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(Fire Brigades Division),
Cleland House,
Page Street,
London, S.W. 1.

Any communication on the
subject of this letter
should be addressed to:-
The Under Secretary of State,
and the following number quoted:-

P. B. Gen. 328/1.

18th September, 1940.

Sir,

Fire Brigade Circular No. 124/1940.

I am directed by the Minister of Home Security to say that Observation or Watching Posts have been established, and have proved useful, in several Districts for the purpose of detecting and locating fires or other incidents caused by enemy action or occurrences such as the illicit use of signal lights. Such posts may be required elsewhere, and the object of the accompanying Notes is to give guidance on some essential points on the equipment and organisation of such posts. Special attention is directed to the observations as to the necessity for co-ordination in the use of the posts in any area, so as to ensure that the best use is made of all the available posts and avoid the installation of any posts which would be redundant. In many Districts the Home Guard have already established observation posts which might be capable of use jointly for police and fire service purposes as well. When, therefore, the establishment of new posts is under consideration it will generally be advisable to

The Clerk of the London County Council.
The Town Clerk,
The Clerk to the Council.

communicate in the first instance with the Commander of the local Home Guard in order to ascertain to what extent use could be made of any posts already in operation.

Where watching posts are required, reasonable expenditure incurred in the organisation and equipment of the Posts, on the lines indicated in the accompanying Notes, will rank for Exchequer grant under the Air Raid Precautions Act, 1937. It is not contemplated that the manning of Watching Posts should call for any addition to the authorised whole-time establishments, and additional whole-time personnel will not be authorised, save possibly for special requirements on specific application.

An additional copy of this circular is _____ forwarded to Local Authorities for the information of the Chief Financial Officer.

I am, Sir,
Your obedient Servant,

A. L. Dixon

Issued to:-

All Fire Authorities in England and Wales.

Copies sent to:-

All Chief Officers of Fire Brigades and Chief Constables in England and Wales for information.

WATCHING POSTS.

Watching posts may be used effectively to supplement other means of observing and reporting occurrences, and their establishment should be considered wherever there is need for this form of organization and the geographical and other conditions will permit. Among the objects for which the posts may be of special use are:-

- (1) To assist in the lookout for the landing of parachutists and to locate the position where any landing has taken place.
- (2) To provide accurate information as to suspicious guide lights or other signals apparently given to enemy aircraft, and especially to locate the spots where such lights have been observed.
- (3) To aid the police in checking lighting infringements.
- (4) To assist in reporting outbreaks of fire, explosions of bombs or other occurrences.

2. Such posts may be either established permanently, or, if need arises, established for specific purposes, e.g. to assist in detecting and locating signal lights, where such occurrences have been reported.

3. The number of posts to be provided will depend upon the purposes in view, the area to be covered and the posts available. If the object is mainly to establish a look out for fires or other occurrences of that sort, a single post may suffice, at any rate in a small town, if it can be sited in a position commanding a clear view over the town, but if the object is to locate with any accuracy signal lights or other occurrences of that kind it will be necessary to work on cross bearings, and three posts, or more if a large area has to be covered, will be required. It is

desirable that neighbouring posts should be inter-visible.

4. In a town, if there is only one post, it should be as nearly as possible in the centre of the area to be covered and as near as possible to a police or fire station. In areas where there are several posts they should be distributed over the area to be covered, and one post should be made the key post and should be sited, if possible, in such a position that as many as possible of the other posts will be visible from it.

5. Periods for which posts should be continuously manned will need to be arranged according to the purpose in view and as the staff available will permit.

6. Whatever the local organisation, one authority must be made responsible for co-ordinating the selection of sites and arranging the system of communication. It is essential that information which is obtained from observation should be made available to all services interested in the information obtained, no matter which service mans and organises the post. Instructions to the personnel concerned should be framed accordingly.

7. In the attached note and appendices details of the equipment and organisation of watching posts are given.

Notes on the Organisation and Equipment of Watching Posts.

Watching posts may be sited and equipped either to provide information from observation from a single post, or to act in conjunction with other posts.

I. SINGLE POSTS.

(1) Posts which are working as isolated units require (a) a good field of vision, (b) some method of identifying the location of observed incidents, (c) some method of reporting to an executive authority.

(2) Posts should be set up on a hill, or on a church tower, a block of flats or office buildings. Some protection from the weather must be provided. In open country this might consist of a caravan or a sheltered dugout. In towns, on the roofs of buildings, a light wooden structure protected by a wall of sandbags may be necessary.

(3) Each post should be equipped with a map, on a scale of 6" to a mile for towns and 1" to a mile for country areas, which should be mounted on a map table, covered by a sheet of talc, and fitted with a simple sight rule (see Appendix A and Figure II). A pair of binoculars and a range finder, if available, would be of use. All observers should have steel helmets.

(4) A telephone is necessary in each post. The line should be either an external extension from a police or fire brigade switchboard, or an exchange line in an auto-exchange area. In a manual exchange area a private line would be preferable.

(5) In order that incidents may be accurately located the map should be orientated. This can most easily be done as follows:- Place the sight rule on the map with the pivot at the point on the map at which the watching post is situated. The sight rule should then be set on a known point. The map should be turned about the pivot until the known point on the map is cut by the left edge of the sight rule. The map should then be fixed in position. The orientation may be checked by turning the sight rule on to other known points and ensuring that those points on the map are cut by the sight rule. It will be of value to mark arrows on the edge of the map table pointing to prominent objects on the ground.

(6) When an incident is observed the sight rule should be set on it. The left edge of the sight rule will then cut the location of the incident on the map. If the range is estimated it will be possible to identify the position of the incident.

(7) Since the value of watching posts depends on the accuracy with which incidents can be located, every effort should be made by the personnel of the post to make themselves efficient at identifying points on the countryside on their maps. They should spend their period of duty making themselves familiar with the field of view which their post covers.

(8) A log should be kept giving time of occurrence, nature of incidents, bearing and approximate location in order that observations may be recorded.

II. INTER-RELATED POSTS.

(1) The location of incidents may be more accurately plotted if two or more posts work in co-operation. While direction can be determined from a single post, it is impossible to estimate distances accurately, especially at night, unless a cross bearing can be obtained from a second post. Inter-related posts should be at least 800 yards and not more than 3 miles apart.

(2) A post which is working in conjunction with another post requires apparatus for determining bearings, and means of communication with the second post.

(3) After the map has been set in accordance with the procedure outlined in paragraph (5) above, a circle should be inscribed on the map, or on the piece of talc placed over the map, of which the centre is the site of the watching post on the map, and the diameter is the length of the sight rule. Degrees should then be marked on the circumference. Every degree should be marked and every five degrees numbered. Grid North on the map is 0 degrees and the numbering is clockwise. (see Figure I).

(4) When an incident is observed the sight rule is set on the incident. The pointer at the front of the sight rule will then point to the bearing of the incident. Grid bearings should always be taken, and, if possible, to the nearest $\frac{1}{2}$ degree. The orientation of maps in the posts should be checked by taking bearings on a known object, reporting the bearings to the key post and ensuring that the bearing lines plotted at the key post intersect at the correct point on the map.

(5) One of the posts must act as the key post, and the bearings from the other posts must be reported to it. The key post should be so sited that the other posts are visible from it, and that good communications to police and fire stations are available.

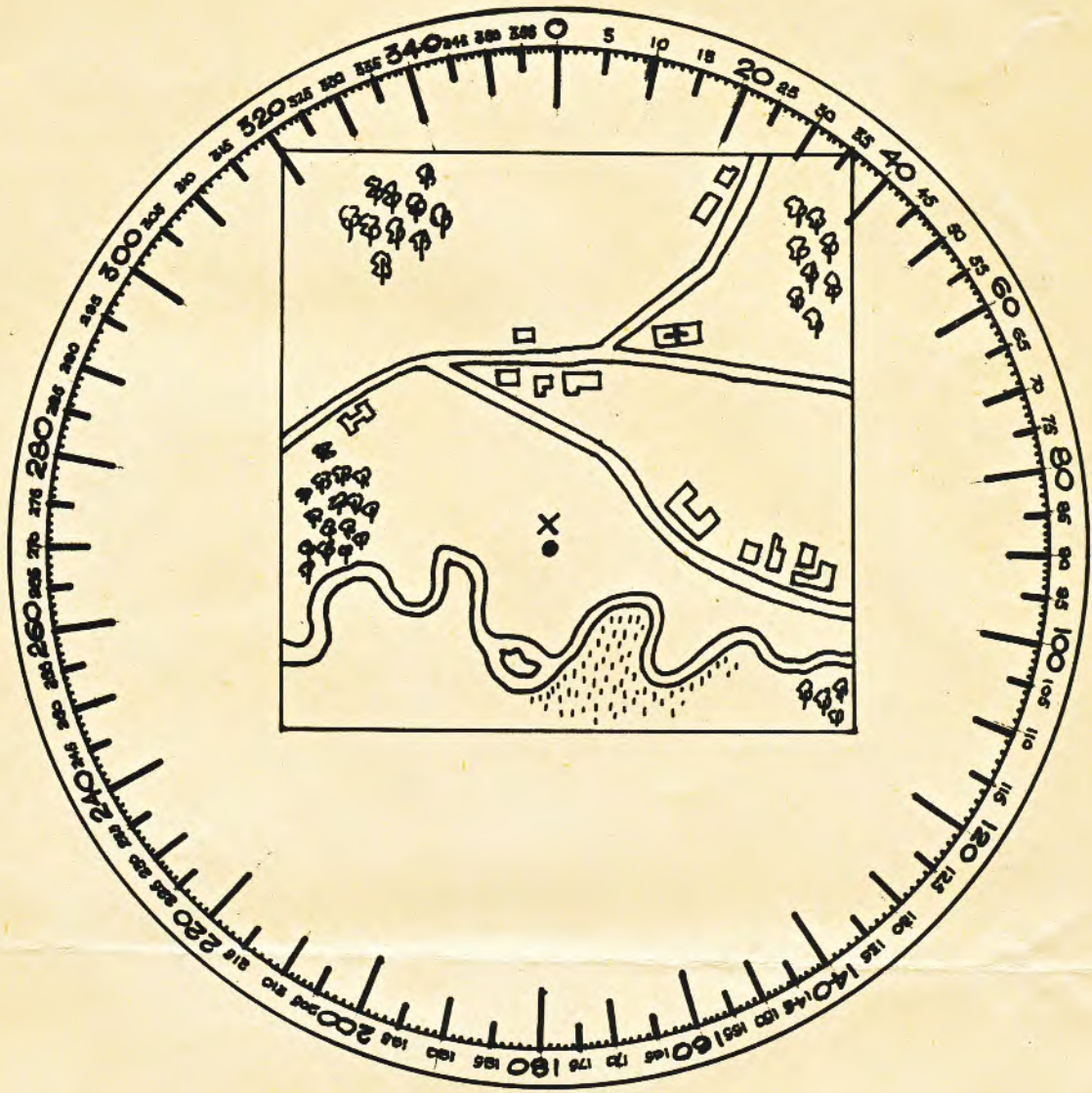
(6) In the key post a map should be set up with each post marked on it. (See figure III). With each post as the centre, a circle or segment of a circle should be drawn with the greatest possible radius consistent with the size of the map board, on the circumference of which Grid bearings should be marked to nearest half degree. A coloured pin, to which a strong thread or fine cord should be attached, should be fixed in the position of each post on the map. When a bearing is received, the cord is pivoted on the pin until, when drawn tight, it cuts the bearing marked on the appropriate circle on the map. It should then be fixed with a drawing pin through a loop in the free end. A similar procedure should be used to plot the bearings from any other posts. The position of the incident will be marked by the intersection of the cords. It will be essential to practise the observers at the local and key posts, and in so doing opportunity should be taken to check the orientation of all maps at the local and key posts.

APPENDIX "A"

A sight rule is constructed from a length of five ply wood or metal, known as the main piece, 1" to 1½" wide, and as long as the size of the map table permits. A pivot is fixed at the left centre of the main piece (see diagrams 1, 4a and 4b). At the end of the main piece a backsight, consisting of a piece of five ply wood or metal in which a "U" shaped cut and vertical slit have been made (see diagrams 2a and 2b), should be fixed so that the vertical slit is exactly over the left edge of the main piece. At the other end of the main piece, the foresight, consisting of a pointed piece of five ply wood or metal cut by a vertical slit, should be attached in the same manner (see diagrams 3a and 3b). A pointer is attached to the front of the foresight in such a way that the point is in line with the vertical slit in the backsight, the left edge of the main piece and the vertical slit in the foresight. A small hooded bulb should be fixed beside the pointer, so that the light will enable bearings to be read at night. Roller bearings may be fixed under the fore and backsights.

The sight rule should be used by pivoting it until the point of the foresight is in the middle of the "U" of the backsight and in line with the object which is under observation. The final adjustment of the sight rule should be made so that the vertical slits in the backsight and foresight and the object are precisely in alignment. The pointer of the foresight will then point to the grid bearing of the object, while the left edge of the sight rule will cut through that object as plotted on the map. Identification will thus be simplified.

I



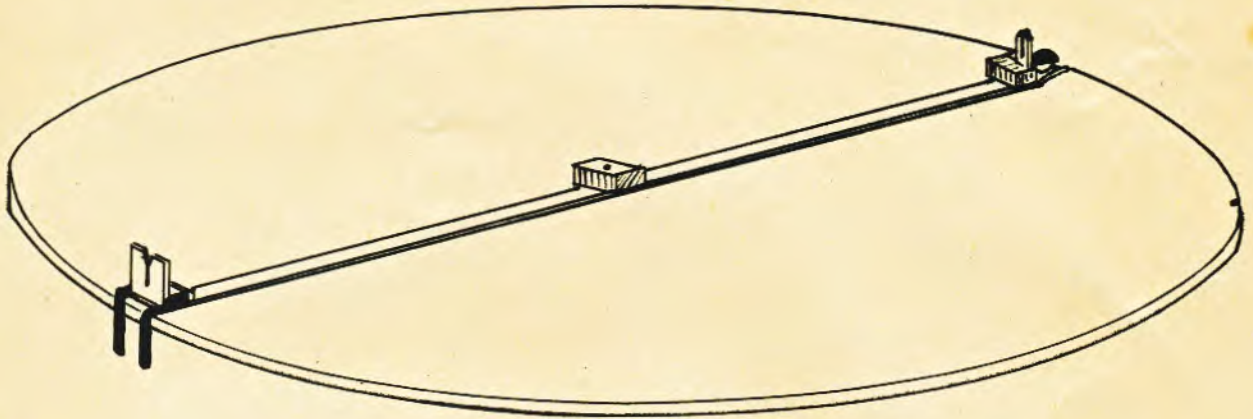
MAP SET WITH TALC DISC MARKED IN DEGREES SUPERIMPOSED.

X = OBSERVATION POST ON THE MAP.

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SUGGESTED DESIGN FOR SIMPLE SIGHT RULE TO BE USED IN OBSERVATION POSTS.

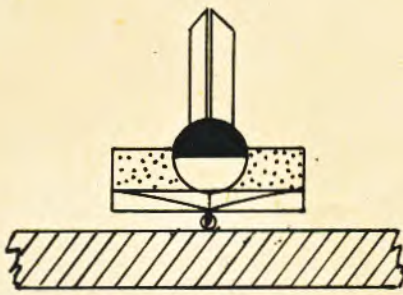
2



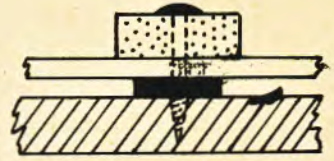
1. PERSPECTIVE VIEW OF TABLE WITH SIGHT RULE.



2A BACKSIGHT FRONT ELEVATION.



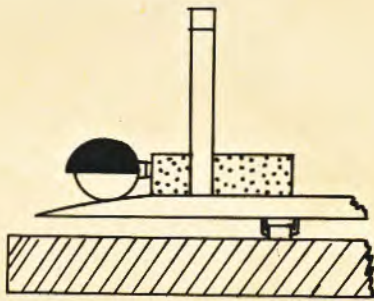
3A FORESIGHT FRONT ELEVATION.



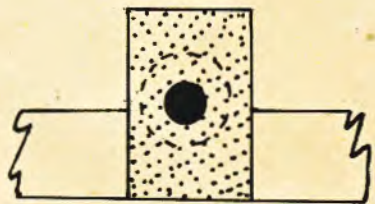
4A CENTRAL PIVOT SIDE ELEVATION.



2B BACKSIGHT SIDE ELEVATION.



3B FORESIGHT SIDE ELEVATION.



4B CENTRAL PIVOT PLAN

3



DIAGRAM OF MAP AT KEY POST ILLUSTRATING BEARINGS TAKEN FROM POSTS A, B, & C OF INCIDENT AT X.