. He described his monumental conception as a portrayal of "the belly of Paris" showing "the public and commercial life of our day. I would include the markets, the railways, the ports, the sewers". Manet received no reply to his application.

An even more grandiose scheme was conceived by Courbet, who felt that railway stations should replace museums as the true exhibition halls of the people. In 1868 Théophile Gautier had written that stations would be "the new cathedrals of humanity, the centre where all ways converge". Courbet elaborated on this idea, hailing

> "the railway stations that are already Churches of Progress and will soon become Temples of Art. Enter the waiting halls and look at those admirable vast sites, airy and full of light: you'll agree that we only need to hang pictures there to make, without any expense, the most matchless of museums, the only ones where art can really live. For where the crowd betakes itself, there is life".

Claiming that his scheme had already won the admiration of Ignace Hittorff, the architect of the grandiose Gare du Nord, to whom he had outlined a plan of realist murals, Courbet continued, "there will be no need to impose the eternal reproductions of Greek helms and Roman togas". He explained that authentic scenes from modern life would "teach the people true history while showing them true painting".

Neither Manet nor Courbet ever actually painted a train. Their schemes for the decoration of public buildings had little chance of being realized, yet they demonstrate the importance of railways and stations as dominant images of modernity; for Courbet they had political implications as well. Railway art finally flowered in the Impressionist paintings of Monet and Pissarro, who held to the myth of the "innocent eye". Consciously anti-intellectual and anti-theoretical, they never issued manifestos or tried to justify their art on any social or moral grounds. Monet wrote, "I have always had a horror of theories. I have only the merit of having painted directly from nature, striving to render my impressions in the face of the most fugitive effects". But while eschewing aesthetic theory, Monet can hardly have been unaware of it. His paintings were championed in the press by Zola; before 1860 he had frequented the Brasserie des Martyrs where Courbet used to preach to his disciples; still later he met Zola and Manet regularly at the Café Guerbois. Though no supporter of realism, he was still its child, and for two decades during the 1860s and 1870s his art reflects the stimulation of *la vie moderne*.

There are good reasons why the railway should have appealed to the Impressionists. They claimed to paint what they saw — and among what they saw were canal boats, viaducts, railway bridges and trains. The Impressionists wished to convey the quality of everyday life and to those painters who often met in the Batignolles quarter during the 1860s, trains were no novelty but a familiar sight; six lines converged at the nearby Pont de l'Europe and the Gare St Lazare was their point of departure for country excursions. A train rumbling over a bridge corresponded to the Impressionist sense of time; its very transience related to their idea of the fragmentary nature of experience and stimulated their desire to capture the truth of the instant. Moreover a train surrounded by steam and smoke, its lights glimmering through snow or fog, provided a new opportunity to study atmospheric effects. Then, too, Impressionism was primarily an urban art; artists discovered the countryside with the eye of the city. Their nature is often the nature of the Sunday outing in the countryside and their *plein air* paintings incorporate industrial motifs with no difficulty. But they were never interested in the railway as a source of drama or incident; for them it remained a purely objective visual phenomenon.

In 1871, to escape conscription in the Franco-Prussian War, Pissarro and Monet moved to London. Pissarro wrote,

"Monet and I were very enthusiastic over the London landscape. Monet worked in the parks, whilst I, living at lower Norwood, at that time a charming suburb, studied the effects of fog and snow in springtime . . . We also visited the museums. The water-colours and paintings of Turner and Constable . . . have certainly had their influence on us".

Undoubtedly the painters saw *Rain, Steam and Speed,* for the motif of the train in a landscape setting appears in their own works during or shortly after this time; interior views or platform scenes could have had little appeal to them. While in England Pissarro painted *Penge Station, Upper Norwood,* which shows a train approaching through a cutting in a bright spring-like setting. Monet's earliest known railway painting, *Le train dans la campagne,* was painted in 1870. In 1875 he painted *Le train dans la neige,* steam and smoke mingling with fog and snow, the orange headlights of the locomotive appearing like two great eyes. In the same year he painted the railway bridge at Argentueil; the bridge is seen from an oblique angle, a compositional device probably derived from Japanese prints.

On returning to Paris, Monet settled in a quarter near the Gare St Lazare. The huge enclosure with its glass roof, against which the locomotives threw their opaque vapour, the incoming and outgoing trains, the crowds, the contrast between the clear sky in the background and steam engines — all this offered subjects for his painting. Monet put up his easel in different corners of the station, returning to the station day after day, exploring it from a variety of angles, seizing the specific character of the place and its atmosphere. It was a new approach to a contemporary scene, but Monet's choice may have been at least partly dictated by his annoyance with critics who had satirized his earlier paintings. One wrote of a river scene, "wallpaper in its embryonic state is more finished than that seascape", and another called his pictures "a laughable collection of absurdities . . . The Impressionists appear to have declared war on beauty". According to Renoir, Monet was so annoyed with a critic who said that fog was not a suitable subject for a painting, that he decided to execute a painting with a subject even foggier than any he had used before, at first suggesting "a scene of negroes fighting in a tunnel". When he finally decided on a view of the Gare St Lazare "with smoke from the engines so that you can hardly see a thing", Monet, who was practically penniless, put on his best clothes and went to call on the Superintendent of the Chemins de Fer de l'Ouest, introducing himself as "the painter Claude Monet". The official, who knew nothing about painting, suspected that his visitor was a famous Salon artist and gave Monet permission to do exactly what he wanted. "The trains were all halted, the platforms were cleaned; the engines were crammed with coal so as to give out all the smoke that Monet desired." Afterwards he was bowed out by uniformed officials.

Among his submissions to the third Impressionist exhibition of April 1877, Monet included at least seven canvases painted in or near the Gare St Lazare. Georges Rivière, in *L'Impressionisme,* an art journal, compared one of Monet's locomotives to "an impatient fiery beast, animated rather than fatigued by the journey it has just completed". It "shakes its mane of smoke which strikes against the glass covered roof of the great hall". For

'The Train from Arles to Orgon' by Vincent Van Gogh. The flat landscape appears as a background for the intersecting lines of roads, hedgerows, canal and a railway.
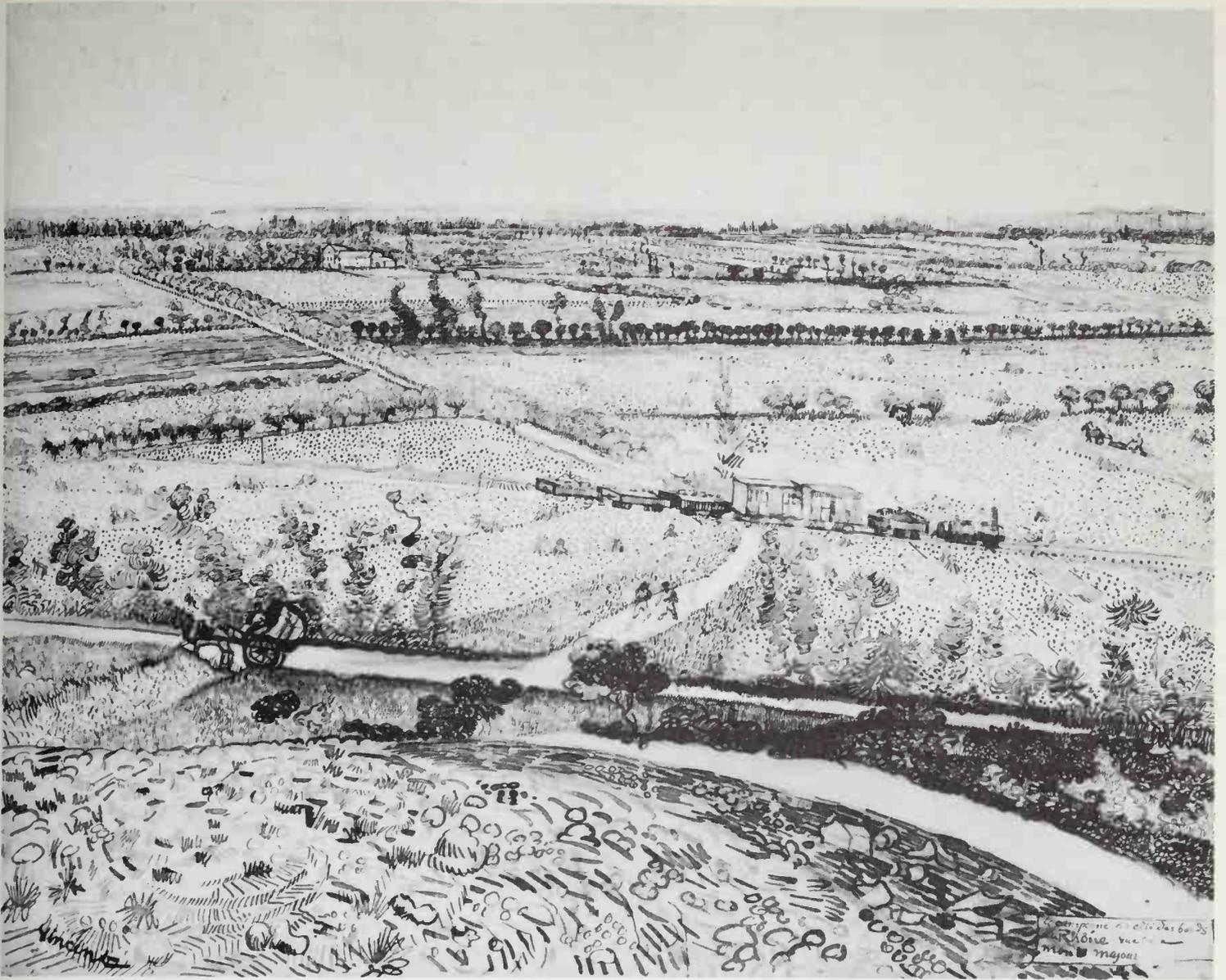
Rivière the scene suggested the essence of the excitement of modern life, the cries of the railway workers, the scream of whistles, the clatter of arrivals and departures, the trembling of the terrain under the great wheels and the drama of merging sun and smoke. For Monet himself, the station may have suggested other sensations. His choice of locomotives resting inside or outside a station rather than rushing through the open countryside is itself unusual.

In the Gare St Lazare he found a suitable location to study the changing aspects of light and shade, mounting vapours, great structure, outer surroundings, and, curiously dominant among larger things, the authentic shape of a Western-of-France locomotive such as Zola's Lantier drove in *La Bête Humaine*. The station has not the internal elegance of Brunel's Paddington in London any more than it has the magnificence of the later, giant station in Milan. Overhead, it has nothing like the parabolic beauty of St Pancras, London, or of the old Broad Street, that was burnt, in Philadelphia. Its *Salle de Pas Perdus* is indeed well-named. But Paris St Lazare is a great station in a great city and surely Monet *got it*. In doing so, he got the metropolitan station of the nineteenth-century city as did perhaps no other painter. Even Frith in the Paddington of the 1860s was mainly painting a colourful crowd, his rendering of the background assisted by photography.

Top left 'The Railway Bridge at Argenteuil'. Monet's plein air painting easily incorporated industrial motifs. In this picture the bridge, seen from an angle, is used as an unusual compositional device.

Far left 'Train in the Country'. Monet's railway is vaguely archaic. The scene itself might be English, if only the parties in the foreground had been playing croquet on a level lawn.

'La Gare St Lazare' by Claude Monet, 1877. Above and left Two of a series.
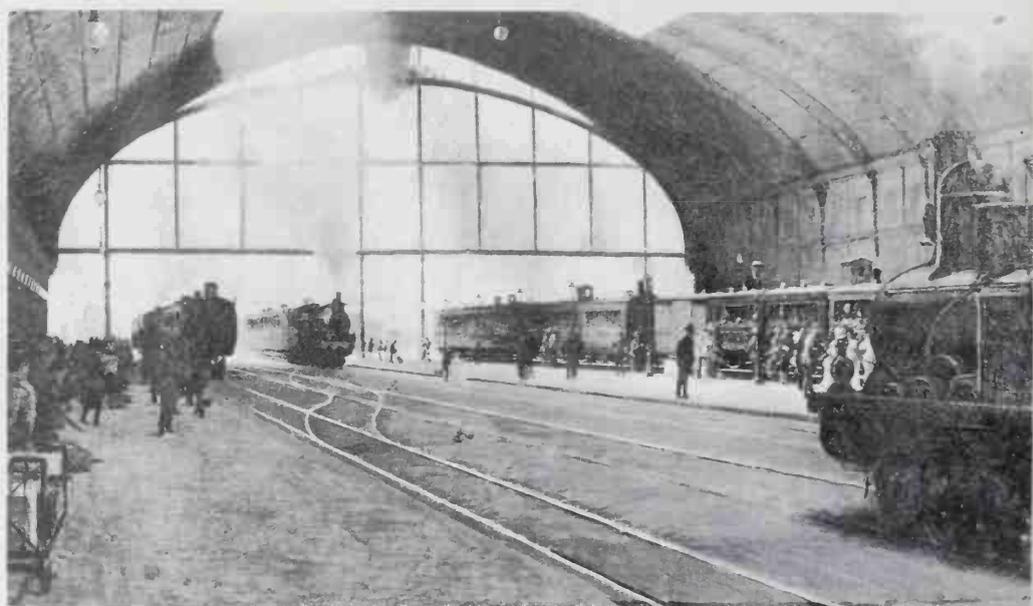
Top *Lucien Pissarro's impression of an approach to the south of London.*

Above *Morbelli's 'Milan'.*

Above right *'Train in the Snow'. This time Monet has painted a 'Tortillard', a*

French narrow-gauge train, though its great days came later than 1875.

Right *'A Train in Floods' by Theodore Earl Butler. A train reflected in the waters of a dissolving landscape.*

Above 'Amsterdam Central Station,' oil by N. van der Waay, circa 1895. The station had changed little by the mid 1920s when it was full of brassy steam locomotives, unusually well-behaved crowds and dining rooms as good as any in the city. From Amsterdam the 'North Star' departed to Paris: trains left for Vienna, Munich, Genoa and many other great cities. The trains have long been electric, but the handsome station still stands on its island between city and ships.

Above right 'Smoke from a Train' by Edvard Munch.

Right 'The Station' by Camille Pissarro. Long thought to be Penge, it has recently been identified as the now defunct Lordship Lane Station on the London, Chatham and Dover line. But letters to 'The Times' have not yet settled the matter.

SUMMER ON THE FRENCH RIVIERA
BY THE BLUE TRAIN

THE GLORY AND
THE DREAM

The high noon of the steam railways lasted for many years, from the 1890s into the 1930s. At the beginning, the railways were unchallenged in inland movement of passengers and freight. At the end, they were facing many new competitors, both on the road and in the air. On its own ground, the steam locomotive had new rivals, in heavy electric and—a slow starter— diesel traction. In the business of transport, they were allies. The trains became faster, heavier and more magnificent than ever before.

In passenger traffic, it was the time of great trains with resounding official names, often sonorously beautiful. The oldest named train in the world was the 'Irish Mail' between London and Holyhead, for Dublin and all points west. The name was entirely descriptive, not romantic; but it stuck in popular affection. Then, still on British rails, there was the 'Flying Scotsman'. The name was a nickname at first, but it became official and proudly borne, in later years. The train first ran by the East Coast Route between London and Edinburgh in 1862. It runs now, as then, though considerably faster and more comfortable, and it remains what Americans call an all-coach train, carrying first- and second-class passengers.

The American legend, among trains, was the 'Twentieth Century Limited', which ran between New York and Chicago by the famous water-level route. It ran until those two splendid rivals, the New York Central and the Pennsylvania Railroads were amalgamated, to the sorrow of many good Americans and others, under the jargon title of Penn Central. In its great days, people called the train simply 'The Century'. Let that remarkable man, the late Lucius Beebe, describe it:

"It is the dawn of a fine spring day in May of, let us say, the year 1934—take away or add a page of the calendar—for the scene we conjure up in the mind's eye of remembrance lasted for a decade backward and another forward into the then unforseeable forties. The viewer is invited to envision over the years, from a vantage point on the Hudson at Manitou or Peekskill, the broad waters of the lordly river flecked with early morning shipping, and the Jersey Palisades in the misty distance. In the foreground, gleaming and sinuous, are the four main-line tracks of the New York Central Railroad curving out of sight around a headline on their way to Albany or, if you prefer, Ultima Thule.

It is just five o'clock, and around the bend, running fast under a curving banner of coal smoke that hangs stationary on the morning air, comes the first train of The Parade. It is No. 36, an undistinguished bread-and-cheese sleeper called *The Genesee*. Ten minutes later comes *The Iroquois*, Train No. 30, Pullmans only; that is followed, in another ten minutes, by Train No. X4, *The Fast Mail;* and right on its heels comes a train with some suggestions of style in its going. It is *The Montreal Limited,* Pullmans only from Montreal to New

Opposite *'The Blue Train'. A traditional approach to the poster.*

Above left 'Italian Troop Train'. The time is late in the 1914/18 war: the train is heading north to the Austrian front with an artillery battalion. Possibly neither the soldiers nor the girls have much idea of what lies ahead on the Upper Adige. Stampa's treatment is documentary at its best, and the picture has great charm as well. Accuracy, too! The Italian rolling stock is faultless, just as the figures live.

Far left 'Letchworth Station' by Spencer Frederick Gore, 1912. A study in contrasting shapes and bright colours.

Above 'Return to the Front, 1917'. It was the most horrible front that Englishmen and Scotsmen (pictured here) had known since bloody business, on a much smaller scale, in the Crimea back in the 1850s. Everyone looks depressed, save perhaps for the newsgirl who might gladly comfort the lonely Highlander if decorum permitted. The scene is a London terminus, possibly Waterloo.

Left 'Cassandre's' innovative design for the 'Étoile du Nord'.
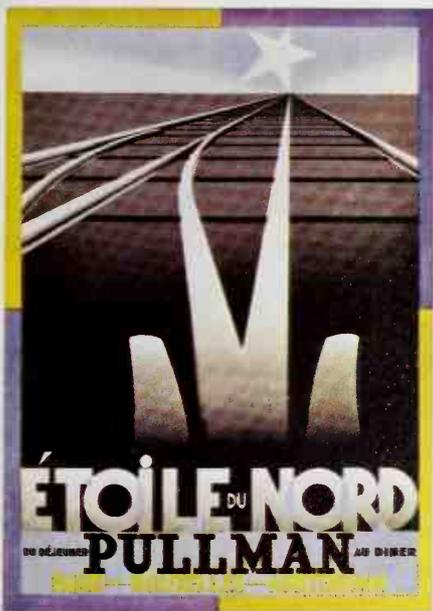
Above *Cailler's Chocolate. 'Ensuring a Pleasant Journey'.*

Opposite above *Wagon-Lits poster encouraging the smart set to travel by train to the south of France.*

Opposite below *The Jura-Simplon Railway. The line's poster emphasizes the picturesque scenery en route.*

York and a club car over the connecting Delaware & Hudson. And behind it, with only moments to spare, comes its companion on the Montreal run, *The Mount Royal*, with coaches and sleepers over the Rutland through deepest Vermont.

Next on the time card and clicking through like clockwork is a truly massive consist, No. 4, *The New York Special*. A flash of synchronised side motion, a hail of cinders, a long-drawn muted thunder of trucks over rail joints, and *The New York Special* has gone, leaving the stage set for the big event of the day.

This is the passage in glory of Train No. 26, *The Twentieth Century Limited*, all-Pullman extra-fare flyer from Chicago to New York on the tightest schedule known, with deluxe standard Pullmans, drawing rooms, staterooms, and compartments; single and double bedrooms; and valet, barber, and maid service. It has porterhouse steak on the menu, fresh flowers on every table, a steward on bowing terms with the great of the great world, a conductor with a pink in his buttonhole, and Pullman porters who are the *haute noblesse* of the social milieu in which they move. The names on its sailing list are the names of headlines; and besides a passenger list of exalted dimensions, *The Century* carries an intangible but equally glittering freight, the pride of a great operation with a tradition of excellence unmatched by any railroad in the world."

Beebe, eminent gastronome and train connoisseur, concluded with admiration,

"It was a train apart, aloof, serene, imcomparable—the sum of all excellences wrapped up in all-Pullman extra-fare schedules that none might let or hinder. It was at once a force of nature and a national showpiece. When it sailed each afternoon from its terminals in New York and Chicago and the red carpet of its going was rolled up for the night, each of its several sections became a self-contained microcosm of security, composure, and the best of everything".

'The Century' was a veritable palace on wheels; its runs were referred to as sailings, its patrons, who boarded it from a red-carpeted platform, were served by valets, secretaries, French chefs, barbers, and a librarian; the latest stock market quotations were available at hourly intervals. Billed simply as the "Favourite Train of Famous People", it became the subject of a Broadway smash hit in the early 1930s.

In Europe, in the halcyon days of the early twentieth century, one could still, with no particular formality, buy a ticket to St Petersburg, Istanbul, Baghdad or Peking. The Orient Express became a byword for excitement, mystery, intrigue and illicit romance. In the train's palmiest days the Head Steward and the waiters of the Compagnie des Wagons-Lits wore blue satin knee breeches with white silk stockings, crimson tailcoats and silver pumps. The train was greeted at stations along the route by brass bands, local orchestras and gypsy serenades. The passengers included diplomats, aristocrats, celebrities, and according to legend, a requisite assembly of spies, diamond smugglers, glamorous ladies of indeterminate origin and purpose and deposed Balkan kings posing as tobacco merchants. Lady Chatterley took the Orient Express; so did Hercule Poirot, James Bond and the magnificent heroine of Maurice Debroka's novel *La Maddone des Sleepings*, Lady Diana, described as "the type of woman who might have brought tears to the eyes of John Ruskin". Although many thrillers and mystery films were set on the Orient Express, no actual murders are known to have been committed upon it; however, several disappearances have been recorded. There was always a worry that violence might break out among the cosmopolitan travellers and once, when the train was trapped for several days in a Balkan blizzard, passengers were asked to swear on a

Bible to forbear political discussion. Before the outbreak of the Second World War, notices were posted in each carriage reading, *"Attention. Les Oreilles de l'Ennemi Vous Écoutent"*.

What Pullman was to America, Wagons-Lits — the International Sleeping Car Company — was to Europe, and as things turned out, a much wider area too. The company's operations spread far into Russia and ultimately through Siberia to the Eastern coasts of China. Thanks to the very generous dimensions allowed by Russian standards, greater even than those of North America (though the difference in rail-gauge was only 3½ extra inches), its Russian cars were enormous. In Tsarist days, the Trans-Siberian Express was a marvel of sumptuosity and that could be well appreciated since, after a week of travelling, one was still deep in Siberia. The company adventured down into the Levant and got a good foothold on the Nile with *trains-de-luxe* for rich tourists to Luxor and the Valley of the Tombs of the Kings. Between the wars, Somerset Maugham noted its sleepers even at Kantara, waiting to take passengers across the Sinai Desert and ultimately to Jerusalem. The quality of service was fairly constant, like that of Pullman. The Man-in-Brown who was responsible for each sleeping car had to be a considerable linguist, and was frequently cosmopolitan by birth. He was guide and ally to all his passengers over sometimes sticky frontiers, more than something of a diplomat, being able equally to satisfy the lofty aristocrat, the rather scared maiden lady who might be on her first assignment as an English governess in Brandenburg or wherever, the arrogant newly-rich and the seasoned traveller.

In France itself, the Blue Train, running from Paris to the Riviera, became famous for the glamour of its accommodations, its restaurant and nightclub. And for those for whom such arrangements were inadequate, there was always the availability of a private car, a private train, even of a private station. When the management of the London and North Western asked King Edward VII how he would like the new royal train equipped, he replied without hesitation, "make it like a yacht". The private railway car, especially in America, became the ultimate status symbol; before its implications of wealth and exclusiveness such recognized properties as
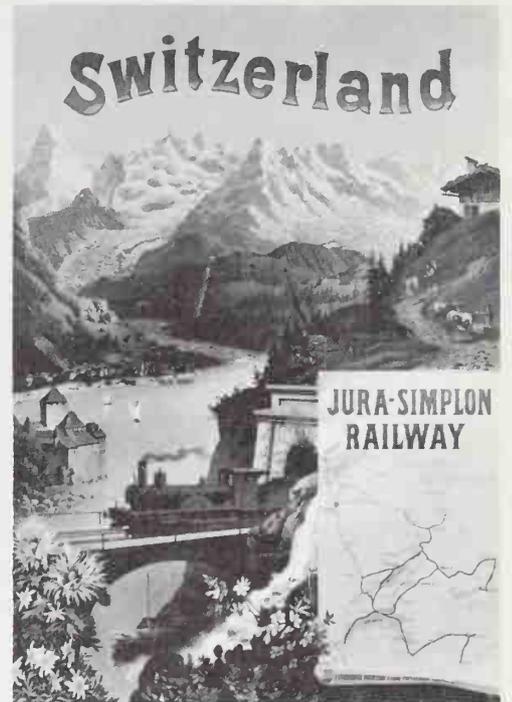
Top 'Evening Train' by Paul Delvaux, the Belgian Surrealist. Accurate in detail, the painting conveys the silent precision of a dream.

Above 'Piazza d'Italia' by Giorgio de Chirico.

Top right 'West Highland Railway' by C. Hamilton Ellis, 1975. A North British train, headed by W. P. Reid's engine 'Glen Ogle,' c.1914.

Right 'Departure from Paddington' by Terence Cuneo, 1975.
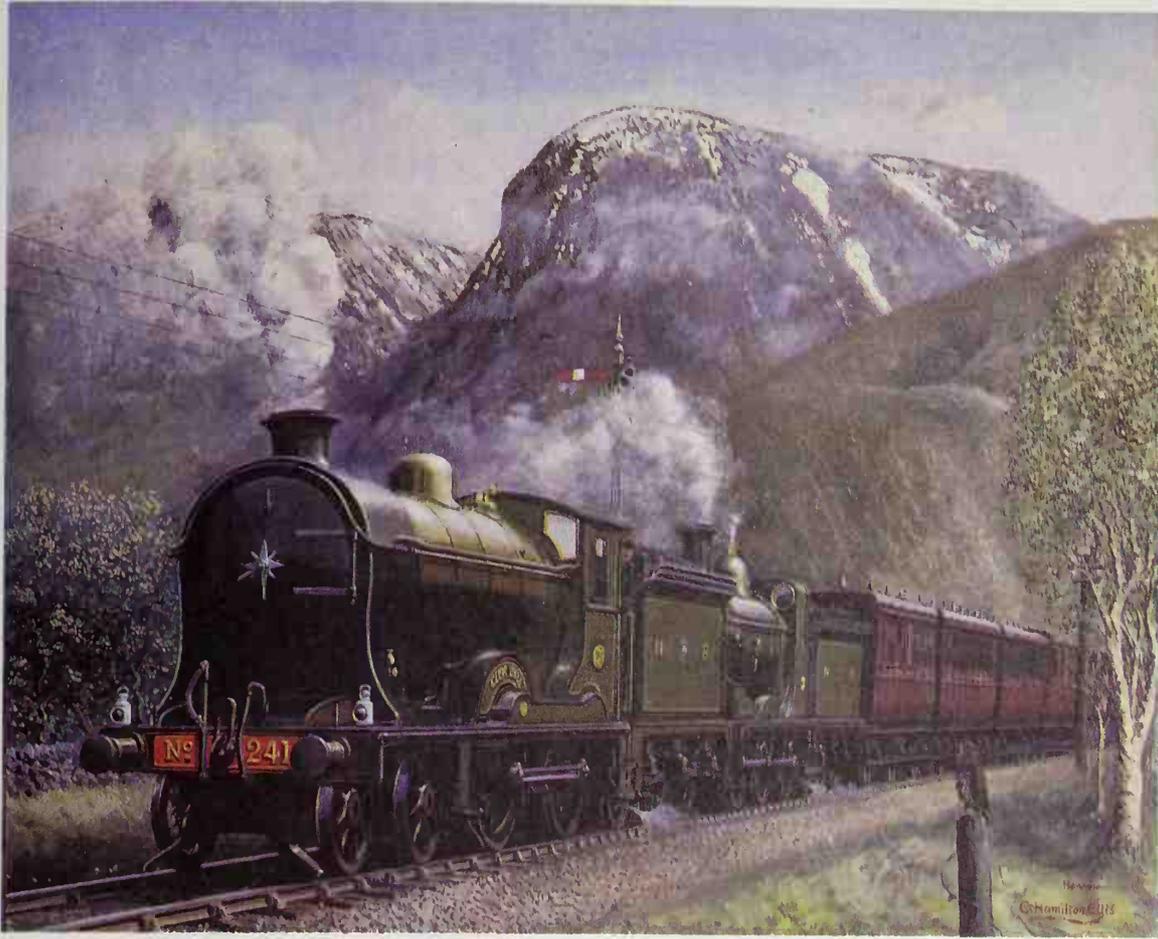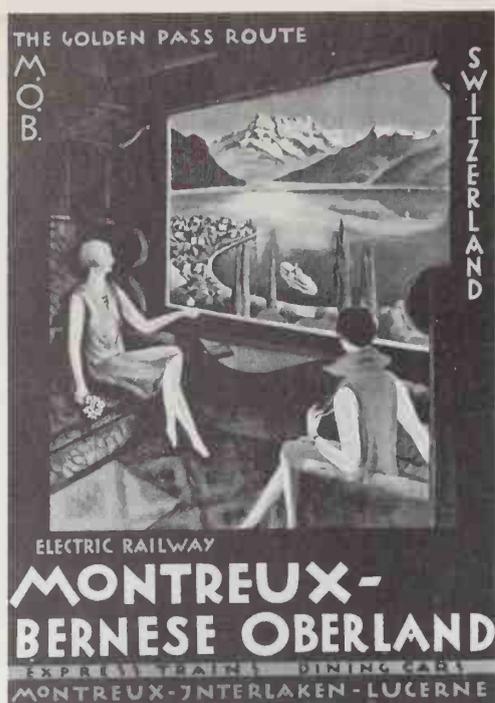
Above *The Montreux-Bernese Oberland.*
The Swiss railway poster emphasizes the
beauty of the passing scene and the
luxuriousness of the accommodation, as
well as the elegance of the passengers.

Opposite *Irish Mail—Travelling Post*
Office. Picking up in North Wales,
London and North Western Railway.
Signed F. P., circa 1906.

titled sons-in-law, social recognition at Newport or Palm Beach, or galleries of Old Masters, palled to insignificance. Gold-plated plumbing, Italian murals, wood-burning fireplaces, marbled floors and grand pianos softened the rigours of long-distance travel. Pullman and Wagons-Lits set standards almost unparalleled in the world, though South African Railways, quite independently, justified that 'almost' and to this day run a magnificent Blue Train between the Cape and the north of the country. Perhaps this is the last of the aristocrats.

The glamour of the famous trains somewhat obscures the fact that the future of the steam railway was, already in the 1930s, in serious doubt. The extremely rich, as yet unhampered by onerous death duties or income taxes, could still afford unparalleled luxury. But many Continental lines had been badly damaged during the First World War and with the advent of the Great Depression, there was little capital to be invested in reconstruction or new equipment. In America many smaller companies faced bankruptcy and the consolidation of lines became common. Faced with competition from motor cars, modern motor lorries and aeroplanes, the railways emphasized their greatest assets—speed and reliability. On some lines passengers received a partial refund if a train ran late. Diesel trains, beginning with Germany's "Flying Hamburger", began to be used in the 1930s and streamlined steam trains hauled by locomotives with names like 'Quicksilver' promoted the image of unimpeded velocity. Railways, with their efficient inter-city links, were still crucial to the industrial and commercial strength of western countries, but the great financial monopolies had been broken. By the late 1930s, the railway, having reached the pinnacle of its power and prestige, faced decline.

In the early twentieth century European artists were influenced by manifestos that had less to do with life and more to do with art; the issue of contemporaneity was never again as important as it was to the Victorians and the Impressionists. The Academies had lost their authority and to be of one's time one had only to identify with a new movement, a new group. The realistic depiction of society and its technology appeared less significant, although certain artists like Fernand Léger, in his essay on "The Aesthetics of the Machine", saw an expression of the dynamism of modern life in the beauty of mechanical forms.

When railways were used as a central subject in modern painting it was usually for their expressive power or for the sensations they evoked. The railway was a natural motif for the Italian Futurists, who celebrated the strength and power of modern life "violently transformed by victorious science", and believed that "all subjects previously used must be swept aside in order to express our whirling life of steel and pride, of fever and speed". To convey the experience of velocity and flux, the Futurists turned to the discoveries of Cubism, dissecting objects and reconstructing them in simultaneous prismatic forms, setting the plane of the canvas itself in motion. In Gino Severini's *Suburban Train Arriving At Paris,* fragmented forms and bright, contrasting colours, the billowing smoke of a locomotive and the glimpse of letters on a billboard were intended to convey the speed and energy of a train rushing through the outskirts of a city.

In the dream world of the Surrealists, trains are often used as symbols— of sexuality, alienation, loss or separation. Giorgio de Chirico sought to convey the enigmatic nature of the visual world, shaped by revery and reminiscence. De Chirico wrote, "To become truly immortal, a work of art must escape all human limits: logic and common sense will only interfere.

But once these barriers are broken, it will enter the world of childhood vision and dreams", and once defined "the romanticism of modern life expressed in the nostalgia of railroad stations, of arrivals and departures". In *Piazza D'Italia* he uses empty spaces, divergent perspectives, mysterious shadows and architectural forms that exist in alienation from one another to convey the silent, haunted quality of a deserted city square.

Early twentieth-century art in America, in contrast to that of Europe, was more closely linked with the movement of social realism, progressive politics and the desire for reform; writers like Frank Norris and Theodore Dreiser reflect the same concerns. Robert Henri became the leader of a group of painters, many of whom had also worked as journalists, including John Sloan, Ernest Lawson, George Luks and William Glackens. Disparagingly dubbed the Ash Can School because of their investigation of the 'low life' of New York, these artists were drawn to the less glamorous aspects of the city; among their subjects they included lonely stations, railroad yards, rusting locomotives, the elevated railway and soot-blackened freight trains. Working at about the same time, Charles Sheeler created epic images of the new industrial landscape with clear, hard geometrical shapes derived from Cubism. A generation later Edward Hopper portrayed the emptiness, monotony and anonymity of the same environment. His favourite themes were commonplace ones: the city at night, railroads, deserted stations, houses on lonely suburban streets, all painted with a clean precision and bright colours that emphasize their pathos. In the 1930s Thomas Hart Benton was one of the leaders of a small regional movement that returned to the America of small towns, the countryside and the frontier; in a time of national uncertainty his exaggeratedly realistic style and rugged subjects suggested the enduring values of an older, unchanged society. Benton also painted monumental panoramas; his murals for the New School in New York are filled with images of a corrupt materialist society, teeming crowds of grotesque figures and relentless thrusting machines.

In the world of 'high art' trains remained a marginal or personal motif,

seldom represented in their own right. But in the field of graphic design the 1920s and 1930s were one of the great periods of railway art. As an art form born of industrialised society, posters became a new means of communication. And as railway companies turned to graphic designers to promote their competitive lines or a particular image, designers turned to avant-garde painting to seek new ways of conveying information. While some posters continued to illustrate the glamour of the destination or the luxury of accommodations, others sought to convey the more abstract attributes of the railway itself—its speed, excitement, elegance and power. Cubism and Futurism had suggested new approaches in representing movement, and an interesting French railway poster designer, Adolphe Jean-Marie Mouron ('Cassandre') was influenced by both. He used the elements of cubist collage in his poster entitled *Wagon-Bar;* in *Étoile du Nord* a bright pattern of gleaming lines streaking up to a star on the horizon suggests the railway's conquest of time and space.

It was also a time when the railroads commissioned recognized painters to create a new standard of commercial art. In America the calendars issued by the Pennsylvania and New York Central Railroads became famous, a familiar sight on the walls of barber shops, grocery stores and hotel lobbies. In Britain the Great Western commissioned W. Heath Robinson to provide *Railway Ribaldry* for its centennial celebration in 1935. Such Royal Academicians as Augustus John and Sir William Orpen designed posters; among the most interesting are those showing industrial scenes and the railway workers themselves. Under the guidance of Frank Pick, London Transport was advertised by artists of the rank of Frank Brangwyn, Rex Whistler, Jacob Epstein and Henry Moore. The combination of aesthetic quality and commercial effectiveness proved highly popular. In the finest of these posters the railways had promoted an achievement often aspired to and seldom achieved, a true union of art and industry.
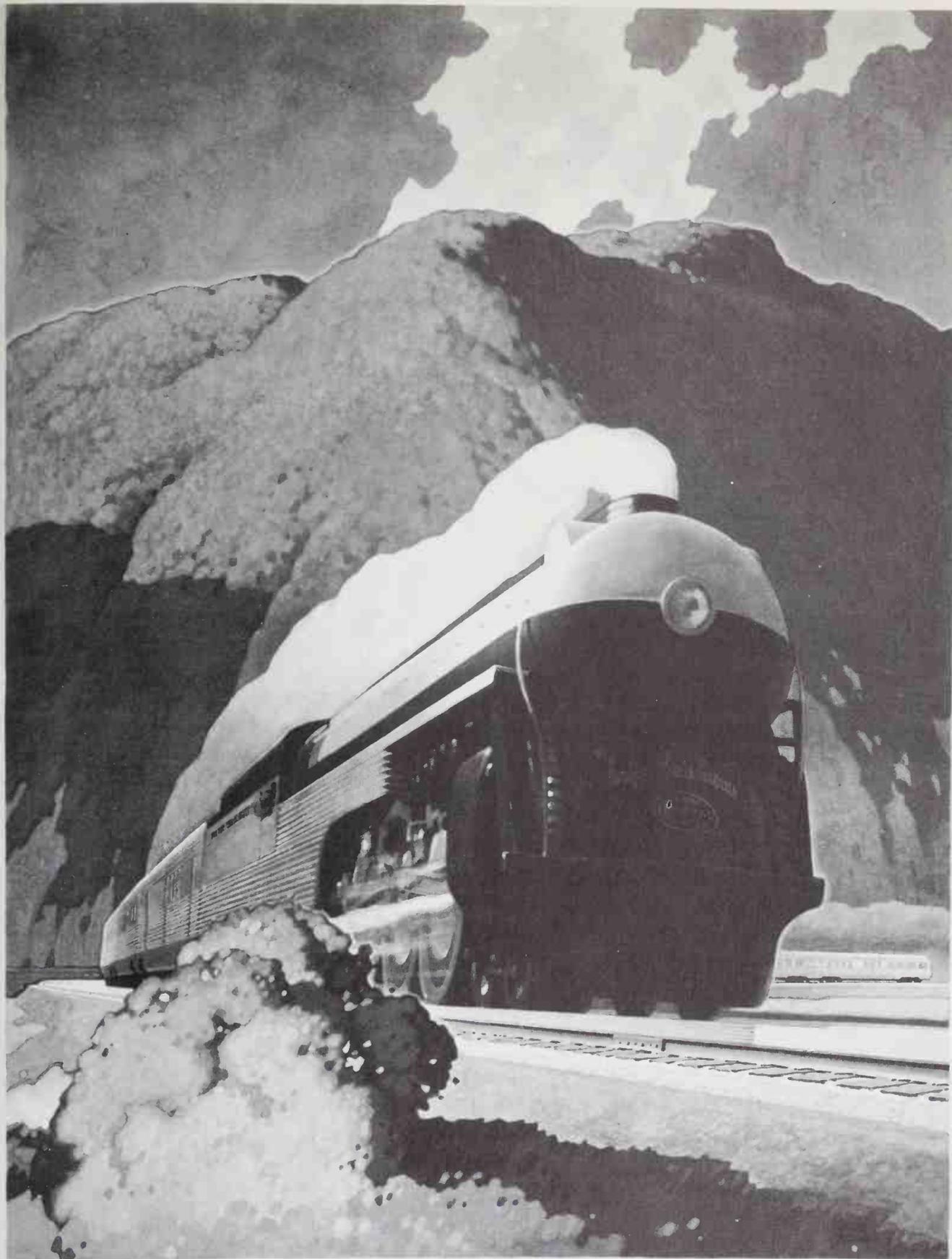
The New EMPIRE STATE EXPRESS
NEW YORK CENTRAL SYSTEM
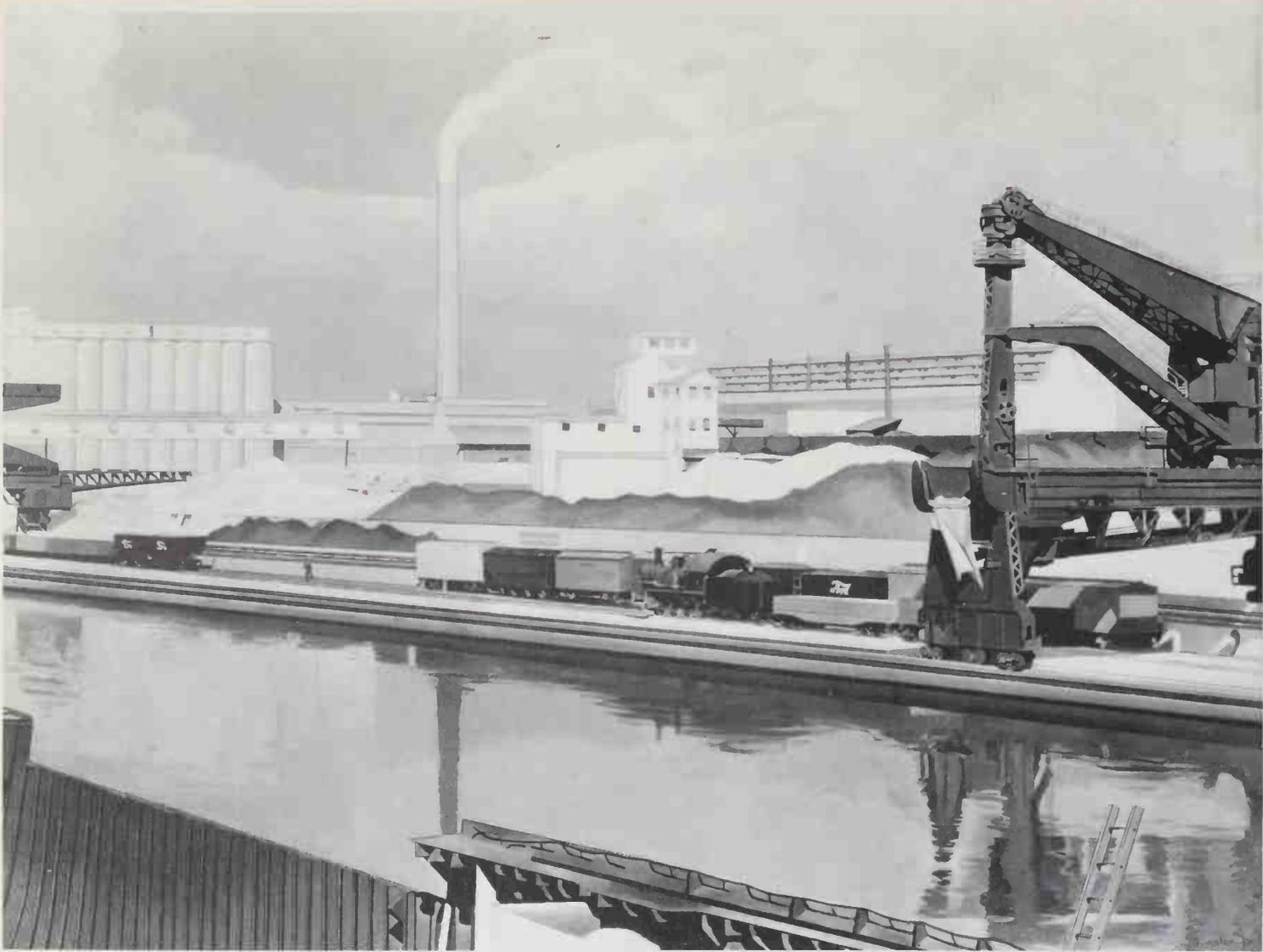
Above *'American Landscape' by Charles Sheeler, 1930. The new industrial environment painted with cool, equivocal precision.*

Right *'The Locomotive'. Etching by Edward Hopper, 1922. American Vernacular.*

Far right *'The Great Steel Fleet' La Salle Street, Chicago, in 1945, by Leslie Ragan. The diesel is invading the mighty New York Central, but steam is still proud and numerous. One of the two nearer trains could be the legendary 'Twentieth Century Limited'; that on the far right belongs to 'The Empire State Express'. From a New York Central Calendar of 1946.*
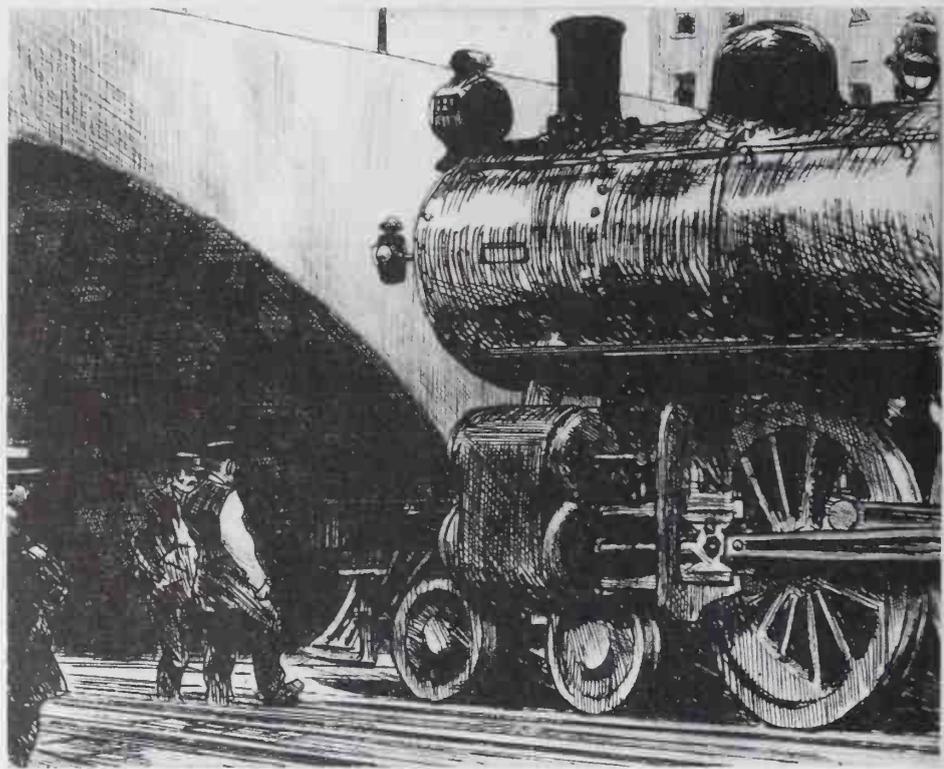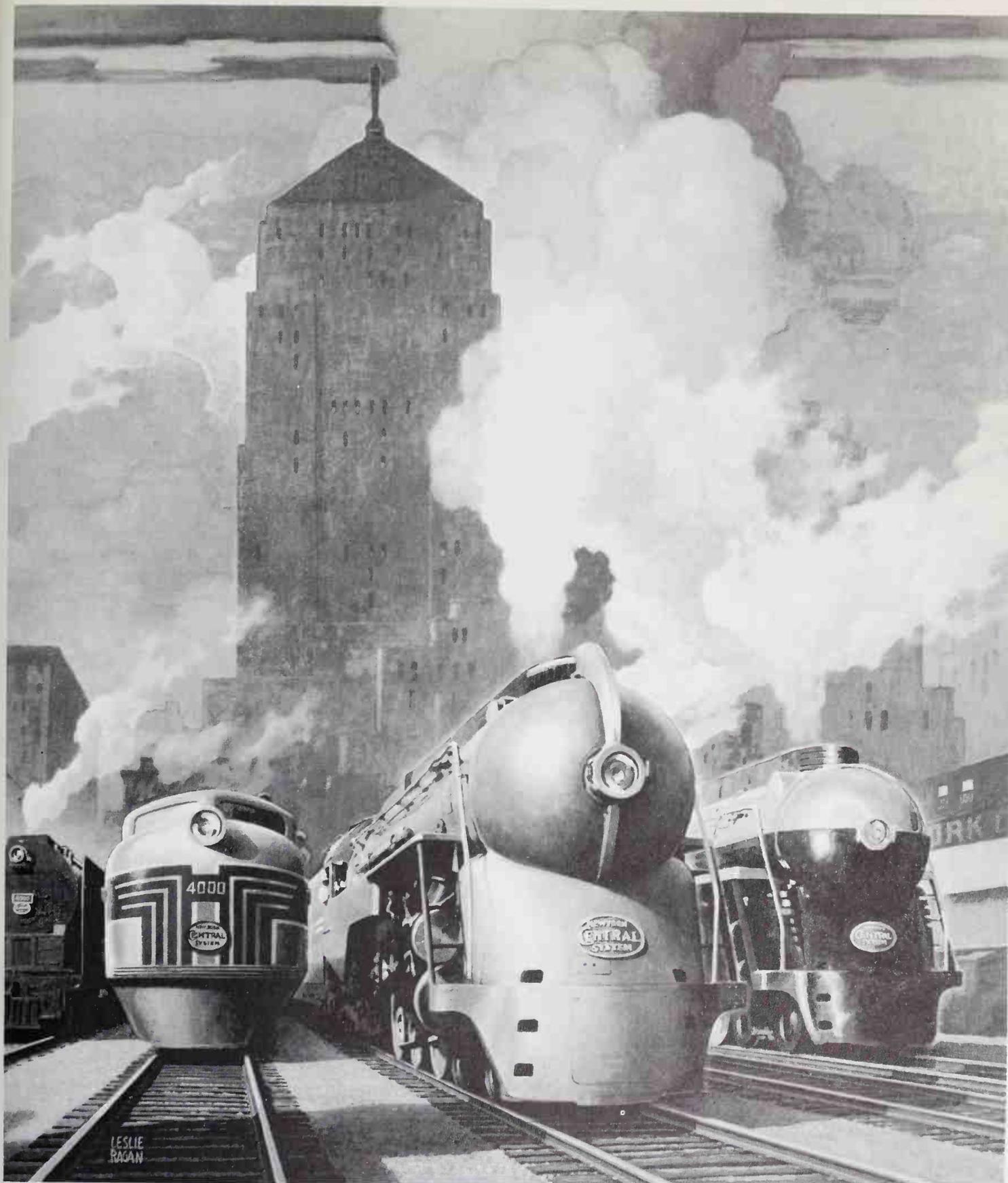
Above 'Freight Cars, Gloucester', by
Edward Hopper, 1928. Bright sunlight,
quiet, melancholy. The outskirts of a
New England fishing port.

Right 'Train and Bathers'. Etching by
Edward Hopper, 1920. Antiquated
English train, contemporary nudes.

Above right 'Locomotive, Number Two',
by Reginald Marsh. A watercolour by
the American artist dated 1929.

Far right 'Pattern for Tracks' by
Francis Criss, 1933. An American
small town station.
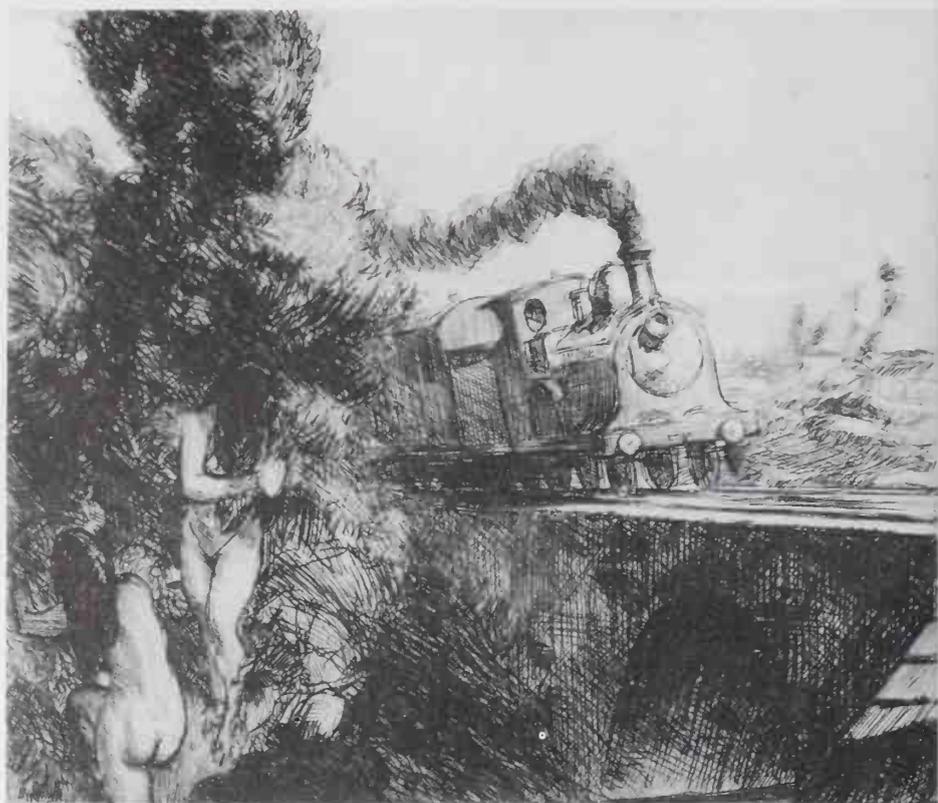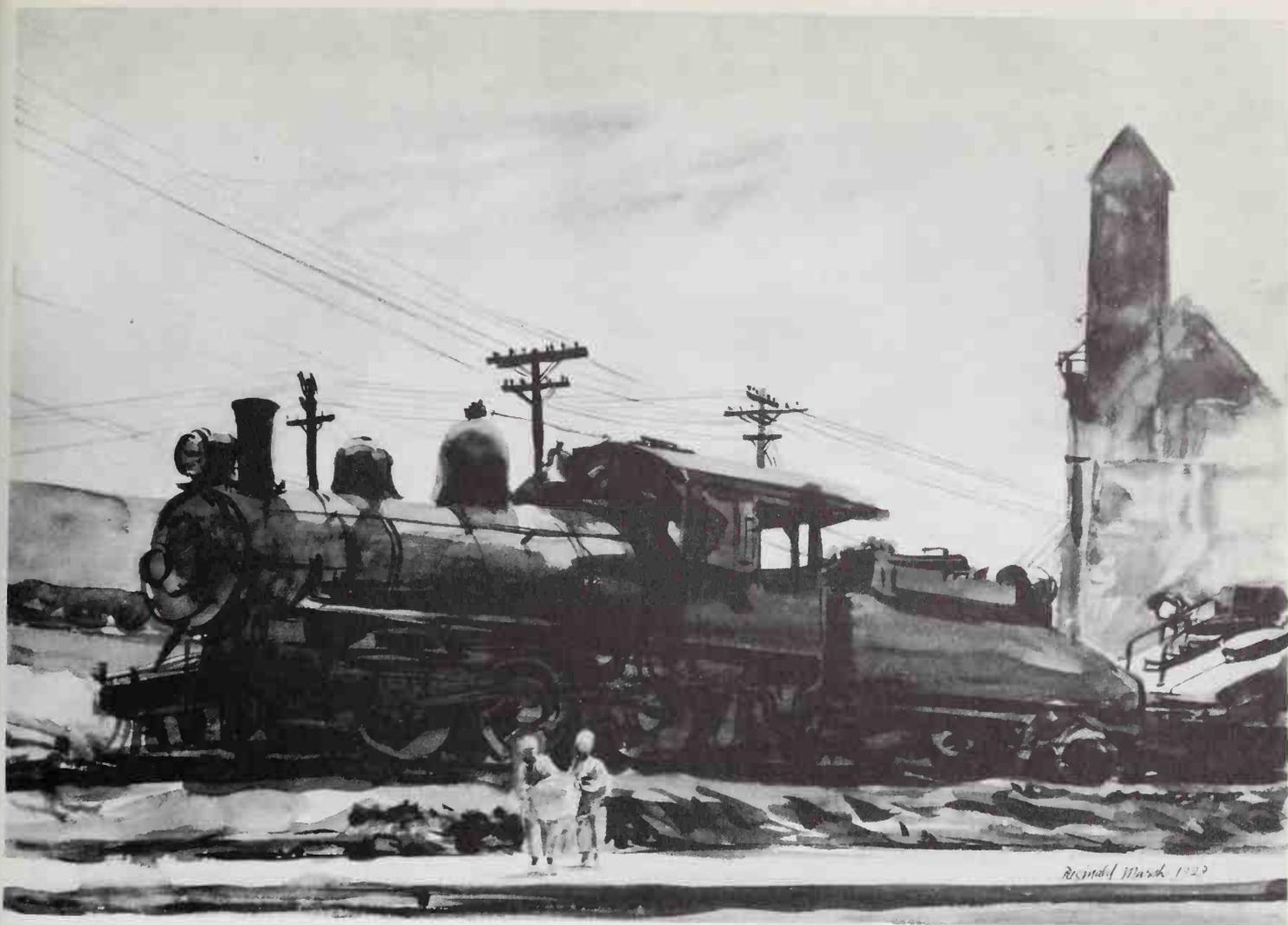
Above *Commuter's Nightmare: The Futurist Approach.* 'We declare the splendour of the world has been enriched by a new form of beauty, the beauty of speed'. Severini's 'Suburban Train Arriving at Paris'.

Right 'Paris Metro'. Drawing by Serge Glumac.

Far right 'Circuit Railway at Grenelle' by Antoine Villard, 1922. Snow in the suburbs, a lowering sky, a lonely stretch of track.

A. Villard
1922.

TO
KEEP PACE
WITH TIME
TRAVEL UNDERGROUND
A Season Ticket will help you

HERRICK
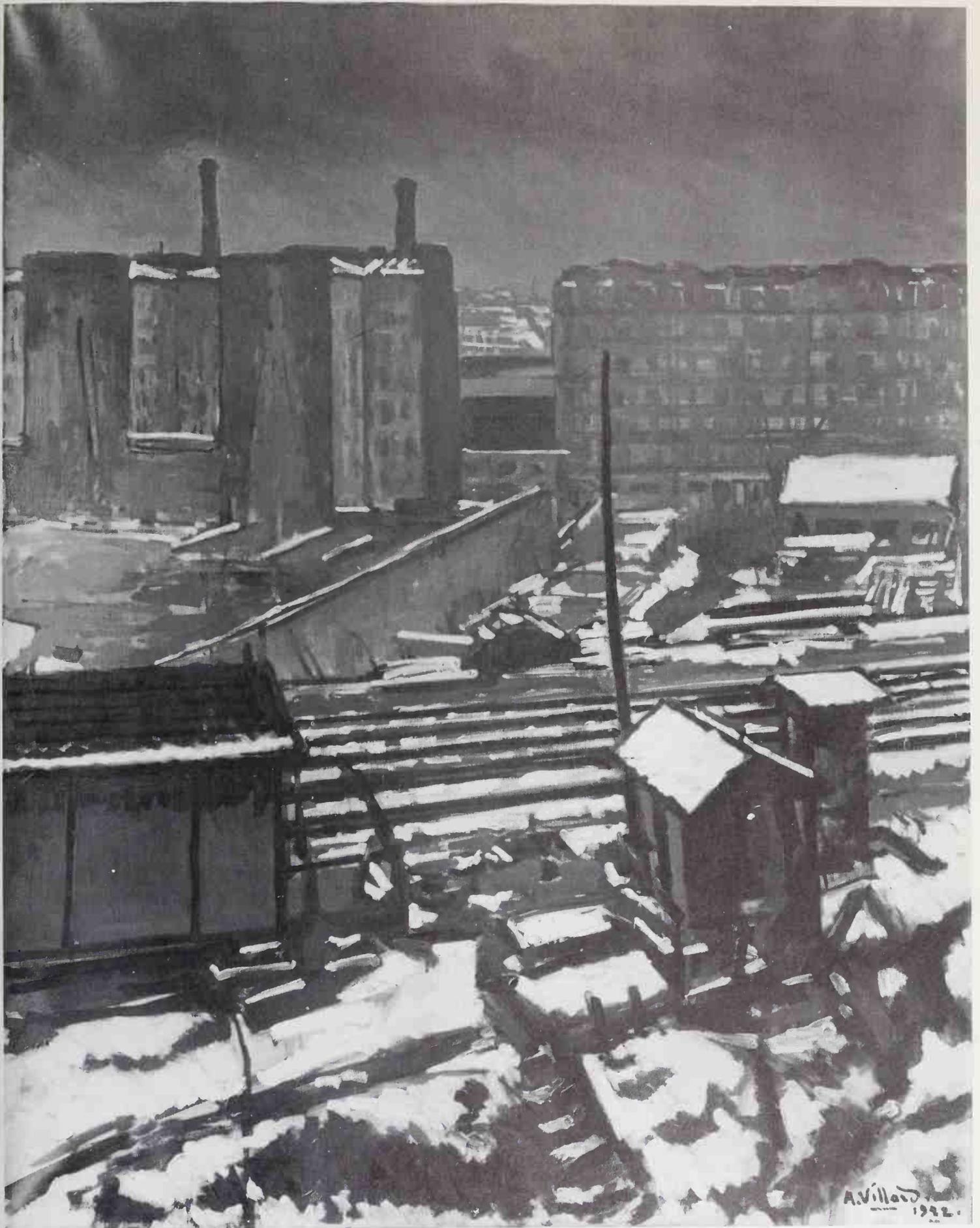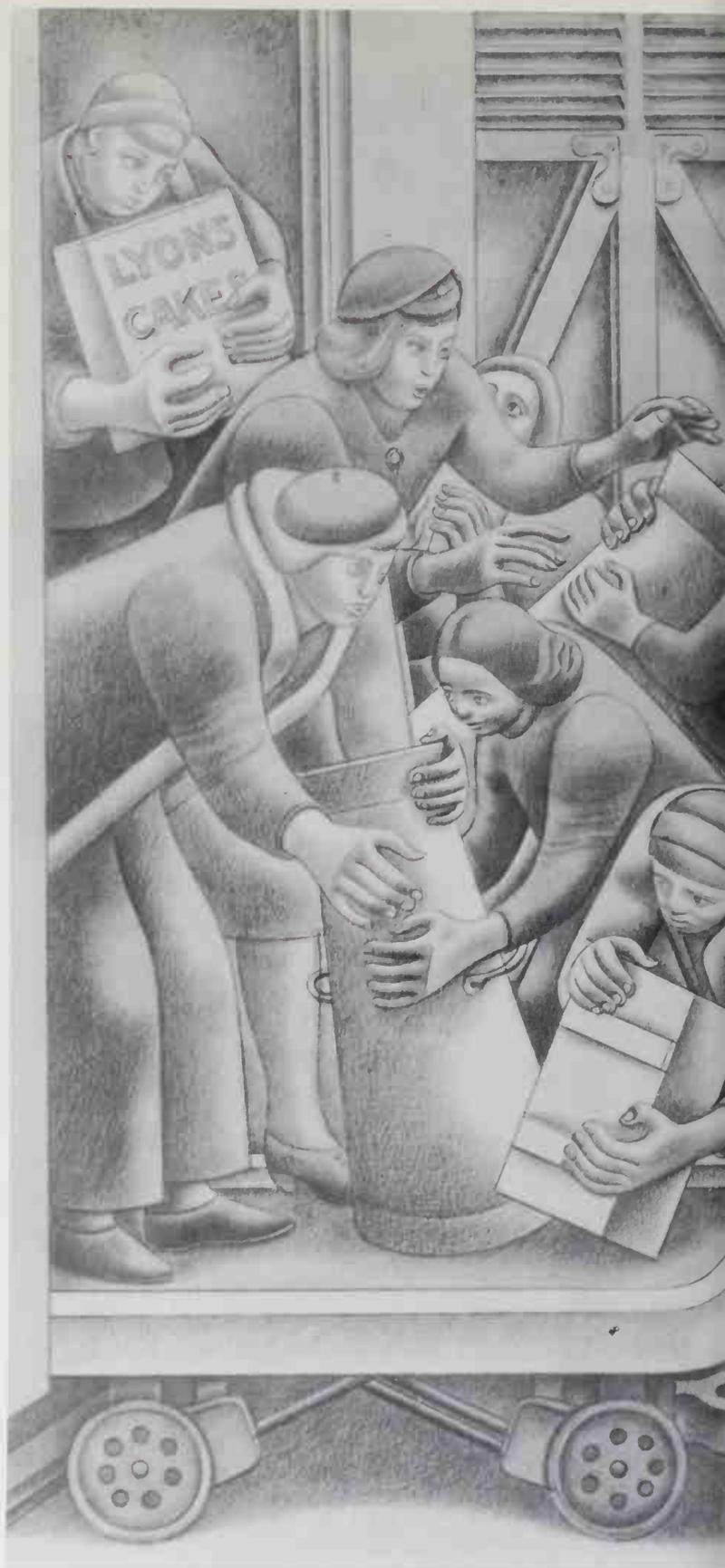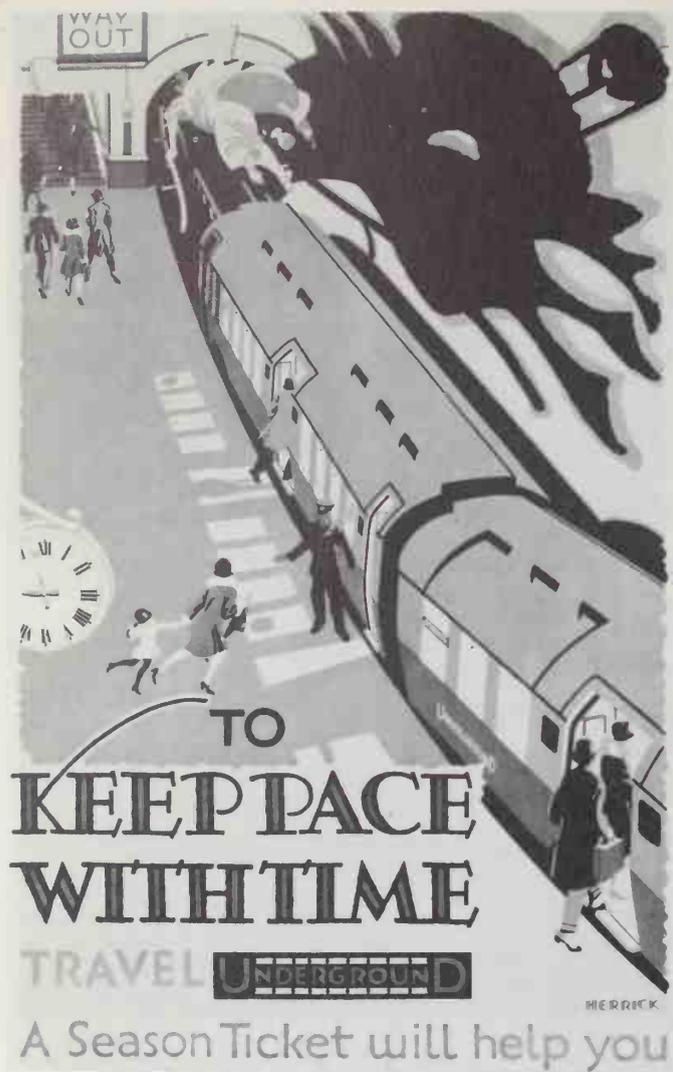
Left *Wartime poster with verse.*
'Thank you, Mrs Porter,
For a good job stoutly done:
Your voice is clear, and The Hun can hear
When you cry "South Kensington!"'
'Station Woman' by Eric Kennington,
for London Transport, 1944.

Above left 'To Keep Pace with Time' by
F. C. Herrick, 1927. One of a series of
fine posters commissioned by Frank Pick
of London Transport.

Above 'Women Railway Porters in
Wartime' by William Roberts. Energetic
homage to a new type of wartime
worker.

Above '*Lehigh Valley*' by Henry Billings, circa 1930.

Above right '*Faubourg*' by Paul Delvaux. This is the Old Belgium, from the houses with their detached terraces to the Belpaire locomotive and straw-hatted little girl.

Right '*Time Transfixed*', René Magritte, 1932. Paris-Orléans surrealized.
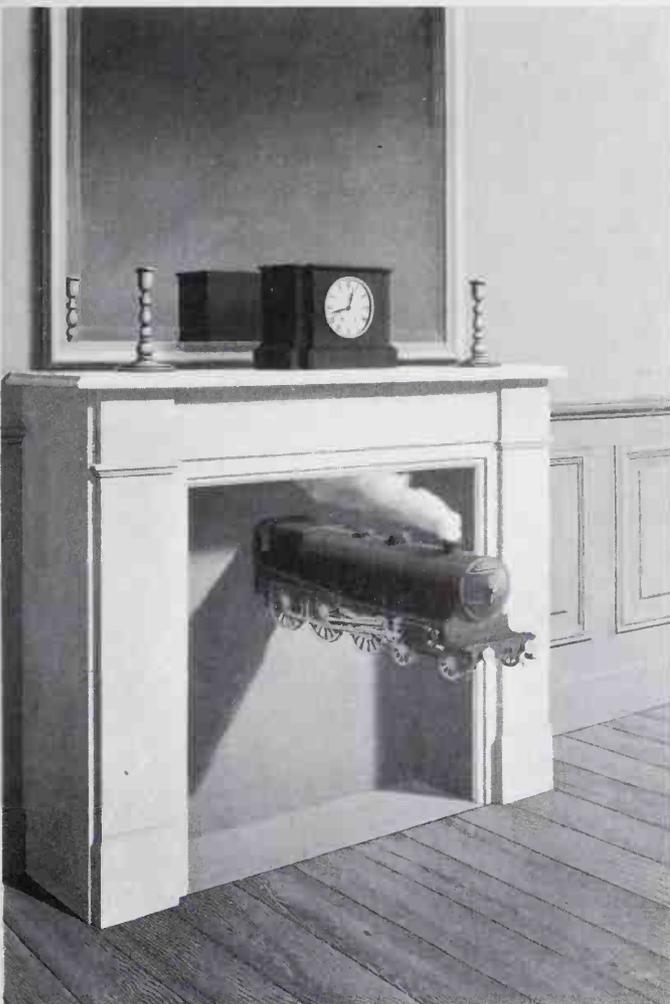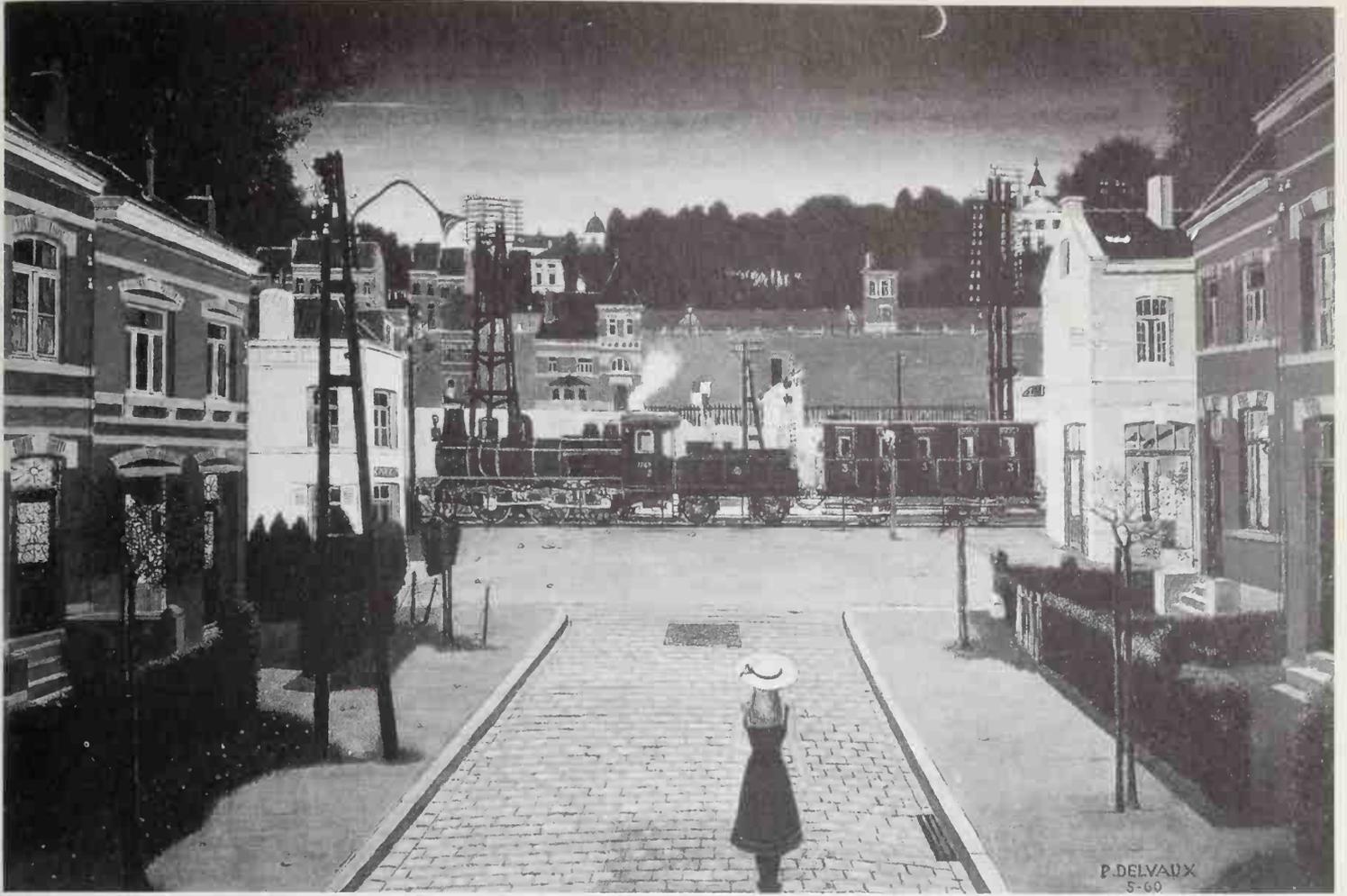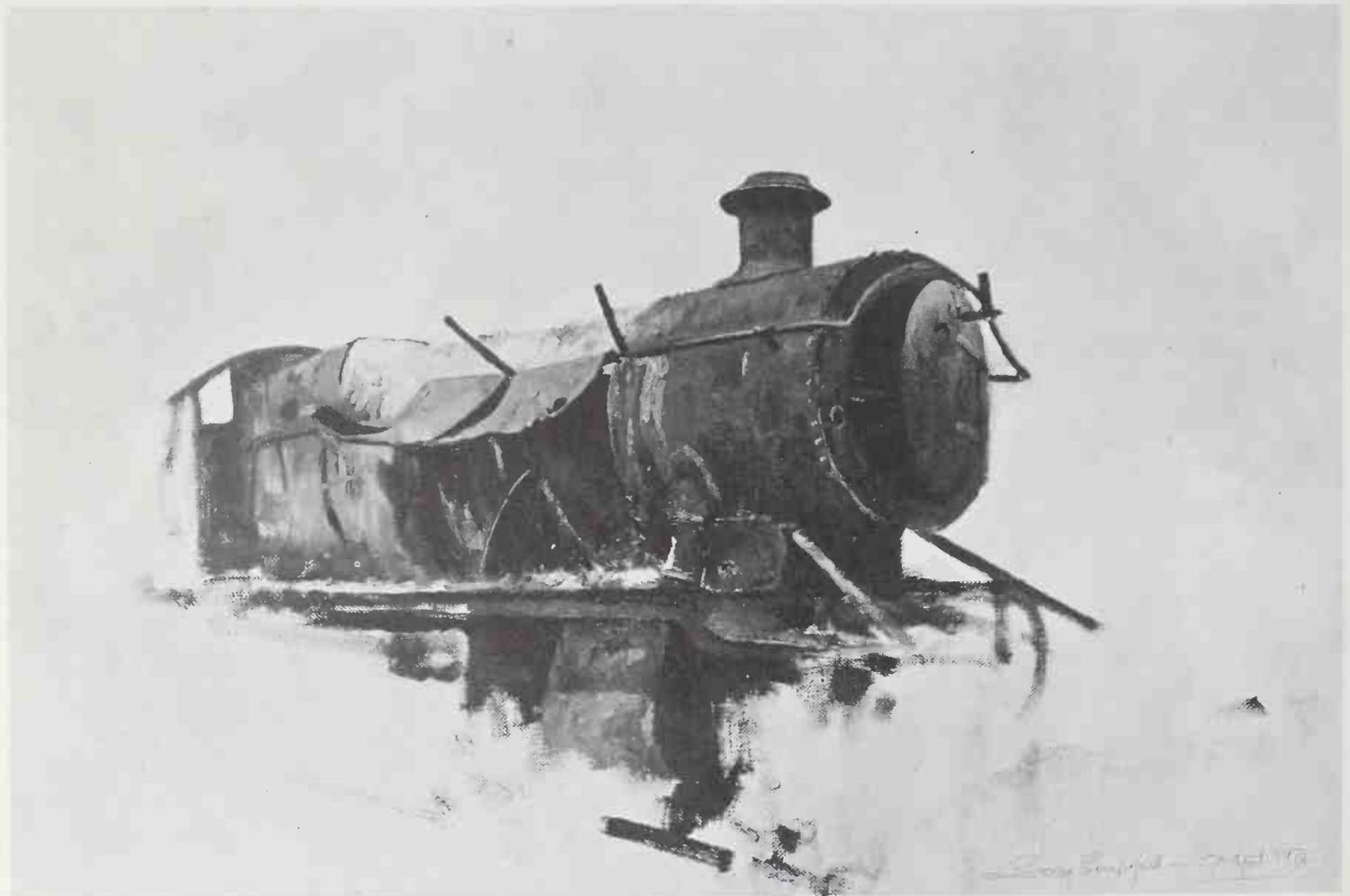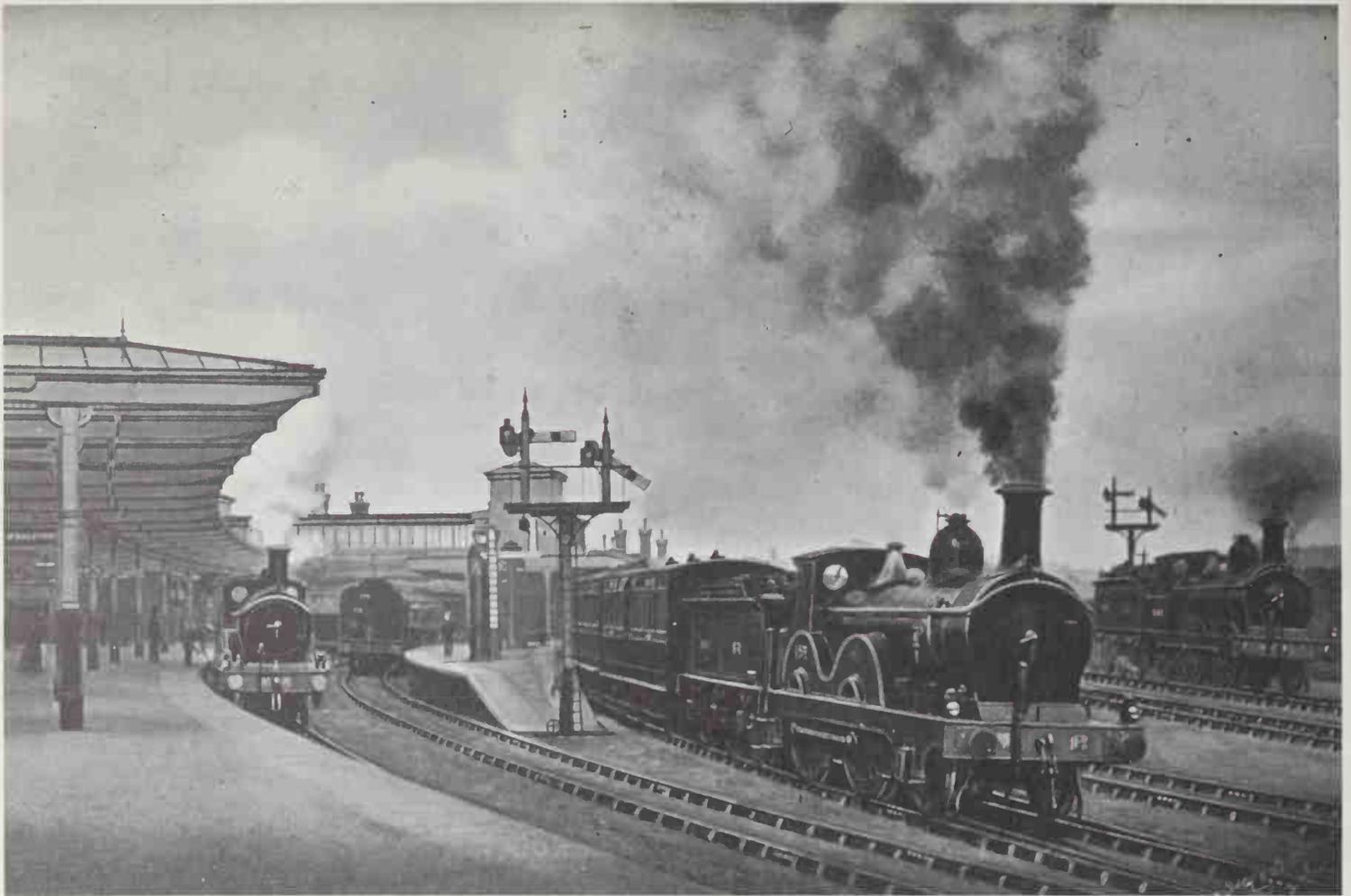
THE REALITY: PRESENT AND PAST

Alongside the use of the train as a symbol—of power, speed or, conversely, of a passing mode of life—there has been the constant desire to represent the train, and particularly the locomotive, for itself alone, as a record and as a celebration. The reasons are many.

There was the slow awakening to the age-old fact that familiar things can be, and often are, beautiful, and therefore should be commemorated in some way. As we have seen, Turner first perceived it as far as the railway was concerned. Monet mastered it. In more recent years there has come the spur of actual fondness, not least because in many areas the train has been retreating from its once undisputed realm.

In view of newly awakened affection for the long-familiar steam train, and on their own peculiar merit, the 'F. Moore' paintings are of interest. They were never hung in the Royal Academy, though some are treasured now in London at the Science Museum. There never was such a painter as F. Moore, which was a trade name under which several painters worked, to an unchanging and meticulous style. Mostly the picture was painted over a blown-up photograph, in oils that were thinly applied but sufficiently rich. Their great virtue was that they accurately represented, in both form and colour, trains and locomotives from every part of the world. It might be the 'Flying Scotsman' or the 'Pennsylvania Limited'. It might be in New South Wales or in the Canadian Rockies. Many a railway book from the late 1890s onwards for thirty years had 'F. Moore' coloured plates, which certainly helped to sell them. Hundreds of picture post-cards came out. With very few exceptions, the results were admirable. Some, considered purely as pictures, were very beautiful. They were, of their time, what Bourne's and Ackermann's lithographs had been to their time, and had a popularity akin to that of the prints of Currier and Ives.

Totally different in style were the works of Frank Brangwyn. The etching reproduced on page 128 shows Cannon Street Station, London. Brangwyn *got* the place, as he got so many other subjects, with its atmosphere, its gauntly splendid structure, its James Stirling locomotives and its restless moving figures. One can hear the cavernous din. One can almost smell the smells, not only of the engines but of the oil, the gas and the crowd.

Another British artist of similar stature was Sir Muirhead Bone. Like Brangwyn, he could draw both a bridge and an engine, faithfully yet dramatically, and his reconstruction-scene of the bombed London Road viaduct at Brighton in 1943, at once conveys the situation of breached viaduct, temporary trestling being tested with two old Atlantic-type locomotives, and the sad, blasted houses in the valley below.

In painting, there had been sharp reaction; not only from Victorian

Opposite above *'Midland Railway',* painting by *'F. Moore'. The trains shown are late Victorian.*

Opposite below *'Barry Scrapyard'.* In David Shepherd's oil sketch of an old Great Western mogul engine—many years on the dump in 1976—is the mute appeal of rejection, ruin and decay.

pure-representational style, but from the splendid influence of the French Impressionists. Oneself, initially as an illustrator, though ever painting for love of both the work and the subject, has stuck to a strictly Victorian representational style, to show what these rapidly vanishing things *were like,* to people who never will have seen them. Always oils! A train is a big, massive, oily thing. Howard Fogg in America is one of the few painters who can make a steam train look massive and majestic in watercolour and one reproduces him with pleasure.

There are gifted artists presently about who are painting some of the finest railway pictures one has ever seen; far better than most of the work current when the steam railway was in its proudest years. Much work has sprung out of a particular regret at the passing of machines that were accessible to all, whose mechanism could not only be understood but could actually be seen working. The once glamorous trains have all but disappeared. The great companies have been nationalized, hailing an end to a kind of private enterprise that may have been unscrupulous, but was nevertheless heroic in the ambitiousness of its undertakings. In many countries passenger services have been severely curtailed, timetables have grown thin, depot lights have been dimmed and once prosperous freight yards allowed to grow derelict. As cars, aeroplanes and, in some cases, diesel trains have replaced the steam railways, they in their turn have come to represent adventure and romance, in the same way as the stage-coaches they themselves made obsolete.

This remarkable affection is accurately expressed in contemporary railway art. Sometimes famous locomotives are depicted with meticulous care; several artists specialize in the recreation of memorable events in railway history, like the driving of the Golden Spike at Promontory Point, Utah. *Hell Gate Express*, painted in 1974 by George Gloff, shows the Sunnyside train yard in Queens, New York, in 1936, when it was still the scene of activity and excitement. Howard Fogg's *Sunrise on the Desert* of 1972 is more romantic in tone. Set in the years of the Great Depression, it

shows a Southern Pacific freight train moving through a mountainous Arizona landscape spiked with cactus.

Many writers have tried to explain the enduring fascination of the steam railway. The late Tom Rolt has written,

"Of all man's mechanical inventions the steam locomotive remains the most evocative of power and speed, having been endowed with these attributes by generations of designers and craftsmen whose sole aim and consideration was perfection of function. Such a single-minded pursuit of fitness for purpose produced in locomotive design a quality of line and proportion which the poet Rupert Brooke described as a 'calm, unpassioned beauty' and which occasionally, as in the 8-ft single drivers of Patrick Stirling, achieved results which were virtually masterpieces of applied art. A future generation denied the spectacle of a steam locomotive in full cry will suffer a loss as great as we suffered who have never seen a full-rigged ship with all her canvas set".

The artists' work often consists of painted panegyrics on a thing that is almost gone, for those who loved it. Should an Englishman grudge the fact that some of the best have been Americans? Certainly not! Railroads made America! Sheldon Pennoyer portrayed old American trains, looking back from the 1920s to the 1850s and after, taking the historical approach, which one has followed so often in one's own pictures, though generally painting what one has seen and can remember.

One cannot foresee the future, save by tendencies, which often are wrong. But in the meantime, even though one may mourn steam, reflect that steam, and its mother, water, where there is a big fall of that, are the primeval agents of power through electrical generation and transmission. Take a look at a vast electric railway junction at sundown, with pantograph or shoe flashing on the contacts, and the coloured signal-lights reflected on a complex layout of tracks! Yes, take a look at that, whether it be about Camden Town, or Manhattan Transfer, or Munich Main, or Zürich, or wherever, and you will find new beauty in it, especially on a wet winter night, or a frosty one, or you are a Philistine! But the glory of naked steam, that is in one locomotive, vehicle or vessel, is gone.

Opposite South Eastern and Chatham. 'Cannon Street Station', an etching by Frank Brangwyn.

Below 'Holland Railway No. 805 1914-47.' Pen and dry brush drawing by C. Hamilton Ellis.
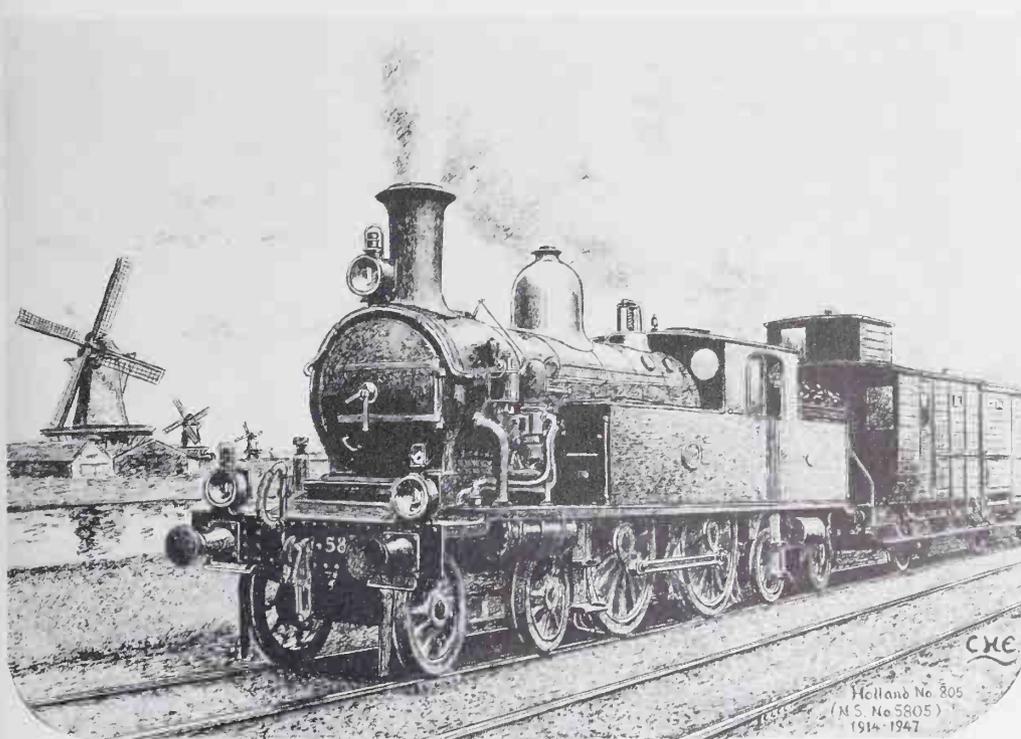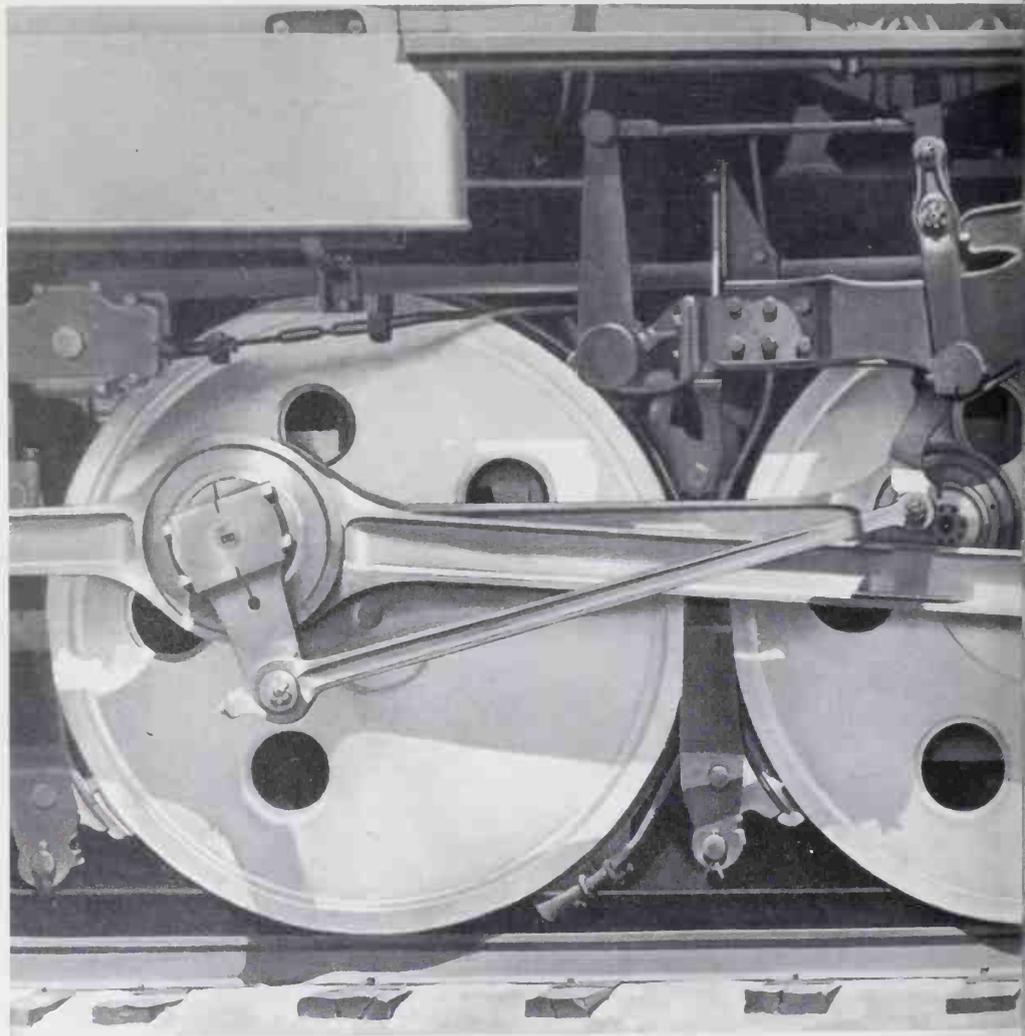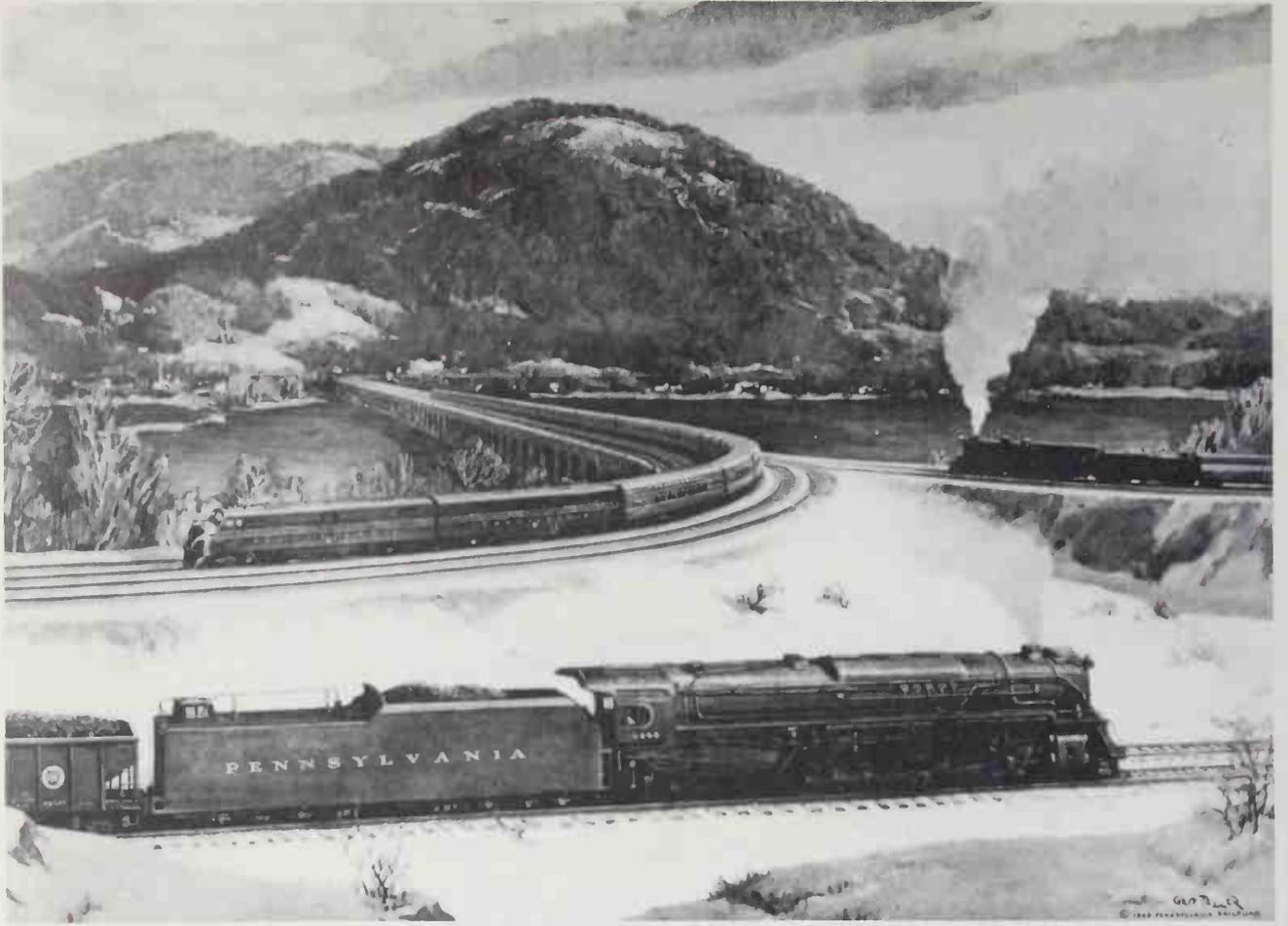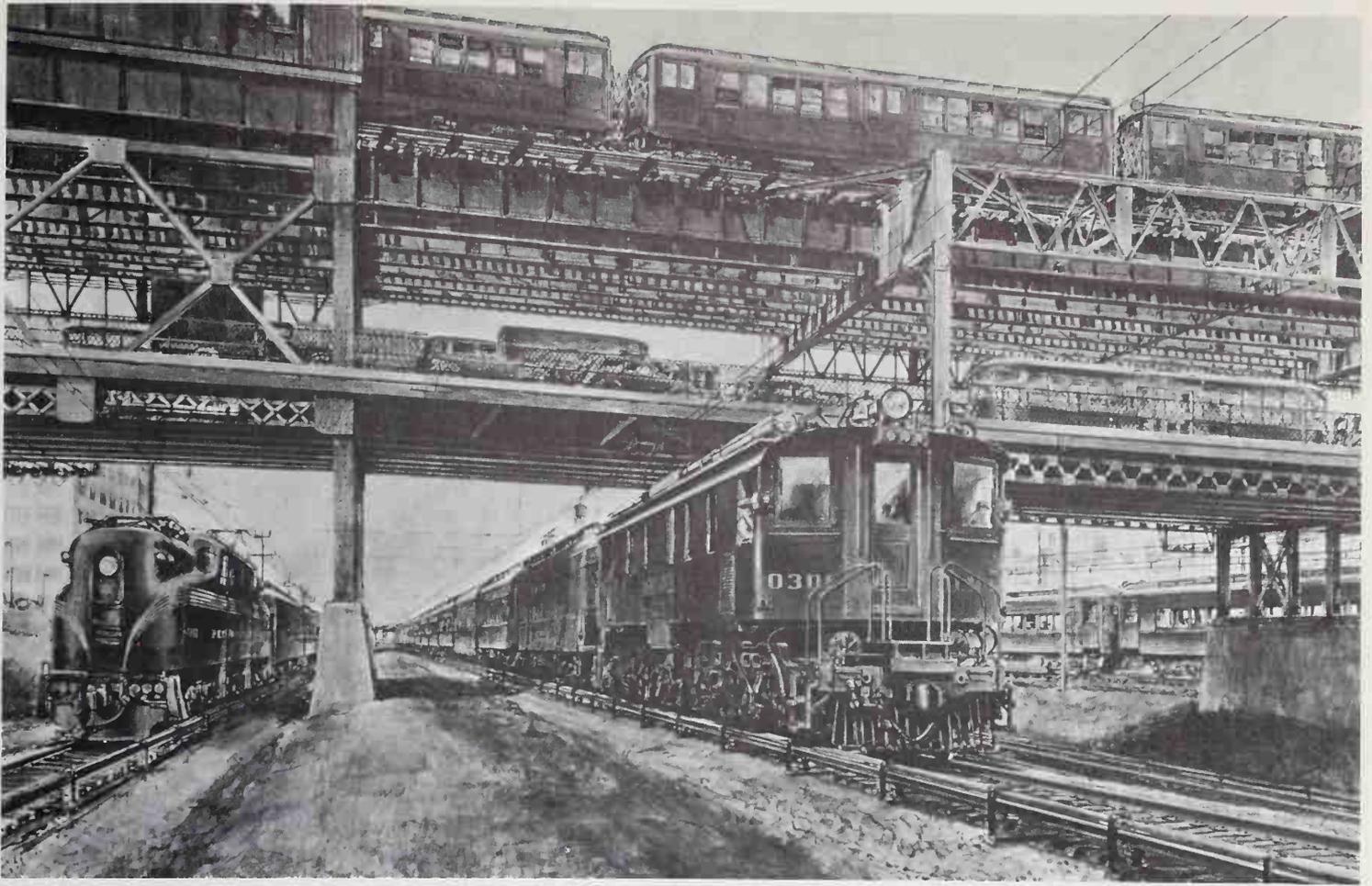
Above left 'Crossroads of Commerce, 1949'. A painting by Grif Teller for the Pennsylvania Railroad's 1950 calendar. The scene is just north of Harrisburg, Pennsylvania, where the company's main line to Chicago crossed the Susquehanna River at Rockville on a four-track, 3,800-foot long stone arch bridge. Three trains are shown, one with a diesel locomotive, two drawn by steam.

Above right 'Hell Gate Express'. Routes and Levels in Queens, 1936. With diverse slums, a prison of some substance, a magnificent cantilever bridge now fairly venerable, and railroad tracks galore, the borough of Queens in New York City is a place of mixed attractions. George Gloff's 1974 painting of traffic on three levels shows an Interborough Subway train (skied); highway traffic including an electric street-car (middle); and left to right below: Pennsylvania, New Haven and Long Island electric trains.
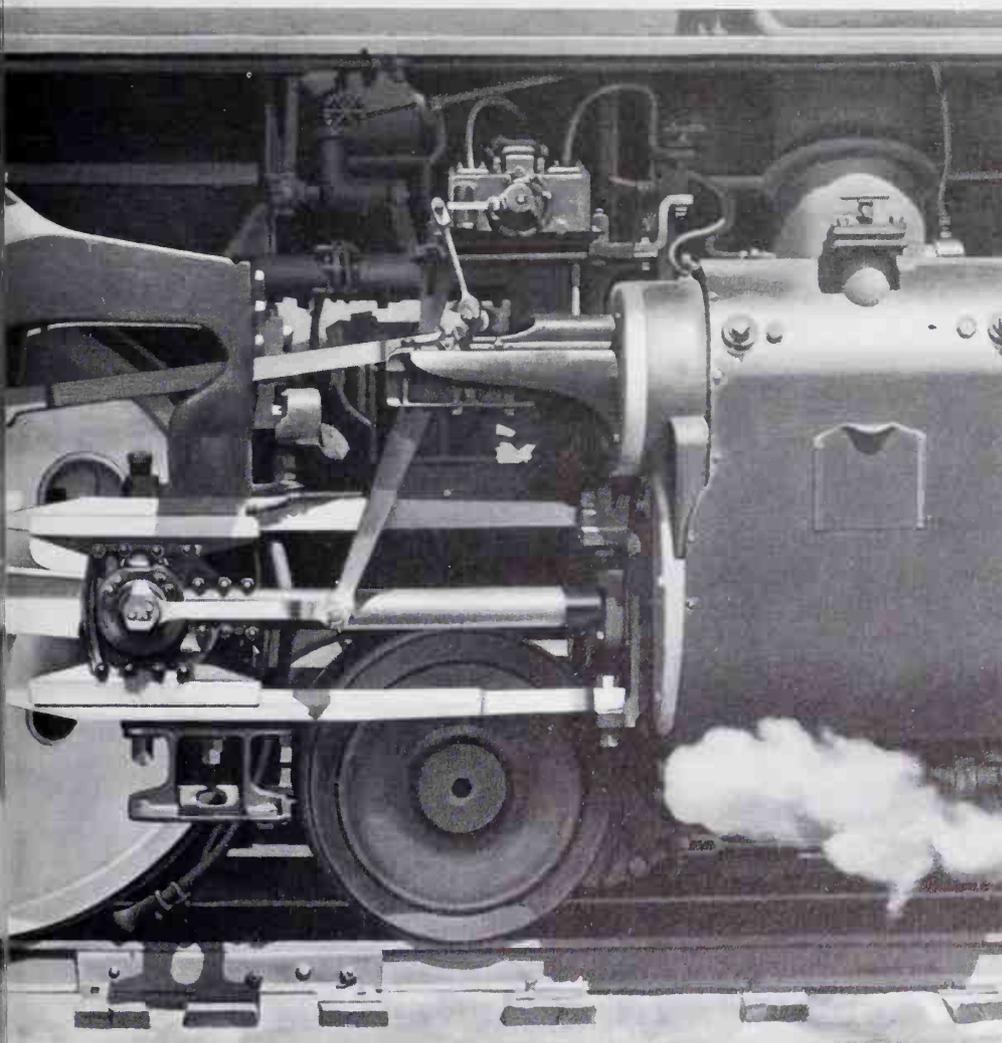
Left 'Rolling Power' by Charles Sheeler, 1939. The heroism of mechanical power rendered in silvery, metallic colours.
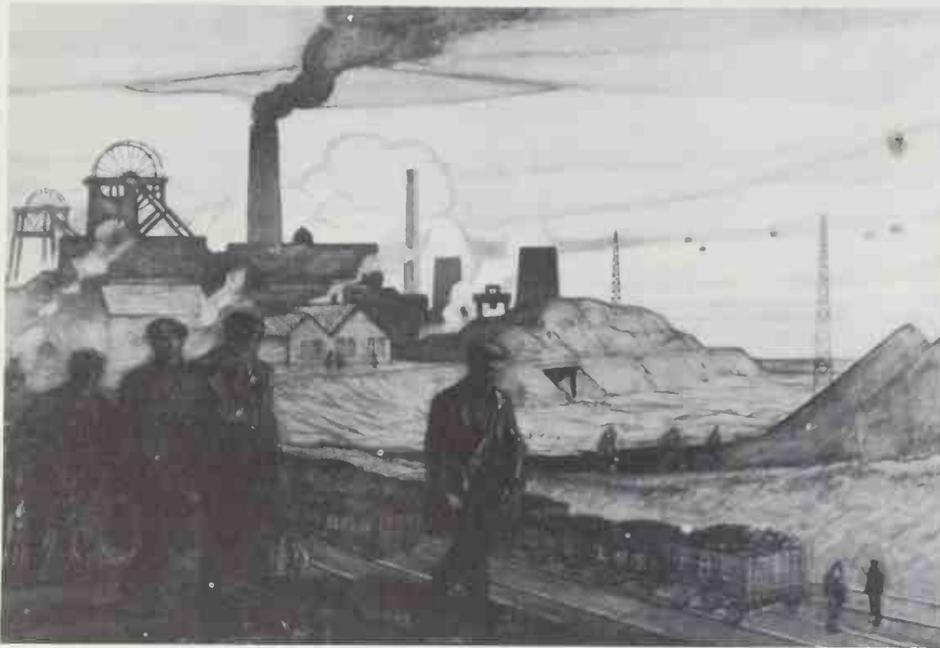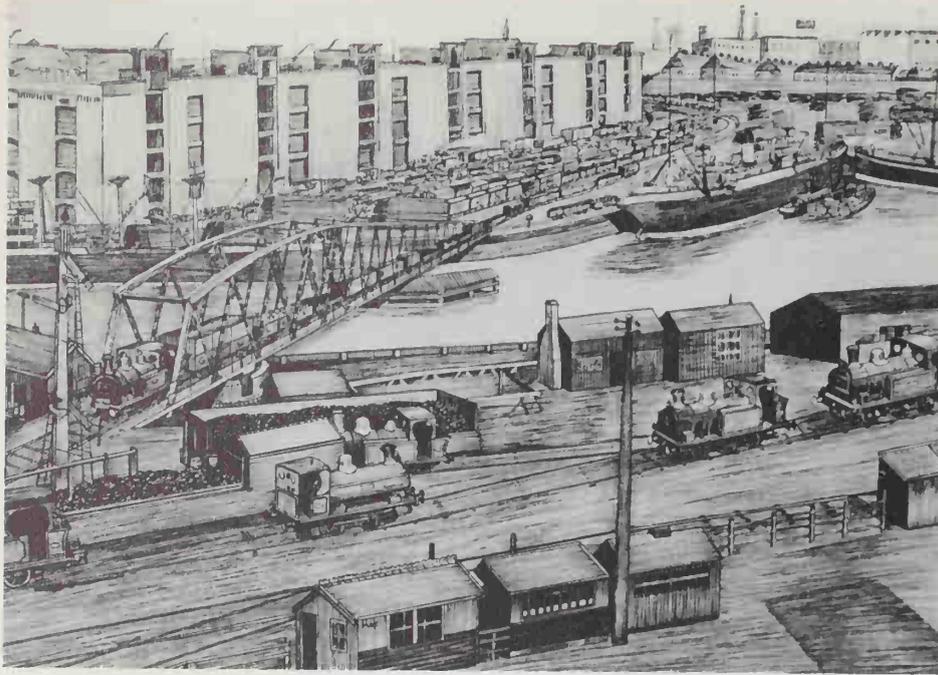
Top 'Manchester Ship Canal'. Pen and ink drawing, circa 1930. Ships and trains, some laden with coal, a railway swing bridge, and the docks and warehouses of the great commercial city.

Above 'Coal' by Gilbert Clausen, from the 1920s 'British Industries' series. Posters of industrial subjects emphasized the role of the railway in the nation's economy. An unsentimental, sympathetic depiction of the miners themselves.

Right 'Sub-Nigel Mine', South Africa, 1968. David Shepherd's painting exemplifies the representational approach, recording something at once important and vanishing.

THE SUB NIGEL LTD.
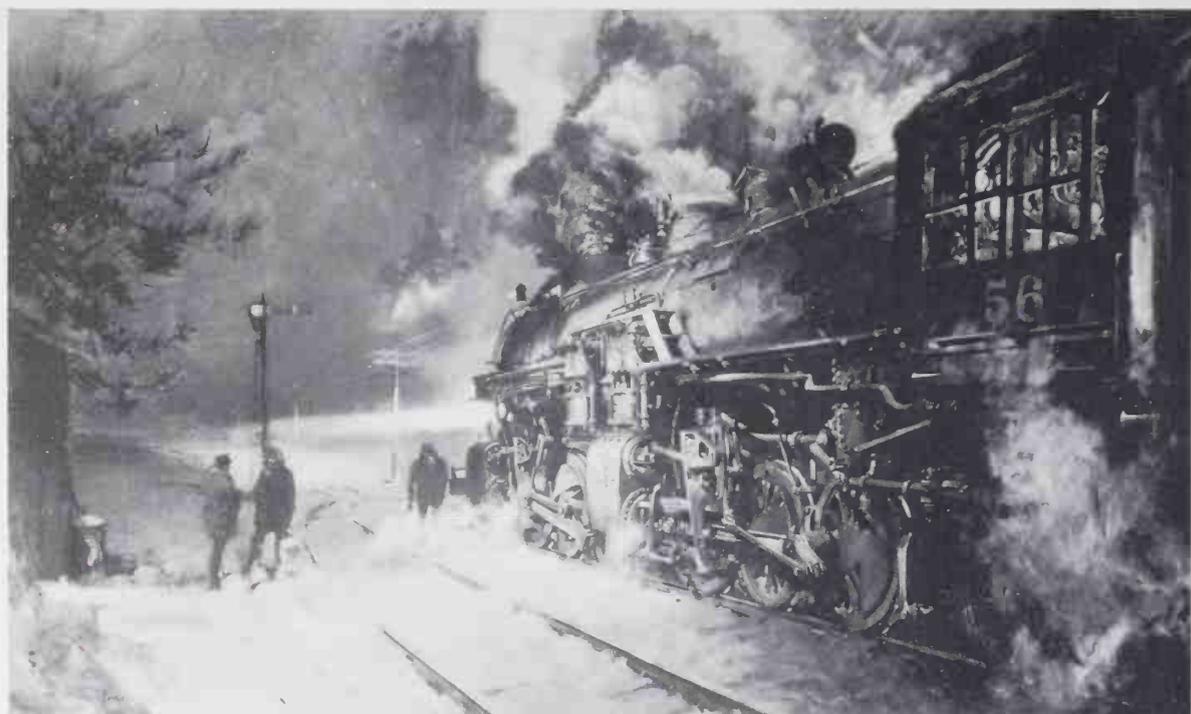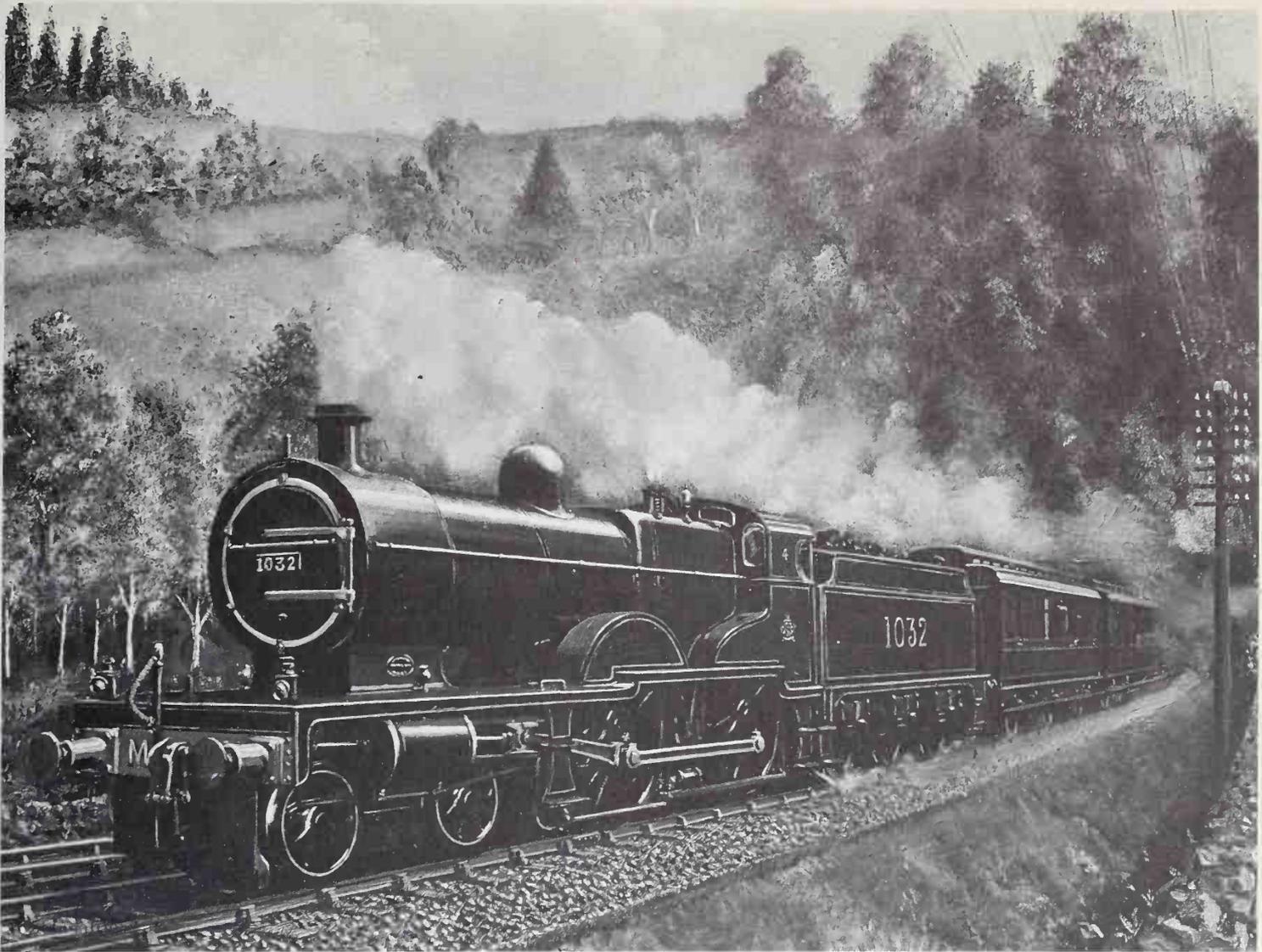
Above left 'London and North Western Ferry at Holyhead' by Alan Fearnley, 1972. A modern recreation of a scene just before the First World War.
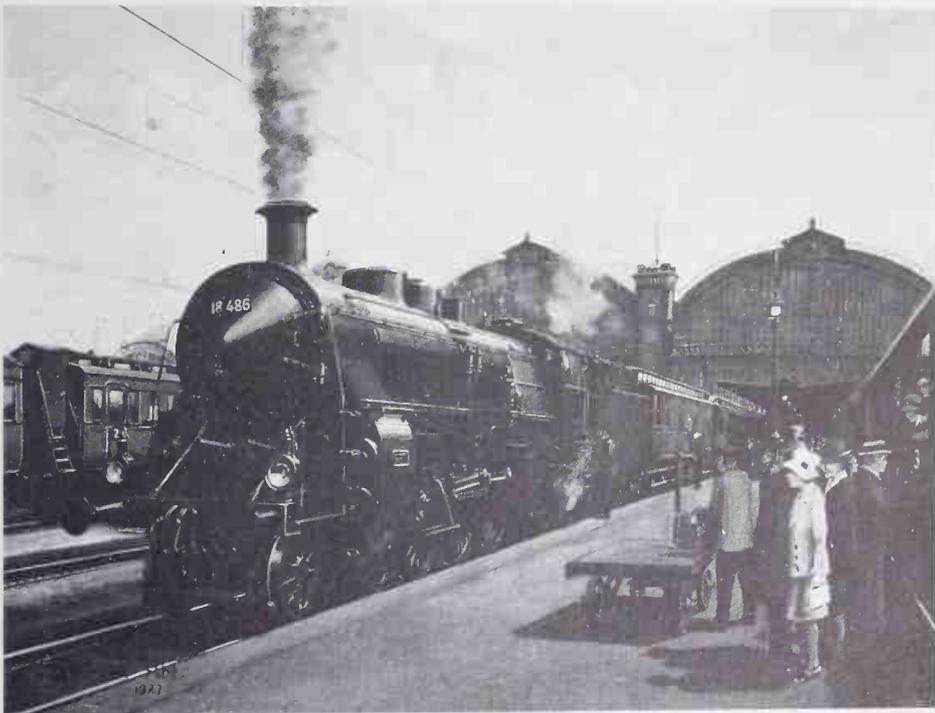
Far left 'Yesterday's Winter' by Terence Cuneo, 1972. Mallet locomotive in the American Northwest. Late days of American steam.

Above 'Midland Glory'. The engine is one of Richard Deeley's celebrated three-cylinder compounds. Oil by C. Hamilton Ellis, 1974

Left 'Munich Main Station, 1927'. The Pacific engine by J. A. Maffei heads an express for the Northwest, taking the mails and first, second and third class coaches. Oil by C. Hamilton Ellis, 1975.

Above *'Rain in the Yards' by Terence Cuneo, 1975. Rain, steam and smoke in Germany.*

Above right *'Battle of Britain Class Locomotive' by P. Bradshaw, 1976. The last great days of steam.*

Right *'Royal Ladies' by Alan Fearnley, 1975. London Midland and Scottish Steam. Two Pacifics, 'Princess Elizabeth' and 'Queen Mary', in the late 1940s.*
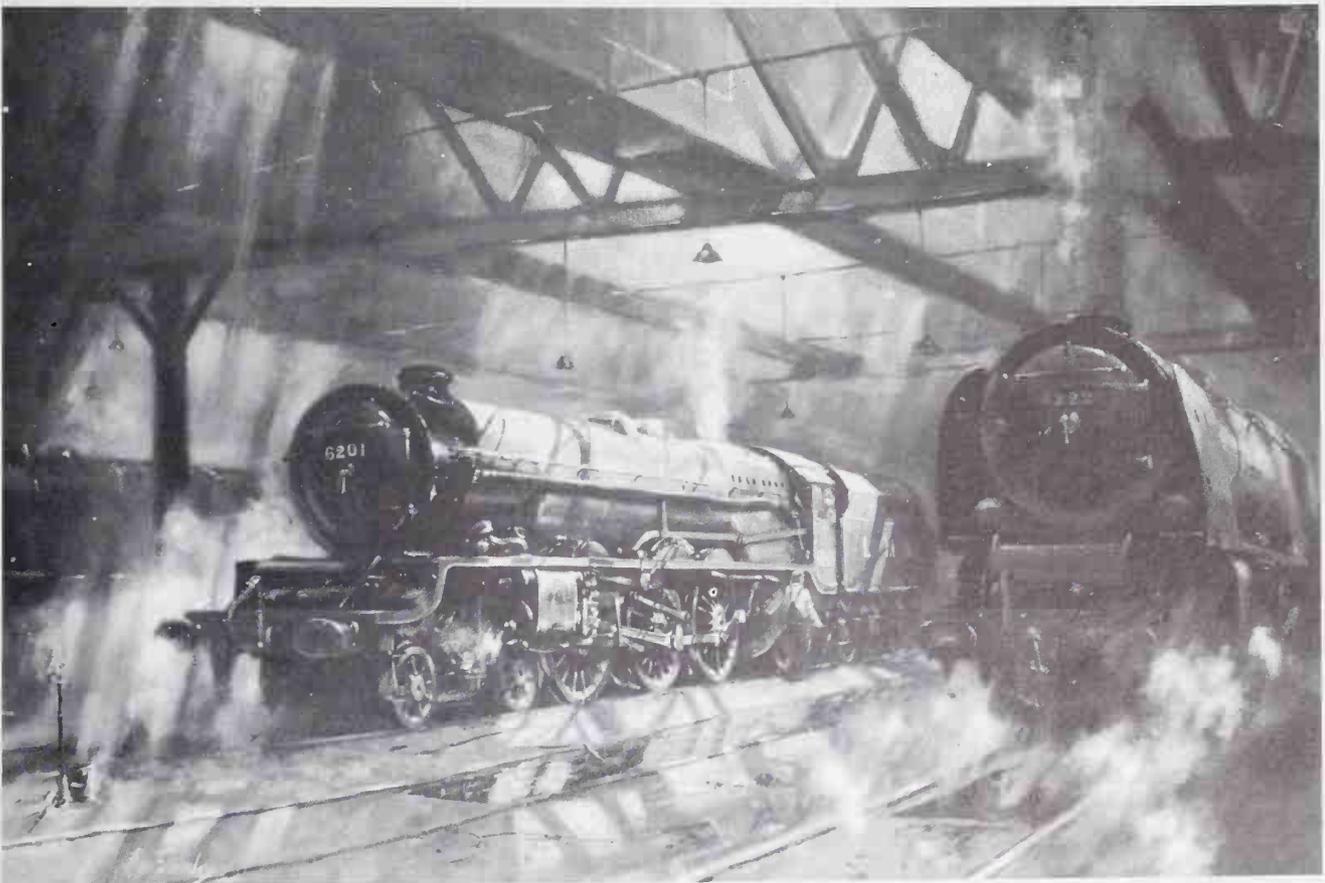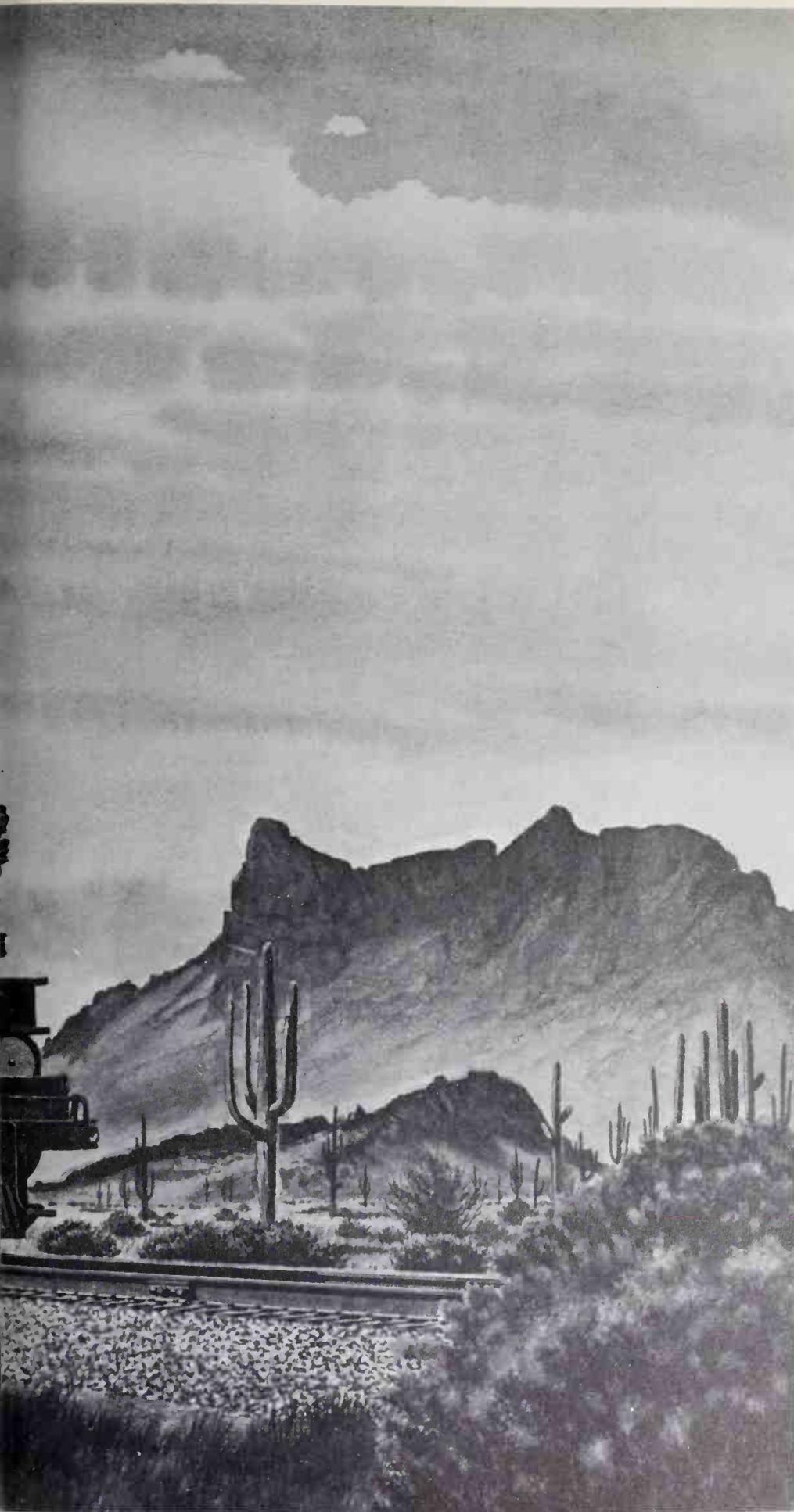
'Sunrise on the Desert' by Howard Fogg, 1972. Southern Pacific's Mountain-type locomotive, the on-pouring freight cars, the aggressive spike of Pichaco Peak in Arizona and the ferocious looking vegetation evoke that country for all who know it, and conjure it even for those who never did. Though invisible, there will be rattlers and gila monsters around. The time is in the sad 1930s, but the great train rolls faithfully under strong steam.

ACKNOWLEDGEMENTS

INDEX

Figures in bold type refer to illustrations.

RAILWAY ART

CHEMIN DE FER DU NORD

A.M.CASSANDRE

NORD
EXPRESS

LONDRES BRUXELLES RIGA
PARIS LIEGE BERLIN VARSOVIE
COMPAGNIE DES WAGONS-LITS

From the earliest days the railway was an innovation which gripped the imaginations of artists in many countries. From the steely, smoky splendours of the locomotives, through the dramatic impact of the railways on the landscape, to the rapid and fundamental changes in the means and purposes of popular travel, the breadth of the subject and its appeal to the general public fascinated and encouraged some of the greatest painters and illustrators of the nineteenth and twentieth centuries. The pictures in *Railway Art* represent the cream of this work and are presented for the first time in a single collection.

New York Graphic Society