

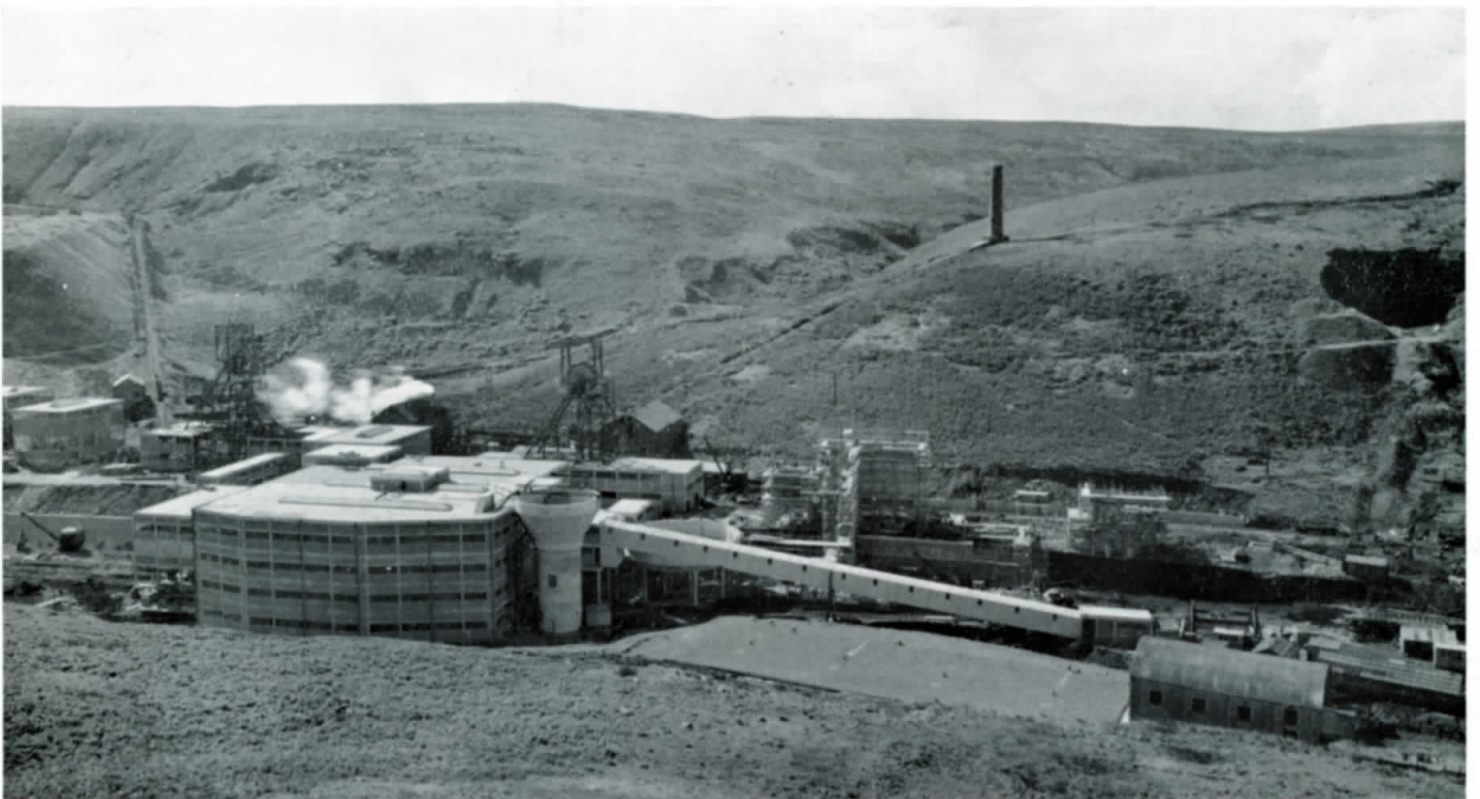
WRIGHT AHEAD

THE HEAD WRIGHTSON NEWS LETTER

VOL. 6

JULY 1955

No. 2



Mardy Colliery, 21st September, 1954. General View. Coal preparation and Dirt preparation.

Chairman's Letter

Despite the fact that we are all busy on our day-to-day affairs, many of us think about our future; whether, for example our children will have a better life; whether advantage will be taken of all the modern scientific developments to improve our standards; and so on. I myself have to think about the future of Head Wrightsons more than most people, because it is my job, and because the effects of our policy take a long time to mature.

You, probably, will have noticed that in all my letters at the beginning of "Wright Ahead" I have avoided all references to politics and trades union matters. You may think that this is desirable. On the other hand you may think it wishy-washy. The fact is that so long as you **do** think, I am content to leave **action** in your hands.

Newspapers, radio, television and other means of disseminating ideas, and information, give you what is available about developments and progress, in the world,

in this country, and locally; and what is necessary to improve our standard of life. That is to say, that information is available to all. In a free democracy, individuals are supposed to be able to act freely, in accordance with what they think is best. When I regard the future, and see the present tendencies, I often wonder how free we really are.

Abraham Lincoln said: "*We assure freedom to the free, honourable alike in what we give—and what we preserve.*"

NOTE. This was written in the middle of the Railway and Dock strikes.

Richard Miles

PERSONAL

BIRTHS

Bridge Yard, Teesdale.

Mr. and Mrs. Turley—a son.
 Mr. and Mrs. Heslop—a daughter.
 Mr. and Mrs. Hutchinson—a daughter. (Mrs. Hutchinson was employed in the Stores Dept. at H.W. Machine Co.)

Steel Foundry.

Mr. and Mrs. Norman Davidson—a daughter.
 Mr. and Mrs. Paddy Walsh—a daughter.
 Mr. and Mrs. John Styan—a daughter.

Head Wrightson Processes Limited.

To Mr. and Mrs. F. S. Runacres—a daughter, Sarah Jane, on 19th May, 1955.

To Mr. and Mrs. E. L. Clapson—a son, Mark Hillary, on 25th March, 1955.

Stockton Steel Foundry

Mr. and Mrs. Jeff. Adams—a daughter.
 Mr. and Mrs. H. Stokes—a daughter.
 Mrs. Stokes (formerly Eileen Bainbridge) was our first 'nello' girl and left us about six months ago.

McKee Division.

Mr. and Mrs. Fred Mason—a daughter.

Head Wrightson Machine Co.

Mr. and Mrs. Dan Murray—a daughter.
 Mr. and Mrs. Jas. Percival—a son.

Head Wrightson Stampings Limited.

Mr. and Mrs. E. Donne—a daughter.
 Mr. and Mrs. D. Ludbrooke (Formerly R. Jennings, Wages Dept.)—a son.

ENGAGEMENT

Mr. Peter Franklin (McKee Division) to Miss Rita Cartwright (Steel Castings).

Head Wrightson Machine Co.

Mr. Geo. Herbert to Miss Vera Lynas.



Mr. and Mrs. E. Cowley.



Mr. and Mrs. R. Marshall.

MARRIAGES

Machine Shop.

Mr. R. Marshall to Miss S. M. Leith.

Bridge Yard, Teesdale.

Mr. F. Lee to Miss J. Thirlbeck.
 Mr. F. Feasby to Miss B. Thomas.

Egglescliffe Foundry.

Ken Watson (Chair Gantry) to Evelyn Smith.

Stockton Steel.

Mr. W. Bloomfield to Miss I. Duck.

Head Wrightson Machine Co.

Mr. Anthony Hoole to Miss Lilian Blyth.
 Mr. Phillip Clark to Miss Joan Winsome Bridges.
 Mr. R. Hunter to Miss Edna Wallace.

McKee Division.

Mr. Reg Brotton—4th June.
 Mr. Brian Laing—25th June.
 Mr. Keith Ferriday to Miss Edna Oakley (Personel Dept.)—16th July.

Colliery Engineering Ltd.

Mr. Eric Cowley to Miss E. Ingram.
 Mr. Peter Balm to Miss B. Peace.

DEATHS

Condolences.

Head Wrightson Machine Co.

To the widow and family of Mr. Tom Parrish. (M'bro', labourers.)

Maintenance Dept.

To Mrs. Jemmerson and daughter.

SILVER WEDDING

Congratulations from Maintenance Dept., to Mr. and Mrs. D. Richards.

ENGINEERING DIVISION

The main news so far as this department is concerned once more concerns sport. As readers of the local evening newspaper will be aware we held a smoker in the Royal Hotel on Friday, 17th June. Mr. Franklin, shop manager was present along with Mr. Allen and Mr. Parsons. Our Department was again successful in the Inter-Departmental Football competition. We again beat the Bridge Yard in the final but only after a very hard struggle. This year our Juniors just failed to complete their double, having to be content with the runners up position. To come back to the Smoker, this is the most successful event yet organised in the shop. If one could find complaint it was that the room wasn't big enough to hold the numbers that wished to attend. Entertainment was provided by competent professional artistes aided and abetted by our own comedians who for reasons of personal safety shall remain unnamed. Our thanks to the hard working committee for a most enjoyable night.

Recent weeks have seen the departure from our midst of two of our oldest workmates. I refer to Jack Stead (Driller) and Frank Hudson (Rate-Fixer). Jack Stead had been with us for 40 years, starting in the old factory under Arthur Cowan at the beginning of the 1st War. Frank Hudson had been with us 13 years coming to us during the war. Both received suitable gifts to mark their retirement. A long and happy retirement to both.

It is hoped too, that by the time this magazine is out Dick Addison will have returned to work. Present information makes that wish extremely doubtful. Dick, who must be known to nearly all the employees of Teesdale, has had a lengthy absence so here's hoping for a speedy return.

Congratulations to Johnny Wheeldon the Heat Exchange shop Darts expert, on his success in the Thornaby competitions.



Mr. and Mrs. R. Hunter.

Bridge Yard, Teesdale.

Congratulations to Brian Flanagan of the Works Offices, on his success in the Thornaby Tennis Tournament, when he won the Singles, the Men's Doubles with J. Evans and the Mixed Doubles with Mrs. Anderson and on his retaining of the Stockton Singles Championship.

We wish a long and happy retirement to Jack Skinner, who has been with us for over 50 years.

Bob Warriner, too, is retiring after 40 years' service. Unfortunately, he is seriously ill and we trust that he will make an excellent recovery.

IRON FOUNDRY

We said 'Cheerio' in May to Derek West (from our Drawing Office) who has joined the Colliery Equipment Division. Good Luck Derek.

Best Wishes to:

A. Peat on National Service in Malaya.

J. Poulter on National Service in Egypt.

Congratulations to John Collin (Apprentice Moulder) on winning fourth prize in the Tees-side Apprentice Moulders' Competition for the second year in succession.

Congratulations to Mrs. Outhwaite who has been appointed joint Mayoress of Thornaby for the current Civic Year. Mrs. Outhwaite formerly worked in the old Foundry Office at Teesdale and her husband Mr. F. Outhwaite is one of our Crane Drivers.

By the time of going to press an ex-member of our Pattern Shop, Stan Cooke, will be on the high seas heading for Canada. We wish him bon voyage and best wishes for the future. Other Departments who will have nostalgic recollections of Stan are Stockton Steel and Teesdale Pattern Shop.

Fred Watton has returned to work after illness, we welcome him back and hope his health remains good.

STEEL FOUNDRIES

Teesdale.

The Division extends to the widow and family of Walter Sealy, its deepest sympathy. "Little Walter" was for many years employed in the Dressing Yard and retired from ill health.

Condolences are offered too, to Mr. T. Johnson whose wife died after a short illness.

Congratulations to Mr. and Mrs. Matt Marley on the birth of twin daughters.

Stockton.

The Division wishes a speedy recovery and return to work to Bas. Riley.

Condolences to Bert Fisher on the loss of his wife and Bob Ross on the loss of his mother.

H. W. STAMPINGS LTD.

The Employees of H.W.S. wish to express their congratulations to Mr. A. Chilton on his appointment as Managing Director of Cupola Mining and Milling Co. Ltd., Baslow, Derbyshire., and wish him the very best of luck in his new venture.

The Staff of Head Wrightson "Stampings" offer their Congratulations and best wishes to the following:—

Mr. A. Gascoigne upon his engagement to Miss Joan Atkinson of West Hartlepool.

Mr. J. Kirtley upon his engagement to Miss Joan Blogg of Horden.

Miss Mavis Hanson on her engagement to Mr. Tony McCann of West Hartlepool.

A presentation on behalf of the staff was made to Mr. and Mrs. Alec Lowther to mark the occasion of their Silver Wedding Anniversary on April 27th. They extend thanks to all, for their good wishes.

The Staff have bidden "Au Revoir" to Mr. Alan Forbes (Drawing Office) who joined H.M. Forces on 14th April.

So now he's wearing Air-Force blue
With nought upon his sleeves
Save but the heart of his sweet Miss
Who's longing for his "Leaves"
We wish you All the Very Best
And hope one day to hear
You've been engaged on what we'd term
As the "Op" of the year.

We have wished "Bon Voyage" to M. Edouard de Preaumont who has returned to France after spending eight months in various departments. We hope that this experience will greatly benefit him in future Projects.

On March 2nd at 9-15 a.m. M. E. de Preaumont and myself paid an underground visit to Blackhall Colliery.

We were issued with a miner's helmet and lamp, and wearing overalls, we entered the "Cage" with workmen, to descend 1,300ft. down the shaft. We were conveyed to the selected district, by trams, or "cars" as they are usually termed by the miners. Many technical points on coal-mining were explained to us by the accompanying Safety Officer, Mr. J. Todd.

Shot-firing was in progress, so we retreated some 40 yards, returning later to see stone which had been dislodged from the Coal-face. We watched a mechanical device, known as a "Duck Bill" removing the huge slabs which were conveyed from the area, again on this moving belt. After watching the Miners advancing the Coal-face, using a coal-cutting machine, we joined them in their "Snap" gratefully accepting water from a tin bottle, for by now the heat had turned our tongues to wood.

We saw how coal was conveyed from the coal-face, by means of a moving belt, entering a "Hopper" where it was tipped into waiting tubs, which in turn, using the "Endless Rope" system, were loaded into the "Cages" carrying it to the surface.

At one point we were 2½ miles out, below the North Sea. We had scrambled over a fall of stone, to be dragged through an opening at the top, in order to reach the other side, crawled between "props" set to keep up the roof, which was less than 4 feet high and walked, half stooping, along dusty road-ways and at 2 p.m. we reached the surface and daylight.

We had seen the conditions under which Miners work to produce the "BLACK DIAMONDS" and thought that perhaps in no other Industry would be found such comradeship among fellow workmen, so necessary to the safety of all employed.

H. W. MACHINE CO. LTD.

Good Luck — into H.M. Forces.
Wm. Nicholson, Gordon Lidster,
Shops. Robin Botterill, D.O.

Welcome return from H.M. Forces.
George Green, "Slim" Williams,
Nick Williams, Shops. Wilf Lock-
heed, Cost Dept. Brian Boughey,
D.O.

Best Wishes to our sick.

"Jake" Bartlett, Geo. Begg, Keith Latheron, Alf Bell, Joe Gildroy, Jack Brown, Cecil Cooper, Mrs. M. U. Wallace. Also Mr. Jas. Mahoney and Mr. Tom Harker, Foreman Pattern-maker and Labourer respectively.

Welcome Return from sickness.

Geo. Curry, Bob Reed, Sam Parkes and S. Shearer.

CURRENT GOSSIP

It is refreshing to observe the genial figure of our Managing Director, Mr. N. C. Lake, once more bestowing a critical eye on our shops, after his comprehensive tour of Australia in search of grist for our mutual mill. We wonder how we stand the comparison! Perhaps, he will enlarge upon the details of his journeying, in due course.

The Head Wrightson Management Golf Competition was won at Dinsdale by Mr. T. H. Hall, our Works Manager, for the second time in its brief existence.

Miss Thérèse Purvis, Junior Typist who has already won International Honours for her netball skill has been picked for the English team, versus Italy at Naples, and we wish her the best of luck.

Illustrating, once again the far reaching tentacles of our organisation, Mr. Jas. Chesser and Mr. Arthur Dodds are now in the U.S.A. gathering information on the operation of electrolytic tinning plant, whilst Mr. Geo. Herbert of the Erecting Dept. is expecting to go to Spain on the installation of the 12in. Plate Leveller.

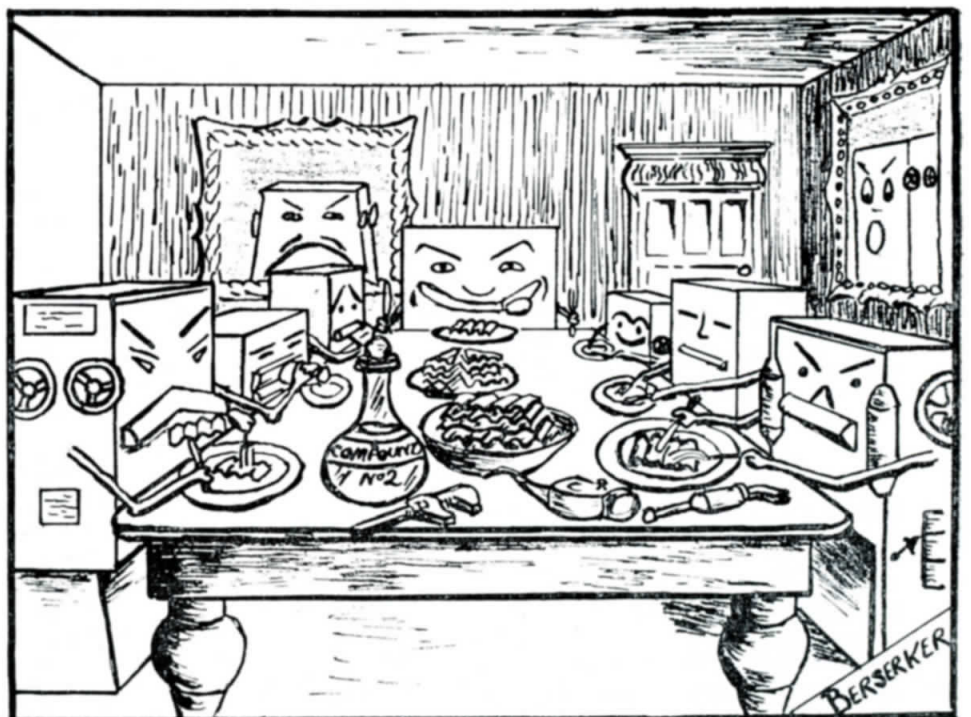
Did you hear that Ronnie Collins of the D.O. got his new house? Well, the front door lock didn't suit him so he "repaired" it, went outside and slammed the door, and found he'd made such a good job of it that he had to break a window to get in again! Tough we are!

Our D.O. Staff has been joined by Mr. John Lyall, the son of the genial "Bob" now in Estimating, and we hope he gets a gold watch in due course like his Dad.

I was shewn the Trophy won by our Badminton Team, for topping the Stockton and District "D" Division of the Badminton League, which will elevate them to the "C" Division next season. As however they are at present "Homeless,"—unless they can acquire a hall, their future is somewhat obscure.

Nothing remains static, changes there must be, and an agreeable one, which affects us all is our acquisition,

Our Artist's Impression of equipment by the Head Wrightson Machine Co. Ltd.



A Roller Leveller Feed Table.



Visitors from Colliery Engineering Ltd. in the Steel Foundry

by transformation, of a handsome new canteen, which reflects great credit upon all concerned, and for which all its patrons express their unreserved appreciation.

Welcome to Miss Jean Reeve who has joined the Print Room Staff.

COLLIERY EQUIPMENT DIVISION

We welcome to the Division Messrs. Kraus, Hope, West and Pring the first three being employed in the Drawing Office and the last at Abernant Site Office. We hope they are happy in their new jobs.

Editors Note. (A very interesting story of the visit of Colliery Engineering Ltd. was also submitted from this Division but I chose the "Visitors" account).

COLLIERY ENGINEERING LTD.

Operation "Thornaby"

This operation was the planned invasion of Tees-side by the staff of Colliery Engineering Ltd. to enable its members to meet the staffs of the various Divisions and Companies, and to see the diversity of work on which they are engaged.

From north, south and west, we converged on Thornaby on Friday, 13th May, travelling in unkindly weather conditions to arrive on Tees-side under a pall of lowering clouds. Maybe the weather was not so good but the warmth of the welcome extended to us by Mr. Peter Wrightson and those who were to look after us during the day made us forget the "depression from the Arctic."

In the care of helpful guides we toured the works of the Machine Company Ltd. and Stockton Forge in the morning, then the shops and bridge yard of the Heavy Engineering Division and the Steel Foundry during the afternoon.

After the morning visit we enjoyed a delightful lunch in the Canteen at Thornaby in the pleasant company of senior members of staffs.

To Mr. N. C. Lake, Mr. J. Wardell, Mr. R. H. Sturges, Mr. J. G. Allen and Mr. H. Cussons, their staffs and workpeople we owe much thanks for the wealth of information proffered to us and the readiness to show and explain operations and methods. In a little time we gained much.

Leaving the Steel Foundry we boarded our conveyances to journey to Neasham Hall and as we travelled the clouds disappeared to let us enjoy bright sunshine at that beautiful home on rural Tees-side. We were delighted that Lady Gwen Wrightson was able to join us.

After tea, Mr. Peter Wrightson spoke to the assembled company and Mr. Needham voiced the thoughts of all in words of appreciation to those who made the visit so successful. For the organisation—many thanks, Mr. F. Shepherd.

Too soon, the time for departure arrived with "Operation Thornaby," successfully consummated.

Aerex Limited V Colliery Engineering Ltd.

The annual staffs cricket match was again played on the Wales Cricket Ground on Monday, 13th June. On this occasion the almost perfect result of a tie was attained when each side scored 55 runs.

A very enjoyable evening on and around the field was followed by refreshments and dancing.

Best wishes to Mr. and Mrs. P. Balm on the occasion of their marriage in March and to Mr. and Mrs. E. Cowley who were married on the 4th June.

Welcome to Mr. J. Gulson in the Sheffield Drawing Office.



The 170ft. Dragline Jib.

HEAD WRIGHTSON ALUMINIUM IN THE NEWS *Aluminium 1955 Exhibition*

The Exhibition, sponsored and organised by the Aluminium Development Association, was held in and around the Royal Festival Hall, London, from June —1st-10th. It was designed to demonstrate the use of aluminium in the many industrial fields in which it is established and thus mark the progress made since the debut of aluminium in this country just 100 years ago.

In its arrangement, the Exhibition followed a pattern of technical development, the five main sections being:—

Historical; Production; Research; Applications; The Future.

There were two parts to the Exhibition, the exhibits themselves and technical discussions.

H.W.A. were asked to co-operate and put on show various items. Among these was a 170ft Dragline Jib

recently built for our friends Sir Robt. McAlpine & Sons Ltd. This was the largest structure in the Exhibition and as can be seen from the illustration, proved most impressive. The dumper bucket to be seen at the foot of the jib is also a H.W.A. product.

H.R.H. The Duke of Edinburgh—honoured the Exhibition with a visit and we understand expressed surprise and admiration that such a structure could be produced in aluminium alloy and was particularly impressed when told the weight of the jib (10 tons) His Royal Highness also showed considerable interest in the model of the Aberdeen Bridge. We are told by the organisers that our jib attracted a major portion of the interest shown by both engineers and laymen.

It will be recalled that the exciting news of its erection progress was given at the time in the local Press!

Head Wrightson Dramatic Society

During the 1954-1955 season, which has now ended, the Society has made good progress. We are pleased to report an increase in membership, and, a most unusual thing in Amateur Dramatic Societies, the gentlemen now outnumber the ladies. In spite of this, however, there is always a shortage of men at auditions for parts. We don't know whether this is due to shyness, or whether they just feel more at home wielding a hammer or paintbrush in the Scenery Workshop.

During the season, we have produced four plays, all of which have had a good reception. Tackling this increased number of productions has been hard work, but

has enabled every acting member to have at least one part during the season. In October, we entered the realm of thrillers with "John Marlow's Profession," which was concerned with blackmail not to mention stolen jewels! Its realistic "Oak-panelled" set was a marvel of co-operation, almost every member of the society having taken a hand in it somewhere. In February, we produced our first, and to date only, heavy drama, "An Inspector Calls." This made great demands, not only on the skill of the cast, but on that of the scene-makers and stage crew. In fact, before it was over, several of our members almost joined the Electrician's Union. In March, we

reverted to comedy when we saw, in "Easy Money," what happens when a family wins a fortune on the "Pools." This play provided some really wonderful character performances, including those of extreme age and youth, and was notable for the appearance of auto-graph-hunters backstage. Our final production in May, "The Camel's Back," was another family comedy, set in a farmhouse. The cast, which we are pleased to say included several of our members who had been missing from recent productions, thoroughly enjoyed themselves putting over the slapstick, and, judging by the laughter, the audiences enjoyed themselves equally.

This season has seen the establishment of our Scenery Workshop, and there is no doubt that all productions have owed a great deal to the realistic sets constructed there by the devoted band of workers, who have toiled away night after night, sometimes in Arctic weather conditions. They have done a magnificent job on every set, whether it was the "wallpaper" of "An Inspector Calls," or "ye olde oak beams" of "The Camel's Back." Another new venture has been our Newsletter, launched at the beginning of the season. An issue of this is brought out for each play, and in it we try to bring our friends and patrons news of the Society's activities and personalities. Incidentally, the Committee has not been idle, there having been eleven Committee Meetings over the season, nearly three times the number laid down in our Constitution as a minimum. We would like to pay tribute here to the work done by our Secretary, Miss Eileen

O'Hara, and our Treasurer, Mr. Fred Mothersdale, the latter of whom has produced three plays, in addition to his other duties.

On the social side, the Second Annual Ball proved a great success, due in no small measure to the skill of our Chairman Mr. Frank Shepherd as M.C. All tickets for this event, incidentally, were sold several days previously.

We brought our Season's activities to a close on May 26th, when our Annual General Meeting was held, preceded by a dinner for members, at the Vane Arms Hotel, Stockton. Reports on the Society's activities and finances were presented, and the following officials and committee were elected for the coming year. President, Mr. Richard Miles; Chairman, Mr. Frank Shepherd; Secretary, Miss Eileen O'Hara; Treasurer, Mr. Malcolm Pallant; Stage Director, Mr. George Wilks; Business and Publicity Manager, Mr. Alan Reeves. Committee—Miss Sheila Cross (Vice-Chairman), Miss Beryl Forrester, Miss Enid Thirlwell, Mr. Fred Mothersdale and Mr. Harry Shields. We were very pleased indeed that our President, Mr. Richard Miles, was able to attend the Dinner. We greatly appreciated and enjoyed his company, and hope that he will be present at many of our future functions..

The newly elected Committee are now busy considering plays for production next season, and we hope to stage the first play of the season in October next, when we look forward to welcoming many old and new friends in Teesdale Hall.

The Misses

- Annette Griffiths
- Audrie Aydon
- Madeleine Green
- Margaret Kerr
- Rita Husband
- Enid Moss



- Harry Shields
- Bill Hutchinson
- George Heaton
- Albert Pattison

Scene from "The Camel's Back."

Receipts and Payments Account for the year ending 30th April, 1955

RECEIPTS

Subscriptions				
Vice Presidents	...	...	12 12 0	
Patrons	...	...	7 10 0	
Members	...	...	5 8 0	
			<u>25 10 0</u>	
Sixth Production—Surplus				
"John Marlow's Profession"			18 3 11	
Seventh Production—Surplus				
"An Inspector Calls"	...	...	1 6 5	
Eighth Production—Surplus				
"Easy Money"	...	...	13 14 3	
Second Annual Ball—Surplus			6 19 0	
			<u>£65 13 7</u>	

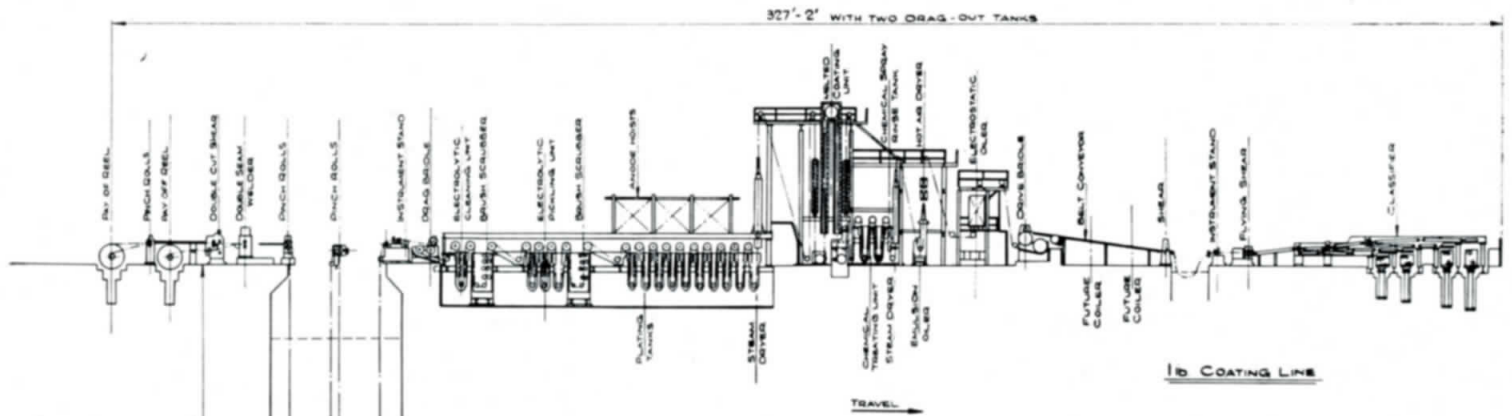
PAYMENTS

British Drama League	...	...	2 2 0	
Subscription				
Library	...	...	2 14 3	
Workshop	...	...	18 12 8	
Make-up Materials	...	...	1 4 1	
Stationery—News Letter	...	...	3 18 3	
Properties	...	...	14 16 3	
Scripts for Ninth Production	...	...	1 19 9	
General Expenses	...	...	7 9 11½	
			<u>52 17 2½</u>	
Balance at End				
Cash at Bank	62 8 0			
Cash in Hand	8 0 2			
			<u>70 8 2</u>	
Less Cash Balances at Beginning	57 11 9½			
			<u>£65 13 7</u>	

(signed) F. Mothersdale, Hon. Treasurer.

Audited and found correct
(signed) P. C. K. Corney. 19th May, 1955.

New Contract for H. W. Machine Co. Ltd.



Line diagram of Continuous Electrolytic Tinning Line.

The installation of the first wide strip mill for steel at Ashland, Kentucky in 1923 revolutionised the method of producing Steel Sheets. There are now over one hundred strip mills in operation on steel throughout the world and almost all sheet steel is produced by rolling in strip form and then cutting to the required lengths. A large proportion of the sheets produced are coated with tin to form tin plates and it became obvious that handling would be reduced, outputs increased and tin consumption lessened if the coating processes were carried out while the steel was in strip form. After a long experimental period a method of applying continuously a coating of tin to steel strip by electrolysis was evolved and a number of plants were built and installed in the U.S.A. In addition to the other advantages the electrolytic method enables lighter and more uniform coatings to be applied than was possible with the older hot-dip method. American manufacturers also built and exported plants to other parts of the world including the United Kingdom.

We have made great efforts during the last few years to obtain an order for a Continuous Electrolytic Tinning Line particularly as we are well established as designers and manufacturers of the older type of hot-dip tinning equipment. We are very proud to report that, in association with the Aetna-Standard Eng. Co. of Pittsburgh we have been awarded a contract for the supply of such a Line to the Steel Company of Wales Ltd., for their new cold strip mill at Velindre. This will be the first Line to be built entirely in the United Kingdom and will consist of Uncoiling, Cleaning, Pickling, Plating, Cutting-to-Length and Classifying sections.

The Line will be capable of operating at speeds of up to 1000ft per minute and outputs of up to 4000 tons of tinplate per week will be possible.

The overall length of the line is 400ft, but due to the path the strip follows through the various sections, the

total length of strip in the line at one time will be 1,200ft.

Highly specialised electrical equipment is necessary to supply the cleaning, pickling, plating and chemical treatment sections, and rectifiers having a capacity of 162,000 amps at 15 volts, will be required.

The finished tinned strip is coated with a very fine film of oil by oil mist precipitation, using an electrostatic oiler which requires an extra high tension supply of 125,000 volts.

A number of specially developed instruments are provided to assist in the automatic control of the line and worthy of mention amongst these are :—

1. An ultra Violet Pin Hole Detector, capable of detecting holes down to 0.001" diameter in the strip even when running at 1000ft per minute.
2. An Electric Spark Marker for identifying the faulty sections.
3. A Flying Micrometer for continuously checking the gauge and initiating the rejection of 'off gauge' material.
4. A coating thickness meter for indicating the thickness of coating on both sides of the strip. This indication is very important when different thicknesses of coating are being applied to the two sides of the strip.

After the processing the strip is cut into sheets of the required length by means of a rotary flying shear, and automatically sorted on a classifier into various piles according to quality, the sorting being controlled by instruments supplemented by visual inspection.

The fulfilment of this contract will provide us with experience in manufacturing and will strengthen our position as supplier of the most modern types of equipment.

This will be of considerable benefit to us when we are negotiating for further orders for Continuous Electrolytic Tinning Lines, a number of which are likely to be required in various parts of the world within the next few years.

H. W. Processes Ltd.

H.W.P. Sales barometer has risen steeply this year and we are delighted to be able to record certain of our achievements.

The turnover of Fluor Products which includes Cooling Towers and Fin-Fan Heat Exchangers has been the highest ever since our association with the Fluor Corporation began in 1947.

Messrs. John Laing are to build our new Precast Concrete Cooling Towers, and a recent agreement between this world famous firm of building contractors and ourselves encourages us to expect far greater sales successes of these products in the future.

Our Atomic Energy Division has received a large number of orders for plant for the Atomic Industry in this country and overseas.

Derek Tow, Head of our Projects Initiation Department and recently elected Chairman of The Graduates Section of The Institution of Chemical Engineers, is to lead a party of twelve Chemical Engineers on a tour of industrial concerns in Sweden. It is hoped that this visit will help us to establish fresh contacts in the process industries of that country.

The present volume of orders will necessitate an extension to our office premises to accommodate an increasing number of staff, and action to this end is under way.

In the domestic field too, certain of our staff members have increased the number in their families. We offer our congratulations to those concerned.

McKee Division



Blast Furnace Plant at Aviles

It is now some eighteen months since reference was made in the news-letter to the Ensidesa Contract for Blast Furnace and Materials Handling Plant in Spain and we feel that you will be interested in the progress made to date.

At present we have a staff of five engineers domiciled at Aviles who are responsible for supervising the monumental task of preparation and erection of the whole plant from the various units which are being shipped out from this country piece small. The problems to be met and overcome are infinitely greater than those usually found in Britain as this plant is the first of its kind in Spain and the local erectors therefore have no "know how." However, as can be seen from the accompanying photograph, taken at the end of May, the furnace shell

is steadily growing in place and overshadowing the concrete cast house and high line. The plant is due to go into production early next year and, to take advantage of the summer months, work is proceeding almost from dawn to dusk each day.

One of our staff recently returned from India and jotted down some of the impressions formed during his four weeks stay in that country.

The first impression was as to size of the country which could be illustrated by the fact that the writer lived for 10 days in a train during which time he travelled over an area 200 miles square, which is approximately equivalent to the distance between Darlington and London, but on checking that area with the rest of the country the comparison was about up to the first joint

of one finger compared with the rest of your hand. It was noticed that the trains generally were slower than in Britain but every train used by the writer ran to time.

Before leaving he was told that he would arrive in India just about the worst possible time from the view point of weather conditions and the maximum temperature encountered was 108° F. with 35% humidity but the worst conditions were 95° F. with 90% humidity. Under these conditions it was possible to work, but at times could be extremely uncomfortable.

The Indians were extremely co-operative and he found no difficulty in obtaining answers to any questions asked, although in some cases they asked for a few days to check up.

During the visit it was necessary to leave the towns and the railways and go into the country to inspect possible sites and, during one of these trips, the whole party travelled by jeep for some two hours over open country without any roads and at the end of that time were approximately 10 miles from the starting point.

The journey was through a coal mining area and the party had the opportunity to watch the mining, which was of the open cast type, and was carried out by a high percentage of female labour.

At one point it was necessary to cross a river and, as no bridges existed, the Indians had built a causeway of coal which not only carried passengers but also carried the lorries which transported the coal from the mines to the rail head.

At another point he was shown a wide sandy dried up water course and across it the Indians were busily constructing a barrage which is to be ready before this year's monsoons and by which they hope to impound millions of gallons of water in a lake approximately 5 miles long by one mile wide and some 30-40ft. deep. It is intended that this water will be used for irrigation throughout the lower reaches of the Damodar valley.

Our correspondent also says that he enjoyed the visit to India although he realises that he saw it under ideal conditions.

At Home in the U.S.A.

(Mr. and Mrs. W. E. Marshall)

We were delighted to have the opportunity to live for six months in the U.S.A. and to discover what life was really like out there.

The eighteen-hour flight across the Atlantic by B.O.A.C. Stratocruiser in mid-November last, proved to be both comfortable and uneventful. The airliner made a short stop at Keflavik (Iceland) to refuel and this enabled us to stretch our legs. Our first glimpse of North America came in the light of early morning when we sighted Labrador, but we did not land at New York's International Airport until 9 a.m. (New York time). It did not take long for the sixty passengers to be cleared through Immigration and Customs. The Customs Officer smilingly allowed us to keep our reserve 1lb. English tea without paying duty!

In New York City, we soon learnt to watch the traffic lights and follow the crowds when crossing the wide streets. The world's tallest building, the Empire State, provided us with a wonderful view over Manhattan and especially so when the lights came on below us at dusk. Christmas shopping was already well under way in Fifth Avenue, where many fine shops are to be found. After solving the mystery of the difference between a nickel and a dime, we patronised one of the numerous Automats for a cup of real American coffee. Whole meals may be purchased from a series of slot machines and this suits the ever-bustling New Yorker. The famed drug stores also provide a speedy meal service plus the pills to cure the after-effects! In all eating places, paper cups filled with iced water and paper napkins are automatically supplied.

We soon covered the 700 miles onward to Louisville in a Super G. Constellation aircraft. Air travel is fast becoming the most popular means of transport in such a vast country.

We stayed in a hotel for our first fortnight in Louisville. During this time, we found that "breakfast" is paid separately from the "bed" whilst each meal carries an unofficial 15% tip. The coloured waitresses would greet people with "How'se you all, today?"—even when speaking to one person. The main streets seemed to be lined with Used Car Lots, all of which do a steady trade. It appears that few people bother to garage their cars throughout the year. The cars suffer most damage to bodywork when left in the works car parks, etc. during the heat of the day.

After the first fortnight we secured a Downtown furnished 4 roomed apartment, complete of course with a refrigerator. In our house-keeping we soon discovered the Super market. All conceivable provisions are attractively displayed in these self-service stores. One deep frozen speciality is the T.V. Dinner, where a full turkey meal is supplied on its own "aluminium" serving tray. We also tried our hand at Southern Fried Chicken, Hamburgers and Waffles. Milk was delivered on alternate days and all deliveries came very early. Extensive use was made of the nearby Launderette, which damp-dried our clothes ready for ironing.

The T.V. set which we hired, gave a choice of two commercial programmes—in New York there is a choice of thirteen channels. On weekdays, T.V. transmissions begin at 7 a.m. and last 'till well after midnight. One of the many local banks sponsored a News Bulletin, whilst each night Milton Metz, the weather forecaster, "filled us in with all the details" after extolling the virtues of Pepsi-Cola, etc., American businesses make full use of radio and T.V. to advertise their products. Lavish spectacular shows, sometimes in colour T.V. provide excellent Saturday or Sunday evening entertainment. Louisville Public Library plans in the near future to transmit a special non commercial T.V. programme. The

library building flanked by a tall radio aerial, already broadcasts daily its own "Third Programme." Films gramophone records, prints and even oil paintings may be borrowed from this exceptional library. The Louisville Orchestra, an amateur body, is so well endowed from the Ford foundation, that leading composers of the day are being specially commissioned to write new symphonic works for the orchestra.

Louisville on the banks of the river Ohio, is a rapidly developing city of almost half a million people. Thanks to its geographical situation, Louisville links North and South. Many families in Kentucky were divided in their loyalties during the American Civil War. (Louisville has a statue both to the Confederate Army Dead and to Abraham Lincoln.) The river Ohio provides a very good waterway for commerce and pleasure, but it also frequently floods. The drinking water used in Louisville is drawn from this river. In a similar manner to the river Tees, the Ohio provides a natural boundary between two states, those of Kentucky and Indiana. Industry is being attracted to Louisville thanks to the plentiful supply of cheap electricity and the ready availability of workpeople. It is quite a sight, to see the huge barges laden with multi-coloured cars, in the process of being shipped from the new Ford plant.

Although Louisville is the centre of trade in Kentucky, the state capital is at Frankfort, some eighty miles away. This town we visited by "Greyhound" bus, which company provides a fast diesel-engined bus network throughout the U.S.A. Kentucky boasts the famous Blue Grass country, where racehorses are bred in the hope of a Kentucky Derby winner. The Derby is held on the first Saturday in May—we were lucky enough to be present at this year's classic race and to back the winner. Only betting on the Tote is allowed in the U.S.A. The 100,000 racegoers sang "My Old Kentucky Home" before the Derby race and this was the nearest we ever got to the Kentucky Minstrels.

Large distilleries in Louisville provide 25% of the whisky drunk in the U.S.A. The Bourbon whisky is encountered in various traditional disguises, Egg Nog Punch at Christmas time and Mint Juleps in summer time. Illicit stills flourish in the Hill-Billy areas of Kentucky and the Moonshiners find a ready sale for their brews. Bourbon is a great deal stronger than American beer, which may be "homogenised, pasteurised and bitter free" as one advertiser puts it.

Friends kindly showed us much of the Kentucky countryside by car and on some of these trips, we noticed the Motels and outdoor drive-in cinemas. In town the cinemas (seats all one price) were always strongly scented with roasted popcorns. The drive-in cinemas take full advantage of the consistently fine weather. We also saw Fort Knox, a large army garrison town and reputed home of the U.S. Treasury gold. Whilst motoring we noted the license plates of cars from other states. The "Land of Enchantment" proclaimed the state of New Mexico, whilst Florida plates advertised "The Sunshine State." License plates are made in State Prisons by convicts. Some of the typically American sports we saw, were American Football, Basketball and Baseball. The

spectators were noisily enthusiastic, but somehow managed to consume large quantities of popcorn, ice-cold beer and sweet meats. The intermission during an inter-High School Football "Derby" brought out the school bands with their shapely Drum Majorettes. The visit of the basketball playing Harlem Globe trotters seemed to attract nearly all the 15% coloured population of Louisville. The playing season for Basketball was just beginning when we left the U.S.A.

A typical American holiday we enjoyed was Thanksgiving Day at the end of November, when the traditional meal of turkey with cranberry sauce, followed by pumpkin pie, was served. Like George Washington we cannot tell a lie, so we must confess to celebrating his birthday in February with all the other Loyal Americans!

Little will be said about business, office hours were 8 a.m. till 4-45 p.m. for five days a week. A light lunch only is taken at the office, the main meal is eaten at home in the evening. This arrangement plus air conditioned buildings ensures that the minimum number of people are sleepy in the afternoons! Many employees have a further job in the evening. Iced-water drinking fountains are to be found in workshops and offices, whilst coffee, ice-cream, cigarettes and chewing gum, etc., are dispensed from the many slot machines. Even a barber may be in attendance!

We were pleased to see Mrs. Walter Tranter, wife of our Maintenance Department Erection Foreman, who arrived in Louisville on a visit a few weeks before our departure. When we left Louisville in early May, the temperature was in the high eighties and steadily climbing. Quite a contrast to our May weather!

The return journey to New York by rail took twenty-one hours—our roomette was complete with two tier bunks, which folded away when not in use. The Pullman type coaches were hauled by a Diesel locomotive, the steam locomotives having been largely superseded by Diesels. American railway tracks frequently run through the main streets of towns. Some of the railroad companies have picturesque names—the "Nickel Plate Road" for example runs between New York, Chicago and St. Louis.

In New York, the United Nations Building gave us one of our last sight-seeing tours. The site on which the U.N. building lies, is regarded as international territory, not belonging specifically to the U.S.A.

The last lap of our trip was accomplished in the luxury liner S.S. "United States," which takes only five days to cross the Atlantic. The liner has an ultra-modern hull design and embodies 2,000 tons of aluminium in its superstructure. One day she averaged the terrific speed of 33 knots. The weather was inclined to be stormy but, despite this, there was plenty to do to occupy our time. At meals, we were treated by the ship's Doctor to his interesting anecdotes of life at sea.

It was with mixed feelings that we approached Southampton. We will always treasure the happy memories of our trip to the U.S.A. We found the Americans a very generous people and justly proud of their country, its high standard of living and of all that has been accomplished in such a relatively short time.

EXTRACT FROM "THE ENGINEER"

3rd June, 1955

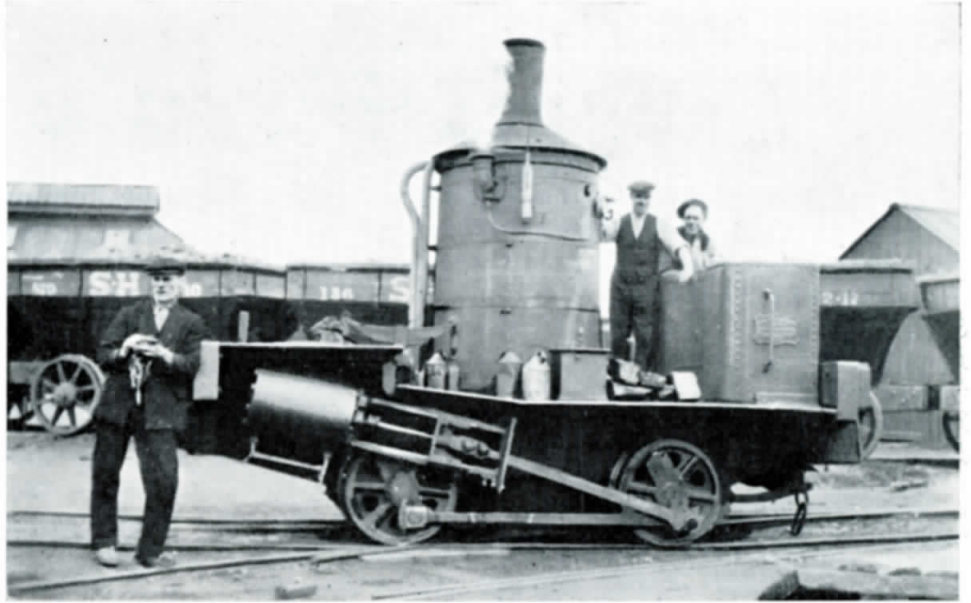
Messrs. Head, Wrightson and Co., Teesdale Ironworks, Stockton-on-Tees, produced vertical boiler locomotives during the period 1870—1880, and the majority are presumed to have gone to local ironworks and collieries in Durham, but at least one went to Surrey, and the yard locomotive at the Hannoversche Maschinenfabrik (Hanomag), Hanover, was at one time a Head, Wrightson vertical boiler engine. Two distinct designs were built, one with vertical engine and geared drive, while the other had direct drive by normal outside sloping cylinders. The geared engine had two cylinders complete with regulator bolted direct on to the boiler, which was carried on a cast iron frame, while the forked-ended connecting-rods operated on to a crankshaft whose main bearings were held in another casting bolted to the bottom of the firebox. No eccentrics were fitted, the link motion being operated by two small cranks offset from each main crank on either side.

The reversing lever was on the right-hand side. A locomotive of this design is still at work in Surrey, having been driven by normal outside sloping cylinders, delivered to the Dorking Greystone Lime Company at Betchworth in 1871, and the following dimensions applied to this locomotive when new:—Cylinders, 6in diameter by 12 in stroke; gear ratio, 3 to 1; the wheel centres were of cast iron and 2ft. 4in diameter over tread, set on a wheelbase of 5ft. 6in. The original boiler, with conical topped smokebox, was 3ft. 6in diameter, with a firebox 2ft. 10in high, and contained thirty-six wrought iron tubes 2in diameter. A photograph of this locomotive in original condition appeared in *The Locomotive*, 1931, page 303.

Another locomotive of this pattern was supplied to the Londonderry Estates Co. Durham, in 1870, (see photo) works No. 21, and it is still at work as Seaham Harbour Dock Company, No. 16. This retains the conical smokebox and the present dimensions are: cylinders, 6½in diameter by 14in stroke; gear ratio 2 to 1; overall diameter of wheels, 2ft 6in diameter; wheelbase 5ft 6in; outside diameter of boiler, 3 ft 6in; height of boiler, 6ft

6½in; number of tubes, 70, with a diameter of 2in; length of tubes, 3ft 9¼in; diameter of grate, 2ft 10¼in; working pressure, 100 lb per square inch; overall length, 11ft 7in; weight in working order, 10 tons.

The other design, with direct drive, is shown in the photograph, and this particular locomotive was also supplied to the Londonderry Estates in 1873, Works No. 33, and is now working as Seaham Harbour Dock Company No. 17. The photograph is sufficiently clear to show all the principal features, and the present dimensions are: cylinders 9in diameter by 14in stroke, with reversing



with acknowledgment to John Hayes.

lever on right hand side; diameter of wheels 2ft 5½in; wheelbase 5ft 4in, outside diameter of boiler 3ft 4in, with a height of 7ft 4in; number of tubes ninety-nine, of 1½in diameter; length of tubes 3ft 11½in; diameter of grate 2ft 9¼in; working pressure 120 lb per square inch, overall length 13ft 6in. The weight is slightly more than 10 tons.

It is unfortunate that so little is known about such an interesting series of locomotives for although the firm of Head, Wrightson and Co., is still flourishing, it no longer possesses any records of locomotive work. Neither is it possible to estimate the number of vertical boiler locomotives built from the Works Numbers that are known, because the firm also built a number of normal four-wheeled outside-cylindrical saddle tank locomotives from 1871 onwards.

Life in the University of Durham

by K. G. CLARKE (late of Aluminium Division).

Many people, particularly friends at H.W. & Co. Ltd., have asked me to describe University life. It appears to them that undergraduates have extremely long vacations and spend most of the term time participating in debates, rags and their favourite sports. I should like to correct any wrong impressions by describing the life of an undergraduate at Durham.

The people of Tees-side should be very proud of their local University, because not only is it the third oldest provincial university (Oxford and Cambridge are the oldest), but also Durham, Cambridge and Oxford are the only three based entirely on a college system.

Durham University was founded in 1832, and the first students lived in the castle, given by Bishop William Van Mildert. This has always been known as University College, and the members call themselves "Castlemen." University College now uses Durham and Lumley Castles,

and some buildings near the Cathedral on the Palace Green.

As far back as 1286, the Durham monks had maintained their own college in Oxford, but the monks were removed at the Reformation and the buildings were used for what has been known ever since as Trinity College.

Present day students do not apply to the University for admission (as they do at Leeds, etc.) but apply to a college in the University and state the degree for which they wish to read. They must be eligible to matriculate, that is they must have the necessary entrance qualifications, and at a formal ceremony they sign their names in the University Register.

There are two divisions—Durham and Newcastle. The Durham division has 1,200 students and the Newcastle

3,000, but although smaller, Durham is the elder and the parent division. There are six men's colleges and four women's at Durham. Each college has its resident students and has its own colours, scarf, blazer, coat of arms and boat house. At Newcastle are King's College (Science) and the School of Medicine.

The lecture rooms are scattered around Palace Green (Durham) and in Old Elvet and the Bailey. The science buildings some of which are very modern indeed, are on the Stockton Road. Most of the colleges are near the Cathedral, and the main library is on the Palace Green.

A student's daily life is very much left to himself to organise. He has a timetable of approximately three lectures per day, including Saturday morning and he must attend at least three quarters of them each term. He has his own very extensive reading list, and it is up to him whether he passes his exams. If he wishes, he can join various clubs, e.g. sports, politics, drama, etc. and he can attend debates and plays or even hold sherry parties. I am often asked why students are given so much freedom. The answer is that most students, contrary to popular belief, are very conscientious and often work late at night, and it is best if an individual can modify the programme of events to suit his own personality and capacity. There will always be students who waste their time and fail exams, but others fail because competition is so keen.

Gowns are worn by all students and lectureres at Durham for all lectures and on official occasions. Each college has formal dinner every evening at 7 p.m. Gowns are worn and drinks can be bought. In fact Hatfield College is reputed to have the best wine cellar in Durham.

Many of you may be puzzled at the terms used in describing University life. An undergraduate as you know,

is a student without a degree and a graduate a person who holds a degree and some of the latter continue at University doing research work.

Dons are members of the academic staff, some of whom reside in each college. There is no internal college lecturing: undergraduates join those from other colleges reading for the same degree, at lectures. A student always "reads" for a degree, "goes down" for the vacation and "goes up" for the term. To be "sent down" is to be failed (or sent down for misconduct).

A **faculty** is the broad heading given to a group of departments. For example there are the faculties of Arts, Science, Medicine and several others. In the Faculty of Arts, a person can read for one of many different subjects, each coming under a particular department, e.g. French or Economics. The degree awarded is B.A. or B.Sc. dependent upon which faculty covers the special subject.

Most departments have a Professor in charge. He holds the Chair in his particular subject. Second in command is the Reader, then the Senior Lecturer, lecturers, assistant lectureres and research students.

Long vacations are necessary because of the large amount of reading, research work and also written work which must be done when the student has free time. All the major works which have been written on any subject must be read so that all viewpoints are known and also the student may be capable of expressing his own view point.

Students, too, work at nights and week-ends and any time spent in social and athletic activities must be made up some other time.



Mr. Franklin presents Trophies to the Machine Shop Football Team.

(By courtesy of "Evening Gazette")

H. W. PERSONALITY

WILLIAM MARSHALL

Garage Foreman.

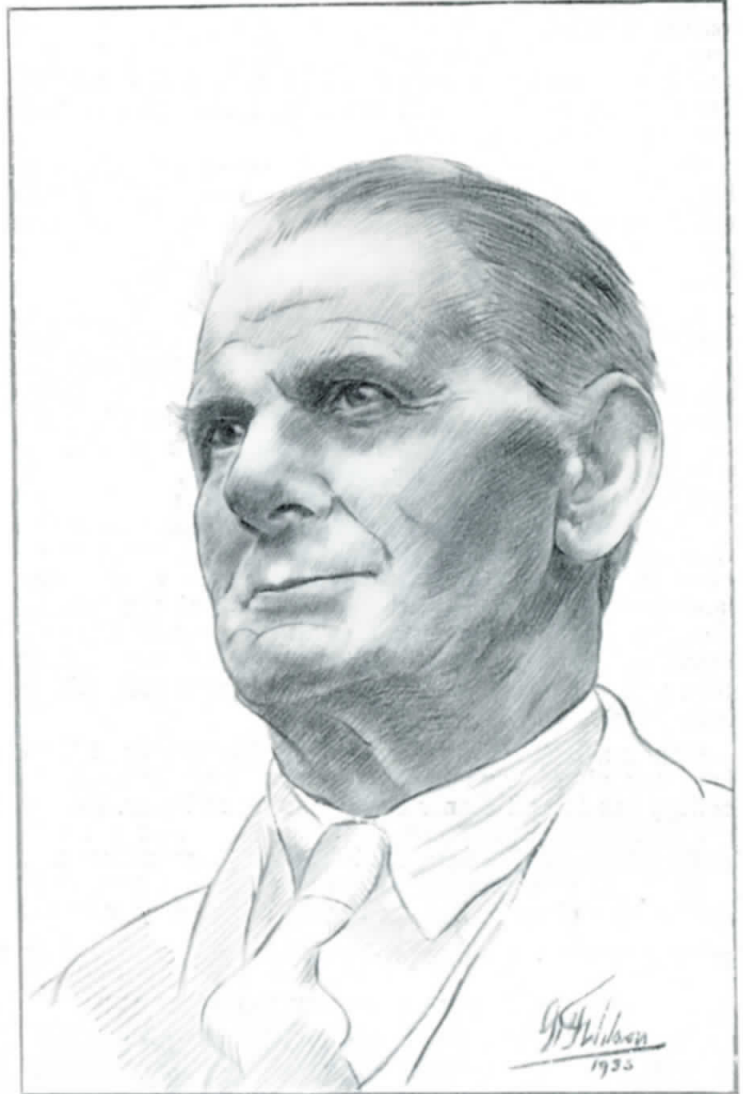
Mr. W. Marshall commenced to serve his apprenticeship over 50 years ago, under his brother (the late T. L. Marshall) as a Fitter and Turner. Attending the Evening Classes held at the Works, he passed on to M'bro. High School Evening Classes. As nightshift Foreman he has happy memories of the lads who worked under him.

Upon the outbreak of hostilities in 1914, he joined up and spent 4½ years, first in the Serbian Campaign and later transferred to the Royal Flying Corps at Salonica and Egypt. After being demobilised he was given the job of going round with the Inspectors.

For the last 34 years he has been in charge of the Garage. It soon became apparent to him that motor transport would supersede horse vehicles, he determined to study at the Motoring School, Newcastle-on-Tyne, travelling down each week-end for a Session gaining an efficiency certificate in Theory and Practice. During these years he has seen a great change in the motoring industry and has always appreciated the co-operation of his colleagues in the various departments who have helped him to keep the "wheels turning."

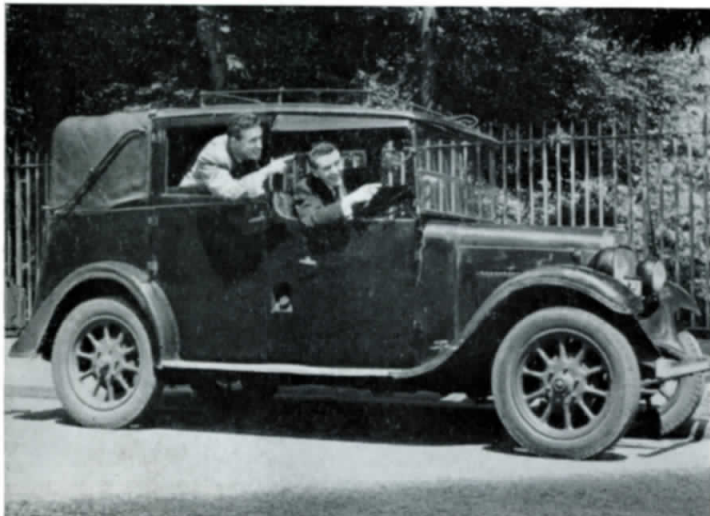
Upon the outbreak of World War II he was an N.C.O. in charge of a Section of the Works Home Guard. When Sir Guy Wrightson founded the Cadet Corps at the works, he realized the need for Technical Training for the boys. Sir Guy arranged for Mr. Marshall to set up a special workshop in Craigs' Shipyard, as part of the Cadet training. This Cadet group was later embodied in the nationwide A.T.C. attached to the R.A.F. From then onwards Sir Guy whimsically used to say "now Air Marshal."

For five years during the War Mr. Marshall ran a most successful Dance in the Pavilion, Teesdale Park, the



proceeds of which were divided between the Hospital, Athletic and Football Associations.

A keen gardener, he is specially interested in growing chrysanthemums, being a member of Middlesbrough Chrysanthemum Society.



"Follow that car"

THE THING made its appearance in Trafalgar Street one morning in June. Some pedestrians ran for cover, while others blinked, rubbed the sleep from their eyes, and gazed in amazement at this weird and wondrous contraption. Had the world gone back 22 years, or were they still dreaming? We would assure our readers that there is no cause for alarm, it was only a 1933 London Taxi which a couple of H.W.A. Personnel had purchased as their answer to the Railway Strike. (Taxi Guvnor?)

Foot-note

What with new super offices and London taxis, would it not be appropriate to rename Trafalgar Street, Trafalgar Square?