

# THE JET Bristoli AFS Magazine



JUNE

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## THE JET Brisiolia Magazine

VOL. I. No. 6.

JUNE, 1940

T the time of writing I have before me many messages of congratulation on the standard of Bristol's Auxiliary Fire Service Magazine, The Jet. Requests for articles have been received, a number of which have been reprinted by A.F.S. publications in other towns. I am convinced that the magazine is vastly superior in every way to other A.F.S. journals, and undoubtedly deserves the whole-hearted support of every member of the Service. I regret to say that this has not been the case. The Directorate of The Jet has been compelled very reluctantly to reach the conclusion that this magazine is not wanted by those in whose interests it has been produced, and is receiving far more support from the public.

Our policy has been to provide useful information relating to all branches of fire fighting technique, interspersed with news items and touches of humour. It seems incredible that for such a small monthly subscription there are members of the Service who have not availed themselves of the instructive and entertaining articles which have appeared within its covers. If the magazine had received the support of every member of the Service its production would be assured; but this has not been the case. Enquiry has been made at every Auxiliary Fire Station in order to ascertain whether it is practical to continue publication under the present circumstances and in view of the high cost of paper. Unless sufficient regular orders are forthcoming it will be impossible to continue producing *The Jet* at a monthly financial loss.

While I cannot help being disappointed in the support which *The Jet* has received, I should like to take this opportunity to thank all those who have contributed in any way to make the magazine successful. It is said that real faith is "the substance of things hoped for, the evidence of things not seen." Well, I still have faith in our production, and I am sure that readers will not allow it to drift into obscurity.

JyKirkup



#### GERMAN AIR RAIDS, 1914-1918

HOW INCENDIARY BOMB FIRES WERE EXTINGUISHED BY AUTOMATIC SPRINKLERS IN THE GREAT WAR

By "Grinnell"

LTHOUGH at the time of writing the Auxiliary Fire Service in the British Isles has not been called to perform the duties for which it was specifically created, events in several theatres of war have confirmed that the danger of the incendiary bomb has not been exaggerated.

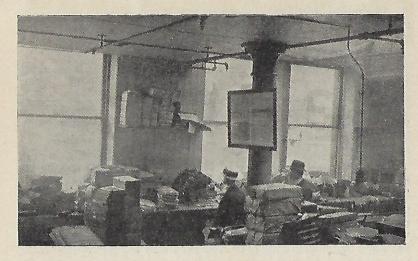
There is no need, at this juncture, to detail the merits that make the incendiary bomb so valuable a weapon to an attacker. For the purpose of the present article it is sufficient to repeat that, whatever its design, the bomb causes an ordinary fire only, which, though it will spread rapidly if it is not checked, can be extinguished without difficulty in the early stages.

The principal threat of the incendiary bomb lies in the large number of fires that can be started by a comparatively small attacking force. Hence it is important that as many small units as possible in any one town arrange for a strictly local protection, either manual or mechanical in operation. Each industrial undertaking should be regarded as an isolated body, and all steps necessary to ensure its safety should be taken by private action of the firm. Sprinkler installations rank first amongst systems of automatic fire protection. Projecting water on to the seat of a fire before the blaze gets out of control, they are an effective answer to the incendiary bomb.

During the War of 1914-1918 sprinklers did sterling service. It is not possible to publish particulars of every fire known to have been extinguished by automatic sprinklers during those four years, but many mills and industrial premises were saved from the destruction which was intended for them by enemy aircraft.

One of the most striking examples of the effectiveness of the automatic sprinkler system was given during the night of September





Photograph taken after an Air Raid on London in 1915 showing one of the rooms in premises which were saved by Sprinklers

10th, 1915, when Zeppelins attacked the City of London. There is no doubt that the heavy fire damage which actually resulted from this particular raid would have been far greater in the extremely congested area involved, had it not been for the work done by the automatic sprinkler equipment. A large number of bombs were dropped within a small city area, thickly crowded with large warehouses and containing goods of great value. Certain warehouses were protected by sprinklers or drenchers, or both, whilst others had no protection of any sort.

Four incendiary bombs hit an unprotected warehouse, which was completely gutted. An adjoining warehouse, which dovetailed into the burning building and so had four walls in common with it, was protected by drenchers and sprinklers. Despite there being no resident staff to turn on the drenchers, the delay so occasioned resulted in only minor damage to the windows and roof on the side of the premises exposed to the flames. The illustration shows the small amount of damage done. This was because 38 automatic sprinklers came into operation and held back the fire until the drenchers were turned on and the outbreak subdued. Drenchers in another building opposite the main conflagration, and separated from it only by a 19-ft. street, were turned on soon after the fire commenced. Here again the protective action of the drenchers undoubtedly saved a considerable block of warehouses from being involved.

An adjacent warehouse, without automatic fire protection, was struck by three incendiary bombs and burned out. Drenchers operating in a building separated from the fire by a 10-ft. courtyard were so effective that, in addition to the complete absence of any damage by fire, no sprinklers operated inside the protected building.

The records of this raid alone show that sprinklers and drenchers not only saved the buildings adjoining the burning premises, but that they made a protective ring between the conflagration and the warehouses in a congested area.

Another example of the value of sprinklers in war time is provided by their work in the Flash Street Mills, Bolton, during the air raid on that town on the night of September 27th, 1916. A bomb fell through the mill roof, penetrated the ceilings of the top floor and the winding room, finally landing on a packing skip filled with empty bobbins. Sprinkler equipment came into operation, and when the alarm bell was answered the fire was practically extinguished.

On the night of June 15th 1917, an incendiary bomb caused an outbreak of fire in the premises of oil merchants in the City of London. The burning building was separated by a narrow street from a wholesale druggist's, which was protected by automatic sprinklers and external drenchers. Immediately the alarm of fire was given, the drenchers were put into operation and the resultant water curtain saved the protected building, in spite of its close proximity to the premises which were destroyed.

The records of a mill in France, at St. Pol S/Mer (Nord), are remarkable. Although the factory was exposed to daily bombardment from land, sea and air, a sprinkler installation enabled it to avoid disastrous fires. Altogether the sprinkler equipment extinguished fires springing from the effects of bombardment no less than five times.

War Time Maintenance.—There are certain conditions of sprinkler maintenance in war time which might be of interest. Principally it should be observed that, contrary to an unfounded impression which has gained currency in some quarters, the water supply should not be turned off.

A sprinkler installation which is intended to be an effective air raid precaution should be able to draw on a water supply which augments or replaces entirely the supply from the public mains. There are two good reasons: (1) the damage which the mains may suffer from bombardment, and (2) the possibility that, even if the mains escape fracture, they will be called upon to operate at maximum capacity, and so fail to maintain enough pressure to supply a sprinkler installation.

If a pump is a necessary part of the alternate water supply, the power unit driving it should be independent of outside supplies. Public generating and distributing stations will be particular targets for enemy attack, so that electricity supplies are liable to break down. An automatic fire pump, driven by diesel engine, provides the ideal unit for emergency pumping duty.

# With the W.A.J.S.

S usual, at the beginning of the month, Nemesis, in the shape of the Sub-Editor, approaches me with a pleading air and a request for some material for our page in the Jet. W.A.F.S., where are all those contributions which were to come flowing in every month? So far only one W.A.F. has risen to the occasion, with an excellent poem signed by what is, I believe, our unofficial though appropriate nickname, "Phoenix." Surely, amongst all the W.A.F.S., there is some literary genius who is at present hiding her light under a bushel.

The Editor of the London W.A.F.S. Magazine has also asked me for contributions, but at the moment I feel that charity begins at home. Our Magazine is an excellent production and I think we should do all in our power to support it. I hope all of you will become regular subscribers.

It is now eight months since we were called up, and most of you are very old stagers. We have, however, welcomed some newcomers to our ranks during the last month or two, and have taken over one or two new jobs, one W.A.F. being attached to the Wages Section. She says she is rapidly going grey! So far I've seen no signs of it and the pay seems to be much as usual.

The food organization, I am glad to say, seems to be working reasonably smoothly. Apart from the vexed question of sausages—from which there seems no escape—we have had remarkably few complaints lately. After the appearance of this article I expect the heavens will fall on our defenceless shoulders. The A.F.S. seems to have produced some extremely good cooks at the various stations, and I have seen the most appetising apple tarts and other dishes emerging from some of the ovens. Needless to say, the cooks' wives are not aware that their husbands can even boil an egg!



You have all, both Part time and Whole time, settled down to a more or less fixed rota of duties—some varied and some not so varied—but I think you are all interested in the work. If you sometimes feel a little bored, or wonder what use all this is, just remember that we never know when a raid might come and we must be prepared and ready to do our part.

# · Sport & Social

A Service for members of Bristol A.R.P. Services was held on May 5th in Bristol Cathedral. The Auxiliary Fire Service was well represented by detachments from the four Divisions, including members of the Women's Auxiliary Fire Service, and filled practically the whole of the Cathedral

Following the Service, which was conducted by the Dean of Bristol, the various Civil Defence units were inspected by Major General G. M. Lindsay, Deputy Commissioner, who was conducted along the ranks of the A.F.S. by Chief Inspector Kirkup.

CENTRAL.—Headquarters visited Bedminster D.H.Q. on May 22nd. Skittles, Darts, Table Tennis and Snooker were played—but Central are ashamed to say they only won the Darts match.

Henleys No. 5 Bath Buildings were the guests of North Bristol, when they played that Station in Table Tennis last month. The result was a win for North Bristol.

**REDLAND.** — "B" Platoon, D.H.Q., opened the Cricket season in grand style with a match against the Rest of the Division, played on their ground at Wills' Hall.

The Platoon ran out winners by 4 runs. For the Rest S. G. Wills was in typical form with the ball (6 for 16), but Horne (23) was their only scorer of note.

"B" Platoon owed much to their smart fielding, W. A. Ind making two brilliant catches. P.C. Sanders had an excellent bowling spell, taking four wickets with five balls.

On May 31st the same Platoon played the "Part timers," who were captained by A/F Beaumont. Result was in favour of the Whole-time men, who won by an inning and 55 runs

who won by an innings and 55 runs.

Table Tennis. — "A" Platoon,
D.H.Q., played White Tree at home,
and managed to pull off the match by
a narrow margin after very exciting
games. The points in favour of the
home team were 19, although White

Tree won 13 games to Redland's 12. Southmead A.F.S. No. 29 are anxious to play any other Auxiliary Fire Station at Skittles or Darts. Enquiries should be made to A/F Hall (1321).

BEDMINSTER.—D.H.Q. started off in grand style with their Cricket matches by beating Greyhound No. 11 Station by an innings and 8 runs on May 8th, 1940.

Hospital A.F.S. No. 3 were beaten by an innings and 24 runs on the 13th, and the Bedminster "Part timers" were defeated by an innings and 15 runs.

But Headquarters came a cropper on May 20th, when they lost to South Central Station No. 12 by an innings and 21 runs.

An enjoyable evening was held with Central at the Provident Hall, Redcliffe, on May 22nd. Result is given under Central's notes.

Bristol Motor Co. No. 9 played the Casualty Services at Table Tennis and Snooker. B/M. Co. won at Table Tennis (13–12), but the Casualty Services came out on top in Snooker by 3 games to 1.

In their matches with South Central No. 12, B/M. Co. lost at Table Tennis by 16 games to 9, but were too good for the A.R.P. Ladies, whom they defeated by 20 games to 5.

ST. GEORGE.— On May 3rd Glebe Road "B" Platoon played a return match against Kingswood A.F.S. Both Darts and Table Tennis were won by Kingswood, by a narrow margin in each case. Our thanks to Kingswood for a very pleasant evening.

Outing.—On Saturday, May 11th, about twenty members of "B" Platoon had an outing to Cheddar and Weston. Tea was had at Cheddar and the party then went on to Weston. A donkey race provided much amusement. Everyone voted the outing a big success.
"A" Platoon are having an outing

"A" Platoon are having an outing to Longleat on Saturday, June 22nd,

#### PRIMING SYSTEMS

#### By Transport Officer Powell

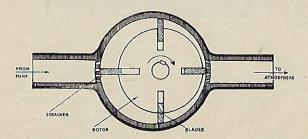
FOUR priming systems are employed in the pumps used by Bristol Auxiliary Fire Service, namely "Exhaust," "Rotor," "Reciprocating Pump," and in the Pyrene Pulsometer (of which there is only one in Bristol A.F.S.) priming is effected by pouring about 2 gallons of water into a sealing chamber, so that when the pump is started water is already in the pump chamber. This particular pump has a four-cylinder Ford engine and delivers about 500 gallons per minute.

#### EXHAUST PRIMING

This system is employed in all Coventry Climax pumps, except the "F.J." type, and also the Beresford Storks. In this method of priming, exhaust gases from the engine are diverted from their usual path to the silencer and by-passed through an ejector or "venturi" tube (a diagram of this particular system of priming appears on page 34 of February's issue). In the ejector is a hole communicating via a copper pipe to the pump casing. The passage of exhaust gases through the venturi tube draws the air from the copper pipe, thus creating a vacuum in the suction hose and pump casing. A clapper valve diverts the exhaust gases from the engine and a poppet valve with a round copper chamber is located between the venturi tube and the main pump casing This copper chamber is a water seal and the valve is necessary to prevent air re-entering the pump casing when the pump is working and so destroying the vacuum. Both the clapper valve and poppet valve are operated by depressing the priming lever. High engine speed is necessary when priming, and when you have a pressure of about 50 lb. showing on the delivery gauge the pump is properly primed.

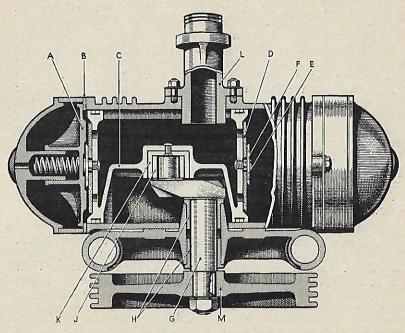
#### ROTOR PRIMING

This type of priming system is employed on the Coventry Climax "F.J." type (750 c.c. twin water-cooled J.A.P. engine). It consists of a round chamber with the bearings to take the rotor mounted out of centre (see diagram). At one side of the chamber is a series of holes



communicating with the main pump casing: opposite is another set of holes leading to a copper pipe outlet. The rotor consists of a round barrel of gunmetal with four deep grooves or slots machined along its

length. In these slots are strips or vanes of lignum vitae (a very hard wood) which are free to move outwards. This rotor is driven by a friction pulley from the main pump shaft, in conjunction with a jockey pulley, which is brought into operation when the priming lever is depressed. Centrifugal force throws the vanes of the rotary primer hard against the casing, and on account of the rotor being mounted out of centre these vanes sweep the air from one side of the casing to the other, automatically creating a vacuum and exhausting the air from the suction side of the pump. Fairly high engine speed is essential when using this priming device, but excessive speed is not advisable. It is important that the lubricator mounted just over the primer body is kept full of engine oil.



LEYLAND EXHAUSTER PUMP

A—Spring-loaded Exhaust Valves. G—Crankshaft.

B—Leather Seating Rings.

C—Double-acting Piston.

D—Leather Inlet Valves.

E-Inlet Valve Mounting.

F—Retainer on Valve Mounting.

H-Crankshaft Bushes.

J-Phosphor Bronze Block.

K-Renewable Guide (Steel).

L-Suction Inlet.

M—Friction Drive.

#### RECIPROCATING EXHAUSTER PUMP PRIMING

The priming pump used on both the Tangye and Leyland heavy pumps is a positive double-acting reciprocating unit of two cylinders which is driven through friction wheels off the main shaft when the priming lever is depressed. At the same time a valve is opened, allowing the pump to exhaust air from the casing of the main pump. There are holes in the top of the pistons covered with leather or rubber discs which act as automatic inlet valves: spring-loaded exhaust valves of bronze, seating against leather and sometimes rubber rings, are provided in the cylinder heads. Water will flow from this pump when priming is effected, and the priming lever should then be returned to its normal position. On no account must the engine be running fast when using the priming pump as excessive speed causes considerable damage. One reason for this is that the pump is not balanced for high speeds.

This type of priming is the most efficient, if not the cheapest to manufacture. A diagram of the pump appears on the opposite page.

#### KINGS WOOD A.F.S. NOTES

#### Social Events

On Friday, May 3rd, Glebe Road, St. George D.H.Q., paid a visit to Kingswood in an effort to avenge their defeat of last month which they suffered at their home Station. This time we were again successful and defeated them both at Darts and Table Tennis, the scores being 5 games to 3 and 6 games to 5 respectively.

H.C.P.

#### Whist Drive

On Friday, May 24th, we held a very successful Whist Drive at the Club Room. This was our first venture and proceeds were in aid of Club Funds. Most of the personnel were present, and in addition we received the support of several of the Councillors.

The Committee of the Social Club would like to express their gratitude to A/F A. White for the great assistance he has given in the way of tickets, tables, etc.

The Directorate of "The Jet" regret if any inconvenience has been caused to Sergeants Wilkins and Smith by the doggerel entitled "Oh Sergeant 1" published in last month's issue.

### WHAT IS THE WORK OF A FIRE ASSESSOR?

Mr. E. A. Spiller chats about his work and tells how fire raisers were detected by the marks of a motor tyre

#### By Geoffrey Bennett

H A D often wondered what exactly was the work of a Fire Assessor, and was recently given the chance to satisfy my curiosity when I met Mr. E. A. Spiller, the prominent West Country Assessor to the Insurance Companies. Mr. Spiller is well known in Bristol Fire Brigade circles, and served the Brigade for a number of years whilst a Special Constable. In a few words he told me what happens after a big fire.

"The insurance company under whose policy the building and contents are covered immediately gets in touch with us. Our concern is to determine the value of property destroyed, and the report which we submit to the insurance company represents the total extent of the fire damage and the amount which must be paid to the policyholder."

He told me that when there is a fire he tries to be on the spot as soon as possible. "Directly the Brigade have finished, where possible we carry out salvage operations. This may account for a considerable reduction in the costs of a particular claim. Our work even includes shoring up walls, etc., and generally making a building safe for salvage parties. As a point of interest London and Liverpool still have a Salvage Corps whose work is quite distinct from the Fire Brigades."

Where large sums of money are at stake, particularly when a factory, warehouse or mansion goes up in smoke, the fire assessor's work is especially important to the insurance offices. Claims are not paid indiscriminately, nor is the honesty of clients taken for granted! I asked Mr. Spiller if he dealt with many cases of arson.

"Quite a number. You see, it is imperative that a fire assessor should be something of a detective. In one particular case, where a large warehouse containing valuable goods was gutted by fire, I happened to notice recent tyre marks at the rear of the premises during my investigations. At first I thought these were made by the fire engines, but enquiry proved that appliances had not operated from this point. My suspicions were aroused, and by tracing a lorry with the same tyres we were able to prove that most of the goods had been transferred to another warehouse just before the outbreak of fire—but a claim was put in stating that they had been destroyed in the 'accidental' fire!"

To the fire assessor, therefore, cause of fire is of vital importance. No effort is spared to determine the reason for a particular outbreak, not only in order to prove conclusively that it was of an accidental nature, but from the point of view of fire prevention to try and avoid the risk of a similar fire occurring again. Mr. Spiller told me that he has investigated hundreds of widely different causes of fire. Many of these are very unusual.

He showed me pieces of lead gas piping which had been gnawed by mice, resulting in a leakage of gas which led to explosion and fire. I

also saw the effect of an electric wire shorting across a gas pipe which was the direct cause of another disastrous fire, vividly demonstrating the need for keeping these two installations well apart. Even more extraordinary was the case of a jet of gas from a fractured pipe which in turn melted the water pipe just above it. The result was an accidental "sprinkler" which successfully extinguished the fire!

Another fire which Mr. Spiller dealt with happened in a factory constructed on model fire prevention lines—fireproof walls and doors, specially insulated electric wiring, etc. An outbreak would seem practically impossible, yet in this case the cause was a lighted spark drawn into the building from outside by an electric ventilator fan. I was told that even in flour mills, where most stringent precautions are taken to prevent sparks occurring in the machinery, pieces of flint enter the bearings of grinding machines and sometimes cause serious outbreaks of fire through dust explosions.

Mr. Spiller also showed me a painter's blow-lamp which exploded, blowing out the side of the lamp and causing a secondary explosion which blew a shop front right across a roadway. Apparently the lamp had been turned down while workmen had left for lunch, and had exploded in spite of the fact that it was fitted with a safety valve. With this explosion petrol escaped and atomised, causing a violent secondary explosion with the disastrous consequences mentioned above. Fortunately no one was in the shop at the time.

I spotted another curio which appeared to be a conglomerate of motor cycle parts. This turned out to be a souvenir of the fire at the Douglas Motor Cycle Factory, Kingswood, which occured in 1927.

Mr. Spiller, who is a walking encyclopedia of fires which have occurred in Bristol and district, has written a book which was published a few years ago entitled "Fire Brigades, their Equipment, Constitution, etc., and Scale of Charges." The area covered by this book includes the whole of the West of England, and full information as to a fire brigade's equipment, etc., in this region is given, even to details of water supply and alarm systems. The author states in his foreword that the book was produced primarily for the benefit of insurance companies, to whom information relating to the available fire fighting appliances in a certain district is of vital importance when considering insurance proposals. Obviously, the premium payable on a building and contents which is well protected against the risk of fire (either by internal prevention measures, such as automatic sprinklers, or an efficient local fire brigade) will be less than for premises which there is only a remote chance of saving from destruction if fire broke out.

During his work as a fire assessor, which takes him all over the country, Mr. Spiller has gathered together an interesting collection of historical fire relics. The walls of his office, which might be described as a miniature museum, are covered with fire marks of all descriptions and from all parts of the country. These marks were issued by the early insurance offices, whose brigades would attend fires only at

buildings which were covered by their policies and which bore their particular fire mark. Mr. Spiller is especially proud of one which came from Hereford. It is an ancient lead mark issued by the Crown Fire Office and a particularly fine specimen. A number of these marks were presented to him by the late John Gotts, who was at one time Superintendent of Bristol Fire Brigade.

In striking contrast to an up-to-date Claim Form for fire damage, Mr. Spiller showed me a claim which was sent to the Sun Fire Office on April 10th, 1788, by one "Richard Morley, Pastry Cook, now or late of Fleet Street in the Parish of St. Dunstan." The claim is handwritten in copperplate, and states that "Deponents own Goods and Chattels were in his premises situated as aforesaid when said fire happened, and were burned, lost or damaged, by the said fire."

Total loss amounted to the sum of £343/10/6. Not only was the claim *sworn at Guildhall*, *London*, but signatures of the Minister, Churchwardens and Overseers of the Parish—twenty-one in all—appear beneath the following paragraph:

"And we do know, or verily believe that the said Richard Morley is an Honest Man, and that by misfortune (without fraud or Evil practice) he sustained a loss by said fire to the amount of the Sum mentioned in the within Affidavit."

The claim cites such items as spitt racks, glass lanthorns, pottage pots, tuckers, aprons and ruffles, bonnet and cloak trimmed with love ribbon, pair of stays (£3/3/0), shoe buckles, cordured breeches, superfine crimson waistcoat, hats, wigs stockings and muslin neckcloths, etc.

Another item of historical interest was an insurance policy dated 1773, also issued by the Sun Office. The policy, which was handwritten and in an excellent state of preservation, is headed with a woodcut showing an ancient manual engine, with a salvage man on one side and a fireman wearing a quaint leather helmet on the other. The latter is grasping an axe shaped like a Red Indian tomahawk, and Mr. Spiller has two of these early fireman's axes hanging on the wall of his office.

Finally, I was shown branches and lamps used on the old steam fire engine from the Badminton Estate (now in Bristol Museum), and also two leather buckets used by the old Imperial Fire Office whose station was at one time in Nelson Street.

# Letters to the Editor

(All Correspondence in connection with this Magazine should be addressed to The Editor, A.F.S. Headquarters, Rupert Street, Bristol, 1.)

5625089 Private Bastone, No. 7 Platoon, "A" Company, Devon I.T.C. Exeter.

April 29th, 1940.

SIR,—" I beg to acknowledge with many thanks your exceedingly useful parcel of the 15th inst., the contents of which I shall find most welcome now and in the future.

May I wish the A.F.S. Wool Fund the best of luck in this a most generous

venture.

Thanking you again,
Yours faithfully,
H. BASTONE."

No. 5677600, No. 3 E.C.O., 6th Battalion, Somerset L.I., Weston-super-Mare. April 20th, 1940.

SIR,—"Please accept my very best thanks for the splendid parcel which I received quite safely. I am sure it is a consolation to know there are people who are quite prepared to give their services for us, and I ask you to convey my thanks to them, also my best wishes for their future classes.

Yours very gratefully, F. BEACHGOOD."

909417 A. C. Clegg, H.R., Hut F. 14, S.H.Q., R.A.F., Cosford, Staffs

April 21st, 1940.

SIR,—It was an unexpected pleasure to be remembered in such a practical way by the Bristol A.F.S. It is a fine gesture on your part and, regarding the quality of the contents, a splendid effort and one that is warmly appreciated.

Many thanks, A.F.S. !

H. R. CLEGG, "

5188920 F. E. Peacock, No. 1 Platoon, Glos. Regiment,

Horfield Barracks, Bristol. SIR,—" Just a line to thank Mrs. Kirkup and the persons concerned for sending me the knitted comforts, which I am sure I shall find extremely useful. It's very nice to know that if necessary I can write to you for replacements.

Yours truly, F. E. PEACOCK."

7374505 Private W. D. Carter, "E" Company, R.A.M.C., Boyd Barracks, Aldershot.

May 8th, 1940.

SIR,—" I duly received the parcel of garments to-day.

I should be grateful if you would kindly thank those members of the knitting parties very much indeed for the time which they have given to this work.

> Yours faithfully, W. D. CARTER."

(Mrs. J. Y. Kirkup would be pleased to receive the names of any ladies who would be willing to help in this work of providing knitted garments for Auxiliary Firemen who are serving with H.M. Forces.—EDITOR.)

"Stand-By,"
Official Journal of the Manchester
Auxiliary Fire Service,

May 16th, 1940.

SIR, — "May I offer you our sincere thanks for the loan of your blocks from The Jet.

As you will see by our first issue, we used three of these. I might add that they were very much appreciated by our fellows.

Yours sincerely,

DAN KILLIP,

Art Editor."

The Weaker Sex!

An Auxiliary Fireman complained that his boots were always wearing through. He said they were so thin that when he stood on a threepenny bit he could tell whether it was heads or tails.

"Is my dog clever! When I say, 'Are you coming or aren't you?' he either comes or he doesn't."

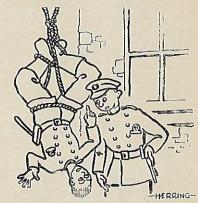
Father: "I had a note from your teacher to-day." "O.K., dad. I won't tell mother."

# and Jet 9 don't know

A small boy had been attending school and returned home very downcast. His father asked him what was the matter.

"They ask too many questions," said the boy. "First they asked me where you were born, and I told them. Then they asked where Mum was born, and I told them. But when they asked where I was born, I wasn't having any. If I'd said I was born in hospital with a crowd of women they would think I was a cissy, so I told them it was in Wembley Stadium."

Some quarrel with their wives; others have learned to say "Yes, dear."



I told them this was the way to do a Chair Knot.

Women parachutists are being dropped as spies by the Germans. Eavesdroppers, obviously.

An order issued by a certain Army Council in Britain reads: "Members of the Women's Auxiliary Territorial Service to show their pink forms whenever called upon to do so."

Parachutist: "Just to think I took all this trouble to carry the bike down with me and forgot to bring any valve rubber."



High enough, Boys !



Before I joined I used to be always talking to myself, you know.

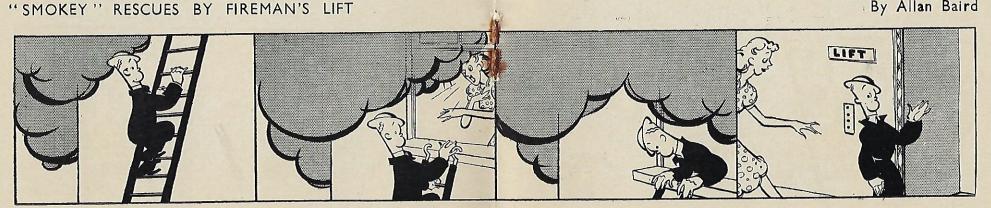
Warder: "Is there anything you want to say before I turn on the juice of the electric chair?"

Prisoner: "Yeah! Loose the laces of my left shoe, my corns are aching."

Doctor: "Well, my man, what's the matter with you?"

Auxiliary: "It's like this, sir. I eats well, I drinks well, and sleeps well, but when I sees a job of work I goes all of a shiver."

By Allan Baird



# PAPER AND RETIRE IMMEDIATELY

By Christopher Crow

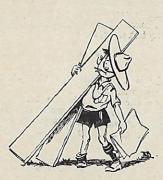
(" Evening World" West Country Humorist)

THE worst of being an Auxiliary Fireman is that there's always the fear that the hereafter will be just a continuation of the job you're doing now. That's why I decided to turn down the tempting offers made to me—car and chauffeur, non-rusting axe of the George Washington variety, tin hat and a written contract entitling me to refuse attendance at all fires except those in breweries—and am still in my old job of making stratosphere balloons.

Mind you—and I'm speaking to you, Mrs. Leatherbottle, if you'll kindly put down that knitting for a moment and pay attention—I should be an asset to any fire brigade.

Because, although my experience is comparatively negligible, as the bishop said to the actress, I'll guarantee that nothing will burn if I have anything to do with it.

This total inability to extract flames from anything less than a two-gallon tin of petrol dates back to the days when I—a handsome stripling of twelve—was left with two matches, a sheet of newspaper and



some planks, and ordered to forthwith light a fire, upon the successful accomplishment of which task would depend whether I should be awarded the Boy Scout Second Class badge, or be stripped of my buttons and drummed out of the movement.

It was only after having lit a cigarette with one of the matches and dropped the second in a billy-can full of water that I realized that Tenderfoot Crow had to be up and doing if he was to avoid the usual Scout punishment for inefficiency—a cup of cold ice-cream poured down

the back of the neck and a ban on kissing Girl Guides for two weeks.

I had visions of the kind, bare-knee'd Scoutmaster who had so encouragingly patted me on the back before he left me to my task, returning to clunk me under the left ear.

Time, matches and the Scoutmaster's temper being short, I hastily heaped together a small pile of chips, placed my scout pole upright in the centre of them and, remembering my woodcraft, twirled the pole rapidly backwards and forwards until the friction caused sparks.

Then, with the aid of a blacksmith's bellows, borrowed from a kindly blacksmith who was passing on his way to find a chestnut tree, I blew the sparks into flames,

There was soon a fine, healthy blaze going among the chips which, when they were nicely browned, I presented to the Scoutmaster, who fortunately had a bottle of vinegar and some salt with him, in the upturned crown of my uniform hat.

The only unfortunate occurrence was that while making this presentation with the ceremonial salute—the little finger and thumb of the right hand tied in a reef behind the other three digits—the flames from my fire spread and burned down a copse, and a game ranger's hut, besides destroying all pasturage over a radius of two miles.

That success turned my head, I am ashamed to say, and I went in for arson on a big scale. But, try as I would, not one other fire could I light.

Once, charged with the task of setting light to the business premises of a gentleman who explained that apart from the heavy insurance policies just taken out, he had no financial interests involved, I placed two petrol cans in the stores, ran a long fuse to the front door, and lit it through the letterbox.

It wasn't until two hours later when I was puzzling the thing out, that I remembered I had forgotten to put petrol in the tins.

It's the same with fireworks . . .

Last Pancake Tuesday, or whenever it is they mourn Guy Fawkes—after all, the poor fellow's only intention was to raise the status of politicians—I bought a roman candle, placed it in the centre of my front lawn, lit the blue touch paper and, obeying the instructions implicitly, retired immediately.

But I still fail to see the sense of going to all that expense and trouble and then going to bed.

Anyone would think the manufacturers didn't want you to see the blue pencil thing go off!

#### EXAMINATION HOWLERS

The capacity of a metal dam is half a million gallons.

A collecting breeching is a thing where you've got two lengths of hose and only want one.

A preventer is used to avoid the spreading of disease and also to stop boats bumping against a quay wall.

F.T. = Feet Head or Head Feet.

A compound pressure gauge tells you what you want to know about the suction without giving away anything about the pressure.

The Weaker Sex!

An Auxiliary Fireman complained that his boots were always wearing through. He said they were so thin that when he stood on a threepenny bit he could tell whether it was heads or tails.

"Is my dog clever! When I say, 'Are you coming or aren't you?' he either comes or he doesn't."

Father: "I had a note from your teacher to-day."
"O.K., dad. I won't tell mother."

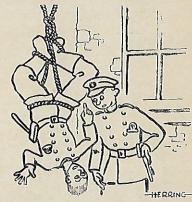
"SMOKEY" RESCUES BY FIREMAN'S LIFT

and Jet 9 don't know

A small boy had been attending school and returned home very downcast. His father asked him what was the matter.

"They ask too many questions," said the boy. "First they asked me where you were born, and I told them. Then they asked where Mum was born, and I told them. But when they asked where I was born, I wasn't having any. If I'd said I was born in hospital with a crowd of women they would think I was a cissy, so I told them it was in Wembley Stadium."

Some quarrel with their wives; others have learned to say "Yes, dear."



I told them this was the way to do a Chair Knot.

Women parachutists are being dropped as spies by the Germans.

Eavesdroppers, obviously.

An order issued by a certain Army Council in Britain reads: "Members of the Women's Auxiliary Territorial Service to show their pink forms whenever called upon to do so."

Parachutist: "Just to think I took all this trouble to carry the bike down with me and forgot to bring any valve rubber."



High enough, Boys !



Before I joined I used to be always talking to myself, you know.

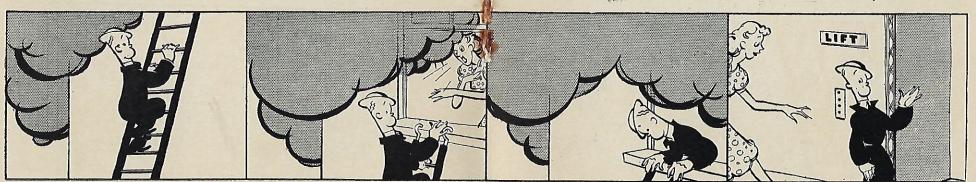
Warder: "Is there anything you want to say before I turn on the juice of the electric chair?"

Prisoner: "Yeah! Loose the laces of my left shoe, my corns are aching."

Doctor: "Well, my man, what's the matter with you?"

Auxiliary: "It's like this, sir. I eats well, I drinks well, and sleeps well, but when I sees a job of work I goes all of a shiver."

By Allan Baird



# LIGHT THE BLUE PENCIL TOUCH PAPER AND RETIRE IMMEDIATELY

By Christopher Crow

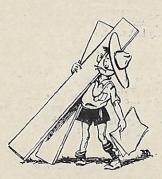
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#### THE STIRRUP HANDPUMP

#### HOW TO DEAL WITH INCENDIARY BOMBS

The E following article has been written in response to several requests. It is hoped that it will enable readers to gain a thorough knowledge of the Stirrup Handpump, a fire fighting appliance designed primarily for dealing with incendiary bombs and resultant fires.

Before describing the pump and its uses, it is necessary to study the construction of the bomb itself. The 1 Kilo Magnesium (Electron) Bomb (which is most likely to be used on account of its effectiveness and the large quantity which can be carried by one plane) consists of a thick-walled tube 9 in. long and 2 in. in diameter, made of magnesium alloy. At one end is a 5-inch sheet metal tail fin which steadies the bomb in flight, but apart from this the whole of the tube is incendiary material. Within the tube is a priming composition of the mite—aluminium iron oxide—which is ignited by a needle driven into a small percussion cap. This type of incendiary bomb does not explode.

Immediately on impact the priming composition ignites and burns for 40 to 50 seconds at a temperature of about 2,500 deg. C. This great heat serves to melt and ignite the magnesium tube, which burns for 10 to 15 minutes at 1,300 deg. C., and may even remain active for 20 minutes. Whereas the thermite composition contains its own oxygen, and so cannot be extinguished by smothering, magnesium must obtain oxygen from the air and surrounding materials in order to burn.

The bomb is extremely fierce in action. During the first minute jets of flame are emitted and pieces of molten magnesium may be thrown as far as 50 feet. Each of these pieces is capable of starting a separate fire. An incendiary bomb can pierce any ordinary roof (including tiles, slates, corrugated iron, etc.), and it will therefore be readily understood that unless the bomb and resultant fire are tackled at the earliest possible moment, a large fire may result which would cause considerable damage and perhaps loss of life. The Home Office therefore recommends that appliances should be available for dealing with the large number of fires which would doubtless be the result of incendiary attack from the air. The Auxiliary Fire Service has been formed to combat this danger, but there is no doubt that in a heavy raid householders would have to find their own means of dealing with incendiary bombs. Arrangements are being made by the Home Office to supply Stirrup Pumps to trained fire parties in certain districts composed of three responsible persons not connected with any other A.R.P. organization. Full particulars can be obtained on application to any Auxiliary Fire Station.

WATER CONTROL AND EXTINCTION

It has been found that a *jet* of water directed upon a burning incendiary bomb causes violent explosions of the magnesium, pieces of which scatter in all directions. Water applied in the form of a *spray* has the effect of accelerating the burning of the bomb so that the

magnesium is consumed in from 1 to 2 minutes instead of from 10 to 15. At the same time this spray of water has the effect of cooling surrounding materials and thus preventing the fire from spreading.

On entering a furnished room where a bomb has been burning, it will be found that a fierce fire has resulted — even within the first minute or so. It may be difficult, if not impossible, to approach the bomb itself, and no hard and fast rules can be laid down as to whether the bomb or resultant fire should be tackled first. This should be left to the discretion of the pump operator, but it is obvious that it is important to deal with the bomb as soon as possible and try to prevent it burning through a floor. It is generally necessary to subdue the fire first and control the bomb afterwards. Approach should always be carried out on the hands and knees.

#### THE PUMP DESCRIBED

The Stirrup Handpump, made to Home Office specifications, is the ideal appliance for dealing with incendiary bombs. It is provided with a 30-foot length of hose, thus allowing the pump to be operated well away from heat and smoke. This length of hose also enables a person to direct water onto a burning incendiary bomb which may have lodged in part of a building which is not easily accessible, such as the corner of a roof void. There is a dual-purpose \( \frac{1}{8} \)-in. nozzle (operated by a finger slide) which enables either a spray or jet of water to be delivered, the latter at 1\( \frac{3}{4} \) gallons per minute. The spray is efficient at 15 feet and the jet gives a throw of 30 feet.

This type of pump receives its name from the metal stirrup which is used by the operator to keep the pump steady while it is in action. Water supply necessary for controlling an incendiary bomb and extinguishing the resultant fire averages 5 to 6 gallons. It should be pointed out that too much reliance must not be placed on the domestic water supply, and a tank, bath or other means of replenishing the bucket or vessel from which the pump is working, should always be available. After an air raid it is highly probable that fire brigade appliances would be using all available supplies from the mains, and pressure would be greatly reduced. For this reason a garden hose fitted with appropriate nozzle and attached to a tap would be of little use. Also, mains may be fractured by high explosive bombs and rendered useless.

#### How IT Works

The Stirrup Handpump is constructed so that wear and friction in the various parts is reduced to a minimum. It works on the bucket and plunger principle, and expels water on each stroke of the plunger.

The pump has two main components:

(1) The barrel, which is approximately  $\frac{2}{8}$  in. diameter and  $14\frac{1}{2}$  in. long, consists of a brass tube around which is a solid rubber protective casing or tube  $\frac{1}{4}$  in. in thickness. Into the base of the barrel is screwed a fitment comprising a filter and non-return ball valve. There is an outlet at the top of the pump barrel around which

#### The Stirrup Handpump

the delivery hose is tied with wire. Also at the top of the barrel is a water-tight gland (packed with a suitable composition) through which slides the plunger rod.

(2) The plunger, attached to a hollow rod connected to the handle. This plunger or piston is fitted with a non-return ball valve, and just above are three outlet holes cut in the hollow rod. In this type of pump there is no rubber or leather washer attached to the piston (as in a garden syringe or similar pump) to form an air-tight

contact with the barrel. Instead there are three rings or grooves machined around the plunger which, in conjunction with the water, allow it to move freely within the barrel at the same time forming a water-tight joint.

The action of the pump will be seen from the accompanying diagrams.

A.—shows a cross-section of the pump during the first upstroke of the plunger. (Theoretically this is correct, but in actual practice it will be found that a stroke is sometimes necessary to "water seal" the plunger before a working vacuum can be created). A vacuum is created in the pump barrel, and atmospheric pressure forces water through the filter and ball valve and thence into the barrel.

B.—shows the pump during the downward stroke of the plunger. It will be seen that the inlet valve is now closed by the weight of water in the barrel, but the pressure exerted upon the water opens the ball valve in the plunger and allows water to pass through. At the end of the first downward stroke water will have partially filled the hollow rod and also the space between this rod and the barrel (through the three outlet holes). Therefore it is not until the second upstroke that water is actually lifted up and expelled through the delivery outlet. (Note.—A number of strokes are necessary before water runs through the hose and issues from the nozzle.)

After the first downstroke roughly half the capacity of the barrel is expelled upon each upward and downward stroke of the pump, thus proving conclusively that it is double-acting. The hollow rod remains primed with water during the time that the pump is in operation; in fact, it acts like a solid rod after it has once been primed, the only exit for water entering the rod through the plunger valve being the three outlet holes. There may, however, be a small air chamber or "cushion" at the top of the rod.

#### EXTERNAL DRENCHERS

By R. S. Littlewood

THIS system of fire protection is installed to protect all combustible portions of outside walls and roofs of buildings from external fire hazards.

In situations where buildings are separated only by narow streets or yards, a fire gaining a hold in one building can rapidly spread to the neighbouring buildings through the windows, roof, or other combustible portions of the latter, and it is to reduce this risk that external drenchers are installed.

A system of "Open Drenchers," which is the one most widely adopted, differs from a sprinkler installation in that it is non-automatic and depends on human agency to turn on the water, the pipe system being kept permanently empty above the main stop valve.

The heads themselves are similar to sprinkler heads, but have no fusible element—the outlet being unsealed and the deflectors varying slightly in design according to situation (see illustration). Thus, when the stop valve is opened all the drenchers controlled by this valve come into operation at once, and form a water curtain over the roof and exposed face of the protected building.

Drencher heads are fixed at approximately 8-foot intervals on horizontal pipe lines fixed on the outside face of the roofs and walls, and these in turn are fed by rising mains from the main stop valve, which is fixed on the ground floor in an accessible position.

The position of the stop valve is indicated by a wall plate fixed on the outside of the building. In this respect it should be noted that there may be several stop valves, each controlling individual sections of the risk, and each valve is marked to indicate the position of the equipment it controls:

A drencher installation must be fed by a practically unlimited water supply of adequate pressure, and this is usually a connection from a town's main which is brought within the building to the underside of the stop valve. In addition, a connection is provided below the stop valve to enable the Fire Brigade to augment the water supply by a connection through ordinary delivery hose from their pump.

Automatic Drencher Installations are sometimes installed, particularly in the City of London, and these are in effect Automatic Sprinkler Installations erected on the outside face of the building on the general line indicated above.



#### "LIGHTER DUTY"

#### By Mervyn Millward

"Advocating laughter as a tonic for workers, Professor Kiek, of Parkin Theological College, Adelaide, suggests that a few good stories would have such a salutary effect upon workers as to increase their output through the sense of joy and well-being so produced."

(Christian Science Monitor)

If any worker deserves a tonic, it's the Auxiliary Fireman. Here, then, is a method whereby he can be provided with one easily and—to the relief of the Minister of Home Security—quite cheaply. Let us imagine, for a few moments, that the worthy professor's suggestion had been adopted for A.F.S. purposes.

Scene: The Watch Room, 6.55 a.m.

Station Officer: "Fall in!"

The day platoon, their faces wreathed in smiles (for Station Officer Smithers is a noted raconteur) line up, chuckling and nudging each other in eager anticipation. Having called the roll and detailed the parade, the S.O. picks up the latest General Order and commences to read:—

"Auxiliary Fire Patrols in the vicinity of Cotham——Ah! That reminds me! Did I tell you that one about——"

Parade: "No, Sir."

S.O.: "Right! Here it is then:

"There was an A/F up at Cotham,
Who, when he saw cats, always shot 'em.
When they said 'How unkind!'
He replied 'They don't mind!
They've still got eight lives if I pot 'em!'"

The parade rocked with laughter and further diversion is caused by A/F Bunker, whose excessive mirth has resulted in the partial swallowing of his top plate.

S.O.: "Well, boys, all jokes to one side, as the man said when he pushed his mother-in-law into the gutter."

This last sally proves too much for A/F Blenkinsop, who, having just recently married, is carried out in an advanced stage of laughing hysteria.

S.O.: "Now! Now boys! Let's get down to business again. Where was I? Eh? What's that? Call of fire at Lock, Stock and Barrell's in Little Street. Rightho! First crew—Oh! by the way—did you ever hear Sergeant Parker tell the story about the night when Joe Burton's place was burned down?

It was soon after he joined, way back in the dark ages. He was coming on duty about half-past four in the morning, when he saw flames shooting out of Joe's place. It was a tenement block, six

storeys high, and old Joe was standing at the third floor window, in his nightshirt, shouting for help. A tidy-sized crowd had gathered, but the Brigade hadn't arrived. As a matter of fact, they didn't arrive at all. The Inspector had a broody hen on a sitting of eggs in the old manual engine they used then and he wouldn't have her disturbed under any circumstances.

But that's by the way. Old Parkie shouted up to Joe and told him to jump, as they had a tarpaulin to catch him in. But old Joe was too windy. As the flames crept higher and higher, he went up, storey by storey, until he had reached the roof. He was still shouting and jumping about like a cat on hot bricks—they were a bit hot by then, too—and old Parkie kept on bawling out:—'Jump! Jump Joe! We've got a tarpaulin to catch you!' and, at last, he plucked up courage and jumped."

The S.O. pauses and there are eager cries from the audience :-

"Good old Parkie! What happened then, Sir? Did he jump? Did they catch him?"

S.O.: "Catch him? Good lor' no! This is where the joke comes in, boys. They didn't have a tarpaulin!"

This denoument proves too much for the parade. They collapse into each other's arms and weep tears of unrestrained joy. The more careful ones, remembering that stringent enconomy is the order of the day and goodness only knows when they will get a fresh issue of uniform, put on their mackintoshes before continuing to weep.

S.O.: "Well now, boys! Come along! Fall in again. Let's get down to business, as the policeman said when the licensee told him that a barrel of beer had burst in his cellar!"

He glances at the clock.

"Good heavens! It's twenty past seven. We'd better get off to that fire in Little Street, hadn't we? Left turn! Left wheel! Quick march!"

#### JUMPING CRACKER INCENDIARY BOMBS

Reports appearing in the press state that the Germans are using jumping incendiary bombs which function like a Chinese cracker, flying about in all directions and causing numerous outbreaks of fire. One wonders whether there is any truth in the report that the Home Office is issuing jumping stirrup pumps to jitterbugs in order to deal with this new menace.

#### FIRST AID TO THE INJURED

CONTINUED

### By Section Officer Elson INJURIES TO THE HEAD AND INSENSIBILITY

A L L injuries to the head with resultant fractures are very serious, owing to the proximity of the brain; concussion, compression, or laceration often follow.

Concussion is a stunning of the brain, causing sudden unconsciousness from which the patient can be roused. The pupils react to light—that is to say, contract and dilate when exposed to light, while both the breathing and pulse are slow and weak.

COMPRESSION is the pressure of blood, bone, or foreign object upon the brain, often caused by a fractured dome of the skull and signified by deep unconsciousness. The pupils are unequal in size, the pulse is slow and full, and the breathing heavy and slow as if snoring. The face is flushed; therefore when the body is recumbent the head must be slightly raised to allow the blood to flow away.

LACERATION is tearing of the brain, and bleeding often occurs from the nose, ears, and mouth.

Concussion or laceration generally occurs with a fractured base. With any fracture of the skull the patient is laid down flat, except that when compression is suspected the head alone is raised.

Treatment for shock is vitally important when any head injury is sustained. Shock is present at every accident to human beings in some degree or another, and the treatment is as follows:—

Lay the patient down, keep him warm, but if in excessive heat remove to shade or a cool place: give stimulants such as coffee or strong tea, sal volatile, or smelling salts. A word of warning in the administration of liquid stimulants—always test the ability of an unconscious person to swallow, since there is danger of the fluid entering the trachea or windpipe, thereby entering the lungs rather than the stomach. Avoid exciting the patient, either by careless word or deed.

In cases of suspected fracture of the skull there is little practical assistance that can be given. The main points are to get immediate medical attention, lay the patient down, arrest any haemorrhage, and treat for shock as already instructed.

With frontal fractures of the skull (often compound or complicated) caused by direct violence, as by the head striking a hard substance or vice versa, a wound of serious nature is often caused. The wound itself requires immediate treatment, as haemorrhage has to be arrested, and the wound has to be covered with a sterile dressing of gauze or lint, held in place by a triangular bandage.

Fractured base of the skull is often caused by indirect violence, and concussion or laceration often accompanies it. The treatment is as described for fractured frontals, but plugging of the ears should be discouraged when First Aiders are inexperienced.

Where it is known that a person has received a severe injury to the head and a fracture is suspected, and that the person is conscious, all efforts must be made to restrain him from unnecessary movements, and he must be made to lie down. This is more difficult than might at first seem probable and often presents great difficulty.

Concussion, which is the least dangerous of the injuries to the brain, can have serious results, although often treated lightly. How many footballers have not played in a game in which a man has been "concussed," to the extent of not knowing the score or even the winning side? Concussion to that degree is dangerous, and should be treated by keeping the patient calm, and certainly not by allowing him to continue the game. A danger with concussion, if not properly treated by rest, is the possibility of it recurring later in life.

Insensibility.—Having in view the condition of insensibility as it might be found by Auxiliary Firemen in war conditions, we can afford to ignore many of its causes; but as much can be learned from an unconscious person as to their condition, I will give some main causes, dwelling more on those which we might expect to find in our capacity

The main causes of insensibility are excessive alcohol, which despite its appeal can be very serious, apoplexy or stroke (mostly occurring in old persons), asphyxiation or choking from one of many causes (to which I hope later to devote an article), fits or epilepsy, injury such as concussion, compression, or laceration, starvation and approaching death.

With an unconscious person the first thing to do is to ascertain how unconscious the patient really is. The degrees vary between fainting that might last a few seconds and coma that proves fatal. The pupils alone can furnish us with this information. If after shading the eyes from light the shade is removed, the pupils which have expanded will be seen to contract if the unconsciousness is not very deep. Yet again, if the white of the eye is touched lightly with the corner of a sterile dressing, the eye will react to the touch if unconsciousness is light.

Should you find a number of unconscious persons awaiting you as a result of an air raid, you would have to decide upon the treatment. Some might be unconscious as a result of injury (e.g. fractures), others as a result of gas or haemorrhage, while some attempted suicide as

#### First Aid to the Injured

the result of fear. All might be in a dangerous condition, but would require different treatment.

The first thing to do with an insensible person is to try to find the cause of insensibility, and having found it, to endeavour to remove the cause from the patient or the patient from the cause. The position of the patient must be noted, the cause ascertained and, if that should be as a result of haemorrhage, asphyxiation or fractures of a serious nature, the cause must be treated immediately. There are many signs and symptoms that might not at first be apparent to an outsider, but can decide for a First Aider the cause of unconsciousness.

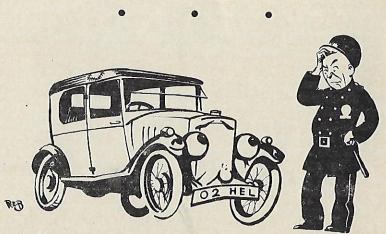
Adopt the following method of examination:

Bruises on the head would suggest concussion, compression or laceration of the brain. If the face is blue, asphyxiation or want of air is suggested, while should the face be drawn on one side the patient has probably suffered a stroke. Examining the ears—if a whitish fluid is emitted with blood, a fractured base of the skull has occurred. If the mouth is frothy and the tongue has been bitten the patient has had an epileptic fit, while stains around the mouth indicate poisoning.

The eyes can give the experienced many clues, but it will suffice to remind you about the dilation and contraction with a guide to discovering the depth of unconsciousness.

Any fracture that has occurred must be treated, and if breathing is shallow or has ceased, artificial respiration must be performed.

The pulse gives guidance—the normal rate being in the region of 60—80 times per minute, and a good rate 72 beats. If it is slow and full, compression of the brain and a stroke may be suspected. If quick and weak, shock and haemorrhage.



Auxiliary Fireman surveys his car after completing a course of training at Transport

#### JACK WARNER'S BROTHER

FIGHTS A RILL MILL FIRE

Unfortunately Jack was either out on his bike or taking his littel gell home when I called on him, so this interview must be regarded in the same way as the sugar in your tea—with imagination.



"Are you a fighter of fires Jack?"

"Moi brother Syd's a fireman, and his first fire was in a windmill. Unfortunately every time he approached the mill the vanes knocked the branch out of his hand."

"What do you think of the A.F.S.?" I asked.

"Well, I've had Waters around me from the time I was born, as they say, so oi loike the idea of being a fireman" said Jack.

"We've a Gert and Daise in the W.A.F.S., so I can sympathise with you," I said. "They cook for us."

"Rill meals?"

"Unless you call sausage and mash synthetic—we sometimes think they are."

"I once found a piece of lead and some string in one" said Jack. "That pig must have been swinging the lead."

When I mentioned the pumps, Private Warner said "Moi pump is on moi boike. It's just as good as a stirrup pump—in fact, you can get close to the fire without getting tangled in hose."

"Talking about hose, how's your littel gell?" I asked.

"She likes the uniform of the A.F.S. Besides, you don't get red stripes in the Queen's Own Herbaceous Borderers. Lieutenant Shadwell's been very cross with me lately; so has the Sergeant. I'm seriously thinking of handing in my stroipe, and becoming a putter-out of fires or digger-out of shelters."

"As one cyclist to another, how's the boike?" I asked.

"I'll let you into a secret about moi troike," said Jack. "I never carry a puncture outfit—just a stickoliquorice. Whenever I get a puncture I just stick a stickoliquorice in the 'ole, and there you are. Try it when you next get a leaky hose. I'm a plugger-up of pin'oles, that's what I am."

"Talking about bilgewater, what do you think of The Jet?"

"Oi loike it. I'm a bunger-up of rat 'oles, that's what I am, and it comes in useful. I've bunged up five holes already, and now I've found another 'ole and am waiting for the June issue."

"Talking about summer, how's Joan Winters?"

#### Jack Warner's Brother Fights a Rill Mill Fire

"What moi littel gell? Still selling photographs of Private Warner, backbone of the British Army. Now she gives a packet of cigarettes away with each one and they're selling like hot cakes, as they say."

"Talking about summer, those canvas blue pencils you firemen keep water in will be fine for swimming.

Between menu
I joined the A.F.S.
For a rill menu
Between menu
De da, de da, de da."

"P.S. My brother Syd likes hard centre chocolates. I've just been trying to buy him a box with the centres on the outside to avoid confusion as it were, but my littel gell says it's very difficult to get the chocolate inside the hard centre, as they say."

G.W.B.

#### FIRE PARTIES

THE first demonstration to be held in Bristol in connection with the Home Office scheme for training fire parties and equipping them with stirrup handpumps took place at Castle Belle Vue Instruction Centre, Redland, on Friday, May 31st. These parties are being formed because there is no doubt that in a severe air raid, during which incendiary bombs are dropped, the Fire Brigade would receive more fire calls than could be dealt with at one time. Parties trained to attack fires as soon as they occur could prevent small fires becoming large conflagrations, leaving the Brigade free to deal with other outbreaks where no first aid measures are available to prevent them spreading.

One hundred and fifty people, representing fifty parties or crews of three, listened to an hour's lecture on the bomb itself and method of dealing with it by means of the stirrup handpump (see page 164). Afterwards the effect of a bomb ignited in a heavily-furnished room and its subsequent control was demonstrated in a specially-constructed open shed. The furniture, which was well alight, comprised a couch, chairs, table, etc. After this demonstration one of the spectators volunteered to deal with the bomb, and successfully carried out the operation under supervision.

Divisional Officer Aldridge and Constable Sanders were in charge of the demonstration.

# FIRE PREVENTION AND CAUSES OF FIRE—CONCLUDED

THE Auxiliary Fire Service is primarily concerned with outbreaks of fire due to incendiary bomb attack from the air: instructions for dealing with such fires by the use of the stirrup handpump will be found on page 164. Apart from tackling incendiary bombs, this pump can be used as an effective first aid measure when quite fierce blazes are encountered. It is surprising what this little pump will do.

Fire prevention measures in connection with the incendiary bomb include the reduction of inflammable materials in the roof void, attics or upper rooms of buildings to a minimum. If possible, floors should be covered with a layer of dry sand, foamed slag or dry earth to a depth of two inches. Reserve water supplies in baths, tubs or buckets should be kept in every house for the use of fire parties using the stirrup handpump.

Prevention of fire includes retarding a fire's progress in its initial stages. Attack the fire with suitable equipment (e.g. extinguishers, buckets of water, sand or a garden hose). It should be pointed out that water cannot be thrown over a fire very effectively from a bucket. There is a great deal of wastage and water cannot be projected any distance. A better plan is to use a jug or basin, which can be employed to apply water accurately onto the fire with very little wastage. With several replenishing the bucket, it is surprising how effective this method of fire fighting can be.

When using buckets, remember to have water constantly running into a bath or cistern. Buckets can then be filled instantly without waiting for them to be filled from the tap. Bucket lines can be organized between the water supply and the fire—one line for passing full buckets and the other for returning emptied ones.

The garden hose is a good fire extinguishing appliance, similar to the first aid reel of the Brigade. A syringe can even be used in the case of small outbreaks, and folded wetted blankets are also effective.

Buckets of sand can be used to smother a petrol fire in a garage, and should always be kept at hand failing a suitable extinguisher.

Finally, in *all* cases of fire summon the Brigade immediately. An apparently slight fire may become a fierce conflagration within a few minutes. The public would be horrified if they knew what a colossal toll of humanity and material has been taken in the past, solely through procrastination in transmitting fire alarms. Messages can be quickly sent from public call boxes, private telephones and police pillars. Instructions should always be brief and to the point, stating address, building involved and type of fire.

Auxiliaries should always remember that it is their duty to prevent fires as well as extinguish them, and that they are engaged in "A constant struggle to prevent an invaluable servant from becoming a ruthless master."

#### A.F.S. KNITTING PARTIES

#### Facts and Figures

On May 24th a cheque for £5 was received from Mr. Melville Wills. This brings the amount spent on wool up to £30.

Since the commencement, on January 24th, with only seven members, 82½ lb. of wool has been purchased and 14½ lb. has been received from the "Evening World."

223 garments have been completed, 52 of which were despatched to Bristol's Own Fund.

27 parcels of knitted garments have been despatched to A.F.S. men who are now serving with H.M. Forces.

Knitting parties are going strongly at Central, Bedminster and St. Anne's, while others are shortly commencing at St. George and Eastville. Special mention must be made of the work done by Mrs. Abraham of Bedminster, who has completed 14 pullovers in four weeks, and of Mrs. Pittman, who has attended every Wednesday afternoon since January 24th.

Will all A.F.S. men who are called up for duty with H.M. Forces please get in touch with Mrs. Kirkup as soon as possible in order to save postage on parcels.



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