

WILLIAM SIGSWORTH, manager, Anglo-American Oil Company, Ltd.

GEORGE SAMUEL SEWELL, engineer, Shell Mex and B.P., Ltd.

JACK OWEN, fireman, Kingston-upon-Hull Fire Brigade.

CLIFFORD TURNER, leading fireman, Kingston-upon-Hull Auxiliary Fire Service.

WILLIAM FISHER, dock labourer, Southampton.

PATRICK KING, air-raid warden, Seaton Delaval, Northumberland.

FREDERICK ERNEST ROSE, maintenance engineer.

Our heartiest congratulations are offered to all the recipients, and we hope before long to see such recognition bestowed on the members of the Nursing Profession, who have deservedly won golden opinions by their splendid courage in helping the sick in the devastating attacks on our hospitals in the Battle of London, and throughout the country.

### HELP FOR THE HOMELESS.

The House of Commons, in a recent debate, was critical about the protection of the civilian population from air raids, and the provision for those made homeless.

Demands were made for vigorous attention, especially in London, to provide more and better shelters.

Mr. Ammon, who opened the debate, admitted that the immediate task was to strengthen existing shelters and make them more habitable, and he pointed out that the brick and cement structure had stood up well to attack. He complained that, through various causes, many persons stayed much too long in shelters.

Mr. Malcolm MacDonald, Minister of Health, admitted that much of the criticism was justified, but that an effort was being made to establish a central office in all boroughs where help could be given. Many persons came to the food and rest centres because of the close proximity of time bombs to their homes. An effort was being made to create a central pool of building labour in the London area.

We earnestly demand help for the homeless, and that the Lord Mayor's Fund shall be speedily and generously distributed.

### STORED BLOOD.

#### TRANSFUSION OF PRESERVED BLOOD.

By JOHN HATCHER.

Though the idea and, to a certain extent, the practice of transfusing stored or preserved blood is by no means new, in recent months its application has been greatly extended. In actual fact the technique was used on a small scale at casualty clearing stations in France during the latter stages of the last war. Experience gained in Spain during the recent civil war, coupled with the work carried out both in this country and other parts of the world, notably America and the U.S.S.R., have confirmed the value of this technique.

The use of stored blood has certain rather obvious advantages over the use of blood freshly drawn from a donor. No blood donor service, however well organised, can successfully compete with the convenience of a

stored blood scheme, and in the emergencies of war, speed and convenience are essential factors.

Also, the blood may be taken and administered to the patient under conditions which would render impracticable the collecting of blood from donors.

Analysis of transfusion records suggest that stored blood is in every way as effective as fresh blood.

#### Collecting Blood.

The blood is mostly collected at recognised central depots established throughout the country, and the donors are volunteers drawn from all walks of life. These blood-collecting depots are popularly known as "blood banks," and from the blood banks the bottled blood is distributed to hospitals in the area. To date, only blood from group "O" donors, that is, the "Universal Donor," has been used, though if the demand necessitated it there is a big reserve of other groups to call on. At the blood banks the blood is collected directly from the donors into special glass containers, something like ordinary pint milk bottles, except that they are provided with a screw-on metal top. The bottles are first partly filled with sterile citrate saline, and the blood is added in the proportion of two parts to one of citrate-saline.

#### Storage of Blood.

The blood is stored in a refrigerator, and care is taken to keep the blood at a temperature between 2 and 4 degrees Centigrade; on no account must the blood be allowed to freeze.

During transport from the blood banks to the hospitals in the sector, special precautions are taken to prevent the temperature rising unduly or the blood becoming badly shaken.

At present blood can only be stored for just over three weeks, and in order that stocks adequate to meet any emergency should always be on hand, a certain amount of wastage takes place. Actually no real waste occurs, as blood which is not used in this time has its plasma drawn off. Plasma is much more staple and can be stored for several months, and in some conditions is preferable to the transfusion of whole blood.

#### Administration of the Blood.

The special administration outfits provided under the emergency transfusion scheme differ slightly in detail in different areas, but in general the principle is the same. In hospitals they are issued to the wards ready sterilised and wrapped in sealed brown-paper parcels. These outfits consist of a length of rubber tubing to one end of which is attached the needle, a rubber bung with two glass tubes for insertion in the bottle, some form of filtering device, usually glass beads, and a metal clip for controlling the flow complete the outfit.

The blood is given by gravity; suitable wooden stands are usually available, and the bottom of the blood-storage bottle is fitted with a ring so that it may easily be hung on the stand in an inverted position. While it is often considered advisable to warm the blood to body temperature before administration, no ill effects appear to occur if this be omitted. When time permits, the bottled blood is cross-grouped with serum from the patient in the same manner as in ordinary blood transfusions.

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