first intercourse with Europeans. That there is little evidence of the use of coiled basketry among them at that time is not surprising, for the early writers were not technologists and were satisfied with recording incidentally the most meager facts concerning the arts and customs of the natives with whom they came in contact.

Basketry of any kind is rarely found in graves or its impressions upon pottery east of the Rocky Mountains. The burial caves have, however, furnished a very few examples of the widely distributed twined weaving, but so far as I know, no examples of the coiled pattern. We must look therefore to existing tribes for the principal evidences of the occurrence in ancient times of different types of this branch of textile art.

The isolated examples of coiled basketry occurring east of the Rocky Mountains noted by Professor Mason may be supplemented by a number of specimens in the Peabody Museum at Cambridge obtained twenty-seven years ago from the Ojibwa Indians of Lake Superior. The coils are of sweet grass and are about one-fourth of an inch in diameter. They are joined with common sewing thread, the stitches being continued from the edge towards the center of the basket, and not following the coils as is usual, the mode of construction having somewhat degenerated.

I see no good reason for attributing this form of basketry among the Ojibwa to European influence. The Algonquians in early historic days were expert basket makers. The excellence and variety of the old basket work of the New England Indians for example is represented to-day only by the degenerate splint basketry which is not worthy of a place upon the shelves of a museum.

There is not to my knowledge a single example of woven basketry extant from New England that may be considered typical of any one of the many primitive types from these states referred to in the early records. Gookin, writing in 1674, tells us of "several sorts of baskets, great and small; some will hold four bushels or more, and so downward to a pint. * * * Some of these baskets are made of rushes: some of bents [coarse grass], others of maize husks, others of a kind of silk grass; others of a kind of wild hemp; and some of the barks of trees, many of these very neat and artificial, with the portraitures of birds, beasts, fishes and flowers upon them in colors." The soldiers under Capt. Underhill, after destroying the Pequot fort in Connecticut, in 1637, brought back with them 'several delightful baskets.' Brereton (1602) found baskets of twigs 'not unlike our osier.' Champlain saw corn stored in 'large grass sacks.' Josselyn writes of 'baskets, bags and mats woven with sparke, bark of the lime tree and rushes of several kinds dyed as before, some black, blue, red, yellow.' In 1620 the Pilgrims found in a cache at Cape Cod a 'great new basket,' round and narrow at the top, and containing three or four bushels of shelled corn, with thirty-six goodly ears unshelled. The New England Indians were probably not more expert basket makers than other tribes to the west and south.

Does not the fact that the three distinct forms of weaving, twined, checker and coiled, are still found among the Ojibwas seem to indicate a survival of these types from prehistoric times?

Charles C. Willoughby.
Peabody Museum.

Iridescent Clouds.

To the Editor of Science: Iridescent clouds are such comparatively rare phenomena that notes on individual occurrences of them are not superfluous. On June 11, I had an opportunity to see some wonderfully fine examples of these interesting clouds. It was a fine summer day; the sky a deep blue, with scattered cirro-stratus patches drifting across it from west to east, and the wind SW. About 11.30 A.M. a small detached cirro-stratus cloud, roughly oblong in shape, and at that time about 15° to 20° from the sun, attracted my attention because of its dazzling whiteness, quite unlike the appearance of ordinary clouds. Very soon colors began to appear, and at the end of about five minutes there were developed some faint bands of color, a faint pinkish tint being uppermost; then a yellowish-green, and then below that a delicate bluish green. These bands were roughly parallel with the

(apparent) upper edge of the cloud. The latter moved in an easterly direction, away from the sun, and in four or five minutes the colors had faded away. A few minutes later another patch of the same kind of cloud, also drifting east, occupied about the same position as that taken by the first cloud at the time it became iridescent, and this second cloud, in its turn, showed faint rainbow coloring. This phenomenon was repeated three times, and in no case did the iridescence last more than four or five minutes. The colors were brightest in the second cloud. There were a good many patches of cirro-stratus in different portions of the sky at the time, and several of them showed waves. Light local showers occurred during the evening or night following.

Studies of iridescent clouds have been made in Europe by Ekholm, Schips, Mohn, McConnel, Hildebrandsson, Kassner and others. A useful article in this subject, by Arendt, will be found in *Das Wetter* for 1897, pp. 217–224, and 244–252. In the *Jahrbuch für Photographie und Reproductionstechnik* for 1900, in a brief article on the same subject, by Kassner, there are some half-tones of iridescent clouds. The views do not, of course, reproduce the colors.

R. DEC. WARD.
HARVARD UNIVERSITY.

PHYSICS AND THE STUDY OF MEDICINE.

TO THE EDITOR OF SCIENCE: Dr. Trowbridge, in his paper on 'The Importance of a Laboratory Course in Physics in the Study of Medicine,' SCIENCE, May 30, 1902, mentions the Johns Hopkins as one of the medical schools that do not offer a laboratory course in physics. His statement is correct, but the inference that might be drawn from it, namely, that the Johns Hopkins does not consider such a course an important part of the preparation for medicine, is entirely incorrect. Those who are familiar with the requirements for medical study in this country are aware, of course, that from its foundation in 1893 the Johns Hopkins has required from each of its entering students certificates not only of a college course in physics, but of a laboratory course as well. If, as frequently happens, the student has not been able to get a laboratory course in the college from which he comes, he is entered as conditioned in laboratory physics and is obliged to absolve this condition during his first medical year by attendance upon a course provided for such cases.

W. H. HOWELL.
JOHNS HOPKINS MEDICAL SCHOOL.

SHORTER ARTICLES.

ON A METHOD IN HYGROMETRY.

DURING the course of my work on the diffusion of nuclei in hydrocarbon vapors, I noticed that on certain days the experiments were apt to break down; the column of air within the tower-like receiver, instead of showing on exhaustion the sharp plane of demarkation between the nucleated air below and the pure air above, was liable to condense as a whole, almost explosively. This occurred at a definite pressure and after condensation had already begun in the nucleated region. Suspecting that the discrepancy might be due to the hygrometric state of the atmosphere, I made the following tests which bear out this surmise. The first column shows the pressure decrement on exhaustion, the second the effect produced on the nucleated atmospheric air in the dry receiver. In the second and third parts of the table, the results of artificially moistening and of drying the air are at once apparent.

1. Room Air.			2. Same, Dampened.			3. Same, Dried Over $CaCl_2$.		
Pressure Decrement.	Receiver.	Hygrom. State.	Pressure Decrement.	Receiver.	Hygrom. State.	Pressure Decrement.	Receiver.	Hygrom. State.
cm.			cm.			cm.		
10	clear.	——	10	clear.	——	10	clear.	——
12	"	——	11.5	clear?	.40	15	"	——
12.7	"	——					"	——
13.4	"	3.4	12	fog.	.39	17		
14	fog.	3.3	12	"	.39	19	"	.21
14	"	3.3	11.5	clear?	.40	no fog obtainable.		