
COLES
VINTAGE CRANES
Cranes from 1889 until 1944

The History of Coles Cranes

Introduction

This is one of series of books about Coles Cranes, a company which between the mid 1950s and 1980s became one of the largest mobile crane manufacturers on the world. By 1998 the last few workers walked off the factory site and Coles Cranes was no more. This is one of the focus books looking at one crane in particular, in this case we look at the old Vintage cranes they built between 1879 and 1944.

When I started looking into Coles Crane it was just out of idle curiosity. In 1972 I went to work for Coles as a model maker making display models of their cranes. While there I had made a series of vintage models of key machines in the history of Coles.

Some thirty years later my curiosity had been awakened by finding some old photographic negatives of the models I had made there. I wondered quite idly what vintage models they may have ask me to build if I had stayed there making models. Little did I know this small thought was going to go on for over 14 years counting...

When I searched the internet, which had come into existence in the mean time, I found there was almost nothing about Coles Cranes. I eventually found out that the company no longer existed. This came as a bit of a shock as it was a massive company when I was working for it, what had happened. I found an article in a book about Coles, it was just two pages long. I thought at the time there must be more to it then that, a major world wide company does not just roll over and die just like that.

I started collecting photos of Coles Cranes and started the Coles Crane website. This sparked a lot of interest form others who either worked there, owned a Coles crane or were just interested in cranes. Since that time bits and peace's of information have gradually filtered back to me through the Coles website. These books are an assimilation of all those pieces of information and half forgotten memories and yes there was more to it, a lot more. This was not just about building cranes this was about business, economics and government.

Any useful additional information or corrections can be posted to me through the Coles Crane Website at https://sites.google.com/sitecolescranedatabase/home

A J Kemp - March 2015

This is the photograph found in an old file that started the whole project going, the first model I made for Coles Cranes.

This was the Tilling Stevens lorry mounted mobile with a 2 ton lift and built in 1920. This was the tropical export version built for the Karachi Harbour Trust,

There were no drawings for this machine so I had to draw a set from couple of photographs.

The Books

THIS BOOK

COLES VINTAGE CRANES 1879 - 1944

Coles cranes developed steadily throughout the years, every advance in engineering knowledge had been adopted and adapted to improve their efficiency. As one of the earliest manufacturers to replace steam with internal combustion engine Coles progressively developed and subsequently discarded mechanical transmission, hydraulic transmission and different types of torque converter before arriving at the ideal transmission for crane operation the Coles Variable Voltage System.

Other Coles Crane books in this series.

Coles History Book One

The first is a reproduction of a promotional book given to clients and agents produced 1979 by Coles called, "Coles 100 years - The growth story of Europe's Leading Crane Manufacturer - 1879 - 1979 ". It was to celebrate the 100th anniversary of the establishment of the Coles Crane company by Henry James Cole in 1879.

Coles History Book Two

In the second book we pick up the story in the 1960s twenty years before the above book was produced. We do this as the first book missed out a vital section in relation to the merger of Coles with Priestman Brothers. This merger began to show cracks in the industry and in management thinking at the time. This book has the advantage of hindsight but hopefully
gets closer to the truth of what happened to the company. In such a large company there are many stories here is the basic story of what happened.

COLES STEAM RAIL MOBILE 3 TON CRANE of 1879

In the year they started their company 1879 Coles made their first recorded sale of a crane, it was for a steam mobile crane. This crane was of a pattern similar most of the other cranes being built at the time. This shows the basic crane unit and other later models. I also describes how they were put together.

COLES COLOSSUS 6000

One crane that Coles built has a strong fascination for lovers of cranes was an oddity that probably should never have been built The Colossus 6000. When built it was the largest mobile crane in the world, it had sixteen wheels and could lift 250 tons. Only seven of these crane were ever built and five of them are still working today.

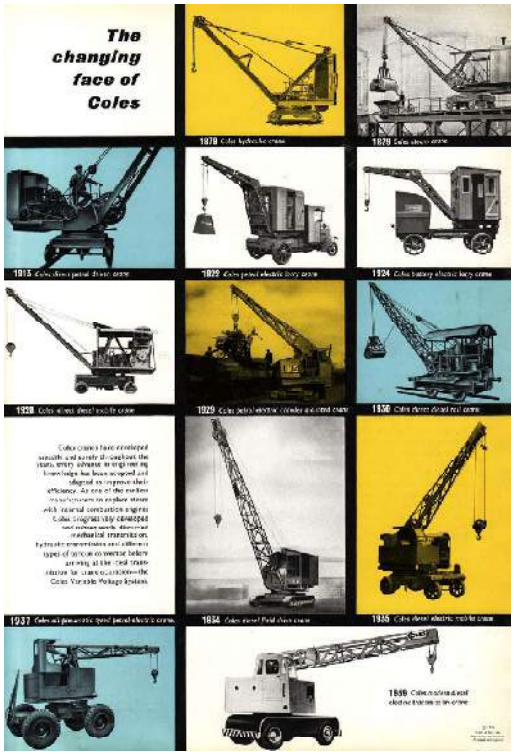
THE DEVELOPMENT OF HYDRAULICS IN CRANES

Under development

INTRODUCTION
COLES VINTAGE CRANES 1879 - 1944

These downloadable books are basically a record of the cranes made by Coles Cranes and are a photographic record of as many of the types made that I have been able to collect together. Complimenting the books is a database containing larger and extra photographs where available, and details of the machines.

Some of the cranes with more details or more information, or that just capture my interest will be expanded into longer separate files. This keeps the download size of the files, which are heavily illustrated, down to a reasonable size. I have to keep the quality fairly high as it is the images that are the main part of the exercise. All the images in these files will be available on the database accessible through the Goole website and Picasa image storage site.



The older cranes, some of which were probably only prototypes, left little information behind other than grainy photographs. What we do have is a series of photographs in the history section of the 1958s Coles sales catalogue, this gives an image and date of twelve keynote units. Some of these units like the steam rail cranes were built or maintained throughout this period. Here based on this list, I well try to give as much as can be found about these early cranes.

Vintage Cranes 1879 - 1947

Coles cranes developed steadily throughout the years, every advance in engineering knowledge had been adopted and adapted to improve their efficiency. As one of the earliest manufacturers to replace steam with internal combustion engine Coles progressively developed and subsequently discarded mechanical transmission, hydraulic transmission and different types of torque converter before arriving at the ideal transmission for crane operation the Coles Variable Voltage System.

1897 STEAM RAIL

When the Coles Brothers took over the foundry and works at Summner street in London they carried on its existing trade of making steam powered rail cranes. They were however quite inventive and one of their early patents was a single cable loading grab which helped sell there cranes. An early engraving from one of the early catalogues shows this type of crane working on coal stacks at a gas works. Work on steam cranes was to be the mainstay of Coles work well into the 1930s although this did not stop them innovating and looking to a future after steam.

By 1890s Coles were doing such good business that the London works became too small so the brothers decided to relocate to Derby, where they opened in a new factory at Slack Lane with good rail connections.

1898 Derby

Derby was a major railway town at the time. Here they could produce larger cranes and made a large range of static and self mobile steam cranes. As each was virtually hand built there were many variations but all with the same kind of layout, a vertical boiler driving steam pistons connected to a series a gears providing direct drive to all the motions, including the rail bogie meaning they were self mobile. Nearly all manufacturers were using a similar layout.

Crane ouitside Slack Lane works - from Picture the Past.

The steam crane was the backbone of much of the industrial revolution in the 1800s and early 1900s. For this reason there is a separate booklet detailing this type of crane, this is called :-

" Coles-vintage-6T- steam-rail-crane-1879"

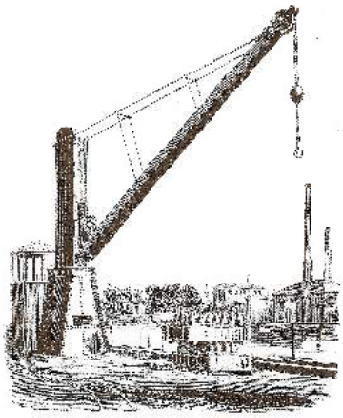
This PDF booklet can be dounloaded from the Coles Crane website.

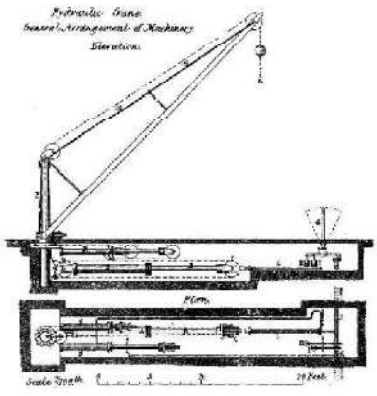
1886 WATER HYDRAULIC

Coles like other heavy machinery fabricators would take on any work they thought they could handle. To this end we see an order on their order books for 1886 on order for three water hydraulic cranes that were built at Woolwich arsenal.*(image right)*

It was in 1846 William George Armstrong started experimenting with ideas of a hydraulic water powered crane, working with the Newcastle Water Company he developed several ideas and settled on cranes that used a piston or ram with leather seals. These rams puhed chains which multiplied their working distance.

(Below and left and right - early Armstron hydraulic cranes.)





His first working model was used at Newcastle with pressure from the street water pipes. It was so successful it attracted interest from railroad and dock shipping companies. Armstrong soon started building these cranes with his new Elswick Engine Works. To start with mains water pressure was utilised but eventually special water towers were built to maintain pressure especially where many units were working in the same area.

Above - water hydraulic 30Ton 66 ft lift 1915.

The crane were initially small gantry units lifting 15 cwt, but over time grew into large port sized cranes able to lift several tons. The simple drawing shows the small key side crane unit with two hydraulic rams one for lifting the hook and the other for rotating the jib. The larger cranes had a tower containing large rams which also give the boom a certain degree of vertical movement by lowering or raising the tower.

These were not simple curiosities and a number of these cranes were in operation well into the 1930s. Photographs show Armstrong type of cranes in operation in Swansea around this time. Photographs also show them in Dale Point Newcastle, Australia (1891), in Wellington New Zealand and in Calcutta Docks (1893). A famous Armstrong hydraulic built in Newcastle UK still survives in Venice Arsenal, built in 1885 and now under restoration.

Above left - Swansea 1930s
Above - Newcastle Dyke Point Australia 1878
Left - Venice Arsenal 1885

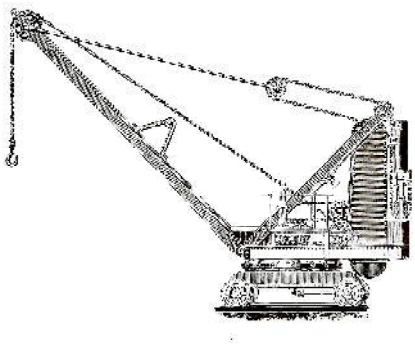
There were many advantages in using water power, the first and one of the biggest was that they could be used where there was risk of explosion. This is not only in places like arsenals where explosives are handled bit also in coal docks and grain stores, as coal and grain dust is extremely explosive.

The last thing you need in such places are open fires and boilers throwing out sparks. The second reason to use them was the simple fact that they were always ready and did not have a long worm up time to get the boiler started and up to pressure, which would be at least a couple of hours.

The third reason for having them was the heat, in hot countries where temperatures could get up well into the 30s C the very last thing you wanted was to have was a hot boiler making things even worse on a busy dock.

One of the best known landmarks Tower Bridge in London was probably the last mechanical device to be continuously operated by water pressure, to raise and lower the bridge sections, which it used with the original machinery until 1976 when oil hydraulics replaced the water system.

Right - Tower bridge built in 1894 used water power to rase the bridge sections.



A very unusual oddity, (Left) found illustrated in an early catalogue, is a rail mounted water hydraulic crane. Weather any were made it is not known but to have an engraving made for the catalogue would suggest at least one was made, perhaps again for an arsenal where there would be a lot of track for moving the munitions around.

1913 DIRECT DRIVE PETROL RAIL

At the turn of the century other power sources other than steam began to make an appearance. Here is an early example of Coles trying out a petrol engine on a and fitting it to a their standard rail unit, using a petrol driven engine to replace the steam boiler. The only information is the small photograph from the catalogue It is unlikely it was anything more than an experiment. (Image - below)

The engine is fitted to the gear train by a ridged belt, this was a common practice with internal combustion engines at the time as the drive belt took away some of the mechanical impact of the harsh clutch systems used then, this both protected the gears and helped to prevent the engine stalling. The whole unit was probably grossly under powered and one can see the drive belt drive being a weak point.

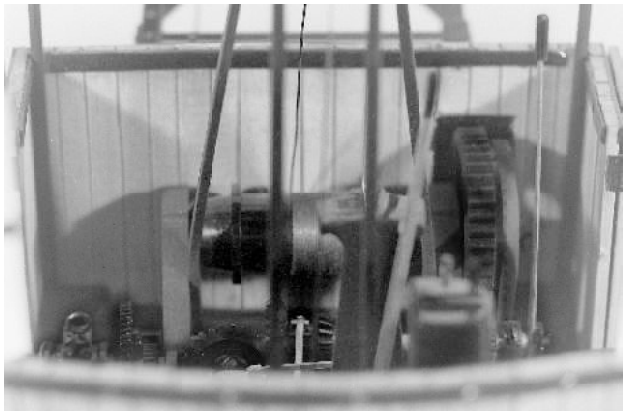
1920 PETROL ELECTRIC LORRY

In 1920 Coles complete an order for two mobile cranes for the Karatchi Port Trust in India. *(Image Left)*

This was a large company which did a lot of trade with Great Briton at this time. This was a new break for Coles for this was there first entry in the use of electricity. Electric cranes had been made from at least 1892 especially in gantry cranes and on docks. They had the same advantages as the Water Hydraulic mentioned earlier. Providing electricity to a mobile crane can be a problem but Coles solved the by buying a truck chassis with a built in generator.

Above - Tilling Stenens with bus coachwork
Laft - basic open shassis as supplied

This was a chassis made by the Tilling Stevens company of Maidstone UK established 1897 who made petrol electric chassis for busses and large vans. These were very strong and had a petrol engine connected to a generator, this provided the driving power to the wheels via electric traction motors. This system made the vehicle very simple to drive. The generator could also be used to supply the electricity for the crane unit when the truck was stationary. Coles built a small slewing crane to fit onto the chassis bed of the truck. It was driven by a single electric motor and the crane movements were controlled by a set of gear wheels as on there standard units at the time. On the illustration you can just see the motor on the left and a new item for a crane, a speed controller on a column.



Above - Layout of the machinery in the slewing unit.
Right - Tilling Stevens unit with crane lifting over side.)

The only modification needed to the truck was a mechanism to lock the rear suspension when the crane was in use to stop it rolling over. It could lift 2 ton which was a useful load but they could only lift over the rear and sides and could not move under load as the due to the locked down suspension.
Not much work was needed on body as it was very light being for use in a hot climate.

Apparently they proved popular and further orders were made by the Karatchi Port Trust for cargo handling .

Whether this was the first truck mounted crane is debatable, Coles naturally claim it was, which for an odd reason may be true.

The PETROL-ELECTRIC MOBILE ~~LORRY~~ CRANE

Built for your business

IF, in the furtherance of your business, the use of a mobile crane would increase its efficiency, or open up a new line of activity, this brief resume of the most important details and applications of a new Lorry Crane will be of interest to you.

The Petrol-Electric Lorry Crane provides adequate load-handling and lifting facilities for a great variety of businesses. For the handling of miscellaneous commodities of heavy and bulky nature, this mobile crane presents many advantages.

What it is—and how it operates

THE Lorry Crane consists of two main units—a Tilling-Stevens 4 ton Petrol-Electric Chassis and a Coles Electric Crane.

The Petrol-Electric Chassis. The Petrol-Electric Chassis provides in a simple and economical manner the power for the several crane operations of hoisting, slewing and derricking. The chassis engine is governed so that the chassis dynamo gives a constant voltage, and the current generated can be switched on to the crane motor immediately the chassis is stationary.

The Crane. The Crane is capable of lifting 2-ton loads at 10 feet radius at a speed of 20 feet per minute, or 1 ton loads at 12 15 feet radius at an increased speed.

The Jib of the crane can be quickly raised or lowered and the whole superstructure can rotate through a complete circle, and in either direction. This can be done in 1/5 of a minute. These operations are worked by the 4 h.p. crane motor, the current for which is supplied by the chassis propelling plant. All crane operations are controlled by 3 hand levers and are assembled in a convenient place and arranged to be under easy and immediate control.

Crane Brakes. An electro magnetic brake is fitted and is held in the off position during the period of operating; should the current fail when lifting is in progress, this brake automatically sustains the load. A powerful wood lined strap brake is also fitted and is operated by a foot lever.

Locking the Crane. When the crane is travelling it is fixed in such a position that it cannot revolve and endanger passing traffic. The back axle is fitted with gear for locking the frame so that the vehicle is absolutely stable when the crane is being used.

The Lorry Crane can help you.

PERHAPS these main points outlined above will suggest to you a means by which some of your transport problems may be solved. The Petrol-Electric Lorry Crane is indeed invaluable in the lifting and carrying of cumbersome materials. It constitutes an efficient and paying method of load handling. It is simple to control and quick in operation.

Full Specification, Photographs, Price, etc., from

Tilling-Stevens Motors Limited, Maidstone.

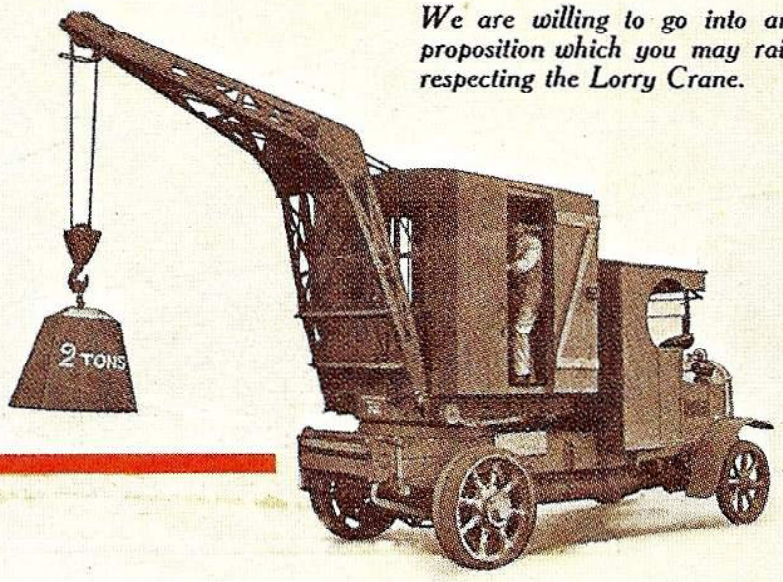
Telephone Maidstone 117.
Telegrams: "Petelobus, Maidstone."

OR

Henry J. Coles, Limited
London Crane Works, Derby.

Telephone Derby 1266.
Telegrams: "Coles, Derby."

We are willing to go into any proposition which you may raise respecting the Lorry Crane.



1922 PETROL ELECTRIC ALL WEATHER LORRY

In 1922 having proved the unit with the Karachi order Coles set about weather proofing it for the british market, this entailed putting an all weather cab and a timber shed around the crane unit. Marketed as first as a lorry crane, which made people think it was a crane for lifting lorries, then as a mobile crane.

The unit although innovative it did not sell very well, there was no market for a light lorry mounted crane. It could not lift and carry so was no good for yard work and it did not have the reach or lifting capacity for building work. The idea of renting a lorry crane for a single lift job from a hire company did not exist. It was probably also very expensive, the Tilling Stevens Chassis was a sophisticated peace of machinery for the time.

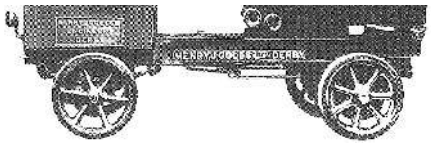
So perhaps this was the first truck mounted crane, for which there was no market.

Previous Page -
Advertisement for the UK version of the Tilling Stevens crane as it appeared in trade papers at the time. Note the crossing out of the word Lorry in pencilled in correction of Mobile.

Right - The only surviving photographs of this crane, the same one as used for the advertisement

Below - The all eletric four wheel mobile a pointer to the way things were going.

Below - From a catalogue engraving steering rods can be clearly seen but just how this was done from the cab is uncertain.



1925 ALL ELECTRIC MOBILE

Perhaps to salvage something from the above in 1925 Coles made this machine. It is essentially a mobile crane. It was simply the back half of the slewing unit from Tilling Stevens places on a chassis with a box fill of batteries for power the rather than an engine. The batteries are in the box at the front and were meant to be charges overnight, much like a milk float. It seems only a couple were actually sold. Perhaps they were for a particular purpose required by a client. Although looking rather odd they are beginning to point the way Coles are going to go, into fully electrical control systems.

Above - 1923, Ransomes & Rapier
Ipswich Transport Museum

In 1923, Ransomes & Rapier brought out the first petrol electric, rubber tyred mobile crane, with cantilever jib and a patented variable voltage speed control system. It was a 2 tons capacity crane mounted on two front wheels and a steerable two wheeled caster at the rear, which could be turned through 90 each side enabling the crane to slew about the centre point of its front axle. It set a new standard for load handling and revolutionised existing ideas of cranage in the industry.

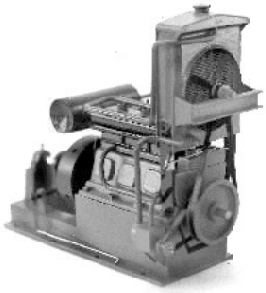
Perhaps the 1924 Battery operated mobile was a quick response to the Rapier machine. What ever their thoughts about the future Coles now had to think quickly.

1928 DIESEL DIRECT DRIVE MOBILE

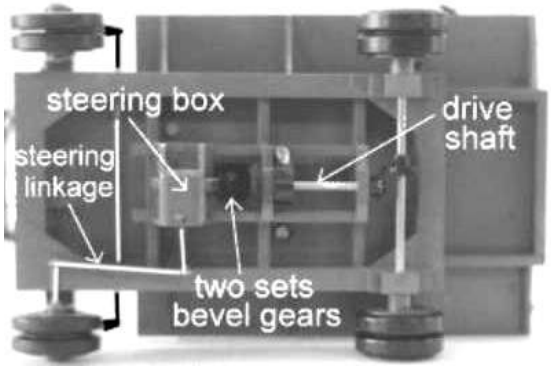
It would be another four years before Coles came out with their first true mobile crane. (as opposed to the lorry mounted Tilling Stevens) This unit however was a using their existing technology, it was essentially their steam crane on taken off the railway wheels and put on a trolley. but now powered by a large three cylinder 25 hp diesel engine. This crane could carry a 3 ton load, had a good reach and had an advantage over the Rapier machine in that it did not have to physically drive round to deposit the load. it could simply slew the upper crane unit. This had a lot of advantages in speed and placing when unloading or loading goods from train or lorries.

The carriage unit, like the train, was substantial with a heavy base on with solid rubber on steel wheels with no suspension, this gives great stability.

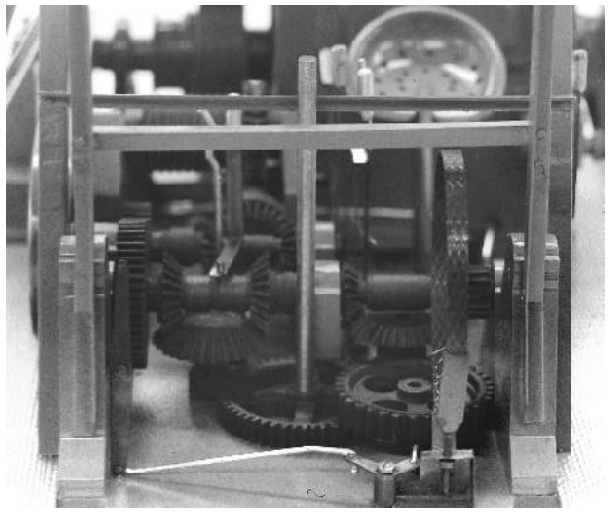
The wheels placed at the four corners were equidistant from the rotating slew mounting, this gave it the same lift capacity all the way around, so it will not fall over slewing the load round from one side to the other.



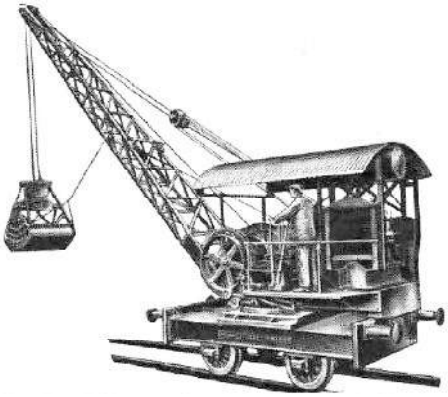
The drive to the crane jib, the winding drum and to the wheels of the carriage are all taken as direct drive from the engine. A large fly wheel, to keep the engine in balance and turning, and clutch formed the counterbalance at the rear of the platform.



A further complication is caused by the need for steering of the front wheels and drive the rear wheels. This was achieved by having a patent double shaft passing through the pivotal point of the crane. The outer shaft driving the wheels and the inner shaft working the steering. The steering wheel was placed directly over this shaft



Although no actual photographs of this machine exist this model was built from the original workshop drawing made by Coles.

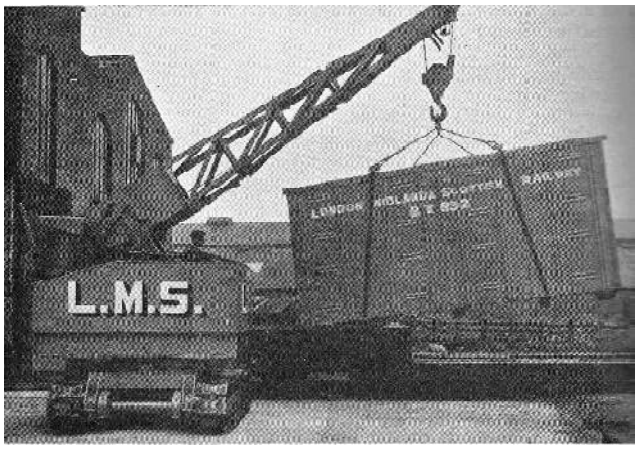


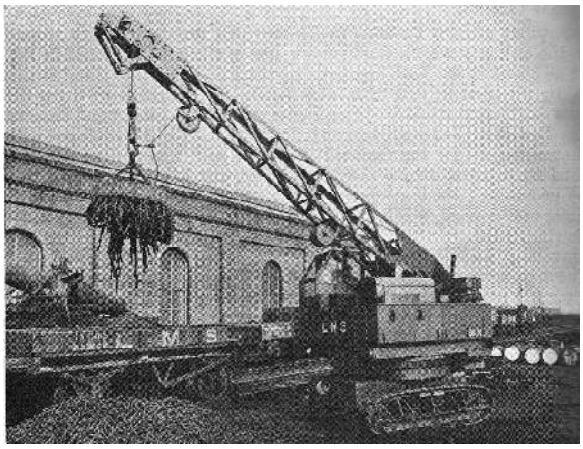
It is not know how many of these were made but for heavy industry the ability to pickup and move a load round using very little floor space would have been quite desirable. Enough business must have bee generated for Coles to market 2 years later a rail version of same unit.

Although the only image of the 1930s rail unit appears is as an engraving on the history page of the 1960 catalogue it must have meant that it was a significant model in there history. It probably signified the end of steam production for Coles.

1929 PETROL ELECTRIC 6 TON MOBILE

Coles had tried petrol electric with the Tilling, diesel with the direct drive mobile but they had nothing to compete with the nippy Ransome three wheeler and others were copying the three wheeled design. So in 1929 Coles came up with this design which was petrol electric operated mobile crane, it kept the important slewing deck and the lightness of a petrol engine. The move over to the cantilever jib must be noted, here taking a leaf from the Ransome model the high level jib meant the crane could get closer to the working area and over the sides of rail wagons. The tracks were probably bought in and were electrically powered. Tracks gave a much more stable base for use in railway goods yards. Now the small petrol engine was simplu there to supply power for its electrical power to all functions, winding, boom movement, slewing and traveling. The tracks each had a separate motor. In total it was fitted with five separate motors making for smooth operation.

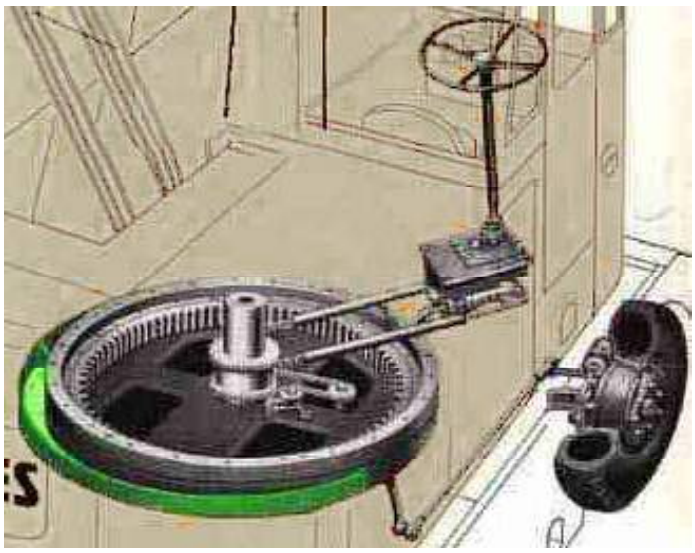




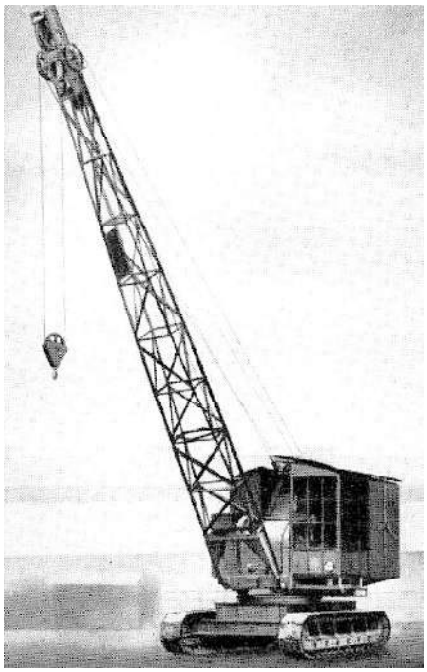
1931 REVERSING STEERING MECHANISM

In 1931 Coles developed an automatically reversing steering mechanism. This made the slewing mobile a much more viable option over the three wheel fixed carriage crane. It allowed the diver to assume that the direction the slew deck was facing was the front of the crane. This meant that if the driver moved the crane on the running wheels, when he turned left the crane went left and if he turn right it went right.

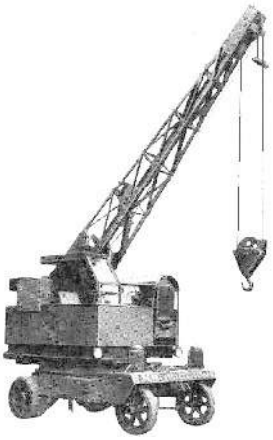
Without this mechanism when the slew deck was facing the rear of the wheel carriage the left right steering would reverse. which make life very difficult, for when you are rotating with the crane it is difficult to remember which end the steering wheels are on , as you can not see the base unit. This mechanism has been feature of Coles mobile cranes ever since. The revolutionary nature of this development gave the company a considerable edge when competing for the EMA order in 1937.



1934 DIESEL FLUID DRIVE MOBILE



Coles were still developing different lines of crane. One of these was still the diesel mechanical based on the 6 ton mobile. Diesel engines had developed and become much smaller so a smaller lighter crane was possible. This crane was also made possible by the development of the fluid drive. The fluid coupling and torque converter was invented by the German engineer Foettinger in the early 1900s. I was designed as a slipping clutch fixed between the engine and gear chain of any mechanically driven device. Among other things this prevented the sudden shock of a quickly released clutch breaking gears with the impact. (still a problem at this time.) This replaced the cumbersome and prone to breaking, belt drive on the old 6 ton mobile. Coles were still only one of the player on an expanding field and this machine reflects more what Ruston-Bucyrus were doing very successfully with their full mechanical drive cranes and excavators. No lift weight is given for this machine but it was probably still 6 ton.



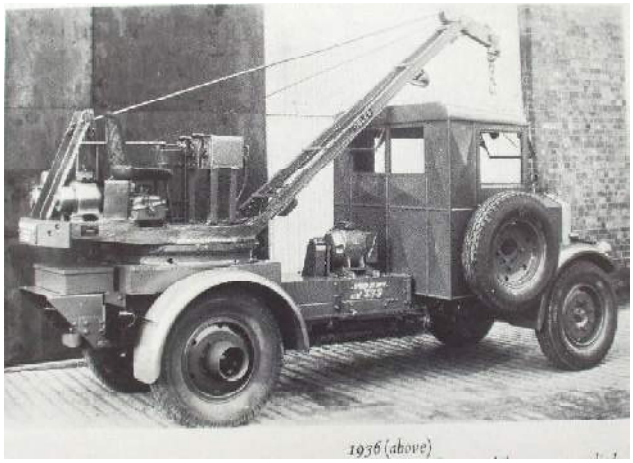
1935 PETROL ELECTRIC MOBILE

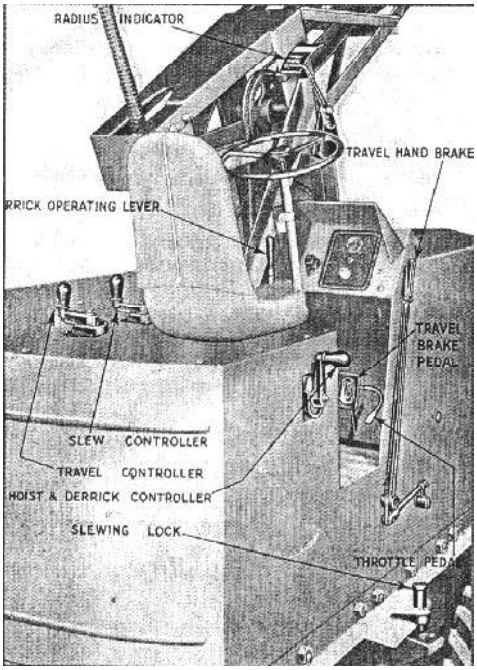
Where the direct drive mechanical cranes needed the power offered by the diesel engine, the smaller lighter petrol engines, used simply to drive a generator made the petrol electric crane a much more compact machine. This 1935 crane shows where Coles was going with design and configuration. This is an update on the 1929 design placing the slewing platform on a wheeled platform rather than on tracks, this made for smooth and faster travel whilst carrying a load. This combined with the reversing steering mechanism made for an easy to operate machine and one that was to form the template of the crane that was to make Coles a world known brand, the EMA.

1936 PETROL ELECTRIC MORRIS LORRY

This crane was one of a pair that were made for the Air Ministry. It harks back to the Tilling Stevens with a light electric crane on a small truck chassis in this case a Morris.

Here the truck is a direct drive but modified so the drive can be sent to either the rear wheels or a small generator behind the cab. The development of the Variable voltage system meant the engine could run at a constant speed and the crane motions could run at different speeds. His unit helped the air ministry see the merits of a fully slewing crane unit. Most small crane units at this time were of the three wheel kind with a fixed position jib.





1937 ELECTRIC MOBILE AIRFIELD

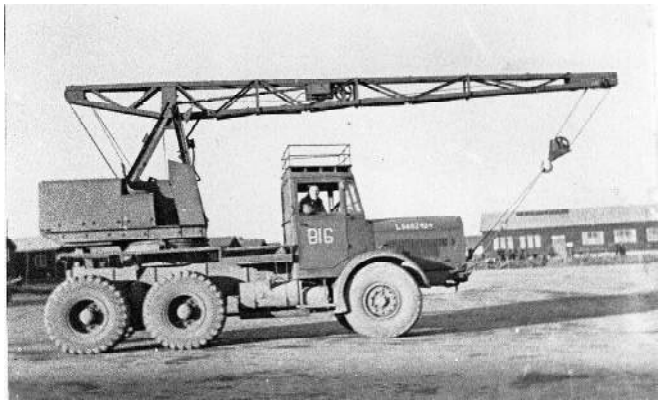
The EMA was designed for a government tender who wanted a two ton pick and carry mobile crane for general purpose work on RAF airfields. (The EMA stood for Electric Mobile Airfield) The design Coles put forward was based on the petrol electric 1935 machine. Although the ministry had specified a slewing crane based upon the then most popular three wheel design most manufacturers were using. Coles put forward their design based on a four wheel machine with a slewing crane unit. This design had advantages, better accuracy of placing load essential for fitting aeroplane engines, the patented steering where the driver always seemed to be facing forward and finally the drive could be disconnected so the crane could be towed at speed behind a lorry to where it was required. Coles won the tender 82 machines, this was a very large order at the time. As war broke out this order was to be followed by a great many more. This crane and its descendant marks were to be the only crane Coles would produce for the next ten years until by the end of war thousands had been made.

Possibly the last surviving EMA mobile now in Beamish Museum

A fleet of mark 1 EMA mobiles ready for delivery 1938

1938 EMA GOT ATTACHED

From 1937 until 1945 the EMA unit developed through six marks eventually ending with the six ton Mk7. The later heavy lift units were all attached to lorry units. The EMA being a self contained simple to operate unit it proved popular especially with inexperienced crew. So it was soon attached to lorry chassis, so in 1938 the rugged Thorneycroft Amazon lorry was selected to mount the EMA on for retrieval, recovery aircraft salvage by the RAF. About 2000 were produced during World War II, of which the RAF had 1800 (400 with diesel engines). The basics of the EMA unit changed little, eventually reaching a 6 ton load, they were reliable and easy to maintain. From 38 through to 45 other lorries were fitted with the EMA unit, the AEC matador is among the best known but anything strong enough could and was used. The Austin A6, Leyland Retriever, Crossley, Diamond T and Ford.



Above - Mk VII EMA petrol-electric crane unit with 5 ton lift, this is fitted to a militarised version of the 6 ton Thorneycroft Amazon 6 x 4 lorry chassis. - now at the Yorkshire Muesum.

Left - A rare photo of one of the original units.

Below right - Towards the end of the war Coles began advertising extiling the vertues of their cranes during the comflict.

Below Left - EMA fitted to an AEC Matador Lorry chassis.

Below - EMA unit fitted to an Austin K6 lorry chassis.

Interesting sites and links

Books on Cranes.
Coles 100 Years - The Growth Story Of Europe's Leading Crane Manufacture 1879-1979 (available as PDF download) Coles 1978

'History of Cranes' (Classic Constructions) by Oliver Bachmann.
Published by KHL International in 1997.

'Mobile Crane Manual' by D.H.Campbell,P.Eng update D.Dickie.P.Eng
Published by Butterworths 1985.

Archives /Websites
Lincolnshire Archives - Engineering Records. Details of Hydra crane and general literature
Grantham Library - details and sales brochure of R H Neal Ltd
Newcastle, Tyne and Wear Archives - minutes, registers, financial records 1907-1948
Beamish Living Miseum, Tineside - http://www.beamish.org.uk/
Museum of Power. Essex - www.museumofpower.org.uk
Picture the Past. (Derby/Notts photo archive) - www.picturethepast.org.uk
Crane Site : Fan site all types of cranes - www.kransite.de
Sunderland Information - www.sunderland.gov.uk
Wortley Top Forge & Industrial Museum - www.topforge.co.uk
Neil Fraser - Classic Commercial Motor Vehicles - ccmv.aecsouthall.co.uk
REME Museum - Army museum - www.rememuseum.org.uk
Graham Newell (jubup) flicker - http://www.flickr.com/photos/62532775@N03/sets/

Contact
Anyone who feels there are any serious omissions, mistakes, or relevant additional material please feel free to contact me and we'll get it put into a revised addition.
I would especially like to hear from anyone who knows about gearing or has any photos or drawings of the slewing deck of this crane.
Contact can be made through the Coles Crane website.

COLES CRANES offical models
A site dedicated to all things about Coles Cranes and its history in crane making. Complete with an image database of all the types made, technical details and history of companies take over.

https://sites.google.com/site/colescranedatabase/home/

About the Author

My early years were spent hunched over a drawing board as an apprentice in an architects office, whilst studying part time for exams. I had always made models and it was here that I first got paid to make architectural models. Convinced I had failed my final exams and generally fed up with life in a very small town, I packed my job in and took the train to Scotland. There was no money to get any further away. No plans except an invite to set up a pottery at a holiday art school.

It was a fun time but then inevitably winter came and you have to be very very waterproof to stay in Scotland in the winter. I came back and looked for a job. I saw an advert for a model maker in Sunderland, so I applied. Had to look up where Sunderland was when I got an interview. Much to my surprise I got the Job. So I was the official model maker to the British Crane and Excavator Corporation Ltd, otherwise known to everybody as Coles Cranes.

Leaving that job to become a teacher I was enticed back into architecture by the lure of money and the promise that I would not have to face a class marauding children every morning. Then computers came along I became a CAD (Computer Aided Design) manager. Strangely I ended up building schools for a number of years. After redundancy I did few years of contract work and one of my final jobs was working with the team building the National Ice Centre. After that I decided to hang up my T-square.

This gave me time for some of my other interests one of which ended up with the Coles Crane website and these books about cranes.

And one final model crane, the first Husky.(right)

Anthony J Kemp