hour (580 cm/sec) the "fly" was merely a blur—the shape could not be seen, but it could be recognized as a small object of about the correct size.

At 26 m/hr (1,150 cm/sec) the fly was barely visible as a moving object. At 43 m/hr (1,920 cm/sec) it appeared as a very faint line and the direction of rotation could not be recognized. At 64 m/hr (2,900 cm/sec) the moving object was wholly invisible.

That even a black object of this size moving at 64 m/hr should be invisible is also apparent from the fact that in 1/20th second (about the shortest time that the eye can recognize) the object moves 150 cm, and thus if it has a length of 1. cm the average intensity of the light along the 150 cm section of its track is decreased by only 0.7% by the presence of the object. Even under steady conditions in a photometer intensity differences of less than 1% are not distinguishable.

The description given by Dr. Townsend of the appearance of the flies seems to correspond best with a speed in the neighborhood of 25 m/hr.

In the Adirondacks I have been surprised by the swift flight of insects which I have been told were deer flies. These flies often strike one's bare skin with a very noticeable impact, far greater than that of any other insect I have met. However, if the speed were 800 m/hr and the fly on striking should be stopped within 1. cm it would come to rest in about 55×10^{-6} sec, and during this time there would be a force of 1.4×10^{-8} dynes or 140 kg (310 pounds). It is obvious that such a projectile would penetrate deeply into human flesh.

The appearance of the moving lead weight on the thread at 25 m/hr seems to agree roughly with my recollections of the deer flies.

The power requirement of a fly at 25 m/hr ($f = 0.08$) would be 0.0034 watts, which would involve a food consumption of about 5% of the fly's body weight per hour, a value which could not well be greatly exceeded if the flies are to fly over 12,000 foot mountain peaks.

Thus a speed of 25 miles per hour is a reasonable one for the deer fly, while 800 miles per hour is utterly impossible.

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THE BAXTER METEORITE

AUTHENTIC cases of meteorites striking buildings are rare. W. J. Fisher was able to find only two records for the whole of North America up to 1933. One of these—a stone of the New Concord fall—was said to have "struck a barn." The other, the Kilbourn stone, Wisconsin, penetrated the roof of a barn and a one-inch hemlock board floor four feet below the roof.

Recently Mr. Frank Clay Cross, who cooperates with the American Meteorite Laboratory, received from Mrs. J. W. Jackson, of Point Lookout, Missouri, a small stony meteorite which was said to have broken through the roof of a house in 1916. The meteorite was examined and proved to be an almost complete individual weighing 611 grams. Its fresh appearance was consistent with the report; but it seemed to us peculiar that an event of this nature should not have been reported at an earlier date. Rev. J. C. Nininger, brother of the writer, who lives some sixty miles from Point Lookout, was dispatched to the location to make a thorough investigation. He found the report easily verified by several neighbors and by a local newspaper account, which gave the date as January 18, 1916, at about 9:00 A.M. The location was near Baxter in Stone County, where the Jacksons lived at the time. Mrs. Frank Jackson, mother of J. W. Jackson, was in the house at the time of the fall and her son was at the barn about sixty yards away. He had heard the noise of the meteorite and had seen the light through a low-hanging cloud. He saw the stone strike the roof.

The meteorite, after passing through the roof, struck a log joist which evidently checked the fall. It lodged in the attic. The Jacksons removed boards from the gable in order to get at the stone, which they had kept ever since.

This will be known as the Baxter meteorite. It has been purchased for the Nininger collection. Casts have been made of the specimen preparatory to sectioning a small portion of it for study.

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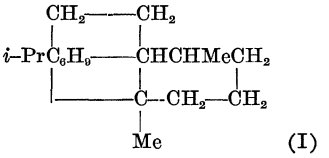
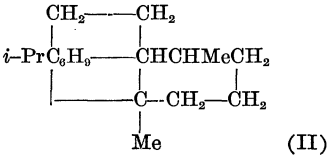
THE SYNTHESIS OF FICHTELITE

IN redrafting the formulas for our article on fichtelite which appears on page 196 of the issue of SCIENCE for February 25, I am sorry to say that there was a slight error made in formulas (I) and (II). These formulas should have been given as follows:



(I)



(II)

MARSTON TAYLOR BOGERT