

MA/P36/HIE133

Michael ANDREWS

Exercise book - 1952-1953

Taunton's School,

Southampton

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FORM. 105

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TAUNTON'S SCHOOL,
SOUTHAMPTON

NAME M. Andrews

SUBJECT History

E.J.A. & S., LEEDS.

Henry VII

Wobsey

< Henry provided against a renewal of civil strife in England by putting down the barons' custom of keeping retainers and defying the courts of law. He protected and fostered trade >

James married Margaret, daughter of Henry VII.

Henry VIII Henry's reign was rather a tyrant anything or anybody standing in the head of the Church thus rejecting the

James defeated

and slain at Hodden.

Ignoble struggles bibb doct.

Events.

Luther defends

his doctrines at

of Worms before

Court of the



Cortez conquers Mexico for Spain



Magellan sails round the world.

Art and

John Knox, Scottish reformer

born. He played a notable part under in the Reformation, Edward VI.

Denounced Mary's policy D. 1572.

Henry VIII

Sir Thomas More

Thomas Cromwell

Edward VI

Prayer in English, mainly prepared by Cromwell comes into use

Home

knows one. He was a man of great ability but could not bear way of his plans. In 1534 Henry declared himself the Supreme authority of the Pope

in England.

He Bible into English. A copy chained in each parish Church

Cloverdale translation

Monasteries suppressed.



English, mainly prepared by Cromwell comes into use

Abroad.

Pis

the Diet

the Supreme

Empire.

Pis conquered for Spain by Pizarro.



Council of Trent called to reform evils and abuses of R.C. Church and to combat the new doctrines

Culture and Famous Men.

Sir Francis Drake, the great English seaman, born near Tavistock, Devon.

Amongst other things he was the first Englishman to sail round the world and won the crown against

the Armada D. 1588

1550 1555 1560 1565 1570 1575

Edward VI	Mary I
Northumb'land	

Mary was a narrow Catholic and so she persecuted the leaders of the reformation, abolished the Prayer Book and ordered Mass to be said. Mary marries Philip II of Spain, the most powerful Catholic monarch in Europe. Elizabeth was a great Queen and guided England through one of the most dangerous periods of its history. She was neither extreme Catholic nor Protestant in religion. She became "supreme governor" of the Church and Edward VI. The clergy had to adopt a uniform service based on the 2 prayer books of

Calais, the last of the English possessions in France, captured by the French.	Start of the religious wars in France between the Huguenots (Protestants) and Roman Catholics.	Gilbert plans a colony in Ireland while tries to colonise Virginia.
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Edmund Spenser, poet, noted for his work "The Faerie Queene". D. 1599.	Christopher Marlowe, poet and dramatist, whose fame is high eclipsed by Shakespeare's genius. D. 1593.
Sir Walter Raleigh, seaman, soldier and writer. Planted a colony in N. Carolina and brought tobacco and potatoes to England. Executed in 1618 for treason against James I.	Francis Bacon, great English philosopher. Well known for his essays. D. 1626.
	William Shakespeare, greatest English dramatist, born at Stratford-on-Avon. Was admitted to a company of actors, called the Kings Servants, to whom he remained faithful. Wrote 37 plays. D. 1616.

1550 1555 1560 1565 1570 1575

1575 1580 1585 1590 1595 1600

Elizabeth	William Cecil, Lord Burghley.
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Irishmen sets sail in search of the N.W. passage. Mary, Queen of Scots, last plot against Elizabeth. Mary executed. The Spanish Armada utterly beaten. Cadiz taken by the English. English and Spain's largest arsenal and most of her fleet destroyed. Rebellion in Ulster led by Hugh O'Neill, Earl of Tyrone.

Drake finishes his voyage round the world.	Drake's Cadiz expedition.	Granville and the "Revenge" off the Azores.	End of the French religious war. Philip of Spain dies.
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1575 1580 1585 1590 1595 1600

28/30

The Gunpowder Plot.

c/o The Captain of the Halberdiers,
The Tower of London,
London.

Dear brother John,

Nov. 6th, 1605.

I thought perhaps that perhaps you would be interested in an extraordinary treason plot that was discovered last night. I was just about to take a walk last ^{afternoon} ~~evening~~ when I and about six others were told to report to the Houses of Parliament.

When we arrived there we were told that we had to search the cellars under the Houses. ^{we} ~~then~~ found nothing except a man who called himself "Johnson" in a cellar where he said he was storing ~~cut~~ wood.

That evening, however, we made another search and this time found "Johnson" booted and spurred. We thought that it looked suspicious and so we searched him and found a tinder box and a small quantity of gunpowder.

Suddenly I had an idea. "Under the wood!" I cried. We pulled away the wood and there to our horror we found no less than thirty-six barrels of gunpowder.

"Johnson" was ~~was~~ arrested at once and taken to be questioned. I heard today that his real name is Guy Fawkes and that

he has been tortured on the rack to tell the names of the other conspirators. They have been found out from other sources, though, and the names of the leaders are Robert Catesby, Thomas Percy, the Brothers Winter and the Brothers Wright.

Here is how the story began. As you may know, dear brother, the Catholics have been very displeased with His Majesty King James. When he first came to the throne two years ago he promised to abolish the fines against them and to give them better treatment. He broke his promises, however, and even increased the fines.

And so a party of Catholic gentlemen, some of whom I have already mentioned, decided to blow up the King while he was opening Parliament, while a Catholic rising and a Spanish invasion were to follow. James' daughter was to be proclaimed Queen and all the conspirators were to meet at a rendezvous in Warwick, excepting Guy Fawkes who was to sail to Holland.

At first a house in Lambeth was fixed, the plan being to tunnel through its wall to the Houses of Parliament. Provisions were laid in and digging commenced but they found ~~digging~~ that it was hard work as the wall was nine feet thick.

Then came a stroke of luck. Percy found out that a man was moving from a house which had its cellar directly under

The House of Lords. He hid it and he and the others filled the cellar with gunpowder and their picks and covered it with wood.

All went well until one of the conspirators wrote a letter ^{urging him to stay away from the House} to his cousin, Lord Montague, who showed it to the King. The King's father had been killed by gunpowder and so his suspicious mind soon read the secret and he ordered the cellar to be searched.

Well, you know the rest of the story. Please give my regards to your dear wife,

Your Brother,

Richard.

10.

Good

P.S. My friend Robert has just told me that that blackguard Jewkes has just been hung, drawn and quartered.

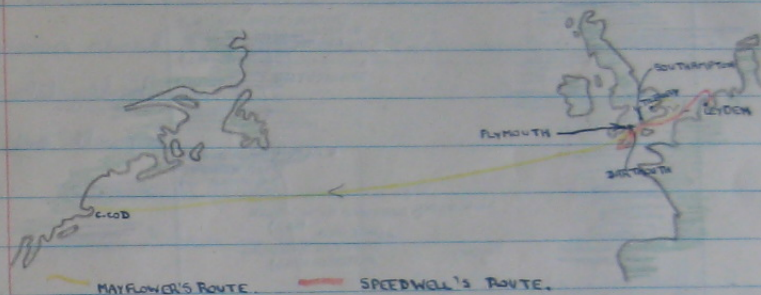


The House of the Gunpowder Plot Conspirators a Lambeth.



Jay Jewkes Discovered.

The Pilgrim Fathers



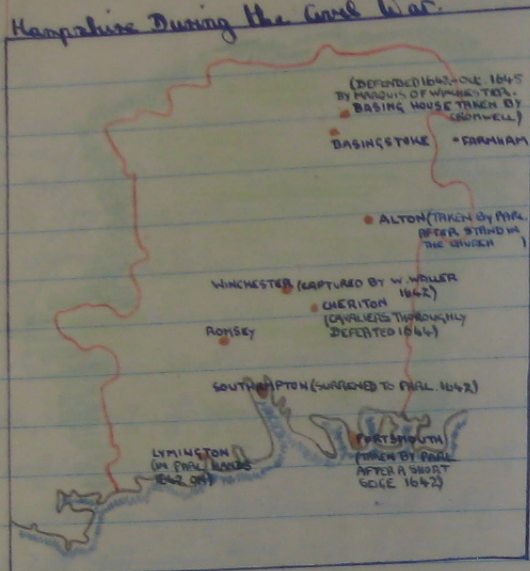
The Pilgrim Fathers were a group of Puritans, some of whom came from England and others who came from a church founded by John Robinson at Leyden, in Holland.

They first set sail from Southampton but had to call at Dartmouth because of damage to one of their ships, the "Speedwell." They sailed on but returned to Plymouth where they left the "Speedwell." The 18 men and 24 women finally left in the "Mayflower" on September 6th, 1620.

On December 21st 1620 they were forced to land, by stress of weather, at Cape Cod in Massachusetts, far south of the territory which had been granted to them in New Jersey. Here they founded Plymouth colony.

The Pilgrim Fathers went to America so that they might practice their religion how they pleased, without laws against it, and to have a home where their own religion would be the established one.

Hampshire During the Civil War



Winchester changed hands several times.
Finally taken by Cromwell Oct. 1645.

Arguments

in the quarrel between

King & Short Parliament

For Charles I.

Against Ch. I.

1) Character -

Facts. Good family man.

Sincere in his

opinions.

Good friend (Buckham)

Cultured.

- were his opinions right?

- Strafford?

1645 - 1660.

- Q 1. What was a). Pride's purge.
b). The Rump and the Barebones parliaments.
c). The name of the Republic under Cromwell.
- Q 2. Explain what the Navigation Act was & why it was passed.
- Q 3. What wars were fought in Cromwell's reign?
- Q 4. Describe Blake's character & achievements.
- Q 5. Why did the English people welcome Charles II so readily?
- A 1. a). Pride was a Colonel in the New Model Army. He and his friends turned out of Parliament all those of whom they did not approve.
b). The Rump parliament was formed by the remaining members of Parliament after Pride's purge. It was so called because it was the tail end of the Long Parliament.
c). The Commonwealth.
- A 2. The Navigation Act was passed by the Rump Parliament in 1651. It ordered that all goods ^{of the country} must either come into England in English ships, or in ships where the goods were made. The Navigation Act was passed to hit the Dutch trade very hard and to act as an encouragement to English commerce.
- A 3. Cromwell first fought in his reign in Ireland, where he

took two strongholds, Drogheda and Wexford, his son-in-law conquering the rest of the island. Cromwell fought also the Scots (1650 and 1651) who were supporting the son of Charles I. He routed them at Dunbar and Worcester, both battles being fought on September 3rd.

The first Dutch War broke out in spring, 1652, as a consequence of trade rivalry, the recently passed Navigation Act, the English insistence on the right of search, etc. It was notable chiefly for the exploits of individual commanders like Blake and Jernp. The Dutch suffered severely from the effects of blockade, but the war roused little popularity in England except in the fleet and merchantile classes, and peace was concluded in April 1654.

A 4. Robert Blake was born ^{at} Bridgewater, Somerset, in August, 1579. From 1640 to 1645 he was Member of Parliament for Bridgewater. He commanded troops in the parliamentary armies, distinguishing himself by the capture and defence of Taunton, 1644-45, which he held for nearly a year.

In 1649 Blake was given command of the fleets of the Commonwealth. A royalist fleet had been organised by Prince Rupert. Blake drove him into the Mediterranean and destroyed many of his ships. He commanded the fleet in the Dutch war and proved himself more than a match for the great Dutch admirals, De Witt, De Ruyter and Van Tromp.

In 1655, commanding a squadron in the Mediterranean, he annihilated a Moorish fleet at Porto Farina, Tunis.

He achieved his most brilliant feat in 1657, completely destroying a Spanish squadron in the ^{Santa Cruz de} port of Teneriffe. He died four months later, August 7, 1657, as his ship was entering Plymouth Sound on the return voyage. His body was buried in Westminster Abbey, whence it was ejected at the Restoration.

Our sailors have deserved better of their country than Blake. He was a great patriot, ^{and} had perfect simplicity, absolute contempt of private gain, humane care for his comrades in battle, generosity, freedom from ambition. He sacrificed his domestic happiness, which was very dear to him, on the altar of public service.

A.3 cont.

The Commonwealth also waged war with Spain. Cromwell attempted in a friendly way to secure for Englishmen the right to trade with the Spanish colonies; when this was refused he went to war. He failed to take Hispaniola but captured Jamaica. As related before Blake had a great victory when he destroyed the Spanish fleet at Santa Cruz de Teneriffe, in the Canary Islands. The New Model Army also did well in the Spanish Netherlands and took Dunkirk.

A.5.

The people became tired of the Commonwealth Parliaments. They did not like the Puritans' ideas of closing theatres and stopping bear-baiting. Because of this interference with their

daily life and habits they hated the Puritans as much as they had hated Laud and his clergy before. Another unpopular thing was Cromwell's experiment of dividing England into eleven districts and placing each under a Major-General, who was to enforce order and to watch over the people's amusements.

On the other hand, Charles II was an easy going ruler and in religion he was very tolerant. He restored ^{some} church lands and the estates of Royalists taken by the Roundheads, except in Ireland. The Acts of the Long Parliament up to the summer of 1641 were confirmed; that is to say, the much-hated special courts, like the Star Chamber, were abolished for ever, and laws could no longer be imposed except by vote of Parliament.

What was the Restoration Settlement and why was it unpopular with many people?

The Restoration Settlement was made by Charles II guided by Lord Clarendon. Crown, church and Royalists' lands which had been taken by the Roundheads were restored, except in Ireland. Only part of the New Model Army was retained and the Acts of the Long Parliament up to the summer of 1641 were confirmed, meaning that the much hated special courts, like Star Chamber, were abolished and that taxes could no longer be ^{imposed} ~~put~~ except by a vote of Parliament. The restoration of land was quite fair except that if a person's land had been sold by the Commonwealth the unlucky soul received no compensation.

The Parliament passed the Act of Uniformity in 1662 to force the Puritans either to leave or to conform to the church.

The Common ~~Prayer~~ ^(slightly revised) Prayer-Book and the 39 articles were to be the rule of faith, every minister having to use and abide by them or to vacate his benefice. Most of them conformed.

■ Famous men in Charles II reign.

Sir Christopher Wren, was born 1632. He was a great architect and mathematician. His first designs were for Pembroke College (1663) and the Sheldonian Theatre, Oxford (1664). He was appointed surveyor-general by Charles II in 1660, a post which he held concurrently with that of professor of astronomy at Oxford. After the Great Fire of London (1666) he rebuilt St. Paul's and 51 other churches in London. He made a great plan for the rebuilding of London, which would have solved the terrible problems of fire, hazard building, but it was rejected. Wren ~~had~~ was knighted in 1672. He died in London on February 25, 1723, and was buried in St. Paul's, where is a tablet bearing the words "si monumentum requiris, circumspice". (If you seek a memorial, look around you.)

● John Milton. Born in London 1608, he was a poet from the age of 10. When the civil war broke out he wrote on behalf of the cause of Parliament. In the time of the Commonwealth he was Latin Secretary to Cromwell. In 1652 he became ~~completely~~ totally blind.

The Great Fire, 1666.

Extracts from the diary of a certain William Cotton, cloth merchant, of "Fox Street, London, 1666.

September 2nd, "The Lord's day."

Did leave my ship the "Dolphin" about 1 o'clock and went out for home. When walking through Pudding Lane I saw a wisp of ~~white~~ smoke curling from the shop of Master Jarner, the King's baker and a right good man. I heard a cry from above me and perceived Mistress Jarner struggling along the roof. I helped her, her husband, daughter and manservant to safety and ^{begged} ~~asked~~ the manservant, a comely lass, to follow. But she was weak of heart and so perished in the flames, which had spread all over the house by now.

The houses in Pudding Lane, one of the narrowest ~~and~~ streets in the city, had projecting storeys, and their woodwork was coated with pitch. The fire spread as if carried by a thousand demons and soon Pudding Lane was as near to Hell as could be. People ran with utmost speed trying to save children and animals and furniture. I helped John Tullerton to drag his belongings to St. Mary Hill, a distance of about 300 yards, which took us no less than a quarter of a hour.

Here we stopped and saw London and the blazing inferno. Shop and church, house and hall fell before the fire. ~~He~~

Buildings were blown up to stop it but to no avail. The pump squirts of water which men did throw upon the fire did no good. By eight of the clock the fire had reached the Bridge.

John and I spent the rest of ~~that~~ ^{this} accursed day helping others to escape. All the time the shouts were heard "It's the Dutch!", "Beg, the Stench!" and "Get the Papists."

And so home, at about eight o'clock, finding my dear wife waiting anxiously for me.

September 3rd, Monday.

To my ship, for I had heard tell that the fire had spread along some of the wharves and landing stages. Did cast off into mid stream, having called up a crew from an ale-house. There the wind blew under and ~~flooding~~ sparks and so we sailed down-stream a little.

I appointed a good man, who claimed to have served under Blake, as captain and then went home, against the city walls, where I remained for the remainder of the day making ready lest we should have cause to move. Had cold beef for supper, mighty fine.

September 4th, Tuesday.

Remained with my wife and family to the "Dolphin" before noon on finding that the fire was still spreading. Cheapside, Saint Paul's Cathedral and Guildhall were destroyed. Ventured to the shore in the evening and found that there had been much

plundering.

September 4th., Wednesday.

^{Today}
~~Today~~ the fire stopped not 100 yards from my house, in the Cripplegate area. Removed back home. To the tavern in the evening, where I found not the usual good cheer. I learnt that 8½ parish churches, about 13,000 houses and 44 halls of livery companies had perished, not to mention the city gates, the Royal Exchange ~~and~~, all the markets except Leadenhall and many of the law courts. The only cheerful person whom I met today was Christopher Wren who informed me of a great new plan of his for the ^{building} ~~rebuilding~~ of London.

The Whigs and Tories, 1688-1750.

^{most of}
The Whigs party was the party which had the "upper hand" throughout the period with which I am dealing. It was the Whigs, in 1688, after James II had been driven out, who were largely responsible for putting William and Mary on the throne. In 1701 it became clear that Queen Anne would have no direct heir and Parliament decided that the crown was to go to a Protestant branch of the Royal family, the House of Hanover. However, if the Stuart "Pretender" had assumed the throne of England that it would be safe under him he probably would have recovered the throne when Anne died, for the nation did not like the idea of having a German King. But he would not do so and so the Whigs proclaimed King George I. Thus the Revolution Settlement of 1688 was confirmed and strengthened by the Hanoverian Succession in 1714.

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The Whigs wanted to keep their power and so they tried to keep the Hanoverians on the throne for they knew that if the Stuarts ruled the Tories would come into power. In 1720 the Whigs found a great leader in Robert Walpole, who became Prime Minister after his masterful handling of the South Sea Bubble affair. Walpole's policy was to keep England at peace and to keep the taxes down, so making England prosperous. He kept in power by seeing that only his supporters held key positions in the Church, the Services and the Law. If a person was against Walpole he would make no advancement. When George II came to the throne it seemed that Walpole might have to retire but George II found

that he was indispensable.

However, Walpole's lust for power brought him trouble.

Explain why the Open Fields and wastes of England were enclosed
in increasing numbers at the end of the 18th century.

Up to the time of the 18th century most of the land ^{in England} in the triangle with its vertices at Lyme Regis, Scarborough and Lowestoft was under the three field system, a remnant of Feudal England. The three field system was very wasteful. Each year one field lay fallow and thus produced no crops. ~~Also~~ Each field was divided into strips which had to have paths joining them and so much land was wasted that way. The ~~farm~~ agricultural workers used very primitive methods, each man ploughing his own ~~pe~~ strips of land and scattering his seeds of corn in any haphazard sort of way. The cattle were very poor and so the peasants grew few root crops they had to be killed in the winter or else they would die. There was no urge to improve, as well.

In the 18th century the population of England began to rise due to better medical conditions and so naturally more food was needed. The price of food rose and so the landlords wished to make as much use of their land as they could. They found their answer in the Enclosure System. Land had been enclosed in a small way for sheep in the 14th century ~~but not so~~ but it reached its peak from 1700 and 1845.

When the enclosure was carried out by holders who collected the strips into one unit by agreement, the development was beneficial and there was no discontent. But the enclosure of common lands and the eviction of peasants with ~~no~~ inadequate or no compensation for the sake of profits was bad. Hundreds of Acts of Parliament dealing with enclosures were passed, most of them prompted by landlords to legalise

their action, but it was not until 1845 that an Act was passed designed to safeguard the interests of peasant-holders, when nearly all the agricultural land had already been enclosed.

The new methods ~~methods~~ designed by Jull, Townshend, and the rest demanded the enclosure system. The first great pioneer was father Jull. He showed that the yield of crops could be increased by proper cultivation to eradicate weeds and he also invented a seed drill. More important innovations were introduced by Lord Townshend, who was often called "Turnip." He introduced artificial grasses and clover and the turnip crop and showed that a rotation of crops, e.g. wheat, turnips, barley and clover, kept the land in better condition than leaving one field fallow each year.

The improvement in pastures and the use of turnips for winter feeding brought about a remarkable increase in the weight of animals. The average weight of cattle rose from about 350 lb at the start of the 18th century to about 800 lb at the end of it, ~~the~~ and, of sheep from 22 lb to 10 lb.

The improvement in feeding was accompanied by an improvement by selective breeding. Robert Bakewell produced the famous Leicester Breed of sheep and Robert Colling the famous Durham cattle.

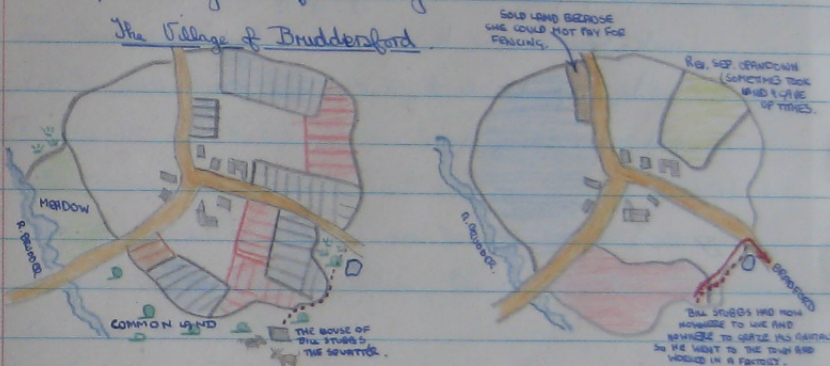
I should previously explained that enclosures were some called because the land was enclosed or fenced off after the corn crop so that the root crop could grow without interference from animals.

The Increase of Enclosure Acts

After 1760 the number of enclosure acts increased very rapidly especially between the years 1793 - 1815 when war conditions meant ~~that~~ high prices of corn.

Enclosure means splitting up the open fields, meadows and often the commons into compact holdings with fence or hedge.

The Village of Braddersford



Before the Enclosure Movement

After the Enclosure Movement

- The land of Algernon De'Arcy - Robinson (Squire.)
- The land of John Yeoman (Yeoman.)
- The land of Widow Mite.

The Transport Revolution Classwork 5th October, 1951

From the time that the Romans left Britain at the start of the fifth century to the Turnpike Trust in 1745 little was done to improve or keep up the condition of the roads. Each person in the country was supposed to work 6 days a year on the roads in his or her parish but the people took their duty lightly. Transport was done mostly by pack-horse because the roads were too bad for coaches.

In 1745, due to the 1745 rebellion and increase in trade, ^{made} making good roads necessary.

The Canals of Hapship Britain 11th October, 1951

When Abraham Darby used coke instead of charcoal in his blast furnace at the Colebrookdale Ironworks, Shropshire, in 1735, a change came over the transport as well as the iron industry for a means of transport had to be found in which bulk goods could be moved at a small cost. The answer, for the time being, until the railways came, was the canals.

The first canal was built by James Brindley for the Duke of Bridgewater after heated opposition from the river navigation monopoly. The canal was known as the Bridgewater Canal, was started in 1759 and opened in 1761 and ran from the Duke's colliery in Worsley to Manchester, including the aqueduct which still carries its water over the Irwell.



THE BRIDGEWATER CANAL
CROSSING THE IRWELL

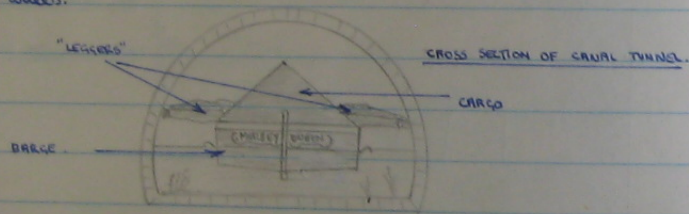
Brindley was a remarkable man. He also engineered the Bridgewater canal to the Mersey and, ^{the} Trent and Mersey canal, which linked Hull and Liverpool, was also his work. He avoided using locks and did most of his calculations mentally, as he wrote with difficulty. Brindley patented an improved steam engine in 1775 as well. He

was a genius but his salary was often under £1 a week.

After the first canals artificial waterways were made, most numbers, all by different firms who did not attempt to link them. Thus a merchant might have to change his goods from barge to barge several times on a journey.

The canals joined places far inland to the sea and so great inland ports such as Manchester came into being. The great cities of London, Liverpool, Hull and Bristol were joined towards the end of the canal period but the canals were little used.

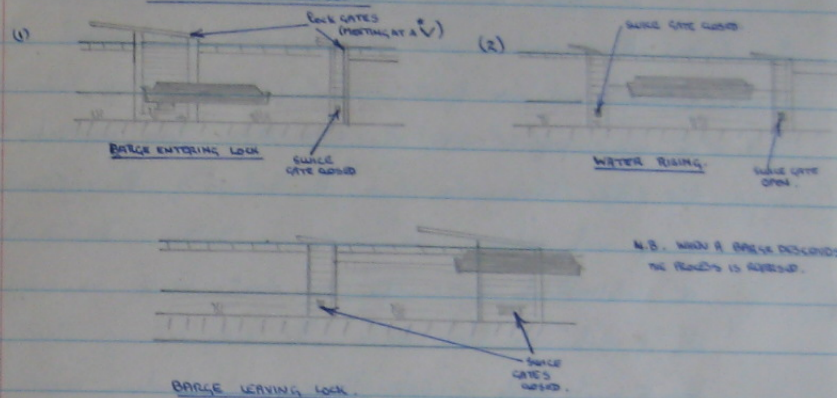
When the canal reached a hill its engineer could either use locks or build a tunnel. Brindley built one of the earliest canal tunnels at Newcastle from 1767-77 on the Trent and Mersey canal. They barges could not be pulled through the tunnels by horses as on the open canal but had to be propelled by "loggers" with their feet against the walls.



A lock is a device by which a barge can be raised from one level of water to another. Thomas Telford was one of the great engineers who used locks. To him also goes the distinction of building many roads in Britain, including the Carlisle - Glasgow and Holyhead - Shrewsbury roads,

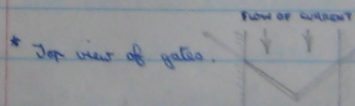
the Menai and Conway Bridges and the only two government sponsored canals, the Caledonian canal and the Clyde canal.

How a lock works.



The canals served their purpose well. They carried the raw materials such as iron and coal to the industrial centres and took the finished products to the ports for export and distribution. Then, in about 1825, the railways, a more economic form of transport - and quicker, began to spread. As the canals had ousted the pack-horses and river navigation companies, so the railways ousted the canals, which fell into their present form of decay.

20
20
✓ Good



The History of Railways.

1. Before the coming of steam locomotion.

The first railways appeared in German mines about 1550 and then spread to use in English mines and foundries. They provided a cheaper and more efficient mode of transport than an ordinary cart on an imperfect road. The first trucks were propelled by men but later horses were used. By the end of the eighteenth century many such railways were common in Britain. The Darbly's ironworks at Colebrookdale, for example, had about twenty ~~was~~ miles of railways, all of which were horse-drawn. The early railways also were used to join canals ~~canals~~ to make loading and unloading easier. The Trent and Mersey Canal still had railways in use in 1911 which were built in 1776.

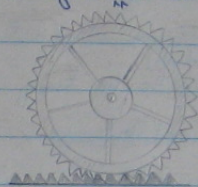
The railways were at first ~~built~~ supposed to be like the roads in that anybody could use them. The first such railway was built in 1801 and ran from Wandsworth to Croydon but it was only for horse-drawn vehicles.

The first rails were only wooden ones but as the traffic became greater flat iron plates were fitted to the faces of these to lessen the heavy wear and tear and cost of replacement. Then all iron rails were used, appearing in Cumberland in 1738. They were cast L-shape and had an upright portion 2-3 inches high on one side of each rail preventing the wheels of the truck from leaving the track.

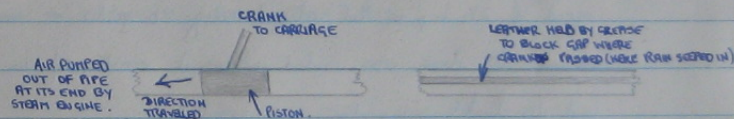
In 1789 William Jessop built a track of thin iron rails with the flanges on the wheels of the wagons.

2. Why the Railways did not spread at first.

a. Many people thought that engines which ran on smooth rails would not be able to pull heavy trains and that the only answer was an engine such as Blenkinsop's (1813), the first engine to be used commercially, which had cog ^{one of} on its wheels which fitted into cog on a rail.



b. In competition with the steam railway there was the atmospheric which was put into practice in South Devon but failed because rain seeped into the vacuum pipe.



SIDE VIEW OF VACUUM PIPE

TOP VIEW OF VACUUM PIPE

c. Parliament failed to grant sanction to railways at first because it was influenced by the wealthy owners of canals and turnpikes. Squires ~~did~~ and other land owners and sometimes ^{even} industrial towns protested against railways so they thought that they would spoil the scenery. It was also believed that the ~~engines~~ smoke would blight the vegetation.

and that the engines would scare the cattle so much that the milk yield would decrease! Parliament encouraged small and rival companies rather than a wide-viewed, comprehensive dealing on a national basis, for it feared monopolies.

d. The Press was, in general, very hostile to the railways. It said that anybody who travelled in such a dangerous machine at such a rate (about 20 m.p.h.) was in grave danger, predicted great disaster for all ^{except a few railway investors and finally stated that if the locomotives' wheels} ^(the locomotives) did move they would be too heavy to move.

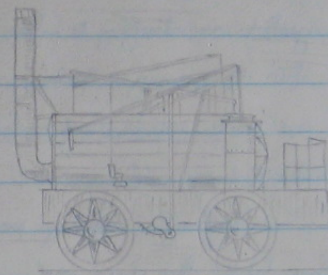
3. Early Locomotives and railways

Although proposals for steam carriages go back to the late 17th. century the first one to achieve even limited practical success seems to be that of Cugnot, a Frenchman, in 1770. It had three wheels, the front one of which was driven by two cylinders, and a maximum speed of $2\frac{1}{2}$ m.p.h., but stopped every 30 yards or so to get up more steam. Its doom was sealed when it overturned in a Paris street and its luckless inventor was arrested.

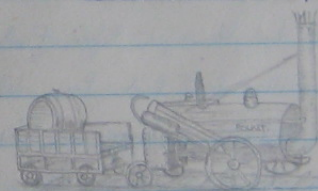
William Murdoch, the inventor of gas lighting, made a highly successful model in 1784 but the real pioneer was Richard Trevithick, who worked on the problem from about 1797. He produced several moderately successful road carriages and then conceived the idea of applying his new method of haulage to the railway. In 1803 he built a locomotive for the works at Colebrookdale and in 1804 another for

the Pen-y-Darren works, which pulled 10 tons of ore and 70 passengers at 5 m.p.h.

Other locomotive engineers followed. In 1813 William Hedley built the famous "Puffing Billy" which proved that steam traction was not only possible but also a commercial proposition. It was the first to run on smooth rails and was still in use in 1865, a remarkable instance of the excellence of British workmanship, for nearly the whole of the job was carried out with hand-operated tools.



HEDLEY'S "PUFFING BILLY" 1813.



STEPHENSON'S "ROCKET" 1829.

George Stephenson was the greatest of the early railway engine builders and the man whose locomotives made railways superior to all other forms of transport. He made his first locomotive, for a colli-

-ing, in 1814 and shortly afterwards made the important innovation of chimney blast. By careful analysis and brilliant workmanship he rapidly improved the efficiency of his engines until in 1825 it was his loco "Locomotion No. 1" which hauled the train on the first public railway in the world, the Stockton ^{and} Darlington Railway. It pulled twenty-two passenger trucks and twelve goods wagons at nearly 12 m.p.h. That railway had been intended primarily for the transport of goods but the novelty of being hauled by a locomotive appealed so strongly to the popular imagination that in a short time after its opening a passenger coach was added, which carried six inside and sixteen outside, and a daily service between Stockton and Darlington introduced.

The Stockton and Darlington railway proved a great success and it was not long before other lines were constructed. The most important was that between Liverpool and Manchester, a distance of about 30 miles. In 1825 a Bill had been put before Parliament to sanction a railway joining these cities but had been defeated. After the success of the Stockton-Darlington railway and aided by an expenditure of £27,000 by the railway interests, a second Bill was passed for the railway in 1826.

A competition was held by the directors of the company for a prize of £500 (in 1829), which was to be given to the builder whose engine gave the best results and conformed with certain conditions. The winner of

the competition was ~~George~~ George Stephenson with his "Rocket", which, on the second day of the trial, pulled 30 passengers at 30 m.p.h.

On September 15th, 1825, the railway was opened by the Duke of Wellington, then Prime Minister, ^{and} a wonderful procession of 8 locomotives, all built by Stephenson and very powerful, delighted the enthusiastic crowd. The steam railway was established as the primary mode of inland transport for nearly a century, although due to opposition and high prices which the railway companies had to pay for land (the British railways cost nearly twice as much per mile as those of any other country) by 1852 only 490 miles had been laid in Britain.

4. The Railway Mania.

Between 1842-47 wild speculation took place in railway shares and was known as the "Railway Mania." The immediate success of the first railways induced financiers to project lines even where there was no economic justification and shares in the companies they floated were eagerly bought by all classes. Hundreds of bogus concerns were formed and ~~many~~ uneconomic lines were bought up by company promoters and their shares offered to an easily imposed upon public. With the high prices offered for railway holdings of any ~~kind~~ description the shares of honest companies were fantastically inflated. Towards the end of 1847 the boom collapsed.

A permanent result of the railway mania was that less populous districts were served by lines which otherwise might not have come into

existence.

5. Parliament's attitude to railways (c.1850) The government took little interest in the railways, however. Gladstone, in 1844, first talked of nationalization, a step which came a century later, and Parliament enforced companies to cater for the 3rd. class passenger and pursued a policy of safety first but little else was done.

In 1846 the condition of 200,000 navvies engaged in railway construction challenged public attention and a committee, appointed to inquire into it, reported. Preventable accidents were shown to be common and housing abominable. So impressed were the inquirers that they boldly recommended that the railway companies should have to pay compensation for accidents, wages should be paid weekly and a Special Board should veto any new railway that did not provide proper accommodation for its navvies. Needless to say, Parliament did nothing.

During this time amalgamations continued and by 1846 the condition was not greatly different than it is now.

6. The "Battle of the gauges."

Although Stephenson built his railways to a uniform gauge of 4ft. 8½ ins. - the gauge used on the old horse tramways, - it was not then compulsory for other undertakings to adopt the same width between the rails. It was only after a prolonged fight, sometimes called the "battle of the gauges" that the standard gauge of 4ft. 8½ ins. was made compulsory by Act of Parliament.

Some engineers advocated a broader gauge. Isambard Brunel, who was

appointed engineer to the G.W.R. in 1833, built the London to Bristol railway using a 7ft. gauge. It was argued that such a gauge would be safer, it would take broader trucks and therefore more goods, and higher speeds could be reached.

It was a sound argument but nobody had the foresight to see that trains of other companies might be required to run over the broad gauge track. In due course other railways brought branches to the same towns that were served by the Great Western and so passengers had to change trains if they wished to continue their journey on a different system.

Brunel, however, continued to build broad gauge tracks and at last the public demanded a settlement of the problem and a Royal Commission was appointed to go fully into the question. Its Report recommended the use of the narrow gauge because it would be far easier to convert 300 miles of broad gauge track than 2,000 miles or so of narrow gauge.

For sometime the Great Western maintained its old policy but when Parliament passed the Gauges Act, fixing the standard gauge at 4ft. 8½ ins. it turned its Oxford to Birmingham branch into mixed gauge by adding a third rail of the standard width. Other portions were gradually converted until the task was completed in 1892.

7. The Railways' Act, 1921

During the First Great War and after it until August 1921, the great bulk of British railways were under government control. Gross revenue increased because the traffic was very heavy and large successive increases were made in passenger fares.

and goods rates. Working expenses, however, increased still more chiefly owing to the payment of higher wages to the employees and the institution of an 8-hour day. In 1920, while the gross revenue was double what it was in 1913, the expenditure had increased more than three times, and the total net receipts of the controlled companies from all sources had fallen from £45,600,000 in 1913 to £8,900,000 in 1919 and to less than £6,000,000 in 1920. The pre-war revenue sufficed to pay an average of about 4% on the whole capital invested: that of 1920 was less than half required to meet the fixed interest on the debenture and first charge stocks.

With the object of restoring the financial stability of the railways, and putting them again on a dividend-paying basis the Ministry of Transport was formed by an Act passed on August 15th., 1919. One result of its efforts was the Railways Act which became law in August, 1921 and was directed chiefly towards, (1) reduction of expenditure by economy in management and administration and by the elimination of the losses attributed to wasteful competition between the different companies and (2) increase of revenue through higher charges, to the extent necessary to bring the railways to the position of self-supporting commercial undertakings.

The Act grouped all the companies into 4 groups named the Southern, Great Western, London, Midland and Scottish; and London and North-Eastern.

2. Public Ownership.

Under the Transport Act, 1927, inland transport, other than by air, and port facilities passed into public ownership. On January 1st, 1948, all main

line railways and most of the small lines, as well as the London Passenger Transport Board, passed under control of the British Transport Commission. British Transport stock to the value of some £1,065,000,000 was issued in compensation to railway and canal shareholders. In place of the four main-line railway company systems, the railways were divided into 6 regions: Scottish, North Eastern, London Midland, Western and Southern.



G = GLASGOW, E = EDINBURGH
BE = BIRMINGHAM, NE = NEWCASTLE
CH = CARDIFF, M = MANCHESTER
BH = BIRMINGHAM, CH = CARDIFF
D = DONCASTER, HO = HORNSEA
R = READING, L = LONDON
E = EXETER, SO = SOUTHAMPTON

KEY

BRITISH RAILWAYS REGIONS.

9. A Few Statistics

Length of track in Great Britain is 19,860 miles. Approximately 1,250,000,000 passenger journeys are made yearly while some 262,000,000 tons of merchandise and minerals (more than half coal) are carried. Train mileage run yearly totals 373,000,000 miles and there are in use about 20,000 locomotives, 69,000 carriages and 1,200,000 wagons. Total staff 635,000 men and women.

10. Electric Railways

The first railway to electrify its line was the City and South London Railway, which, in 1890, electrified its line between London Bridge and Stockwell. Two years later the Liverpool Overhead Railway was built as an electric railway for steam locomotives could not be used there because of the danger of sparks firing the docks.

Many railways now were being electrified, mostly in the London and South Lancashire and Yorkshire areas. They included the Liverpool to Birkenhead line (1903), Newcastle-on-Tyne suburban lines (1904), Shildon to Middlesbrough line (1903), and Lancaster-Macclesfield-Naptham (1908). In 1900 the first Underground Electric Railway was opened between Shepherd's Bush and the City. The London, Brighton and South Coast company was the first of the large companies to use electricity but made a false step by using the overhead system which has since been converted to third rail. Other companies who used electricity were the London and North Western Railway, who, because of heavy traffic, adopted a long term policy of building electric tracks alongside the existing ones, and the London South Western.

The South Eastern and Chatham railways found it necessary, in 1925, to form an independent company construction which laid about 60 miles of track.

In 1931 the Weir Committee published its report and was unanimous in favour of complete line electrification. It found that under conditions of railway working in Great Britain, electrification would reduce the cost of operating the

railway system, and, therefore increase the efficiency of utilization of the coal resources of the nation; it would reduce the average ^{schedule} running time of main line trains; by increasing the bulk use of electricity it would reduce the cost of electricity; and, finally, the cleanliness of an electrified system would have a good effect on the health of the ^{urban} ~~working~~ population.

In 1932 London was linked to Brighton, Worthing, Portsmouth and Southsea, and Bexhill and Eastbourne by electric traction and in the same year the Manchester, South Junction and Altrincham Railway, jointly owned by the L.M.S. and L.N.E.R., was electrified.

An electrification scheme is still in course of construction on the Sheffield to Manchester line of the Eastern and North Eastern Regions. The scheme covers some seventy-five miles of route and when completed all passenger, goods and mineral traffic will be worked by electric traction.

11. * Locomotives

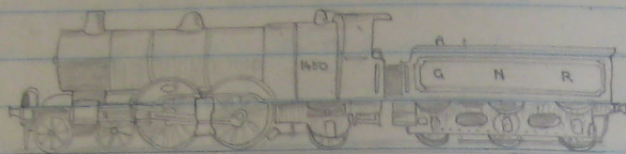


STEPHENSON'S LONG BOW LOCOMOTIVE, 1825

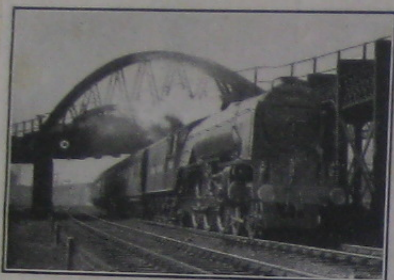


N.E. EXPRESS LOCOMOTIVE, 1870

* See also the "Rocket" and "Puffing Billy" on a previous page.

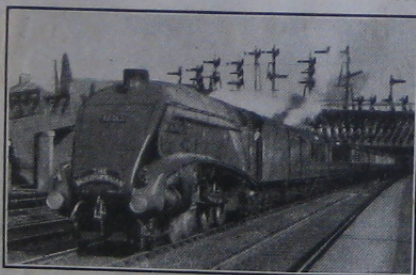


G.N.R. "ATLANTIC", 1908.



The down "White Rose" near Harringay, in charge of "A1" 4-6-2 No. 60120, now named "Kittiwake." Photograph by F. R. Hebron, London.

TWO BETWEEN-THE-WARS LOCOS.



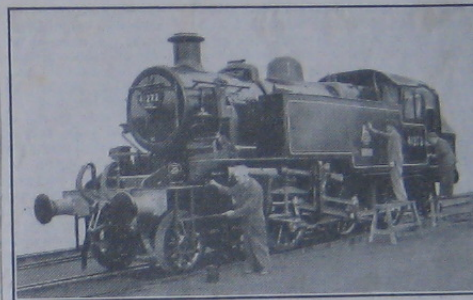
The southbound "Northumbrian" leaving York for London. The "A1" locomotive is "Andrew K. McCosh," working through from Newcastle to King's Cross. Photograph by C. Ord, York.

(SIMILAR TO THE "GIVEL JUBILEE" AND THE "HALLARD" (1938) WHICH HAD THE WORLD'S STEAM SPEED RECORD OF 126 M.P.H.) * (1935)

TWO TANK ENGINES

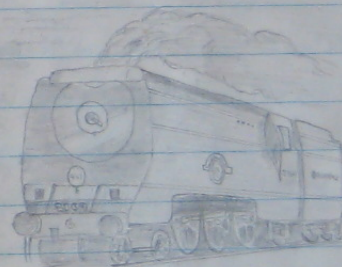


A quaint little saddle-tank, No. 1331 of the Western Region, withdrawn recently. It was built in 1877 for the Whitland and Cardigan Railway. It is shown at Porthywaen quarries in 1947. Photograph by S. W. Baker.

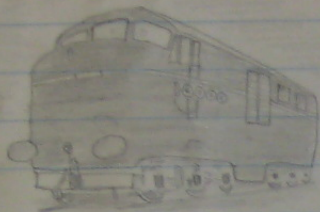


Putting the finishing touches to Crewe's 7000th locomotive. This is a 2-6-2 tank, B.R. No. 41272. British Railways Official Photograph. (1960)

Tank engines carry their coal and water supplies on their framing and are thus self-contained units. They are used for branch-line passenger trains, goods and shunting.



"MERCHANT NAVY" AIR SMOOTHED PACIFIC TYPE, 1945.



FIRST MAIN LINE DIESEL ELECTRIC LOCO. BVT
INTO SERVICE ON THE L.M.S. LINE IN 1948.



THE "RAILPLANE", A PRE-WAR EXPERIMENT NOW GLASGOW.
THESE RAILPLANES, WHICH CAN CARRY 12,000 PASSENGERS AN HOUR, MAY
SOLVE THE PROBLEM OF SUBOCEAN TRAFFIC.

12. Railway Coaches

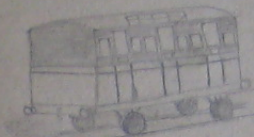
The first railway coaches had no buffers and the practice of using third class open carriages was common till 1850 and even later on some branch lines. Iron sprung four wheelers the coach progressed to the enclosed six wheelers, then the six wheeler corridor, introduced on the North-Eastern in 1823 to the bogie carriage of today. The ^{first} bogie vehicles were five Pullmans put on the London-Bradford service in 1874. These 5 Pullmans were the premier profit cars but were ante-dated by two years by sleeping saloons on the East and West coast routes to Scotland. In 1893 the afternoon express from King's Cross to Edinburgh was vestibuled throughout, the first example of what became main-line practice in Great Britain. Which -



STOCKTON TO DARLINGTON RY. COACH, 1826.



THIRD CLASS OPEN COACH, 1860.



FIRST CLASS COACH, 1840.

12. RAILWAY COACHES



FIRST RESTAURANT COACH, 1879.



CUT-AWAY SECTION
OF A SOUTHERN REGION
DOUBLE-DECKER COACH,
1950.



Mail pouches suspended from the ground standards at Harrow (L.M. Region) being picked up by the 8.30 p.m. ex-Euston "West Coast Postal".

appeared in 1871, third
cars in only 1927.

Coaches were fitted to
stock and the lot of
ready to make a few
use them.

class diners

class sleeping

After 1875 continuous

British passenger

1884 was only

companies to

Excellent

to both

national &

lay out

110+

110

Shipping - from c.1800

Sailing ships

In 1760 ships were still in the line of development from the days of Drake. Most ~~large~~ trading vessels were of about 300 tons burden. The East Indiamen built specially for the trade ranged from 700 to 1,000 tons except from 1786 to 1797 when the East India Company was forced to build bigger ships. That company also had to resort to iron knees, with unexpected success, when there was a scarcity of naturally bent timber. About 1770 copper was first used to sheathe ships' bottoms, and thus frequent careening could be avoided.



AN EAST INDIAMAN, 1815.



A TEA CLIPPER, c.1860

With the discovery of gold in California in 1849 and the Australian gold rush a year later, the 'clipper' ship, which had been slowly developing velocity in the United States of America, suddenly got its opportunity. These clippers were first built to carry the gold-seekers. They were made of soft wood and therefore cheaper, though not so strong, and were five or six times as long as their beam. Their speed was

much greater than that of the British ship. The end of the Navigation Acts gave these American vessels the opportunity of entering the British tea trade from China*, but new British tonnage rules and hardwood hulls, denser but softer than the soft-wood ones, soon permitted British builders to produce better ships and American competition began to diminish. The Civil War put an end to the rivalry for four years and after 1866 American shipyards did not renew it as that nation turned its attention to internal reconstruction and expansion westward.

Many improvements were made to the sailing ships, for example the using of ~~iron~~ iron framework with hardwood planking and later hulls made totally with iron and steel, giving greater strength with less weight, but they were fighting a losing battle against the steam-ships. Their fate was finally sealed when in 1863 the steamer "Robert Love" delivered an undamaged cargo of tea, for before it was thought that the steam would damage the tea, and in 1869 the Suez Canal was opened. It was nearly impossible to sail a ^{sailing} ship through the latter and it was found that it was cheaper to take a steam-^{and quicker*}er through it than to sail a clipper ~~to~~ round the Cape of Good Hope. In 1874 the clippers ~~were~~ ceased to be built and were transferred to the Australian trade, where they continued to "race the southern wind" till the end of the 19th century.

* The first ship to arrive at her destination first got the benefit of the market, and, moreover, the quicker the journey the better the condition of the cargo, for tea deteriorates when stored. This led to tremendous races of the clippers. For example, in 1866 5 British clippers took part in a race from Yanchow to London. They were meeting of each other until the "Ariel" and the "Thetis" reached the Channel. The race became terrific and the "Ariel" reached her destination 10 minutes before the other.

Steam Ships

The first ships powered by steam were very weird devices. John Sitch of the U.S.A., for example, in 1785 designed a steam-boat driven by an endless chain of floating boards, a sort of naval tank-track, and later adopted a set of paddles moving like those used in rowing. He also suggested jet-propulsion in 1790, and the same system was proposed on numerous occasions and even tried out by Rumsey in 1793, succeeded in driving a jet-propelled boat on the Potomac at 4 m.p.h.

Various proposals ^{and attempts} were made at paddle-boats driven by engines of the Newcomen and Watt type, but without notable success until 1788, when Miller and Inceynington built a paddle-boat, which on trial on Dalvington Dock reached a speed of 5 m.p.h. Inceynington carried on the work and built the "Charlotte Dundas", which in 1802 towed two 70-ton barges 19 1/2 miles in nine hours against a headwind, no sailing boat nor other vessel on the canal dared to move.

In 1807 Robert Fulton, an American who used a very scientific approach making experiments on water resistance and similar topics, created a sensation by steaming 150 miles from New York to Albany in 32 hours. Hereafter steam navigation on the waters of the U.S.A. made rapid progress and was ~~thoroughly~~ thoroughly established in 1815. In Britain progress was slower till about 1830 and in 1815 the country had only 20 steamers. One of these was the "Comet", built by Bell in 1812, was 42 feet long and carried passengers successfully between Glasgow, Greenock and Helensburgh.



BRITANNIA (1840).
WOODEN PADDLE.
The first Cunarder.



THE "COMET" ON THE CLYDE, 1812,
25 tons, 40 feet long.



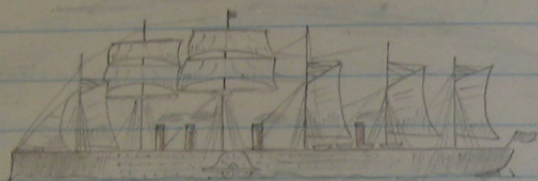
MODEL OF THE "CHARLOTTE DUNDAS" No. 2.

In 1819 the "Saratoga" crossed the Atlantic in 29 1/2 days under sail and steam but only 84 hours of the voyage were with steam. The first steam crossing of the Atlantic was performed by the Dutch steamer "Capeaar" in 1827. She was a wooden boat with paddles driven by independent engines. Built in England, she was ~~built~~ ^{buil} by the Dutch and used on the West Indian mail service. In 1833 the steamer "Royal William", part-owned by Samuel Cunard, the founder of the Cunard line in 1839, did the trans-Atlantic journey in 25 days, as against the "Capeaar's" month. 5 years later four ships, the "Sirius", the "Great Western", the "Liverpool" and the "Royal William", crossed that ocean, the shortest time being 15 days.

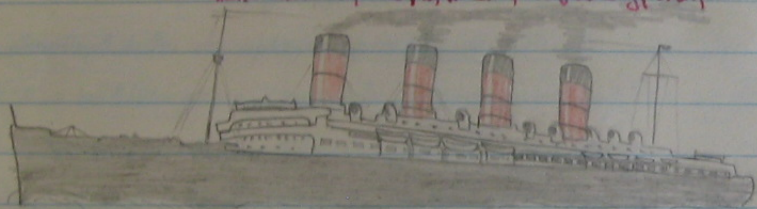
In 1843 the problem of iron ships was solved by Brunel, who built the "Great Britain", a great achievement, for every detail had to be thought out from the beginning. All early steamships were of wood, and were thus paddle driven as wooden ships could not stand up to the vibrations of the screw. Iron ships also are lighter for the same dimensions, offer more cargo space, and are stronger. After the "Great Britain" iron ships became common. In 1863 the first steel ship was launched and from 1874 steel had completely replaced iron.

In 1853 Brunel showed that much bigger vessels can be built with iron with his ship "Great Eastern", the largest ship built to that date. Her dimensions were: length 692 feet, beam 83 feet, draught 25 feet and gross tonnage 18,945 tons. She was a screw and paddle vessel and cost about £139,000. She crossed the Atlantic in 11 days in 1860 but was found to be too expensive and was later employed in laying the first Atlantic cable. She also laid the French Atlantic cable from the new screw propeller to the mast idea.

the Bombay - Suez cable, and the fourth and fifth Atlantic cables. Sold by auction for £16,000 when was moved to the Mercury and broken up, the materials being sold for about £60,000. The "Great Eastern" was really ahead of the times but it did not have enough power for its great bulk.



THE "GREAT EASTERN", 1858, 18,915 tons, 672 feet long, iron,



S.S. "MAURETANIA", 1907, 30,000 tons, 762 feet long. N.B. no provision for sails, steel.



THE "TURBINA", 1894.

Although the North Atlantic crossing bulked very largely in the public eye it was by no means the only route that received attention. Successes gained as it were indeed

spectacular but it was quite a short route and shipowners were alive to the fact that something must be done about the long-distance routes. The route round the Cape to India was long and round about, and, moreover, put no money in the shipowners' pockets. It started with the East Indian Government, which ran a service from Bombay to Suez. At Suez the route was continued overland over the isthmus and the rest of the journey was done in sailing ships.

Then the Peninsular Line - it did not become the Peninsular and Orient Line until 1845 - stepped in and ran a steamer service in competition with the government sailing packets, and in 1839 joined hands with the East Indian Service. From the date of its incorporation in 1839 the P. and O. carried mail to India and Egypt and from 1872 it has had the mail contracts to Australia. Its vessels are not so large as those of other routes as they have to go through the Suez canal, which only vessels of a certain size can negotiate.

Competition between the various services had a big influence on merchantile design; when it was appreciated that the fastest liners on the Atlantic service could serve in an emergency as auxiliary cruisers, all the naval powers gave subsidies which permitted ships of war standard to be built and in the late 1880s twin screw ships were built for the European - U.S.A. routes with a gross tonnage of 10,000 and a speed of 20 knots. Very soon trans-Atlantic ships exceeded 20,000 tons and 23 knots; while the turbine engine was extended to liners of moderate standards. In 1907 the 20,000 ton liner ship "Mauretania" and "Lusitania" were powered by them.

The first man to power a ship by a turbine was Parsons, when in 1871 he constructed the small launch "Turbina," which created a sensation at that year's

naval Review by reaching a speed of 34 knots, 7 knots faster than the speediest destroyers. In the following years the turbine was tried in various vessels by the Navy, with such ~~no~~ success that in 1905 the Admiralty took the decision that turbines should be used exclusively ~~that turbines should be used~~ on all types of warships. Meanwhile the first merchant vessel was built with a turbine, in 1901, and soon turbines were accepted as the best drive for all fast ships. From 1909 Parsons developed the system of driving propellers through reduction gearing and thereby made possible the use of turbines in slow cargo vessels.

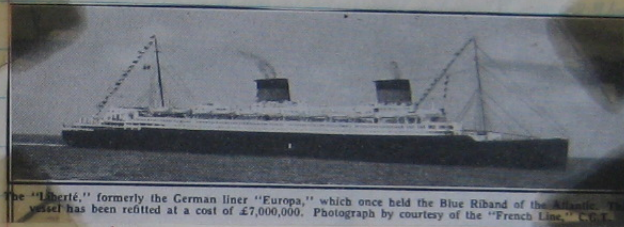
Some companies decided that ships of large size and extreme comfort, with moderate speed, paid better than the record-breakers. The long distance liners were naturally more conservative in their design and slower in their development. All types benefited by the discovery of the virtues of the cruiser stern instead of the overhanging counter, although it was not generally adopted until after 1918.

The Diesel internal combustion engine was introduced for ocean-going cargo ships by Danish and British Builders in 1902, and proved to possess many advantages for certain types and trades. As an alternative oil fuel was substituted for ~~sea~~ coal under the boilers of certain steamers, greatly reducing the bunker space required and the size of crew necessary and giving for better results.

During the First Great War the British and American governments built a very large number of tramp type ships which flooded the market when they were put on the scale but after the armistice. Technical improvement was thus limited for some years.

But the desire for luxury and speed in passenger liners had not died and the German "Bremen" and "Europa" (now the "Liberty"), 52,000 tons, the Italian "Rex" and "Conte

di Savoia", 51,000 and 48,000 tons, the French "Normandie", 83,223 tons, and the Grand White Star "Queen Mary" (81,235 tons) followed one after another in rapid succession, each in its turn breaking the Atlantic record.



The "Liberty," formerly the German liner "Europa," which once held the Blue Riband of the Atlantic. The vessel has been refitted at a cost of £7,000,000. Photograph by courtesy of the "French Line," C.F.R.



THE "REX," 51,000 tons.



THE "NORMANDIE," 82,299 tons, 1024 feet long.

40. Great White Star Line



R.M.S. QUEEN MARY

81,225 tons, holder of the "Blue Riband" (ave. 31.2 knots), length 1,019 ft.

Please remove
this picture for
the story of the
Cunard White
Star Line, THEN
REPLACE IT.

82,673 tons, 1,031 feet long, service speed 29 knots.

The "Queen Elizabeth" was completed during the Second Great War, was used as a troopship before making her maiden voyage as a passenger liner in October, 1946.

Between the wars cargo liners and oil tankers to carry oil in bulk were also greatly improved in design. The competition of Diesel propulsion brought great improvements in steam engineering, while electric drive, with current generated by turbines of or Diesel engines, gave excellent results. It was not until some years after the First Great War that the improved hull line of liners greatly reduced their fuel bills.

After the Second Great War there was again in the market an excess of tramp-type ships built by the British and U.S. governments, although fast tonnage suitable for regular service had also been built. Numerous war-time practices were found safe and continued in peace, while full advantage was taken of scientific experiments made officially. The great improvement of aluminium alloys in their resistance to corrosion at sea led to their adoption for many parts of the ship and the use of plastics became general.



The turbo-electric liner "New Australia." Photograph by courtesy of the Shaw Savill and Albion Company Ltd.

1950

UNION-CASTLE LINE TO SOUTH AND EAST AFRICA.



THE UNION-CASTLE ROYAL MAIL MOTOR VESSEL "STIRLING CASTLE" 25,554 TONS.

Please take
out this picture
for the story
of the Union
- Castle Line,
THEN REFACE
IT.

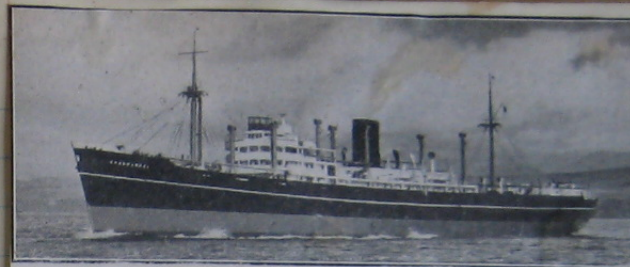


The life-boat at sea. The vessel is the twin screw light Liverpool type of life-boat stationed at Seaham.

TWO SMALL BUT IMPORTANT SHIPS.



A Scottish herring drifter leaving a northern port at sunset.



The P. and O. fast freighter "Coromandel." She was completed last Autumn for service on the London-Calcutta run. The illustrations to this article are reproduced by courtesy of the P. and O. Steam Navigation Co.

TWO SHIPS OF BURDEN 10,500 tons, 428 ft. long



A BRITISH TANKER.

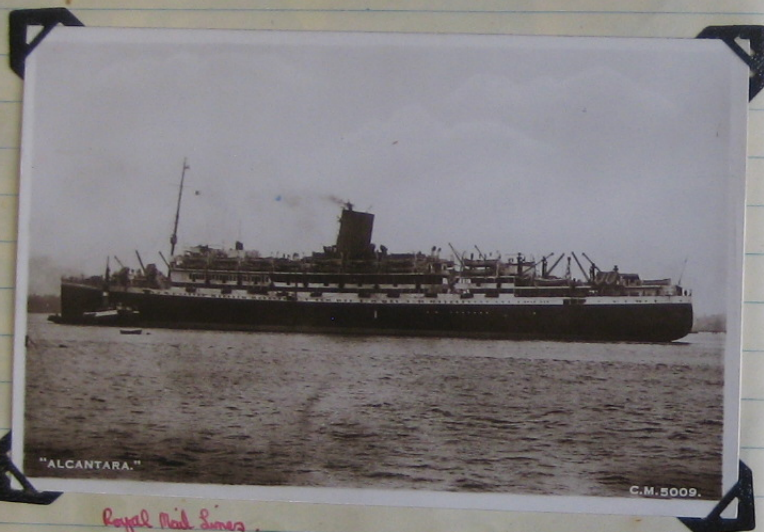
A CHANNEL STEAMER.



T.S. "Broughton," NEWCASTLE-DOVER FERRY, 2,875 tons, 311 feet long.

Royal Mail Lines

The Royal Mail Line was chartered in 1839 as the Royal Mail Steam Packet Company. Two years later it obtained the mail contract to the West Indies and a fortnightly service of paddle steamers was instituted from Falmouth. In 1851 the service was extended to South American ports. During the Crimean War the company's vessels were used as transports. Extensions were made to Morocco, the Canary Islands, and Madeira, and in 1910 the company purchased the Pacific Steam Navigation Co. Other lines were absorbed and now has a fleet operating to most parts of the world.



Royal Mail Lines

Excellent

Fighter

Early British Aircraft of World War II

These four most famous British fighters early in the second World War were perhaps the "Spitfire", the "Hurricane", the "Defiant" and the "Beaufighter", the four aircraft which were mainly used in the Battle of Britain.

The "Spitfire" was a single seat day fighter and was directly descended from the seaplanes which won the Schneider Trophy for the third time in succession in 1931, but some features of the Hunkel 113V had also been added.

The "Spitfire" was designed by R. J. Mitchell, its engines by Rolls-Royce and it was produced by Supermarine. It was the plane which the Germans most feared, having a speed of about 365 m.p.h.

The "Hurricane" was also a single seat day-fighter and was made by Hawker. Its speed was about 40 m.p.h. less than that of the "Spitfire" but it destroyed the greater number of hostile aircraft.

The Bolton-Paul "Defiant" was primarily a night fighter and was almost unique in having no guns in its wings but a turret behind its cockpit. It was a single engine, two seater aircraft and had a speed slightly less than the "Hurricane".

The "Beaufighter" was a general twin engine aircraft and was made by Bristol. It had a crew of two and its armament consisted of four cannons in its nose.



SPITFIRE



DEFIANT



BEAUFIGHTER

Education



Committee of Privy Council on Education - formed by the consideration of all matters affecting the Education of the People. James Kay - Shuttleworth, who established the right of wage teacher system, made the teaching profession more attractive, devised limited State aid to other religious communities and planned and improved methods of teaching.

request of Queen Victoria "for the leading man of it was Sir James Kay - Shuttleworth, who established the right of wage teacher system, made the teaching profession more attractive, devised limited State aid to other religious communities and planned and improved methods of teaching."

Board of Education - combination of the Educational Department, the Science and Art Department and the educational powers of the County Commissioners. In 1902 School Boards and School Attendance Comptrols were abolished.

1833
Government made a grant of £20,000 for school buildings to the British School Society & the National Society.

Grant increased by £10,000.

GROWTH OF STATE EDUCATION

1870
1876
"Forster's Act or the Elementary Act" set up elected school boards to raise money from local rates, where school accommodation was insufficient. Religious teaching was non-denominational.

On Act made it a point to see that every child received elementary education in the age of 5 to 13.

Education will power at districts insufficient.

1889, 1890
The Technical Institutions Act empowered councils to levy rates of not more than 1d. in the pound in aid of technical instruction.

The duty of the local authorities was to see that every child received elementary education in the age of 5 to 13.

On Act made education free.

1902
The Local Education Act allowed the use of technical instruction of the technical contributions paid to the local authorities for the poor and spirit duties.

1902
Balfour's Act, as well as abolishing school boards, made the county or county borough the authority for all forms of education. Local authorities could also provide grammar schools.

The Butler Act, enacted by the Consolidation Act, gave full powers to local education authorities to provide for the physical as well as mental education of children from 2 years of age. It raised the school-leaving age from 12-14, and gave the local authority power to raise it to 15, a power never acted on.



1944
The Butler Act revolutionised the English educational system. It unified the control of education within each area, formal education in three progressive stages: primary, secondary and further, provided county colleges for work up to the age of 18, abolished fees for secondary education in publicly financed schools, and raised the school-leaving age to 15.

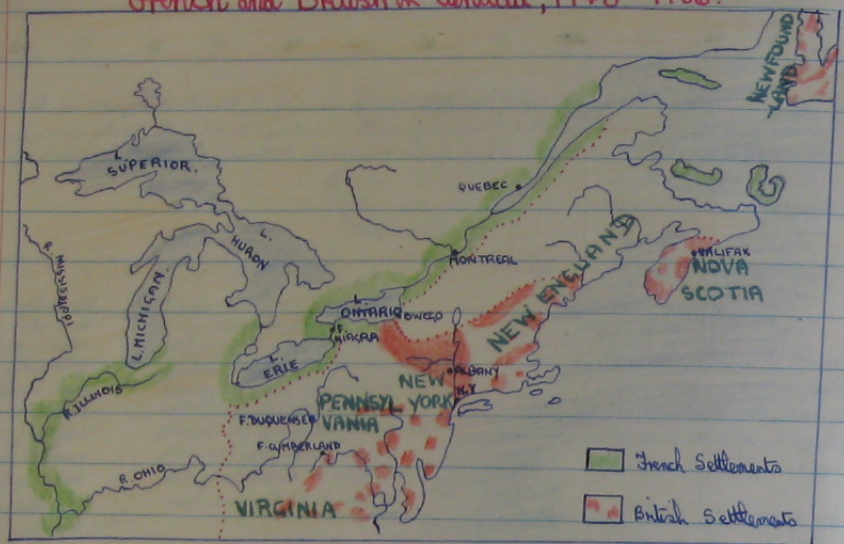
1808
The British School Society, founded 1808 and the National School Society both employed the monitorial system by which the senior boys learnt from a master and then passed on that information "parrot fashion" to the younger boys. Writing was done on slates. Although learning "parrot fashion" was bad, it produced beautiful copy - plate writing.



1861
SYSTEM
From 1861 to about 1900 used by which a master who passed from his graded pupils by ability were together.

1900
The "Payment by Results" system was used by which a master could be paid by the number of boys standard for the week. Standards was that after boys of differing ages were together.

French and British in Canada, 1748-1756.



Write a letter from a young gentleman of Boston to a friend in Virginia describing the Boston tea party and explaining why he hates the British so ~~the~~ much.

Plymouth House,
Beacon Street,

Boston, Mass.

December 17th, 1773.

Dear William,

I thought that perhaps you would be interested in an incident which happened here yesterday. As you know, at times feeling here has been high against the British. The Seven Year's War, which ended in 1763, had left Great Britain with a load of debt. The Landowners, who dominated Parliament, were restive under the heavy tax on land and

insisted that we, in the English colonies, should pay at least some of the cost of the army still kept in America. And so it was decided to raise revenue by the sale of stamps which would be necessary to validate certain business papers and which had to be affixed to all newspapers and pamphlets. As soon as the Act came into operation, in the spring of 1765, it met severe opposition from all ^{of} our colonists, for, although we recognized Britain's right to govern our trade to a certain extent, we did not think that she had the right to tax us, especially as we were not represented in Parliament. And so ~~there~~ ^{there} were great demonstrations. Inflamed crowds paraded the crowded streets of this city. Agents were forced to resign their offices, the hated stamps were burnt and the Act nullified. Merchants formed nonimportation associations and by the summer trade with Britain was at a stand-still. In 1767 the Act was repealed.

The repeal, however, was accompanied by a Declaratory Act asserting the full authority of the British Parliament over the colonies. The hated English landlords continued to press for relief from taxation. That same year, therefore, acting on this hint, a new chamber of the exchequer, Charles Townsend, led the House of Commons in imposing a duty on lead, glass, paper, paint and tea. At once we again raised vehement protests, although there were no disorderly demonstrations as there were at the Stamp Act. It was unanimously resolved to use no English goods and to pay no debts in England until the Act was repealed. And so women found substitutes for tea, students used American paper, and houses went unpainted. In this city the enforcement of the regulations provoked violence. When customs officials sought to collect duties they were set upon and handled roughly by the populace. For this, 2 regiments were dispatched to protect the customs commissioners. The presence of British troops in the town, nicknamed "Bloody Backs" because of their red coats, invited trouble. One day in March 1770 a snowball fight became a mob attack, the order was given to the soldiers to fire and three Bostonians lay dead. This atrocious action gave agitators a valuable

material. Seeing no other way out Parliament decided to treat a strategic retreat and repealed all of the Townshend duties except the "tea tax", which George III kept on ~~in that~~ to keep up the right.

Then followed a three year period of calm. It was the calm before the storm, though. Samuel Adams, a Harvard grad graduate, had meanwhile been organizing a movement throughout our country which would bring together all the anti-British and make them aware of their importance. Last night the movement struck its first blow.

Three ships of the East India Company lay at anchor in Boston Harbour. Each was laden with tea, which was to sell at 3d. a pound, whereas in Britain it would have been a shilling. Adams suspected that it was a trick to collect taxes and so he and about 50 friends (I among them), disguised as Mohawk Indians boarded the ships, ripped open the tea chests and poured their contents into the sea. Our action, I am sure, will react all the anti-British in these colonies and I soon, I think, we will be independent of the fat English money-squeezers who have not the guts to come here and try to make money for themselves but sit lazily in large manors living on the toil of men like you and I.

Hope this letter finds you well,

Your old friend,

John.

The American Revolution and why it succeeded.

1. The bad strategy of the British.

1775, Bunker's Hill & Lexington. At Lexington the first blood of the war was drawn, when a detachment of British soldiers were sent to prevent the colonists from taking a number of arms and were fired upon. A more serious affair was the battle of Bunker's Hill when the British tried to regain the town but only did so after heavy losses. The British badly underestimated the colonists' strength and also used bad tactics. Instead of creeping up the hill they rushed up in straight lines. The Hill was of great strategic importance as it commanded Boston Harbour.



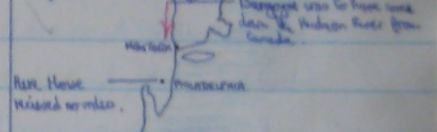
3. Britain lost command of the sea.

In 1778 French declared war against Britain & began to help the colonists because they wanted revenge for the loss of the 7 years war and a year later Britain followed suit because of the Family Compact. With these two powers to aid her America gained control of the sea. As a result of this, when Cornwallis took up a defensive position in the peninsula of Yorktown no help from the British Navy was forthcoming. The French blockaded the port while the Americans held the rest of the peninsula. With no supplies coming through Cornwallis hung on as long as he could but had to surrender in October 1781.



2. The folly of running a war from 3,000 miles away.

King George had conceived a plan of trying to cut off the 13 original colonies from the rest. The main direction of this effort to General Howe and to General Burgoyne, but those to Howe for some reason never arrived. And so Burgoyne had to try to carry out his orders single-handed, not knowing that Howe was not coming. He was greatly outnumbered in passing by the heavy guns, the baggage & the well directed attacks of the enemy troops and so was forced to surrender at Saratoga Springs. If there had been one man of ability in command in America the result may have been different.



4. The genius of Washington. Whereas the British had no "on the spot" commander the Americans had an ideal one in George Washington, a Virginian who had fought against the French in America during the 7 years war. He was not a highly-trained soldier or an inspired commander, his success was due to strong common sense allied to unshakable determination. Despite all sorts of handicaps - a half-trained government, inexperienced officers, a shortage of food, pay, clothing & arms - he held on with steadfast firmness all through the dark days to emerge victorious and later to become the United States of America's first president.



George Washington.

George Washington was born on February 22nd, 1732, at Bridges Creek, on the Potomac river, Westmoreland county, Virginia, the son of a prosperous planter whose family had emigrated from Northampton to Virginia in the 16th century. His father died while he was a child, and his schooling was irregular. At the age of 16 he went to live with his father at Mount Vernon and was there appointed public surveyor of Culpeper County and at the age of 21 major of the local militia.

Loving adventure, he welcomed in 1753 the difficult mission of crossing some 600 miles of hostile wilderness, hostile nations, and of warning notice on the French that their forts on the western lands were regarded as an encroachment. He was rewarded, in 1755, by an appointment on the staff of General Braddock, who was sent to visit the French. Braddock's force was destroyed, but Washington's intrepidity in attending the rout earned for him a high reputation.

Returning to Mount Vernon, the estate which he had inherited, Washington organized the Virginia forces for defense against the Indians. The colonists resented military service and when, in 1759, Washington married Martha Custis, a rich widow, he gladly resigned his command and devoted himself to the administration of her estates and to purely local politics.

In 1765 difference between the British government and the colonies became acute. Washington's plan to boycott all goods on which Great Britain levied taxes proved so unsuccessful as to call their repeal with that of the obnoxious Stamp Act, though the tea duty was imposed. In 1774 he was elected to the first continental congress. At the outbreak of the War of Independence, 1775, he was given the chief command.

During the war he was forced to spend much of his own fortune to uphold an army to whose support the colonial exchequer was painfully unequal, and made the scapegoat of every other general's failure. Bewildered by the party hatreds which divided congress, he spent the first year in attempting to introduce

order into the muddled organization of the army, and to check enemies on his own side. While so engaged he was forced to order his troops to retreat; the passage of his army from Long Island, where he had been defending New York, through the British lines, although it was followed by a rout which turned his army into a rabble, was an indication of his spirit; it was followed by a brilliant victory at Brandywine, December, 1776, the battle that virtually forced the colonists from their defeat, and by a masterstroke at Princeton, New Jersey, January, 1777. The defeat of Burgoyne, September, and Germantown, October, 1777, however, compensated the British.

The ascendancy which Washington possessed over his troops was demonstrated at Monmouth, June, 1778, where, though he was betrayed, Washington turned an ignominious defeat into a victory.

The surrender of Burgoyne at Saratoga, meanwhile, seemed likely to change the course of the war, but was followed by a blow from which Washington barely recovered - the defection and treachery of Benedict Arnold, one of his most brilliant officers. Major Andre, who was associated with Arnold, was caught and hanged as a spy, and Washington was subjected to much censure for this action, which, however, had full military justification. Washington was encouraged by the alliance between the colonists and France, concluded in 1778, and later by the support of Spain against the British. Between Monmouth and Yorktown, 1781, where the surrender of Cornwallis virtually ended the war, Washington was not engaged actively.

At Headquarters, however, near New York, he had a task to which he would doubtless have preferred the almost dangers of open warfare, for there he had to continue to combat the cabals formed against him, to soothe the frightened congressmen, to retain the friendship of rich foreign soldiers without offending the warring colonists, and to keep discipline in an undisciplined army. On December 23rd, 1783, he resigned his commission and retired to Mount Vernon.

The retirement and peace for which he yearned were short in duration. Returned as a

Washington was more than a figurehead in the first American government; to him are in large part due the wide powers which became characteristic of the United States presidency. Against the opinions and desires of many of his supporters he reluctantly suppressed the whiskey insurrection, acted with solemn determination against the machinations of France, and showed no animosity against Great Britain. His moderation, and his attempts, mainly successful, to arrange a compromise between the hostile parties of Hamilton and Jefferson alienated many, and though he was unanimously re-elected president in 1793, he had thereafter to endure many warlike and calumnious attacks. He refused to stand for a third term in 1797 and retired once more to Mount Vernon, where he died suddenly of a cold chill on December 14th, 1799.

British Colonies

Provinces

Territories

1871

1882

1891

1907

1912

1917

1922

1929

1931

1935

1939

1946

1954

1959

1967

1971

1975

1979

1982

1985

1989

1992

1995

1998

2001

2004

2007

2010

2013

2016

2019

2022

U.S.A. independent since 1773. During 19th cent. spread to west.

UPPER CANADA

LOWER CANADA

The History of Canada (cont.)

Stage I 1763 lower Canada (French + Catholic)

1783 Upper " added (United Empire Loyalists)

1791 Pitt's Canada Act. Each province given a separate Parliament. But the King's representation had the last word.

Stage 2 1837 Rebellions in Upper + Lower Canada.

Causes - Lower - quarrels between Parl. (R.C.) + governors (protestant)

Upper - quarrels between Parl. + governors.

certain families monopolised power.

Anglican church given too much land.

Lord Durham's visit

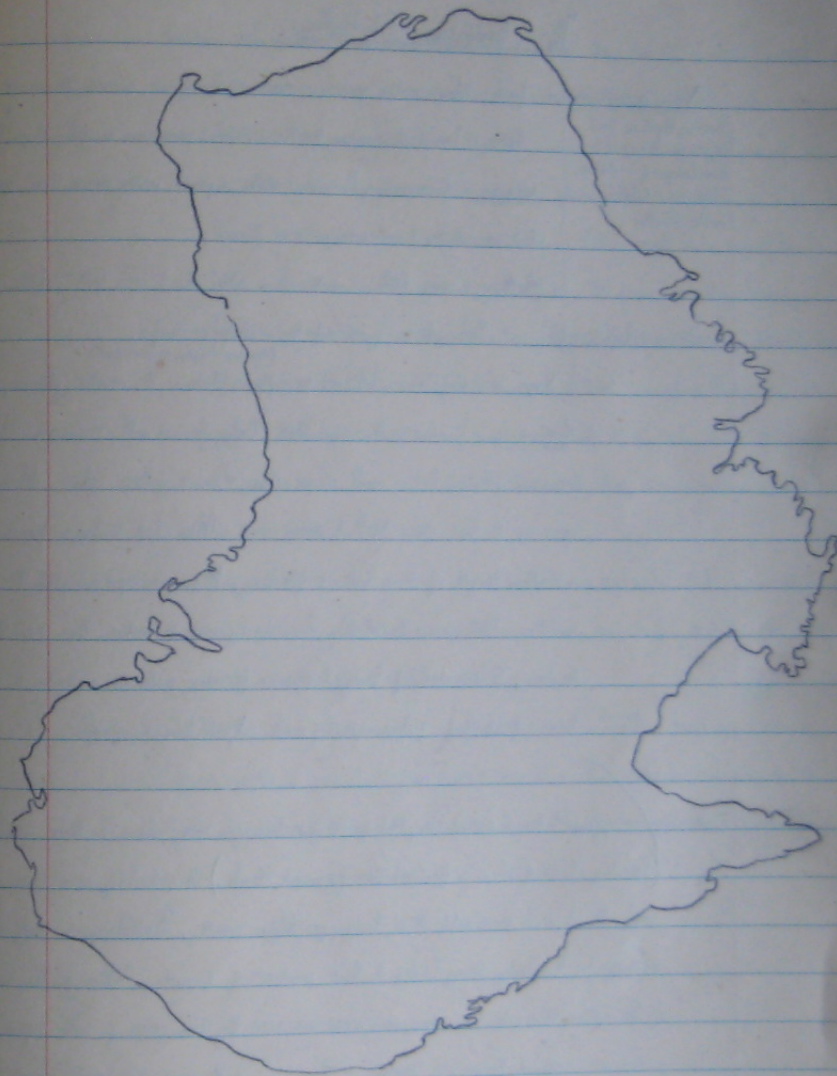
Durham Report (1839) recommended

a) Union of 2 provinces - done 1840 Union Act

b) Responsible government - achieved during Governor-Generalship of

Lord Elgin 1848

Stage 3 Growth of Canada + 1867 North America Act set up federal govt. + state parliaments.



The Australian Blackfellows.

Very primitive - food: - tubers, roots, gums, opossum, kangaroo, insects, snails, no cultivation.
 Pigeons Britains lived 25,000 years ago. No knowledge of metals. One by rubbing sticks together.
 houses: - bone walls, windows for throat, animal possessions in dilly bags. Rough shelter.
 weapons: - Boomerang, throwing stick, spear, stone axes, bone fishhooks, clubs.
 Had not invented bows & arrows.
 clothes: - very little, sometimes a skin cloak or a belt, often nothing.

Customs & habits & religion Each tribe governed by a chief or chiefs.
 (also worshipped animal gods) ^{nothing}
 Very superstitious, believed in spirits, Biani, the creator, demons, apparitions, etc.
Appearance - Hair cut with mussel shell, body greased with fat. Adult (mailed) women painted bodies with pipe-clay, & red & yellow ochre. When a boy grew up he had front teeth knocked out. Also had to lay on his back for a certain length of time without flinching. Physique apt adapted to desert conditions. Thin, muscular bodies, eyes deeply set to protect them from the glare of the sun. Quiver ideas of beauty - wounds forming patterns on limbs & chest, eye-lashes & front hair picked out by roots. Dead "buried" in trees.

Descent - appear to be a mixed race, Malay element having a large share in their composition. (Mixing colour of skin a few shades from jet black.) All probably came from same stock, though it is remarkable that languages differ greatly. Intelligence very low, their intellectual knowledge being limited to their number of fingers. Although the languages of the native tribes are so diverse, some words are used by tribes 100s of miles apart, indicating a common original tongue. i.e. "water" or "kanyee" is the same for water among several tribes separated by wide areas.

* because of climate & no animals of prey.

Hunting - very skilled. Knew every habit of animals they hunted & could imitate their cries so as to deceive the very creatures themselves. Discovered how to be a very inquisitive bird. Hunted in two. One would bury himself up to waist & cover exposed part with an emu skin, whilst the companion hid himself near by in a clump of bushes. One in bushes would make cry off emu. Other would wave himself around grotesquely. All traps were within hearing attracted by cries. Compelled themselves to go close. Spurred & eaten. Blackfellows could detect reptiles by watching the behaviour of birds & applied themselves with ease by catching a bird, attaching a piece of fluff to its body & then following to meet to its hole. Yet, for all their skill, they were sometimes glad to eat grubs, moths, ants & rots.

Dances - chief sometimes a native dance. Sometimes the dance represented the hunt, and the dancers would go through all the stages of tracking, finding, and making the kill: others they acted the fight between 2 tribes in tribes making.

Conclusion : did not take to civilization: population dropped ^{150,000} ~~250,000~~ in 1800 now about 50,000 mostly in Queensland, N.W. Terr. & W.A. Pure-blooded ones almost extinct. Could not stand up to the white men. Not beyond the 1000 extinct Tasmanians who gave no amicable action.

Africa - the exploration and partition which concern the British.

The Life and Work of Livingstone

David Livingstone was born at Larv Barntye, Lanarkshire, Scotland, on March 19th, 1813, the son of Neil Livingstone, a tea agent and a deacon in the Independent church at Hamilton.

David's early years, after the age of ten, were divided between a cotton mill and an evening school. By dint of working he then managed to study medicine, theology, and Greek at Glasgow University. In 1838, influenced by the teachings of Sir Thomas Dick, he offered his services to the London Missionary Society; and after attending the medical school at Charing Cross Hospital and gaining his diploma at Glasgow, he sailed on December 31st, 1840, for South Africa to join Dr. Moffat, whose daughter Mary he married in 1844. She died at Shupanga in 1862.

Eight years he laboured in Bechuanaland, teaching and ministering to the natives. In 1849, with his friend and benefactor, William Cotton Oswell, he crossed the Kalahari desert, discovered Lake Ngami and partially explored the Zambezi. Inspired with a desire to ~~to~~ link up the interior with the sea, he next conducted an expedition down the Zambezi to the Indian Ocean (1852-56), a marvellous contribution to geography and the natural sciences. In the course of it he discovered the Victoria Falls. After publishing his account in 1857, and ~~concluding~~ ^{resolving} his connexion with the L.M.S., he appointed British consul at Bulawayo. In 1858-64, with Dr. (later Sir) John Kirk, he explored the Shire and Save rivers and discovered Lake Nyasa. Then he again visited England to advocate further expeditions in the interests of commerce and for the suppression of the slave trade.

In 1855 he started on an expedition to solve the problem of the Nile basin, marched from Mbandaka to the South of Lake Tanganyika, 1862, and discovered Lakes Moero and Bangweulu. Lake in 1871, H.M. Stanley, sent out by 'The New York Herald' to discover where

Livingstone was, found him in worse need at Ujiji. Though wanted in health, Livingstone refused to return, and made further efforts to reach the sources of the Nile. At Ficks, on May 1st, 1873, he was found by his servants, lying by his bedside, dead.

It is estimated that, attended for the greater part of the time by only a few native servants in 33 years he travelled over 30,000 miles of country hitherto unknown to the white man. He was the first European to traverse the length of Lake Tanganyika. His influence is exemplified by the fact that the notorious slave dealer Tippu Tib suspended operations when Livingstone was in his neighbourhood. Having been embalmied and carried to the coast by his followers, the explorer's body was conveyed to Westminster Abbey.

Cecil Rhodes

Cecil Rhodes was a son of the Vicar of Bishop's Cleeve, where he was born on July 5th, 1853. Educated at the grammar school, he was sent at 15 for the benefit of his health to Natal, where his eldest brother, Herbert, was planting cotton. They joined the diamond diggers on the banks of the Vaal after winding up the cotton plantation. They developed two separate mines or pipes - De Beers and Kimberly - which were a maze of individual claims. The necessity of amalgamating these brought Rhodes to the front, and after a long financial conflict with Barney Barnato, he amalgamated the mines under the name of De Beers in 1889.

Between activities at Kimberly Rhodes found time to keep his term at Civil College, Oxford, graduating in 1881. That year he joined the Cape parliament as member for Kimberly. He entered it with a plan already formed in his mind, no less than the creation of a British Africa from the Cape to the Zambezi. In his first session Rhodes ^{ministry} engineered the defeat of Sprigg, and under the ~~same~~ ^{same} ministry ~~of~~ obtained power to

serve for Cape Colony control of Bechuanaland. Deputy commissioner for this country in 1874-75, he defeated Boer hopes of expansion by maritally negotiations. Rhodes could now make use of the concessions he had ~~secured~~ secured from Lobengula, chief of the Matabele. In 1889 he obtained from the imperial government a royal charter for the British South Africa Company, and pushed forward the well-organized expedition which took peaceful possession of Mashonaland.

In 1893, aided by the Matabele on the ~~Mt~~ Mashona front about a war, in which the latter tribe was defeated and a territory as large as France & Germany combined under the administration of the company. President Kruger was now surrounded by British territory except for Delagoa Bay, which Rhodes had failed to purchase from the Portuguese. Prime Minister of the Cape since 1890, Rhodes was pressing the colony to extend its railway system to Pretoria, and effect a railway and customs union with the Transvaal. But the parliament refused, and the wealth of the newly discovered goldfields enabled Kruger to build his line to Delagoa Bay and punish the colony for its ~~not~~ exorbitant customs policy; ~~but~~ but he carried the matter too far when he "closed the drifts" to Cape merchandise and produce. The action raged the colony behind Rhodes.

Remembering his bloodless successes, Rhodes concentrated the Rhodesian police near the Transvaal frontier. Kruger gave way on the Drifts question, but refused any concessions to the Uitlanders. Then came the episode of the Jameson Raid; Rhodes' invincibility was proved; and although on January 2nd, 1896, the day of Jameson's surrender, he tendered his resignation as ~~prime~~ prime minister, and shortly afterwards resigned his managing directorship of the Chartered Company, he was severely

assured by both his ~~own~~ and the British parliament. He found work and ~~solace~~ ~~solace~~ in quelling a Matabele rebellion which had broken out upon the news of Jameson's defeat. With no authority and no backing, except moral power, he went to the Matoppo and there negotiated a peace with the chiefs.

He went back to encourage industrial development in Rhodesia; and in 1897 justified past policy on the ground that Kruger had denied the majority of the population any share in government. But the great question had to be settled by arms. At the outbreak of war Rhodes at Kimberley helped to organize the defence. Hardship helped to break down his strength, and after a painful illness he died on March 26th, 1902. He was buried in the Matoppo Hills.

In his imperialism Rhodes was at once a visionary and a man of ~~impetuous~~ impulsive action. He attempted too much and left it undone, yet the prosperity of Rhodesia witnesses his work as a founder of the British Empire. Though a financial genius, he was probably not personally interested in the fortune that he acquired; but he failed to realize that subordinates were not always selfless. He would not have understood Cecil Curle's phrase, "patriotism is not enough," when it came to justifying the unconscionable - at least brave decisions which he took.



Livingstone exploring in the heart of Africa.

The Boer War, its causes and course.

Great Britain had, by treaty, the right of controlling the external affairs of the Transvaal, and, moreover, had ~~and~~ an interest in the affairs of the white population that had been attracted thither by the discovery of gold. The Boer government refused to give civic rights to these men, and in 1899 there were protracted negotiations on these and other points in dispute. No agreement had been reached when, October 8th, the Boers issued an ultimatum, demanding the withdrawal of the British ~~to~~ troops who had been sent or were on the way to South Africa. This was treated as a declaration of war.

The Boers at once invaded Natal, and there the first engagements took place. The Boer artillery was surprisingly good and their tactics by no means despicable, but the British regulars, about 4,000 in number, were excellent soldiers and both sides could claim successes. At Talana Hill and Klondalaagte the British were victorious, but they met with a disaster at Nicholson's Nek. Before the end of October, Sir George White, the commander, and his small force were closely shut up in Ladysmith, around which was an increasing army of Boers, while others invested British garrisons in Mafeking and Kimberly. In November a British army gathered at Cape Town and was ready to move forward. Sir Redvers Buller led the largest contingent to the relief of Ladysmith; Lord Methuen with the Guards and Highlanders set out for Kimberly, while between the two was General Gatacre. All met with defeat.

Methuen came into action first. After two skirmishes, Belmont and Graspan, he reached the banks of the Modder on November 27th. Across it the Boers were in strength, but the British compelled the enemy to vacate their positions among the hills. Proceeding further, Methuen delivered a night attack on some strong Boer lines at

Magersfontein on December 11th and 12th. This was a total failure. On the ~~previous~~ previous day Gatacre's force had met with a reverse at Stormberg.

The hopes of Britain were by this time centred on Buller. Having reached the Tugela, he attacked at Colenso on December 15th. The strength of the Boer positions and the military skill of their defenders were underrated, and the result was the loss of 1,000 men and, much more serious, a blow to British prestige. It was a slight set-off when in January, 1900, a severe attack on Ladysmith was beaten back. By this time Lord Roberts and Kitchener were on their way to South Africa. Meanwhile, Buller failed again at Spion Kop, on January 22nd.

Roberts went forward with a mounted force to relieve Kimberly, and the war was entered on February 15th. This prepared the way for the main move against the Boer forces. Their retreat was cut off and they found refuge in the dry bed of the Modder. Then took place the Battle of Paardeburg, February 27th, which ended in the surrender of 4,000 Boer fighting men. Buller by this time was able to move his attack on the Tugela positions. After heavy fighting, on February 28th, his army joined hands with the defenders of Ladysmith.

Roberts lost no time in following up his successes. Having crossed the Orange, he received the surrender of Bloemfontein on March 13th, while an appeal for peace showed that the Boers grasped the realities of the situation. For six weeks the British remained at Bloemfontein, preparing for a further advance by clearing the enemy from the neighbourhood and making safer the railway line to Cape Town. In these weeks Christiaan de Wet showed his skill; his chief successes were perhaps at Senne's Post and Rensburg.

On May 3rd all ^{made} ready for another forward move. On June 5th Roberts entered Pretoria, freeing 3,000 prisoners. Mafeking had been relieved on May 17th, and Buller

But drove the Boers from Natal, thus opening up a converging line of attack on the Transvaal. From Pretoria Roberts moved east to Komati Poort. Then Lydenburg and Bulwerston fell, leaving the Boers almost without a stronghold. In September the Transvaal was formally annexed, and in December Roberts left the completion of the task to Kitchener.

During the African summer the Boer cause revived. De Wet as usual was busy, and generally successful in his raids in the Orange Free State, as was Botha in the Transvaal, while the area of warfare spread again to Cape Colony. Mounted men were sent from England and a number of flying columns organized. Kitchener's plan was to clear the worst areas of their inhabitants, gathering the women and children into so-called "concentration camps", and to hunt down the fighting men.

Kitchener's organization steadily improved. His railways became safer and better, and his mounted men more numerous and expert. He ringed round the foe with a chain of blockhouses and completed arrangements for operating away from the lines of railway.

This was proved when overtures for peace, which were rejected, came in July 1901, from the Boers. Encounters continued through the year, and early in 1902 the Boers captured Methuen at Tweedbrook, but in March they asked unconditionally for peace. The Treaty of Vereeniging was signed at Pretoria on May 31st, 1902.

The British troops had increased until the fighting force must have numbered 250,000. The Boers lost 5,774 killed and 27,829 wounded, while over 20,000 died of disease. The Boers may have numbered altogether 75,000 and be killed about 4,000. At the end 40,000 Boers were prisoners of war. In January 1902 there were 121,765 Boers in concentration camps.

3-5	Armadas
A	do not, > don't.
P	/
9.	I is good.
E.	They are posh.

① { 15 dates.
Renaissance.
40 marked Map.
5 series of odd man out.

4 out of 7.

Plague.

Yipe.

Pilgrim Fathers.

Armada.

Gunpowder Plot.

People.

Taggers.

Civil War.

Revolution (1688)

Elizabethan Theatre.

Education in Tudor times.

Down life in Tudor times.

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