occurs in great abundance on the dry flinty hills of the Ozark region, where it is associated with black-jack and post oaks, and with white hickory. Both of these hill hickories are known locally as "bull hickory," there being very little to distinguish them except the foliage. The *glabra* form is the commonest tree in the hills, where it is usually rather small—occasionally twelve inches in diameter and fifty feet high—with very thick, rough bark separating into small squares like the proverbial alligator hide; a rather deep cylindrical crown of small branches, and small, lanceolate, shiny leaflets.

The reproduction of this "alligator hickory" is very good, and is especially abundant on hills which are burned over every year, these being sometimes covered with nearly pure thickets of hickory seedlings and seedling-sprouts. These are injured less by the burnings and recover more readily than the small oaks, afterward, and hence are the sole survivors where fires occur frequently. Examination of the seedlings, however, shows them to be very old, and proves beyond a doubt that their development is very much retarded by the exposure.

The drought-resistance of this hickory is even more remarkable than its fire-resisting powers. After a midsummer drought of eight weeks, both the black-jack and post oaks were in very bad condition, a large proportion of the foliage having turned brown, or the trees killed outright. The hickory, on the other hand, showed only a slight deadening of the leaves in the tops of a few trees. The explanation of this superior drought-resistance is undoubtedly to be found in the small, thick-skinned leaves which characterize the alligator hickory, and which are typical of xerophytic plants. The tendency to form a long, strong tap-root, which all hickories exhibit when growing in well-drained soil, is certainly a very potent factor here.

Such characters as these recommend the alligator hickory for planting in the prairie states, and in dry situations in more humid regions. The high technical value of the wood should in part offset the very slow growth of the tree. It is not to be expected that the hickory will attain to merchantable size in less than seventy to one hundred years. In that period it should produce a considerable quantity of spoke and handle stock of the very highest quality, if grown on soils of reasonable strength. The planting of hickory on light soils can not be recommended under any circumstances.

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Current Notes on Meteorology and Climatology

Kassner's Meteorological Globes

Professor C. Kassner, of the Prussian Meteorological Institute and also of the *Technische Hochschule* in Berlin, has prepared two "meteorological globes" which will be of great help to teachers of geography in general, and especially to those who lay much emphasis on meteorology and climatology. These globes (diameter 34 centimeters) show, for January and for July, the temperature, pressure and winds of the world. The temperature is shown by isotherms for every 2°, and in places for every 4° C.; the isotherm of 0° C. is drawn heavier than the others; those parts of the globe which are warmer than 0° are colored red, and those colder than 0° are colored blue. Different shades of red and blue are used for different degrees of heat and cold. Isobars are drawn in blue, the isobar of 760 mm. being heavy; those below 760 mm. are broken lines; those above, solid lines. Winds are indicated in the usual way by arrows. The principal meteorological stations the world over are shown; the observatories, and the central stations of the various meteorological services are appropriately emphasized by special symbols.

By an ingenious device the globes can be turned over, while still remaining on their wooden stands, so that the southern latitudes may be readily seen. These globes will help greatly in giving a clearer conception of the actual distribution of temperatures, pressures and winds than can be gained from a study of the ordinary meteorological charts. While the globes are too small for exhibition

purposes before large classes, they can be used in work with small classes with excellent results. The price is 50 Marks; the agent, Dietrich Reimer (Ernst Vohsen), in Berlin. There have been few additions to the teaching equipment in meteorology and climatology in recent years which are of more value than Kassner's meteorological globes. It is to be hoped that many of them will find places in our geographical laboratories, both in schools and in colleges.

WATERSPOUTS ON THE SWISS LAKES

PROFESSOR J. FRÜH has recently published an interesting paper on the waterspouts of the Swiss Lakes ("Wasserhosen auf Schweizerseen," *Jahresber. geogr.-ethnogr. Gesells. Zürich,* 1906–07, 105–127), in which a detailed account is given of the waterspout of June 19, 1905, on the Lake of Zug. This spout was 18–20 meters in diameter, and stirred up the waters of the lake within an area of 100 meters, more or less. The whirling column was hollow; had a left-handed rotation; was more than half a mile high. Its velocity of progression was somewhat over seven miles an hour, in an easterly direction. Several photographs were taken of this waterspout, three of which are reproduced in Professor Früh's article. The author has also collected accounts of what he believes to be well-authenticated waterspouts observed on the Swiss lakes. There are 22 in all, noted on nine lakes. Of these waterspouts, all were observed by day, and 14 of the 22 occurred in the (meteorological) summer. There is no evidence of any value to the effect that any of these spouts were produced by the meeting of winds coming from different directions.

A HYGROSCOPE OF A UNIQUE PATTERN

IN *Symons's Monthly Meteorological Magazine* for November, 1907, John Aitken describes a simple hygroscope which he has used for many years. The petal of one of the so-called everlasting flowers is attached to a stiff hair, which serves as a pointer, and the petal and hair together are fastened on a dial, set in a metal case. The instrument is about as sensitive as a hair hygroscope; is more compact, and much cheaper. An illustration shows the construction of the hygroscope.

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THE FIRST INTERNATIONAL CONGRESS FOR THE REPRESSION OF ADULTERATION OF ALIMENTARY AND PHARMACEUTICAL PRODUCTS

THE First International Congress for the Repression of the Adulteration of Alimentary and Pharmaceutical Products will be held in Geneva in September, 1908. As described in the preliminary statement issued by the congress, it has been felt for many years that such a movement was desirable and necessary, but more general matters occupied the limited time of the international congresses, and while these subjects were taken up among others, they did not receive undivided attention. The feeling that such a congress is necessary has been crystallizing for a quarter of a century, and at the Fourteenth Congress of Hygiene and Demography, in Berlin, 1907, the Universal Society of the Geneva White Cross conceived the thought of initiative action. The plan for the first meeting is an exhibition of unadulterated products, and the consideration of this occasion will be the "Defining of Unadulterated Food." In every case definition will be the basis of each decision, establishing a "codex alimentarius." It is desired by the committee of organization that manufacturers, chemists and lawyers who are interested in this question, should unite in forming these definitions.

Dr. H. W. Wiley, Bureau of Chemistry, Washington, D. C., has been asked to undertake the organization of the American committee. He hopes to associate with him those in the various states who have charge of the application of the food and drug laws, to whom he has written individually, inasmuch as these should be represented if possible as a whole. For the benefit of the chemists of the country at large, as well as others of every class who desire to identify themselves with this movement, the statutes of the congress are reproduced herewith: