



THE MERGER

Message from
Omdr H. Pasley-Tyler RN (Retd),
Chairman of Elliott Flight Automation

By the time you all read this message it will be known with greater certainty whether this proposed merger will in fact take place. Having regard to the strong support provided by the British Government, I have little doubt at the time of writing this message that this important step of rationalisation in the broad industrial fields in which both companies operate will materialise.

Many of you have given loyal service to Elliott Brothers and Elliott-Automation over a long period. Some may even share with me the memory of the days in the late 1940s and early 1950s when Elliott Brothers was struggling for its very survival. What has been achieved by the devoted and enthusiastic efforts of many thousands of people in the company will appear to some as little short of a miracle. This is an occasion, therefore, when I would like to pay my tribute to those of you who have worked in the flight field and who have made such a very significant contribution to the company's present stature, not only in the

national but in the international scene. However, it is now the duty of all of us to look ahead and not look back; for in a highly complex and changing world we must not only look to the future of our company but, as an important element in the nation's industrial effort, we must also consider the needs of our country. Taking all this and many other complex factors into consideration, I feel sure that as the years go by it will be seen that we have taken the right step at the right time, not only to consolidate the past efforts of us all, but also to strengthen our position for the battle for the economic well-being of this country.

I know that many people may have at the back of their minds worries as to whether their own future will in some way be prejudiced or threatened. I therefore hasten to assure you that whilst we must all be prepared for change, no one need have any serious doubts about their future resulting from this merger. On the contrary, I would say that the step that we are proposing to take will in fact assure and improve the future of every one of you and your successors for many years to come. In any case, such changes as may emerge will certainly not take place precipitately.

My very best wishes to you all.

ELLIOTT ROCHESTER FETE 1967



Competitions of all kinds marked the highly successful Elliott Rochester Fête on July 8. Some 3,500 people came to enjoy the fun, including the inter-divisional push-ball contest, above, in which TACD on the right are seen working up to victory over Accounts under the watchful eye of social club secretary Jim Collins. For further pictures, including one of the newly elected Miss Elliott, see page 3.

Wet but worth it! PARIS 1967



Floodwater ankle-deep inside one of the exhibition halls!

THIS year, Paris outdid even its established reputation for bewildering size and appalling weather. Few of those who were on duty in the exhibition area on Le Bourget airfield will ever forget the chaos caused by five successive days of rainstorms and gales.

The Elliott team escaped with little more than a coating of mud on clothes and cars. Others less fortunate were flooded on exhibition stand or chalet and had to order lorry-loads of high-priced gravel. There were 510 exhibiting companies and 190 aircraft at Le Bourget. Four or five exhibition halls were surrounded this year by five large national pavilions, two French, one Russian, one US and the British "Information Centre". The head-line interest at Paris is always whether the Russians have outdone the Americans and whether the French have joined the "big league" in space and weapons. Having chosen to "go it alone", separated from the main group of British industry stands, Elliott-Auto-

mation was tucked away in a smaller exhibition hall to one side of the main area. But the Ministry of Technology featured Elliotts prominently with a good show of automatic landing equipment, the SBAC featured automatic landing as a "British first" in the industry pavilion, French agent Europe Air Services showed a selection of EFA equipment, and the ELDO stand showed the Elliott digital inertial guidance system for the European satellite launcher. Although the French President, Gen. de Gaulle, by-passed the Elliott stand altogether during his inaugural tour of the show, a steady succession of VIP groups rustled and murmured their way past. Mr Roy

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EFA GAINS A SLICE OF F-111K

KEPT carefully under wraps until the last few days of the Paris air show was the news that Automatic Test Equipment Division had won the contract to develop and produce computer-controlled automatic test equipment for the F-111K swing-wing aircraft for the RAF.

Mr Stonehouse, Minister of State at the Ministry of Technology, determined that he would publicly announce the EFA order during his visit to the Paris air show. The wires to Paris hummed as soon as first news of the forthcoming announce-

Continued on page 2



Mr John Stonehouse, Minister of State for Technology, and his wife, talk to EFA Joint Managing Director W. H. Alexander (left) at the Elliott stand at Paris



Bob White (MACD) throws "Mac" McCarthy (Sheet Metal) during a Judo demonstration at the Tudor Court Hotel

Judo Club scores many successes

THE EFA Judo Club has just had its most successful year with a string of victories, including national and county championships. The Club now numbers 40 senior members, but also has 60 junior members.

HEAD-UP DISPLAYS GO THEIR OWN WAY

When the factory at Lower Sydenham was closed last year, Airborne Display Division was moved to Rochester and amalgamated with Flight Support Equipment Division to form DADD. Business was going relatively slowly in both divisions and the amalgamation made good sense.

Since then, the fortunes of both product groups have radically changed and the two have once again been separated into Automatic Test Equipment Division and Airborne Display Division, the latter moving across to the third tower block.

ATED achieved two major breakthroughs with the orders for computer-controlled test equipment for the HS.801 Nimrod maritime aircraft and for the RAF F-111K swing-wing bombers. ADD's achievements, particularly in the USA, have opened up major sales prospects.

New appointments in both divisions are listed on page 3.

Last month at Walsall, Marie Miller became National girls' champion in the 14 to 16 year age bracket, and Phillip Whymark became national champion in the eight to 10 year bracket. The Elliott team also became British National Junior champions.

Roger Hore, who was area champion last year, became national lightweight champion this year. Sid Alderman (Sheet Metal), became runner-up to the national lightweight champion. Amongst the juniors, Paul White became Kent Junior champion for the eight to 10 year ages. The juniors also won the Cook Trophy and the Kent team championship. The Club demonstration team in both Judo and Karate were billed to appear in the Social Club fête.

Girls Too . . .

Judo club secretary Mr. Walker (Fisher Division) reports that the section is always happy to welcome new members of either sex, and that three Black Belts are available to give qualified instruction to beginners. Meetings are held in the Main Canteen on Monday and Wednesday evenings for seniors, Thursday for juniors. Sunday mornings are open club meetings. Beginners are welcome on any evening.

Anatomy of a partner

Basic Facts About English Electric

With a strength of 80,000 people in Britain and 10,000 overseas, English Electric has an issued share capital of £58.6m, almost all registered in the name of British shareholders. Turnover in 1966 was £270m, more than a third of this being overseas.

English Electric was formed in 1918 and acquired Marconi, Ruston and Hornsby and its subsidiaries W. H. Dorman & Co., D. Napier & Son, and Vulcan Foundry.

In Britain, the company operates subsidiaries and product groups as follows:— Electrical Products, Power Generation, Electronics (broadcasting and radio, line and space communications, air and ground traffic control, defence and navigation including computers, special components and microelectronics), Diesel Engine, Traction, Computers and Automation (computers for commerce, science and industry), Domestic Appliances, Valves (radio and microwave), Special Products (aircraft equipment, industrial actuators, industrial heating equipment).

Associated companies (with EE holding in percentage) include British Aircraft Corporation (40%), Marconi International Marine (42.7%), Nuclear Design and Construction (40%). The last-named was formed in 1966 in co-operation with Babcock & Wilcox and Taylor Woodrow.

English Electric has factories overseas in nine countries, in Europe, Africa, South America and the Far East.

THE SAD TALE OF THE PUP

EVERY Paris show has its curiosity, and this year it was vintage aircraft. The great American pavilion featured a replica of the "Spirit of St. Louis" monoplane, in which Lindbergh made his spectacular solo New York to Paris flight just 40 years ago. The French put a replica of Nungesser and Coli's record-breaking long-range biplane in their national stand.

EFA decided to redress the threatening imbalance by providing a British vintage aircraft. TACD sales manager "Doc" Stuart is one of the very few approved pilots of the Shuttleworth Trust collection of old aircraft, and he arranged for the Sopwith Pup to be transported to Le Bourget and to fly it during the main air display on the last Sunday of the show.

The justification was that Elliott flight instruments manufactured during World War I were fitted. It so happened that the Pup was a British aeroplane with a French engine—the Gnome le Rhone rotary. The Concorde is, approximately, a French airframe with British engines. Flight control equipment for both aircraft is by Elliott.

The plot thickened half-way through show week when Hawker Siddeley thought of publicising the fact that both the Pup, originally manufactured by an HS predecessor, and the P.1127 Harrier—for which EFA also makes flight control equipment—could take off in the same distance and from the same surface.

The story aroused considerable interest. The basic facts were passed to the commentator for the flying display—complete with armament details, performance and dimensions in metric measures. The stage was set for an inspiring display by "Doc" Stuart on Sunday.

The Gnome engine was run and checked during the morning. The flying programme got under way after lunch. "Doc" Stuart installed himself in the cockpit. Sqn Ldr Jackson of the Shuttleworth Trust swung the propeller. The announcer began to tell the 300,000 spectators all about the Pup, how Elliotts had brought it to Paris; how it was a very early Anglo-French aircraft; how Elliotts supplied control equipment for both Pup and Concorde.

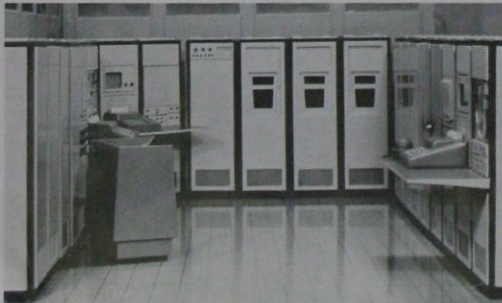
Refused To Start

But the Pup's engine absolutely refused to start. Jackson went on and on swinging. The commentator ran out of words. The display schedule moved on and the next aircraft began its demonstration. The Pup was wheeled ignominiously back to the hangar where, to the consternation of all, the engine started first swing and ran like a sewing machine. Anyone who has been involved in a test programme will understand the poignancy of the situation. So the Pup was not seen flying at Paris, but the publicity effect was very largely achieved. "Doc's" initiative was worthwhile.

"Doc" Stuart (TACD) man-handles the tail of the Sopwith Pup during the Paris air show. Ministering to the front end is Sqn Ldr Jackson of the Shuttleworth Trust



. . . A SLICE OF F-111K Continued from page 1.



ATED's projected layout of a C700 computer controlled automatic test installation, with low-frequency, radio frequency and computer control bays and a rack for the equipment under test

ment reached Rochester. Next day, on the stand in the exhibition hall, a reception committee was summoned and some energetic searching tracked down the ministerial party and ascertained the exact form the announcement was to take.

Finally, Mr and Mrs Stonehouse arrived at the Elliott stand and were received by EFA joint managing director Mr Alexander. Mr Stonehouse handed over a written copy of the announcement—and that was it. The announcement concerning EFA was in fact one of a number recording his visits to the stands of a variety of British manufacturers at Paris.

Now that the initial flurry is over, it is worth emphasising the main features of the F-111K test equipment order. It is the largest ATE

order ever placed in Britain. It is by far the largest order yet placed for British equipment for the F-111K programme. It is EFA's second large order for this equipment and establishes EFA in this very important "second-generation" equipment.

Further Prospects

As a result, there are considerable prospects for further sales, both military and civil. Operators of supersonic transports and other large airliners will undoubtedly need such automatic test equipment in order to speed-up equipment turn-round and reduce spares holdings.

By ordering the F-111K system in Britain—and there was, in the early stages, a very strong possibility that

the equipment might simply be bought from the USA—the Government has opened up a considerable export potential.

The C700 for the F-111K includes capability for automatically testing radio and radar equipment, which has not been attempted before in Europe. EFA can therefore offer testing ability over the full range of airborne equipment, and is in fact uniting in the C700 all the experience gained in ATED in previous smaller test equipment, including the precision pressure controller.

For Ron Bristow and his team in ATED, it has been a long, hard road, but all the apparent frustrations of recent years have now proved to have been worthwhile. Already, ATED is looking for the next orders.

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Further Successes at Rochester Fête 1967

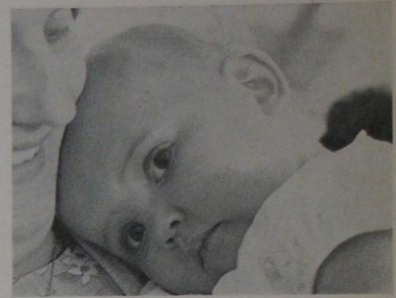
Right, Lorraine Spendiff (AEID), chosen Miss "Elliott" after a closely watched contest, poses in full regalia and storm-proof bouquet.

Below, the four winners of the children's fancy dress competition with Gala Clown, Reg King. First prize was won by pint-sized pirate Simon Nichols.



Right, Sandra Eldridge relaxes after winning 1st prize in the 9 to 18 month class of the Bonny Baby Show.

Below, the Elliott tug o' war "A" team showed its pull in high places by beating J Division, Kent Police. The coach is Alf Barty.



HARRISON'S ELEVEN SNATCHED VICTORY

EFA people on the way up - appointments

AIRBORNE DISPLAY DIVISION

B. S. WOLFE
Divisional Manager
from Deputy Chief Engineer TACD

E. C. HAWLEY
Controller
from Deputy Controller DADD

P. LOWRY
Chief Engineer
from Chief Engineer DADD

S. R. A. LOWRY
Sales Manager
from Senior Sales Engineer DADD

AUTOMATIC TEST EQUIPMENT DIVISION

H. R. BRISTOW
Divisional Manager
from Divisional Manager DADD

A. B. BUTLER
Divisional Controller
from Divisional Controller DADD

J. E. MASTERMAN
Sales Manager
from Sales Manager DADD

A. L. BAKEWELL
Production Manager
from Production Manager DADD

D. B. GEMMELL
Chief Engineer
from Chief Engineer DADD

Winning Runs Scored in Last 10 Minutes

THE annual all-day fixture between the Elliott-Automation CC club side and Mr. A. J. (Alf) Harrison's Select XI, played at Featherby Road ground on June 11, was a really swinging effort in more ways than one, with batsmen swinging the bat to very good effect.

The club side, skippered by Alf Pullen, batted first and had to work hard for runs against the opening attack of Barry Fullagar and Stan Wells. The first wicket fell at 30 when Peter Taylor was bowled by Wells for 12 (where do you get your machining done now Stan?). Then wickets fell fairly regularly until, at 83 for 5, Jim Southworth was joined by Alan Jones and they embarked on a partnership of 106 in 64 min, during which both players reached half-centuries, Jim in 51 min and Alan in 57 min. When Jones was out for 53, the remaining batsmen assisted Southworth to push the score to 231 for 9, at which point the skipper declared leaving Jim Southworth 84 not out. Derek Jackson and Jim Hardy opened the batting for the Select XI, and their first wicket fell at 16 when Derek was bowled by Brian Shingleston. John Warne (who did select the Select XI?) joined Hardy and took the score to 30 for 1 at tea-time.

At this time the club side were very optimistic about their chances. With about 200 runs needed and only two hours left to play it looked like curtains for Alf Harrison's XI. But, and it was a big but (no offence Jim), Jim Hardy was still there. With Warne, he proceeded to hit the ball all round the ground to such effect that they added 146 runs, of which John Warne hit 44 before falling LBW to Peter Taylor. The score was then 162 for 2.

Stan Wells then helped Jim Hardy to add the final 73 runs. With 10 minutes left to play, Wells hit a four when the scores were equal at 231. Jim Hardy's final score was 149 not out, including 23 fours and one six. Stan Wells scored 20 not out in that 73-run partnership.

Mr "H" is Pleased

It was a wonderful performance by Jim Hardy, and the highest individual score on the club ground. He thoroughly deserved the congratulations he received from both teams, not to mention a jubilant Mr "H", who managed to hide his delight very well. He did not, as was later alleged, say "Kiss me Hardy", after the style of another Englishman who won a great victory, but got shot winning it! We cannot believe the rumour that a certain person promised to bring back a Geisha Girl from his recent visit to Japan for anyone who scored 150 runs (you wouldn't have liked her anyway Jim), but it's equally hard to believe anyone would strive so hard for the usual reward of a pint of Keg. Finally, congratulations to Allon Teers who skippered a fine team in this good win and who performed very well as wicket-keeper, taking three catches and stumping one.

Better Bowmanship

"THE biggest in the towns now, and the best organised" is the claim put forward by secretary J. Milner (Fuze Division) for the Archery Club. It began late in 1965 with discussions between Jack Milner and Reg Bloodworth (MACD). The club was formed and archery (toxophily in the dictionary) got under way during the following April.

Most members were newcomers to the sport, but new equipment, practice and internal competition soon produced the need for competition against other clubs. In mid-1966 there were 30 members, many of whom had their own equipment, including sophisticated laminated bows.

Club participation in various events was requested, including the CCPR for grammar school girls, the last Rover scouts moot and a mixed group of French students. For the first time, the Elliott Fête had an

archery stand; and the club ran a stand at the Hempstead Cricket Club fête. The Chatham Carnival Committee unfortunately had to be turned down. An archery get-together was organised for the local archery clubs, in conjunction with the MSCPH, a disabled persons' sports club with an archery section. The club is now growing fast, with a steady succession of requests to join. Proficiency is increasing, a championship scheme has been introduced. Several matches are being shot and some members are on the list for the county team. Other members are represented on the county committee and southern region council. Membership was expected to pass 30 by the end of June.

Main activity is at weekends, but evening sessions are held on Tuesdays, Thursdays and Fridays, with the last-named for beginners and general practice.



Giving archery instruction to young people are, left to right, Doug Marriot, Denis Green and Jack Milner.



Full-scale mock-up of the Concorde, centre-piece of the Paris aircraft display

PARIS 1967 Continued from page 1.

Mason, Minister of Defence for Equipment, came to lunch with Elliotts.

From contacts with the steady stream of visitors, it became obvious that EFA's international reputation stands high. The orders for equipment for the Lockheed C-5A, the head-up display for ILAAS and the display trials in a Douglas DC-9 were known and respected in Paris.

Of "personal" interest to EFA, and illustrated here, was the splendid full-scale mock-up of the Concorde, which turns out to be an extremely costly immovable asset.

"Johnny" Johnson's Team

A great deal of hard work at all levels went into the Elliott participation at Paris. Preparations started on the fourth floor late last year, were put under the control of Fred Haskett early this year, and brought to life at Paris by the exhibitions department at Lewisham, headed by "Johnny" Johnson. His team was at Paris days before the show opened, shepherding equipment and supplies through the French customs, erecting and equipping the stand and the chalet and handing over to the stand-manning team on the first day.

The manning team of about eight people were directed by Mr. W. H. Alexander, joint managing director, who organised the roster and solved the endless small problems. Telephone communications this year worked rather better than before once people had got the hang of French dialling tones, incomprehensible recorded voice messages and short passages of Gallic announcement music.

The EFA aeroplane, a Piper Aztec flown by Arthur Southall, shuttled back and forth continuously with

people and equipment. Air traffic control is a perpetual problem at show time, and Arthur had some considerable complications thrown at him, not least the apparent inability of the French controllers to give guidance for taxiing on the airfield. At times it was like Piccadilly Circus without the traffic lights. The appalling weather produced its own stimulus in the form of intense turbulence, strong cross-winds and blinding rain. "Arthur Southall Airlines" did a good job.

Warm Beer on Tap

Contrary to the usual hairy adventure stories brought back from Paris, much solid work was done. When the team had settled to the routine, starting early in the morning and lasting, inevitably, until late at night, a great deal of useful contacts and negotiations were completed. The Haskett influence had ensured an ample supply of Red Barrel warm beer in the chalet, and this proved a considerable attraction to both English and foreign visitors.

Armed Hold-up

An unscheduled event was the sudden appearance in the chalet of a full-rigged cowboy demanding tonic water at gun-point—real guns, but not loaded. He was promptly disarmed by Ken Warren and was found on interrogation to be a Pan American World Airlines employee from the chalet next door. Not only PanAm, but Hughes Tool Co. had rigged their chalets as wild west saloons.

Sadly unsuccessful was Elliott's attempt to rival the USA and France by exhibiting a vintage aircraft. The tale of "Doc" Stuart (TACD) and the Pup is told on page 2.

HEAD-UP WITH DOUGLAS

A MAJOR success story of recent weeks was the nine-week flight trial of an Elliott head-up display in a Douglas DC-9 jet transport. Instrumental in that success was Richard Gie of ADD, who provided several weeks of intensive on-the-spot engineering support at the Douglas Long Beach airfield, near Los Angeles.

Main purpose of the programme was to complete flight trials of the new Douglas Category 3 all-weather landing system for the DC-9, to follow the Category 2 low-approach system already certificated. EFA's part was to provide a head-up display as a monitoring and stand-by control system, so that the pilot could watch instrument, guidance and operating information without taking his eyes off the outside scene. By this means, the pilot can see the runway the instant it emerges from the gloom without having to shift his eyes from instruments to outside scene.

Long Hours

Richard Gie spent more than seven weeks altogether at Long Beach, helped in the early stages by Alec Findlay, our US representative on head-up displays. Gie's average working day lasted from 8.30 in the morning to about 10.00 in the even-

ing, and he motored to and from work along the freeways and stayed in the inevitable motel.

Gie flew for about 25 hours in the trials DC-9/30, referred to as "Ship 48" and destined later for delivery to Eastern Airlines. Flying sessions generally lasted throughout the daylight hours, with briefing at 08.30 and only a half-hour pause for refuelling, Douglas manager of guidance and all-weather systems development, Cliff Stout, the test pilot assigned to the trials, would fly the DC-9 several hundred miles up to Stockton or Oakland airports and make repeated landings there.

Early trials concentrated mainly on the autopilot and flight director, provided by Sperry and Collins respectively. Although the Elliott display was switched on whenever airborne, it was not until fairly late in the programme that it was seriously tested as a reversionary system for manual blind landings.

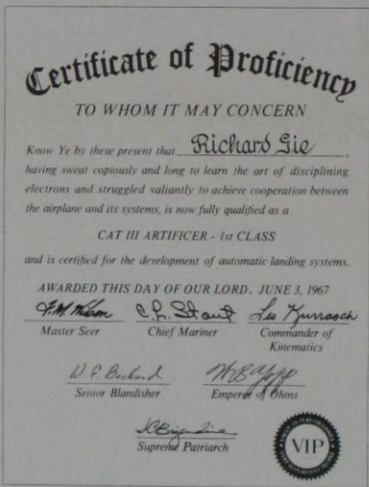
Few Douglas people had previously experienced head-up displays, although Dr. Michael Naish, father of head-up displays at RAE Farnborough, is now working at Long Beach with Douglas. The first manual landings using the display, with polarised screens to obscure external vision and simulate fog, proved very successful and the pilots were surprised at the touchdown accuracy they could achieve. George Jansen, Douglas chief test pilot at Long Beach, made several landings and the company's vice-president engineering watched a landing.

Several Pilots

They were followed by several pilots from the Airline Pilots' Association and by a pilot from Aviation Week magazine, whose article appears in the issue of June 26.

Having seen the flight trials successfully under way, Gie returned to Rochester to re-establish contact with his wife, recovering from a serious motor accident, and with his "fleet" of 24 Afghan hounds.

Douglas showed their appreciation of Gie's work by sending him the certificate reproduced on the left.



APPRENTICES RACE RICKSHAWS AND RAFTS

£200 Collected for Charity

ELLIOTT apprentices at Rochester strove valiantly in two curious races at the end of June, raising £200 for charity in the Rochester establishment in the process.

One team constructed a rickshaw and gained a very creditable third place (we think) in the Epsom to Brighton rickshaw race organised by British Overseas Airways Corporation. Pulling in relays, with girl friends as passengers, the team arrived in Brighton in good order, only to be held up at a traffic light and then virtually written off by a female learner driver. Undaunted, the apprentices carried the wreckage and passenger bodily over the finishing line. This is the effort which earned the £200.

Less fortunate were the two teams of apprentices who built rafts from material theoretically available on a desert island and attempted to paddle from the old Medway bridge in Rochester, up to the M2 bridge and back. Neither team actually finished the course. One of them sank. This race was organised by the Medway industrial employers' association and won by the Dockyard team.

Fisher Won Team Trophy

Len Murphy
Became
Victor Ludorum

ATHLETES representing all divisions competed at the Featherby Road club ground in June in the annual Rochester sports day. The Management Trophy for the top division was won by Fisher Division. This year's new Victor Ludorum Cup, donated by J. H. Durrants Ltd., was won by Len Murphy of Gear Division—known to his friends as the Killarney Canary.

Len's achievements included winning the mile, 880 yd, 440 yd and gaining a close second place in the 220 yd, giving him a total of 18 points. Not to be outdone by "Dad", Mrs. Murphy came second in the ladies' novelty race and her two daughters won prizes in the races organised for children. (Note: It is not true that Len Murphy won the ladies' tug o' war).

Outstanding for the fairer sex were Miss Frankie Turner (MACD), whose running delighted the spectators and earned her 15 Victor Ludorum points, and Mrs C. A. Scragg (TACD), who reached 90 ft

with her javelin throw and was placed in the ladies' shot put and high jump.

A high standard was set in all events and many helpers and officials made the day run smoothly. Brian Young (TACD) managed to record all the points and produce the results minutes after the final event had been concluded.

The prizes for winners and runners-up and the Management Cup were presented by Mrs Alexander, wife of EFA's Joint Managing Director and President of the Athletic Club. The Victor Ludorum Cup was presented by Mr. C. I. V. Curtis, Managing Director of J. H. Durrants Ltd.

NOT KICKING AND SCREAMING...

Referring to the proposed English Electric Elliott-Automation merger and the part played in it by the Industrial Reorganisation Corporation, the Financial Times of June 23 commented

"... Lord Nelson and Sir Leon Bagrit were certainly not 'dragged kicking and screaming into the 20th Century,' to borrow Mr. Wilson's curious phrase (Sir Leon, after all, had more or less let it be known that he invented the 20th Century)..."