



Figure 15.—ONE OF FRANCIS BAILY'S PENDULUMS ( $62\frac{1}{2}$  inches long), shown on the left, is now in the possession of the Science Museum, London, and, right, two views of a similar pendulum ( $37\frac{5}{8}$  inches long) made in the late 19th century by Edward Kübel, Washington, D.C., which is no. 316,876 in the collection of the U.S. National Museum. Among a large number of pendulums tried by Baily in London (1827-1840), was one which resembles the reversible pendulum superficially, but which is actually an invariable pendulum having knife edges at both ends. The purpose was apparently economy, since it is equivalent to two separate invariable pendulums. This is the type of pendulum used on the U.S. Exploring Expedition of 1838-1842. It is not known what use was made of the Kübel pendulum.