

ured with a sextant)  $22^{\circ} 10'$  and  $46^{\circ} 45'$ , respectively. *C* was the whitish parhelic circle, of radius  $20^{\circ} 5'$  corresponding to the solar altitude of about  $70^{\circ}$ . At the intersection of the circles *A* and *C* there were slight increases of intensity but no conspicuous parhelia. *D* and *E* were much fainter arcs intersecting the parhelic circle at the point opposite the sun. If prolonged they would have been approxi-

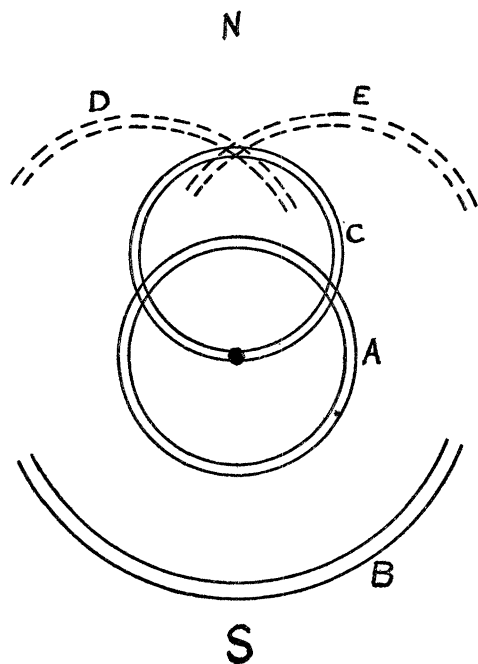


FIG. 1.

mately tangent to the  $22^{\circ}$  circle. The phenomenon was first noticed at 11 A.M. and faded soon after noon.

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#### QUOTATIONS

##### THE CONDITIONS OF INDUSTRIAL ACCIDENTS

THE enactment of laws in various states on workmen's compensation for injuries has aroused increased interest in the statistics and physical and psychic conditions of industrial accidents. The total number of these accidents is almost appalling. The lowest

estimate places the fatal accidents to adult workers in the United States at 35,000 a year, with an additional 1,250,000 non-fatal accidents. The Massachusetts Industrial Accident Board, on the other hand, placed the number of workers killed by accident yearly at 75,000, which apparently includes not only adults, but also workers of all ages, while the number of injured of the same classes was placed by this Massachusetts authority at 3,000,000 or over. An earthquake in a foreign country that kills half this number of persons and maims one fiftieth of those injured in our United States industries is spoken of as catastrophic.

Among the interesting elements of these accident statistics is the fact that a greater proportion of accidents occurs on Monday than on any other day of the week. Accidents are said to be due often to fatigue. As, after the day of rest on Sunday, workmen should be less fatigued than on other days, some other factor must be sought to explain this feature of the statistics. It has been suggested that the "blue Monday" accidents are really due to the fact that workmen take more spirituous liquor on Sunday, and thus become unnerved and more liable to accidents during the following twenty-four hours. There is, perhaps, something in this contention, though it has been disputed. In the Massachusetts Industrial Accident Board Reports, in which the official figures are given, there is scarcely more than one twentieth more accidents on Monday than on Tuesday, while Tuesday is not much above the average in the number of accidents reported for other days. Saturday, of course, shows a noteworthy reduction, because of the half holiday in some trades.

By far the larger number of accidents occur at about 10 A.M and 3 P.M. This fact is confirmed by the reports of two state boards, Washington and Massachusetts, which have secured rather careful records. As they represent the extremes of the country, the conclusions from their statistics would seem to be incontrovertible, though the fact is not what might naturally be expected. The State

of Washington Industrial Commission<sup>1</sup> says, "These results seem to disprove the theory that fatigue is the prominent cause of accidents, because accidents are here shown to happen at the hours when the workmen are least fatigued." On the fatigue theory it might naturally be expected that most accidents would happen after 11 A.M. and 5 P.M. The actual hour of the high point of curve of accidents shows how important are the facts and how necessary of proof the theories.

After much discussion, the tendency to speed up employment has been incriminated, as the predisposing conditions for the occurrence of accidents. This desire comes over the workman when he is not yet fatigued, but has been employed for several hours. He starts the morning's work "cold," and as he warms to his work, the danger of mischance because of haste becomes greater. Just when the speeding up reaches a climax in the morning hours, most accidents happen. The same thing is true in the afternoon. Workmen feel sluggish after their lunch, but after an hour of work warm up again, and by about 3 o'clock they are doing their most rapid work, and are at the same time more subject to accident.

With regard to accidents among children, however, there is no hour of maximum. Accidents occur at all times, and they are comparatively much more frequent among children than adults. The United States Bureau of Labor reported that "there is clear evidence of great liability to accident on the part of children. Though employed in the less hazardous work, their rates steadily exceed those of the older co-workers, even when in that group are included the occupations of relatively high liability." This was said with regard to the southern cotton mills, but the same thing is true of practically all industries in which children are employed.

The results of these accidents come to the physician. We are devoting much time to the prevention of disease, and we should be ready to give attention also to the prevention of injury. Virchow used to say that the ideal

<sup>1</sup> Report of State of Washington Industrial Commission for 1912, p. 178.

function of the physician, besides that of reliever of human ills, is to be the attorney of the poor for the prevention and relief of social ailments, and, above all, the prophylactic of their physical consequences, whether in lowered health or in maiming injuries.—*Journal of the American Medical Association.*

#### SCIENTIFIC BOOKS

*The Ants of the Baltic Amber.* By W. M. WHEELER. Schriften der Physikalisch-ökonomischen Gesellschaft zu Königsberg. LV. (1914.) Pp. 142.

Among the very numerous writers who have discussed the structure and habits of ants, few have had anything to say about the early history of the group, as shown by the paleontological record. Large collections of fossil ants have remained for many years in museums, unnoticed by students, who seem never to have conceived that the record of the past would throw any light on the present. As long ago as 1868, Gustav Mayr published a very important paper on the ants of Baltic amber; in 1891 Emery gave an account of fourteen species found in Sicilian amber, and at different times other writers have described fossil ants. Thus the total numbers of recorded species of fossil ants is well over 200, but many of these are very imperfectly known, and probably assigned to the wrong genera. The materials collected and then neglected have been very extensive, and in particular those from Baltic amber and from the Florissant shales in Colorado, numbering thousands of specimens, have invited a complete revision of paleomyrmecology. It is very fortunate that the rich collections from these two localities have fallen into the hands of Dr. Wheeler, who has undertaken the great task of setting them in order. The first section of this work, on the ants of Baltic amber, has now been published. Dr. Wheeler had the loan of the whole collection from the Geological Institute at Königsberg, as well as that of Professor R. Klebs, together with some smaller lots, the total number of specimens examined being 9,527. Of one species alone, *Iridomyrmex goepperti*, he saw 4,539 individuals. Up to the