HONORARY recognition has been conferred by the University of Wisconsin on four Wisconsin farmers and one Missouri man for outstanding service to the agriculture of the state and nation. Recognition is given by the university every February at the close of Farmers' Week, to from two to five men who have been outstanding leaders in agriculture. Dr. Edward A. Birge, the president, who has just completed 50 years of service in the university, presented the diplomas.

PRESIDENT COOLIDGE has signed an order establishing national forests in eight military reservations. These are Pines Plains and Camp Upton, New York; Camp Dix, New Jersey; Tobyhanna Artillery Range, Pennsylvania; Camp Meade, Maryland, and Forts Humphreys, Eustis and Lee, Virginia.

## UNIVERSITY AND EDUCATIONAL NOTES

THE University of Leyden, founded in 1575, celebrated early in April its three hundred and fiftieth anniversary.

DR. WILLIAM J. CROZIER, professor of zoology at Rutgers University, has accepted a professorship at Harvard University.

PROFESSOR S. LEFSCHETZ, of the University of Kansas, has been appointed to an associate professorship of mathematics at Princeton University.

THE physics department of Princeton University announces the appointments of the following men as assistant professors: Dr. Henry D. Smyth, former National Research fellow and at present instructor in this department; Dr. Louis A. Turner, National Research fellow at Harvard University; Dr. Allen G. Shenstone, demonstrator in physics at the University of Toronto; Dr. Charles T. Zahn, National Research fellow at Princeton University.

DR. GILBERT MORGAN SMITH, of the University of Wisconsin, known for his work on algae, who was a visiting professor at Stanford University last year, will join the Stanford faculty permanently next year. Professor Douglas H. Campbell retires at the end of this year.

SOLON SHEDD, head of the department of geology at the State College of Washington and state geologist of Washington, has accepted a position at Stanford University, where he will have charge of the John Casper Branner Memorial Geological Library.

EARLE B. PHELPS has been appointed professor of sanitary science at the College of Physicians and Surgeons, Columbia University. Professor Phelps has for a number of years been a member of the faculty of the department of biology and public health of the Massachusetts Institute of Technology and was later professor of chemistry at the Hygienic Laboratory, U. S. Public Health Service at Washington. The department of sanitary science is the second department of a group which will eventually constitute the Institute of Public Health of Columbia University founded under the terms of the will of the late Joseph De Lamar. The department of public health administration is headed by Professor Haven Emerson, who is responsible for developing this new effort in education and research in preventive medicine. In August the position of assistant professor of epidemiology will be filled and in September a new assistant professor of medicine in industrial hygiene will be added to the staff.

DR. N. B. DRYER, formerly of University College, London, has accepted an appointment in the department of physiology of Dalhousie University at Halifax.

## DISCUSSION AND CORRESPONDENCE

### CONFUSING TRAFFIC SIGNALS

A COUPLE of years ago I almost got into serious trouble for flagrant disregard of traffic signals, when, in fact, I supposed I was obeying them, and came to with a queer "gone" feeling when told quite fiercely that I was not. I had wanted to drive across Euclid Avenue, an east and west main thoroughfare, had seen the "stop" signal, had said "That's good" and had driven straight across.

What was wrong? Not only was I tired, but the occurrence took place at the end of a long period in which I had not been driving but had done a good deal of dodging to and fro across the avenue on foot. To a person on the sidewalk the word "stop" in the middle of the crossroads means "It is safe to cross the street you are on" (Figure No. 1); and if most

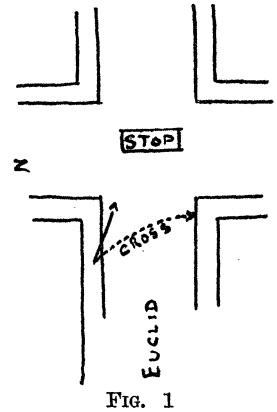


FIG. 1

of a pedestrian's careful street-crossing is done on some one street, like Euclid Avenue, the sign comes

to mean "It is safe to cross Euclid" (or whatever the particular street may be). And then when the pedestrian starts driving again, the red "stop" signal may still mean "Cross Euclid." Stupid, of course, but perfectly natural.

It is a question of confusing a sign and a signal. However loosely the words may be used, they stand for two very different things. A sign is a label that tells something about a thing or place. A signal is a "word of command" to move your body or the car you are driving in a certain way, relative to its present position, but quite regardless of absolute place or absolute direction. A sign tells you more about your surroundings. A signal invites you to forget them. "Gee," "Haw," "March," "Halt," "Right turn," "Left turn," "Full steam ahead" are signals. You can follow them without the remotest idea of where you are or where you are going. Landmarks, buoys, steeples, barber poles, show windows and street names or numbers tacked on a wall are signs. So are such legends as "Entrance," "Exit," "No road," "This way to the Art Museum"; and so is the very appearance of the roadway or the sidewalk. They all give local information and leave you to use it as you will. A pilot or steersman looks for signs; his engineer below looks for signals.

A traffic officer's whistle is partly signal, partly sign. In so far as it means "Go, if you have stopped; stop if you are going," it is a signal. But when, as in Cleveland, one blast means "Traffic will move north and south" and two blasts mean "It will move east and west," it is a sign. A "stop sign" is supposed to be a signal pure and simple.

Now, signs are more natural and more usual guides for either man or beast than signals. It often takes a good bit of tugging at the rein to make the horse you are riding leave the trail. Moreover, the man on the street, whether pedestrian or driver, is surrounded by signs but sees very few signals. He is in an atmosphere of signs, and if he can interpret a signal as still another sign, he tends to do so. And that is what the writer had done when (as pedestrian) he gradually learned to make the red light at the crossroads mean "Euclid Avenue may be crossed."

There are two ways for traffic authorities to avoid this confusion. One (now under experiment at a single corner in Cleveland) is to remove the signal from the middle of the road altogether and put a two-faced light (showing opposite colors at right angles to each other) at each of the four corners over the edge of the sidewalk (Figure No. 2). These lights give the same command to everybody, whether walking or driving: "Approach the blue,[1] but not the red."

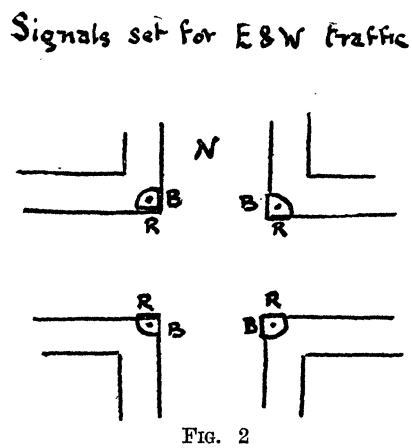


FIG. 2

The other method is to add the informative or sign element of the officer's whistle to the signal element of his lights. Show your colors as at present, but *when traffic is east and west show two lights instead of one,* and make a corresponding change in the appearance of the portable, hand-worked "Go-go tree." The color is the signal, and any stranger can understand it. The number (or shape) is the sign, and the pedestrian who had learned that a single red light or a given red mark means "Euclid may be crossed" would hardly give that meaning to the double red light or the different red mark that he sees from his car when Euclid may not be crossed (Figure No. 3.)

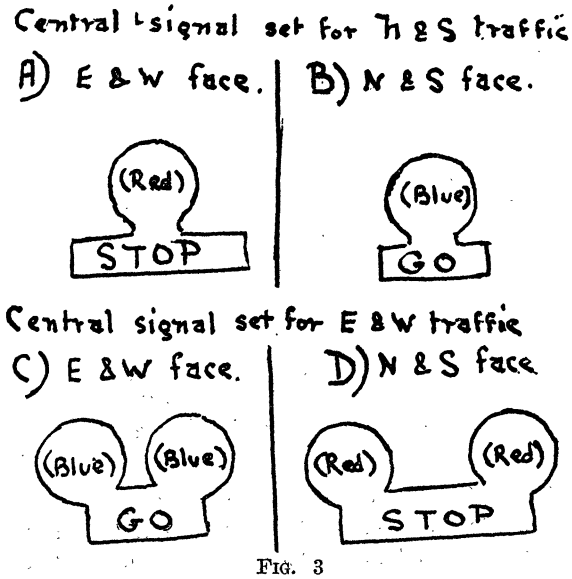


FIG. 3

Incidentally, such a change as this would practically solve the problem of color-blind drivers or color distortion in a fog, for number (or shape) would guide

[1] They actually use green, but blue would make less confusion for the rather large number of red-green color-blind drivers.

a driver, who knew how he was facing, when color could not.

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## THE UNDERTOW MYTH

I AM very glad indeed to see the undertow myth exposed. For many years I lived in Evanston, Illinois, on the shores of Lake Michigan, in which I used to swim a great deal. Solicitous friends and relatives (most of them non-swimmers or very poor swimmers) took it upon themselves on innumerable occasions to caution me against the "strong and treacherous undertow" which they said was present, especially during rough weather. Many a time when the waves were dashing very high I have taken my usual swim with but little fear, believing that if I were carried out by this mysterious undertow I would be able to swim up to the surface where, all are agreed, there is no outward flow; for the water could not be towing away from the shore on the bottom and at the surface simultaneously. If this were the case all the water along the shore would recede and pile up in the direction of the center of the lake. After "taking my life in my hands" on many occasions during many summers, I came to the conclusion that, as far as I was concerned, undertow even in stormy weather was nonexistent along the shores of Lake Michigan. In fact, it always seemed to me that the pounding waves hurled me toward the shore with a force a little greater than any I could detect pulling me out to sea; but I never reasoned the problem out thoroughly, as Davis has in a recent issue of SCIENCE. I used to think that this phenomenon might be manifest on shores where the slope of the bottom is very steep and complicated also perhaps by tides. Now, however, after studying Davis's article and after reviewing my own experience in rough water, I am convinced that undertow is a myth. Davis's theory that it has arisen from the fear and confusion of people not accustomed to big waves seems to me more than plausible.

As requested by Davis, I will add the following information: I am almost as much at home in deep water as I am on dry land. The slope of the floor of Lake Michigan near the shore is not steep. The direction of the wind, as far as I can recollect, was usually toward the shore. When I used to swim in Lake Michigan I never made a critical study of wave movements at the time. This communication is merely a "memory record." However, I did go into the lake many times in stormy weather at places where an undertow was said to exist and I never was able to detect it.

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## A QUOTATION FROM HIPPOCRATES

To the charge that one has not accorded due honor to Hippocrates, one may not remain silent even if defense is both presumptuous and impossible. In an address (SCIENCE, September 5, 1924) use was made of the wording on a tablet on one of the Harvard Medical School buildings. It was of exactly that type of monumental inscription that America is accustomed to receive from Dr. Eliot's pen. Dr. Eliot did, indeed, furnish the particular phrasing used, hence I accepted without question the statement that he had written it.

Several letters from friends calling my attention to the fact that the inscription is a translation from Hippocrates, an anonymous letter on the same subject, and the recent distress of the writer in SCIENCE (February 13, 1925, page 184) deepen my chagrin at my ignorance. Had I not been ignorant, however, I could not have made an ultra-modern interpretation of the inscription; an interpretation which many appreciative letters indicate has been helpful.

BOSTON FRANCIS G. BENEDICT

## "TUMBLING" IN A WILD MOURNING DOVE

THIRTY years ago my wife and I observed "tumbling" in a wild mourning dove. A description of the observation was sent to Dr. C. O. Whitman and its receipt acknowledged by him, but, so far as I know, he never made use of the data or made these known. I will give the data here from memory.

We were driving north over flat open country. Mourning doves were flying from the northwest to a "pigeon roost" southeast of us, in a dense apple orchard which had grown up from an abandoned nursery. The tumbling bird was first noticed a sixth of a mile in front of us and to the left of the road. I thought the bird had been shot and hit and I waited for the report of the gun, but none came. The bird balked, fell over backward fluttering, dropped say fifteen feet, recovered and flew on. When no gun report was heard we wondered if the bird might have struck a wire, but saw none in the field where the bird had been. The bird crossed the road an eighth of a mile in front of us and flew diagonally past us at a distance of about a tenth of a mile and disappeared behind and to the right of us. Twice more it tumbled in full view, though at distances of one tenth and one eighth of a mile. Each time the behavior was the same—balking, a fluttering backward fall, recovery while still well above the ground and a renewal of flight. I had not at that time seen tumbler pigeons in flight. When later I did see them their behavior impressed me as similar to that of the wild dove.

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