

My son is copying our editor Fred
And having a go at dropping down dead
And just like Fred he came back to life
Back to this world full of trouble and strife.

I hope members do not think I am being facetious after reading my little piece of doggerel, but I do realise the health of my friends and family are obviously not something to joke about. Mike Perkins is without doubt my oldest friend alive today. Ever since we met at the Black Swan in York in 1987 at our first Convention. He suffered a stroke in March 2016 and while I phone his wife Dot and daughter Mandy fairly regularly, after over a year Mike is still not able to hold a lucid conversation.

The news on Fred is much better I wrote in the Spring Journal that there was concern that there may have been a loss of oxygen to the brain while his heart stopped beating for sixteen minutes, but thank goodness it seems he still has his wits about him. Kenneth took me down to Portsmouth to see him a few weeks back, and he is frail but completely with it. He suffered an injury when they fed a tube down his throat to feed him and they are talking about a further six weeks for that to clear up. Fred's not complaining about the three ribs they broke. A few days ago (14-5-2017) his wife Janet sent me a drawing Fred had done of the Crystal Palace, and it came with the comment that he did not think his skill as an artist was good enough yet for the Journal. The latest news is, Fred is out of hospital and in a rehabilitation centre.

And what about Kenneth. Well he goes to a keep fit class and it must be a pretty up-market one because he has his own personal trainer to put him through his paces. Suddenly Kenneth collapsed on to the floor, and when they checked there was no trace of a heartbeat. Purely by chance one of the ladies at the class just happened to be a Surgeon over from New Zealand making her only visit to the gym. Two other ladies there also just happened to be nurses from Shrewsbury Hospital, and they all knew what to do, and without delay managed to resuscitate him. It was his lucky day. He only spent about a week in hospital where they fitted two stents.

He has to go back after a month for a check up to see if he needs another stent fitted or perhaps a pace maker. He too has cracked ribs and when they came to sort him out they found he had cracked his knee cap when he fell. Fortunately I suppose being younger he has not had any after effects, and his only comment was that he was bored to tears while in hospital as he felt perfectly fit.

In two weeks time Kenneth was going off to Patagonia for a one week walking holiday, if it had happened out there it would have been the end.

With my perverted sense of humour I thought the only funny thing about Kenneth's 'do' was that his personal trainer was so traumatised by all these goings on, that he needed to take two days off work to recover.

Looking at what has been done so far for this quarters Journal it seems its nearly all about a model coal mine, so I hope members are interested in coal mines. It all started with an enquiry from a member about post cards of a model on display at Wembley in 1924. The last and only time I have mentioned the model in the Journal was way back in 1999 when I published a short article. When I referred back to that earlier Journal I found that I used the same picture on the cover as I had already chosen to use on the cover of this Journal.

Comparing the two covers the more modern technology used to produce today's Journal has meant a much better image than that used eighteen years ago, although they both came from the same original source. Doing this article has brought home to me the fact that many of the 200 miniature workmen featured on the working model at Wembley were actually moving and mechanically activated little working models in themselves.

Looking through my copy of the Model Engineer and Electrician dated 1925, I am so impressed by the high standard of craftsmanship attained by ordinary members of the public. Is model making a dying or even dead art now I wonder.

The Editor

Display at Spring Stampex 2017

By
Don Knight

It was felt that a joint meeting of the Exhibition Study Group and the GB Congress Study Group would bring both groups together. This took place on Saturday 18 February and was attended by several members of each Study Group and one guest.

Derek Connell welcomed all those present and asked who had brought displays and got a full response. The first person to come forward was **Derek Weston** who put up one item, it came from the 1908 Franco British Exhibition and showed the Colman's Mustard display. He asked if anyone could give him any information on this.

Don Knight then showed the Wolverhampton Exhibition of 1904, the Liverpool Exhibition 1911 and the Bristol Exhibition of 1914. Colin Searle showed a display of the 1911 Congress. These were then viewed. **Derek Connell** talked and displayed the London 1960 Exhibition and Congress giving the story of the Congress and items from the Francis Kiddle collection. This included the souvenir sheets showing the Bishop Mark this covered two lay outs.

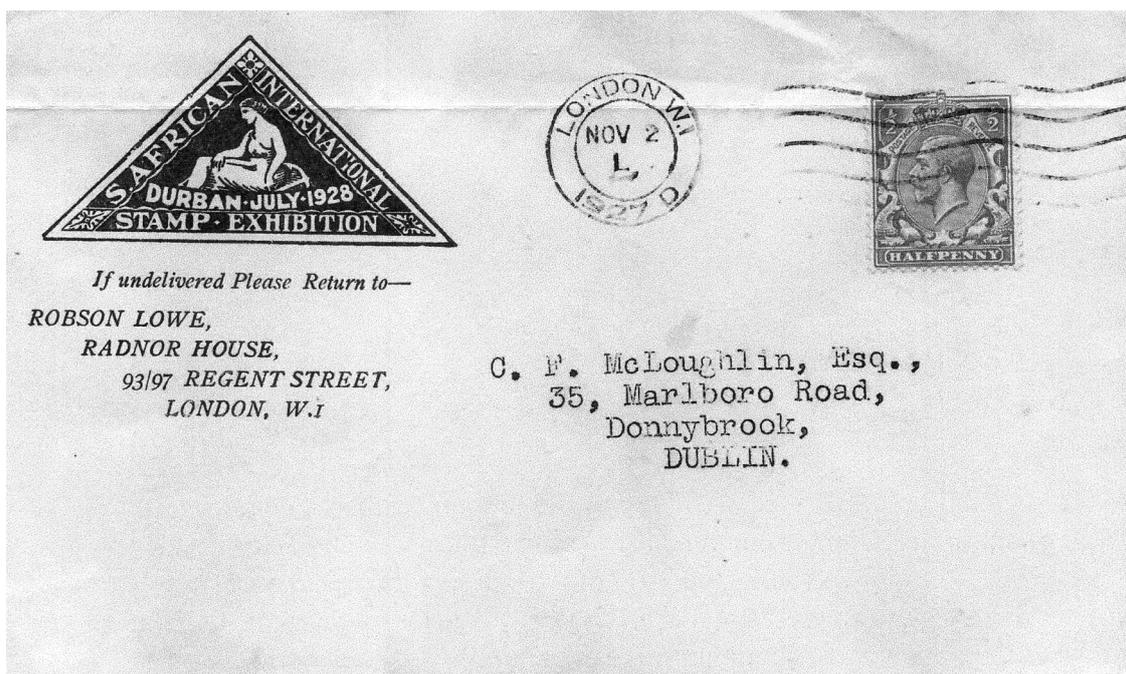
Trevor Milton from the Congress Study Group talked and showed just a small part of his 1910 Congress put on by the Hertfordshire Philatelic Society. On display were the many original letters telling how they went about getting sponsors, publicity and drawing up the rules.

Ron Trevelyan talked and showed the British Industries Fairs from 1915 at Crystal Palace, the White City until 1937 and saying that the last one was in 1957 due to more industrial exhibitions being held in Europe.

The next display was by **Jim McKerrow** with the 20th Congress of 1933 souvenir sheets in the various colours and papers they were printed on. They came in perforated and imperforate, he said he only collects mint material.

Colin Searle finished by showing the original art work from the 1960 exhibition. Derek Connell thanked those who had put up displays and all who had attended, Colin Searle thanked Derek and said we must try this again.

A member Edward Caisley has sent in a scan of a Robson Lowe cover with a printed advertising label for the Durban South African International Stamp Exhibition held in July 1928. Can any member give him any details of this exhibition?



Surcharged Mail sent from the British Empire Exhibition by Ken Tonkin

A wide variety of charge marks were applied to mail sent from the exhibitions of 1924 and 1925. These were used when postcards or letters were sent either unstamped or with the incorrect postage paid. At this time the standard rates of postage for the most common items sent from the exhibitions to UK destinations were as follows:

| | |
|----------------|-----|
| Printed matter | ½d |
| Post cards | 1d |
| Letters | 1½d |

Under the UPU double deficiency rule underpaid mail was subject to a postage due charge of double the deficiency or underpayment. This would mean, for example, that an unpaid postcard sent to a UK destination would be charged 2d (2 x 1d underpayment). Sterling denominated charge marks were applied to such mail to show the amount of postage due to be collected.

The same regulation applied to unstamped and underpaid mail sent overseas destinations but due to the complexities of foreign currencies a standardised system based on a gold franc of 100 centimes was used worldwide. A deficiency identified in the UK was translated into a gold centimes charge and the local equivalent of this charge would be collected in the country of destination. Charge marks with a large capital T for the French word Taxe were used to identify such mail. Some, but not all, of these marks had the centime charge included.

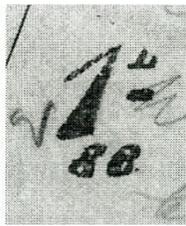


Fig 1

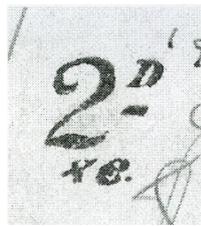


Fig 2

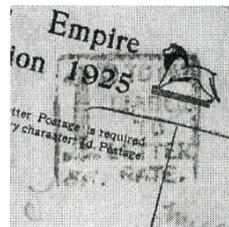


Fig 3



Fig 4

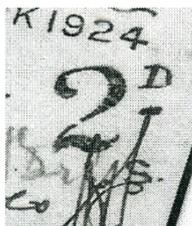


Fig 5

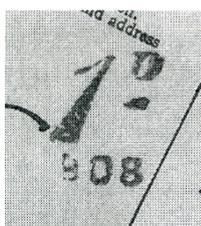


Fig 6

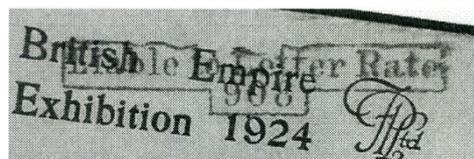


Fig 7

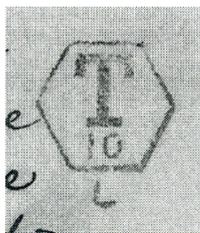


Fig 8

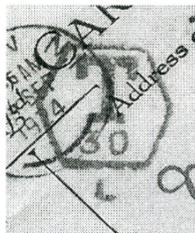


Fig 9

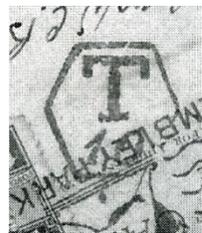


Fig 10

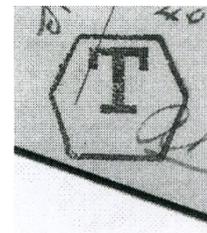


Fig 11

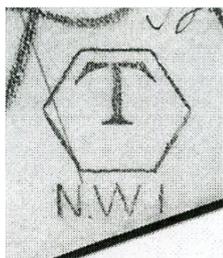


Fig 12



Fig 13

Fig 1 1D/86 charge mark applied at the North West District Office to a UK postcard mailed with a ½d stamp, resulting in a 1d deficiency. The same mark was used on an unstamped envelope which was charged at the printed matter rate of ½d that again resulted in a 1d deficiency.

Fig 2 2D/86 charge mark applied at the North West District Office to a UK postcard sent without a stamp, resulting in a 2d deficiency.

Fig 3 1D/86/TO PAY/LIABLE TO LETTER RATE charge mark applied at the North West District Office to a UK novelty postcard with an insert and mailed with a 1d stamp. Such cards were charged as letters for which the correct rate was ½d resulting in a 1d deficiency.

Fig 4 1D/I.S. charge mark applied at the Inland Section at Mount Pleasant to an unstamped envelope charged at the printed matter rate of ½d resulting in a 1d deficiency.

Fig 5 2D/I.S. charge mark applied at the Inland Section at Mount Pleasant to an unstamped UK postcard, resulting in a 2d deficiency.

Fig 6 ID/908 charge mark applied at Wembley Post Office to an unstamped UK novelty card for which the correct rate was ½d. The card was mailed with a 1d stamp, resulting in a 1d deficiency.

Fig 7 LIABLE TO LETTER RATE/908 instruction mark applied to the above postcard to explain why an additional charge was made.

Fig 8 T (taxe) 10 (centimes) L (London) charge mark applied to a postcard sent to Barbados with a 1d stamp. The correct rate for this card was ½d, hence the additional charge.

Fig 9 T (taxe) 30 (centimes) L (London) charge mark applied to a postcard sent to Belgium with a 1d stamp. The correct rate for this card was ½d, hence the additional charge.

Fig 10 T (taxe) 10 (centimes) L (London) charge mark applied to a postcard sent to Burma with a 1d stamp. The correct rate for this card was 1½d, hence the additional charge.

Fig 11 T (taxe) mark applied to a postcard sent to Egypt with a 1d stamp. The correct rate for this card was 1½d, hence the additional charge.

Fig 12 T (taxe) N.W.I mark applied to a postcard sent to Switzerland with a 1d stamp. The correct rate for this card was 1½d, hence the additional charge.

Fig 13 T (taxe) 10 (centimes) 86 mark applied to a postcard sent to Australia with a 1d stamp. The correct rate for this card was 1½d, hence the additional charge.

Joint Philatelic Congress Collectors & Exhibition Study Group Meeting at Stampex

Members will remember a very pleasant meeting was held in the Spring between the two groups and there was a suggestion we hold it again this year. This has been arranged and this time we shall be the guests of the Philatelic Congress Collectors Group at Stampex on Saturday 16th September between 2 and 4.

Will any members who can make it and hopefully also bring a display, please let our Secretary Don Knight know in advance.

Member David Ogden has sent in an enquiry about the model coal mine that was on display in the Palace of Industry at Wembley in 1924. He is particularly interested in finding out which of the various sets of cards featuring the model were available at the exhibition, and can therefore be regarded as true exhibition cards.

Dear David,

In reply to your query about the Phelps cards I cannot tell you much more than what we published way back in 1994. At that time we identified eight different backs to the set of four cards, which implied eight different printings. When we did the update ten years later another back had turned up.

According to a printed text on one card (type 8) which reads 'Model mine built 1894 by W. Phelps. Mine is at Treherbert, Rhondda, South Wales. Taken 27 years to build.' I would assume this imprint appears on all four cards with this back, but as the card No. 4 is the only card of the set recorded, this must remain speculation.

The original photographs were taken by L. Ladd of Ton-y-pandy as his imprint appears on types 4, 5, 6 and 7. He must have prospered as on type 7 he is now listed as a company and the town is spelt as a single word Tonypandy. Unfortunately I cannot supply a scan of type 9, I think Mike Perkins must have this and he is out of reach at the moment. The details we published in 2004 of this back just reads 'Correspondence' 'Address' with a Line 'T' divider and a dotted stamp box.

I think the history of these cards is that the model must have been kept somewhere during the 27 years it took to construct, initially possibly in a makeshift structure consisting of a scaffold frame covered with a tarpaulin and with temporary electric lights, as can be seen in the background of the post cards. The model after all measured 14 ft by 8ft 6ins and about 8 ft high The nine printings of post cards were all derived from the four original photographs by Ladd which implies there must have been a steady demand for these cards as Ladd presumably later laid out the money to have four screened photogravure printing plates manufactured to supply the demand. This makes me think the model must have gone on display somewhere and found a home in a museum perhaps, and Ladd's cards were on sale at this outlet. When it was decided to exhibit the model at Wembley I'm sure Ladd would have seized the opportunity to cash in on views of which he probably held the copyright.

While we have listed the types as 1 to 9 there is no way to sort out the sequence of production.



Phelps type 1. is a B/W screened photogravure printed card and is known with a Wembley stamp.



Phelps type 1. Although not postally used at the exhibition it does have a Wembley stamp and part of the message reads “Am here with Lald and his party” and further down “Olive it is very interesting in the exhibition”



Phelps type 2

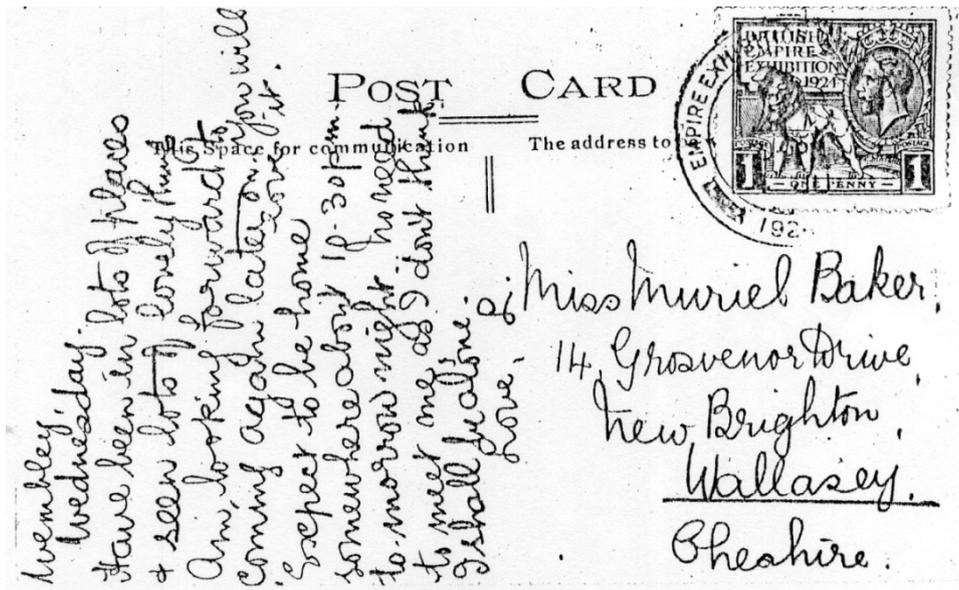


Phelps type 3

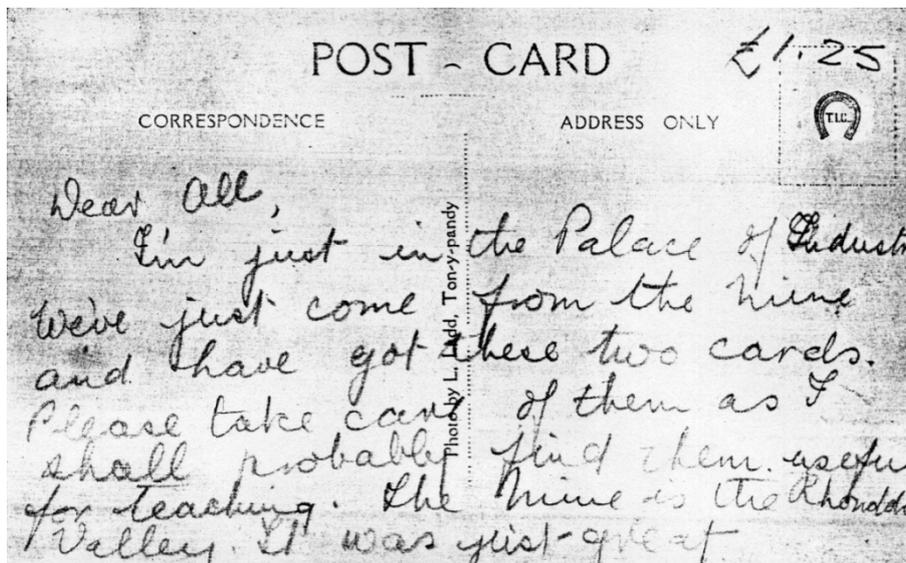


Phelps type 4

On this back the dotted ‘T’ divider is sometimes very feint, note the small curved shape between ‘T’ and ‘C’ of POST CARD



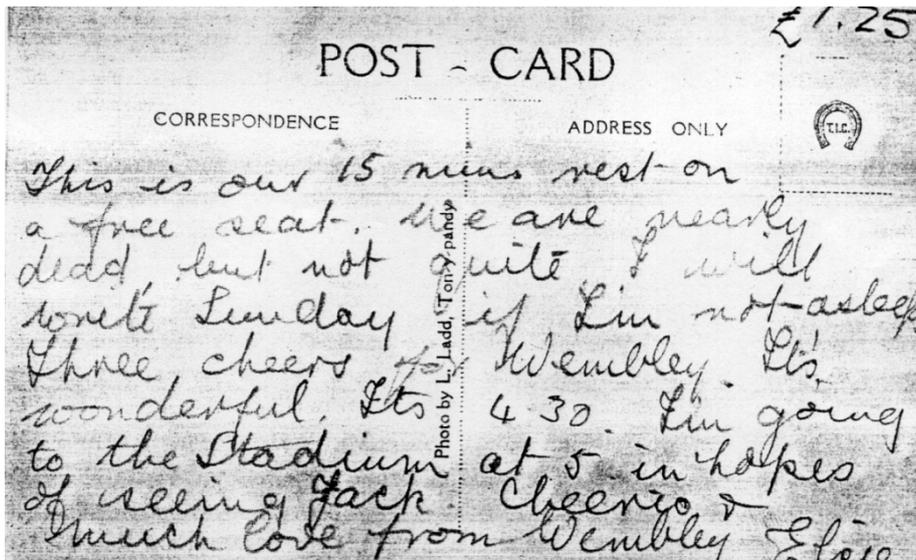
Phelps type 3. Message reads “Wembley. Wednesday. Have been in lots of places & seen lots of lovely things, am looking forward to coming again.”



Phelps type 4. I'm just in the Palace of Industry. We've just come from the mine and have got these two cards. Please take care of them as I shall probably find them useful for teaching. The mine is the Rhondda. Note the writer possibly a teacher has got two cards from the mine, this rather implies a free hand out and not the purchase of the set of four in a packet.



Phelps type 5. Only a scan of a photo-copy of a photo-copy so not very good.



Phelps type 4. "This is our 15 mins rest on a free seat. We are nearly dead, but not quite" "Three cheers for Wembley, its wonderful It's 4.30 I'm going to the Stadium at 5 in hopes of seeing Jack. Cheerio & much love from Wembley"

Type 2 to type 7 are Real Photo's with types 3 and 4 well tied to Wembley by stamps, exhibition post marks and messages. Type 8 is again a screened photogravure printed card, printed from the same plate as type 1.



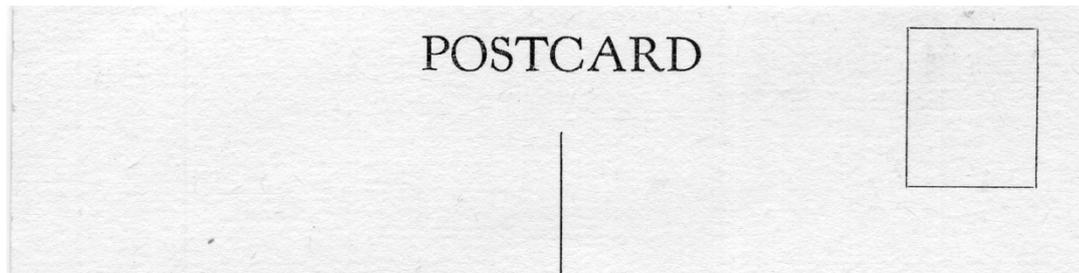
Phelps type 4. "We have just come back from the exhibition after being there all day. We spent a most enjoyable day. This is the coal mine which we went down."



Phelps type 6. Definitely pre-Wembley in Oct 1923



Phelps type 7



Phelps type 8

The Model Coal Mine

This is an account reproduced from the *Model Engineer and Electrician* January 29 1925 of a most interesting model which was shown in the Mining Hall attached to the Coal Mine at the British Empire Exhibition, Wembley. This model, which occupies a space 14 ft. by 8 ft. 6 ins., and stands about 8 ft. high, is the production of an erstwhile colliery worker and more recently a railway employee, a man without training in engineering or mechanical work, without a workshop such as a model engineer usually considers necessary and without the capital to purchase the parts of the model, which are so frequently obtained ready-made, in order to save time. The maker is Mr. Wm. Phelps, of Treherbert, South Wales, and he occupied his spare time for nearly 20 years, assisted by his wife, in making the working model of a Welsh coal mine. He says that he was largely dependent upon the information which he gathered from the pages of *THE MODEL ENGINEER* for the knowledge of how to make and use the tools and appliances which he found necessary in its production, and that whenever he found himself in a difficulty he turned up our volumes to find out from the experience of other model makers there recorded how to overcome them. We are gratified to know all this.

But to return to the model ; nearly the whole of it is composed of scrap material picked up on the various waste heaps which abound in coal-mining districts, the electric lamps and the motors which provide the power to produce the lifelike working motions of the men being almost the only parts which have been purchased.

What the Model Shows.

On two of its faces the model shows the surface works, buildings and operations; the other two faces are sections, showing at the surface the railway, pit-head, fan, winding engine house and pumping engine, and beneath these the bottom of a shaft with sump, etc., hauling and pumping appliances, and the working faces on the four seams of coal. One of these, the upper thin seam, has been added since the model came to London and since the photograph was taken. The section also shows the tramways, waggons, stables, drifts and crosscuts, ventilation doors and brattice cloths, and horses and men at work.

No. 1 Face.

Taking these faces in order, it will be seen that the first or No. 1 Face, on the extreme left in the upper tier, shows the end of one of the winding engine houses, exhaust fan house and pit-head, which will be seen to greater advantage when examining the No. 4 Face. Then on the lower or middle level, the pit-head frame of another shaft built up of iron of various sections, riveted together and stayed with lattice work cross pieces, as is the modern practice, and the ladder to the top where are the two large pulleys over which the winding ropes travel when hoisting or lowering the cages carrying

the men or the coal trucks up or down the shaft. The engine house is seen, with one side wall broken open to show the massive winding engine and the model men operating it.

The Best Foot Forward.

The sheds at the pit-head, with weighing appliances, turntables, etc., over which the full trucks from the cages pass, to go along the tramlines to the screens, returning when emptied to the shaft for their next journey, these waggons or trucks are pushed by little models of men, who walk along, putting one leg before the other in the most natural manner, and all seeming to put their "best foot forward." Then we see a party of men with their safety lamps ready to go down the mine. Coming down the stairway, with its protective rails, to the lowest level, we find the railway with a tank engine and four loaded waggons ready to be shunted off to take their place in one of the long, trains we so often see passing along.

The railway line passes to the right underneath a skew-bridge or tunnel to the No. 2 Face. It will be noted that the railway waggons have the initials of their owner "W.P." painted on their sides on the regular orthodox fashion. The engine houses and the sheds are lighted by electric lamps (flash-lamp bulbs), and outside there are two tall lamp standards each carrying two lamps. There are in this section 16 models of men, 10 of them carrying safety lamps. It will be noted that the skew bridge is properly finished off with the date of its opening, 1922, cut in the stonework.

The Second Face.

The second or No. 2 Face again gives a view of the surface with many of the buildings, machines, appliances, etc., which one finds at a colliery, and this time on four levels, so that a greater number and variety can be shown than would be the case if all was on one level. This face is full of interest, and with the one at the back of it showing the underground section, are the most lifelike and instructive. On the lowest level we see, on the left-hand, the skew-bridge or tunnel from the No. 1 Face, just outside which the two sets of rails join the main line, the points being well shown. Here again we see a "Pecket" locomotive and loaded coal waggons. On the extreme left are two tip-over screens, receiving the coal from two of the tram waggons, seen in the No. 1 Face, as brought from the pit-head and discharging the large coal direct into the railway waggons, marked "W. P., Model Collieries, Treherbert," with their regular number, and "Load 10 tons, Tare 5-10-0" nothing seems to have been overlooked. The screens, which are worked most naturally by five of the model men, are slung on chains and are inclined at the required angle by means of counterbalance weights at the end of the chains, which pass over the pulleys on the top of the gantry. The main-line rails pass at the right-hand side into and through a shed where a further six waggons are waiting their turn to be loaded up.

Now for Some Life.

The next or second bank is full of life. On the left is the upper part of the screening plant already mentioned, with the covering shed. Then we have four boilers with their furnaces, supplying steam for the winding engine and the other stationary engines, and behind them the tall round red-brick chimney carrying the legend, "W.P. 1922." At these furnaces are three model men, one the engineer-in-charge, another, raking one of the fires, and the third busy stoking. There is an endless rope tramway with full and empty waggons, and these, with the men at the furnace, are in motion.

Next to the furnaces is the lamp room. The lamps are being prepared for issue to the men, and some of them are alight to show that they are all in order. There are two figures at work inside the room attending to the lamps and passing them out to the waiting miners, of whom there are three. Another one who has got his lamp has stopped to talk with a boy. Two other men are sitting outside the lamp room with their lamps alight, and from the motions of their heads are evidently having a good mag before going down.

Opposite to them is a man working a vertical drill, hand power, with a large overhead horizontal flywheel. Next we come to the smithy, without which no mine could carry on, the fire is alight, one man is holding a piece of iron in it and the smith and striker are at work at the anvil. Outside is a boy with a horse which is having one of its fore-feet shod by another assistant of the smith and alongside the smithy two other men are at work repairing an upturned waggon. Between the smithy and the next building we see a flight of steps leading up to the third level.

Then there is the engineer's shop, inside which several figures are seen at work, while outside a man is working at a treadle lathe. Another is at a bench working a ratchet drill and another is busy

filing up a piece of work. Adjoining this is the woodworking shop. Outside it are two men, one turning a large grindstone and the other carefully grinding an axe upon it. Another man is shaping a piece of wood on a block, with an axe very likely it has just been ground as it seems to work very well, and still another man is sawing a plank. Inside the shop the foreman is seen standing at the window watching the men at work outside, and a man is seen planing up some wood. The action of this man planing should be carefully watched, the movements are very natural. The whole of the body swings from the feet, and the arms working from the shoulders have the elbows dropped at each return stroke. The action has been caught perfectly. This model workman might give a lesson to some others, who are not "model" workmen.

Further along are seen the tram waggons passing into and through another shed on to one of the new style tumbler screens, whence the coal passes into the railway waggons below. There is also a mortar pan driven by a stationary engine. One man is in charge of the engine and another one is continually shovelling the stuff into the pan. On this level there are three standards carrying six electric lamps.

Still Higher Up.

On the third bank we see three buildings. In one there are two high-speed generators with two men in charge, one of these is taking it very easy as all seems to be going on well. Next to this is one of the most important institutions on a mine, and has its title Pay Office written up large. There are some 14 or 16 men waiting for the pay-box to open. The sight of this office naturally brings to mind the question of "the pay," and the lot of grumbling there is about it, both amongst the miners and the non-miners. It seems to be a constant source of grievance, like the man's bald head, which he was always grouching about but which he did not want to lose. Further along we come to the air-compressor driven by a horizontal mill-engine, with a large heavy flywheel, these machines are in charge of three men. Then there is another battery of four horizontal boilers with their furnaces and the model attendants at work as usual. The chimney is again a round brick one, but this time it is built of white bricks. Both this chimney and the red one are protected by lightning conductors. On this bank there are again three lamp standards of two lamps each.

At the Top.

On the fourth or topmost bank the most prominent feature is another chimney taller than any of the others and square built but more slender than the round ones. Here also is another line of railway with engine, waggons and sheds, which will be better spoken of when dealing with the No. 4 Face.

Face No. 3.

This face is a surface and sectional view, at the far end of the model. On the extreme left we have an end view of the shed and screening plant into which the tram waggons are brought and run on the tipping plant. Four men are at work in this shed, and there is a recording indicator showing the work done; beneath are the railway waggons mentioned before. The pit-head frame with its ladder to the top and large pulley is noticeable. The construction is of iron or steel, but in this instance it is plain girder not lattice work. The pit-head is surrounded by sheds and buildings for various purposes. On the left is the winding-engine house, and a model of the powerful horizontal engine used for winding. The engine driver has his hand on the starting lever, ready for the next run, and the indicator showing the position of the two cages in the shaft can be seen in front of him. On the roof of the engine-house is seen the revolving ventilator. In the shaft is a cage which has been brought to the surface, and there are a number of tram waggons. Several workers are also to be seen here, and the whole place is lighted up with electric lamps.

Under the Surface.

Below this is a section of the mine, showing the rock formation, the bottom of the shaft and the excavations around it for the pumps, fans and other plant, and the entrances to the levels or drifts on either side. These will be seen to be bricked round as they have become permanent structures and the bricking does away with the necessity for renewing the supports from time to time, as would be the case if they were of timber. In the shaft there is a second cage which is at the bottom when the other one is at the top, and one of the loaded tram waggons is being pushed into the cage by one of the men, while the on-setter has his hand on the signal level ready to signal to the engine-house at the surface when the cage is ready for hoisting. The space round the shaft bottom is lighted with electric

lamps, and across the front of the section is a line of tram rails along which one of the men, walking very naturally, one leg following the other in quite correct style and without a limp, is seen pushing along one of the empty tram waggons, the bricked tunnel for this tram line being partly cut away to show up the working.

Some distance to the left of the shaft we find another excavated chamber, on two levels, where is seen the haulage engine, drawing the trams by means of wire ropes to *and* from the workings. Here again we have the engine-man with his hand on the starting handle, and in the lower portion of the chamber there is a horizontal pump, with air-chamber. Here the attendant has his hand on the control lever and another man is on his knees, vigorously driving a spike into one of the bearers to make secure a part that had worked loose. Close by there is one of the cubby-holes with seats, and two men with their lamps having a rest and an animated conversation.

The Underground Workings.

We come now to the fourth and last face. This is a section of the workings on the seams of coal underground, while at the surface we see a railway line with a 4-4-2 locomotive hauling three loaded 10-ton coal waggons and a miners open passenger waggon. There is also a signal cabin, a footbridge over the line and several buildings, one of them is an inn, the Miners' Arms, and a number of tram waggons. At the right-hand there is another engine-house and engine driving a 16 or 18-ft. ventilating fan which serves to ventilate the mine through the upcast shaft. The lighting is, as before, by double-bracket electric lamp standards, and there are some half-a-dozen men about in different parts.

Underground we are shown the workings on four seams. The two lower seams are worked on the "independent stall" system, and the next one on the "Nottingham" or "open-face" system. The top seam is a thin seam and is worked partly by manual labour and partly by machine. This working has been opened quite recently.

Coal Getting.

On the lowest seam there are a number of the model men at work getting coal and doing the many other jobs incidental to coal getting. Along the front is one of the main roads or galleries, and at the right-hand will be seen the opening where the tram line disappears into the tunnelled gallery, which has been cut away to give the section. The tunnel or gallery here is again bricked and of circular section with a space under the tram rail bearers to convey away the water to the sump. This tramway runs along the whole of the front, and has at various places galleries running at right angles and leading to the working face. The seam is shown partly cut away, with a section of uncut coal between the galleries and the working face. There are also a number of blocks, consisting of timber props and boards filled with stones and rubbish from the workings.

These blocks, which the miners call "cogs" or "chocks", not only save the hauling and the winding of the waste, but enable it to be used to hold up the roof as the work advances, and thus again save a lot of timber or other supports. The pit props will be seen in some places broken and bent by the pressure of the roof, as the ground when opened always has a tendency to creep and try to fill up the vacant place:—"Nature abhors a vacuum." The props require constant watching and attention, the timber men and their gangs being always at work putting in new props alongside those that have collapsed or shown signs of weakness.

Tram waggons or trucks loaded or empty are being taken to and fro and some are being filled. This seam is alive with men, most of them with their safety lamps alight. In one place a man is working a ratchet drill. In another place two of the timber men are at work building a "cog" with the round timbers and props ready to be filled with "gob", as they call the stones and rubbish used as packing. A number of the miners are at work on the face, some cutting coal, some hammering in the timbers, and one is levering up a large block of stone with a crowbar. In several places are seen the brattice screens across the roadways to direct the air currents, and in one place there is a trap door with its attendant "door-boy," or "trapper," sitting there in loneliness, with his lamp, although in the old times he had no lamp but had to sit in the darkness, except when a trammer passed, ready to open the door for the passage of a waggon or train of waggons, and, what is still more important, to close it again at once.

The Labour of Tantalus.

A pit pony, which has been hauling a waggon, has come to a standstill, as the waggon has come off the rails and two men are hard at work trying to replace it, one has his back against the end of the waggon pushing and the other is lifting it up by the leverage of a pit prop, but their efforts were not successful, the waggon was off the rails still when the writer left. Beyond and behind this and the trap door a chamber has been cut out and bricked, in which is a centrifugal pump working by compressed air, with the man in charge. Altogether on this seam there are 24 figures, mostly working, and 22 lamps. Three of the men are seen sitting down having a snack, and two of them, will be seen energetically working their jaws in their efforts to masticate and get down their bit of "grub," and one is taking the opportunity to have a snooze.

The Pit Ponies.

In the next or second seam there is a six-stall stable with five horses and a stable man grooming one of them, while a tram waggon with two sacks of fodder has just arrived. This section shows the seam of coal along the front, with galleries leading to the working face. This can be seen beyond as some of the rock above the seam has been removed to allow of it. Here again there are a dozen men at work hewing, breaking down, tramping, building the "cogs" and filling them with "gob." The trams, with the horses drawing them, are in charge of the hauliers, each man with his safety lamp alight ; the whole exhibiting a busy scene of continuous work.

A Close up.

The third seam is shown entirely on the working face. This seam is a thick one, giving more head room, but requiring more props and timbering, which with the "cogs" are much in evidence. Four of the men, who have just come down one of the galleries, are taking it easy, while waiting for a number of trucks to be moved so that they can get their waggon along. One of them is laying down the law to his comrades very emphatically, perhaps he is trying to rouse them into a strike or explaining the necessity for their agreeing to a levy for political purposes, there is nothing to indicate what it is, but he is desperately in earnest about it. On the face a man is again levering down some of the loosened coal. There are a dozen trucks or waggons being loaded or pushed along, miners at work with picks, shovels, hammers and gads, and timbermen shaping the props, putting them up and fitting the caps in their places. Altogether there are 24 men in this seam, and evidently two out of sight, as there are 26 lamps to be seen alight.

Teaching Him to Walk.

Mr. Phelps is all the time at work making improvements and bringing in new developments. While at Wembley he was engaged for some time in getting one of the roadmen to walk upright along the tramway track in this seam. It is not very difficult to get the model man to walk along, putting one foot before the other in a natural way, when he has his hands on a tram waggon, but it is much more difficult to make the man stand up alone and walk along. The model men, in this respect, seem just like children ; they can walk when they are holding on to something, but it is a different matter when they try to strike out alone. When the writer was there, the patience with which the builder of the model must be endowed was exemplified in the efforts he was making to teach the fireman or roadman, whichever it was, to walk alone.

Mr. Phelps was out of sight in the cubby hole underneath, which he occupies when superintending the working of the model, and all that could be seen was the model man being taught to walk along the tramroad. He would walk along for a few inches, taking his steps quite nicely, then, like a child when it feels itself falling, he would begin to run and then degenerate into a slide, both legs dragging along in a most laughable manner for a few inches until it was evident that he had given up walking for this occasion, and he was sharply taken back-wards to the starting point. To the onlooker, there seemed nothing to account for the sudden backward movement, it seemed just to be part of the game. After a little adjustment of the unseen mechanism had been made, he must try again. Try again was not enough, nor even the try, try, try again that we all remember, for the latter was repeated for the best part of an hour before the model man was induced to walk nicely, as he was told to. I hope that he is still doing it. The visitors who happened to be present seemed to think that this was the best part of the entertainment, and many of them spent much more time than they had intended watching his antics.

The Thin Seam.

The upper seam has been recently opened, it was simply a thin seam of coal when the model arrived in London, but its development was decided upon, and it has now been opened throughout most of its length and shows better than any possible description could do the methods which have to be adopted in the working of a thin seam. It also is in accordance with the regular practice that the working of a thin seam, which is more difficult and expensive, shall not be taken in hand so long as there is plenty of thick and more easily worked coal available. In a thin seam there is no head room and the miners, when at work, have to lie on their side and use their picks in that position and their shovels also. Anyone who has tried, even for a short time only, to work in that position, say, trying to put a screw or nail into the skirting board near the floor, may imagine what a miner in a thin seam has to put up with, and perhaps will not grumble so much at the price of coal.

At the present time these thin seams are frequently worked by means of coal-cutting machines. Such a machine is shown at work in the centre of the seam. The picks or cutters are attached to the links of an endless roller chain, something like a large-size bicycle chain, which passed round two horizontal sprocket wheels. One of these is at the end of an arm which pivots on the carriage and forms a radius, enabling the arm and wheel to describe a quadrant or semi-circle. The other sprocket wheel is centred on the pivot of the arm and is driven through gearing by a motor either pneumatic or electric, but generally the former. As the coal is cut, the arm is carried round, until it is as far out as it will reach, when it is withdrawn and the carriage advanced along the seam for another cut. The coal which has been undercut is afterwards broken down and trammed away, leaving a new face to be worked upon.

Getting the Coal Away.

In the seams of ordinary thickness the tram waggons can be brought nearly up to the face being worked, but in a thin seam this cannot be done unless a lot of the rock above or below the seam is broken down and trammed away, and it is too expensive to do this in view of the smaller amount of coal being recovered, formerly, the coal was thrown back as it was broken down until it reached a tramroad, but now conveyors are used. Near either end of the thin seam in the model there is a tram or waggon road, and it will be seen that in order to get sufficient depth this has had to be cut partly in the coal seam and partly in the underlying rock. In front of the working face will be seen two conveyors taking the coal as it is cut from the machine to the waggons. These conveyors consist of an endless rubber or canvas band, two or three feet wide, carried on rollers and passing over drums at each end, one of these drums being driven by a motor. The coal is shovelled on to the travelling belt and is so carried to the other end where it automatically falls into the waggon. Besides the cutting machine and the conveyors there are eight men at work in this seam, each with his lamp.

Oh, the Patience of it!

A model-maker will not be surprised at the statement that it has taken twenty years to make this model, and he, above anyone, will appreciate the patient and painstaking labour that has been put into it, especially when he remembers that there are some 200 figures in addition to the waggons, ponies, engines, etc., and that most of them are in motion.

The whole idea is well thought out, and shows the maker to be observant and ingenious. The surface work being shown on three or four levels provides space at the back for showing the four seams in their proper places in the underground workings. The effect when all the lamps are lighted is very fine, and the use of the small pea-lamp bulbs in the safety lamps gives the correct impression of semi-obscurity underground.

The current for the lamps and motors is taken from the local supply service, but Mr. Phelps has his own dynamos and accumulators for use when necessary, and has made himself master of them and their management.

Its Educational Value.

The model, undoubtedly, is highly instructive and educational, and on a recent visit one of the Government inspectors of collieries highly commended it as one of the finest educational delineations of a coal mine that could be made. That this description is correct could soon be proved to anyone who listened to the remarks of the visitors who saw the model at Wembley, many of them coalminers themselves. The writer has heard them, describe it as the best representation of a coal mine that it is possible to make, and say that nothing could better convey to the public the idea of what work in a coal mine is like.