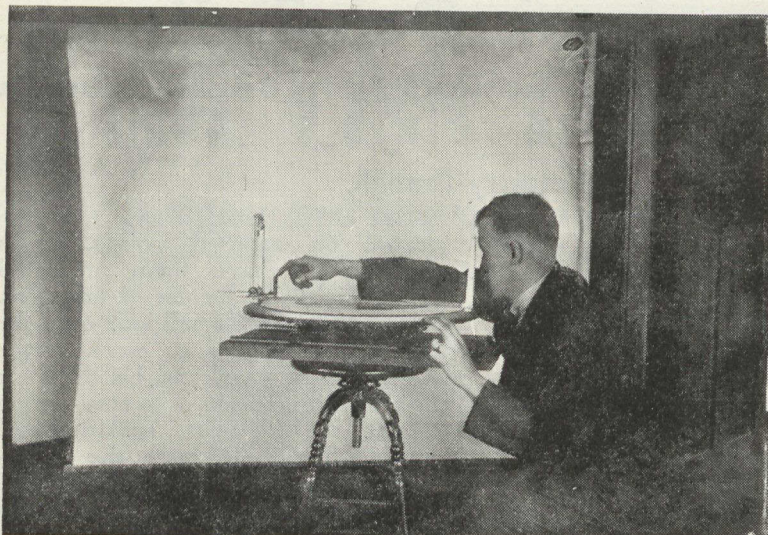




ABOVE
—
Fire-Finding Apparatus
Used with
Very Satisfactory Results
in
Look-Out Stations.



AT RIGHT
—
Fire-Ranger Telephoning
in
Report of Fire.



instrument known as the Osborne Fire Finder. The use of the former is manifest, while the functions and use of the latter it is desired to describe, so that persons interested may have some comprehensive idea as to the scientific methods being applied in the location of fires.

Osborne Fire Finder

The Osborne fire finder was invented by W. B. Osborne, of the U. S. Forest Service at Portland, Oregon. It consists of a heavy circular metal base graduated near the outer edge. This base is supported below on four short metal legs, or points, which rest on two solid metal rods. The rods are screwed to a board and act as a track or guide upon which the points can slide back and forth. This sliding device is for the purpose of overcoming any nearby obstruction which may be in the line of sight as, for instance, an upright or a window-frame in the look-out station itself.

Attached to the graduated circular base and lying flat upon it is a detachable circular disk of sheet metal. Mounted on the surface of this metal disk is the map of the country, surrounding the look-out station. The map is so mounted that the position of the look-out station on the map is exactly in the center of the disk. The whole map and disk are covered with a transparent shellac, or varnish, to preserve it and prevent it becoming marked or weathered.

Fitting on top of the graduated base piece is a sliding metal ring of a slightly smaller diameter than the base and which may be turned through 360 degrees in either direction. To this sliding ring are attached two upright sighting pieces;

also a handle, or grip, for the purpose of turning or sliding the ring. The sighting is done through a small slit or a peep-hole in the eyepiece upon a vertical horse-hair in the object-piece.

A horizontal horse-hair is also stretched between the two sighting pieces. Stretched with edge up between the two uprights and just above the map is a flexible metal tape. It is graduated into inches and fractions of inches from the middle toward the ends, and by means of it the distance from the look-out station to any point on the map may be read. Attached to the sliding ring, at the base of the upright eyepiece, is a vernier for the purpose of reading the angle through which the line of sight is turned.

The instrument also includes an attachment for the sketching of a panoramic profile of the surrounding country. A paper circle is laid over the map. Then, by following with the "point" the outline of the mountains and hills as they exist, their profile is automatically transferred to the paper. The thumb-screw imparts a horizontal movement to the pencil at the same time that it moves the point in a vertical one. The complete instrument weighs about fifty pounds.

Two Reports Necessary

If a piece of country is to be properly controlled by look-outs it is desirable and necessary that for practically every point in the tract there should be visibility from at least two look-outs. Immediately a look-out man spots a fire he uses his Osborne instrument to determine the location. With his general knowledge of the country and with the good topographic map with which he is provided, he is able to tell fairly accurately the location of the fire from his station. This information is communicated to headquarters. Similarly, another look-out man, spotting the same fire, telephones the direction, the approximate distance, and the approximate location, to headquarters. With two such reports on the same fire, it is a comparatively simple matter to apply the intersection method and to locate the fire to within a quarter section. The writer recalls an instance in Kamloops last season when the same fire was being reported simultaneously from two look-outs on two telephones at the district office. It will readily be seen that with look-outs functioning to this degree of efficiency, it makes it possible to get the necessary man-power and equipment on the fire within a very reasonable time.