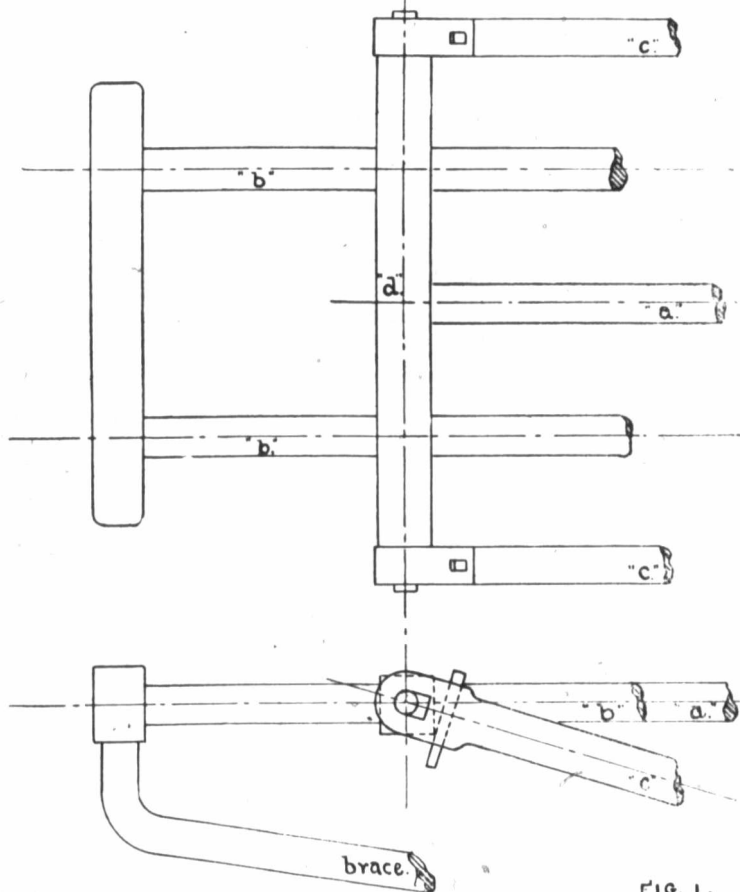


Stevenson's "Rocket," 1829, was the first locomotive to use a crosshead. This consisted of a small block running between two guides; a short connecting rod, which must have caused great ver-

PISTON AND CONNECTING ROD MOTION  
TREVITHICK'S LOCOMOTIVE.



Sketched from model in Field Museum, Chicago

FIG. 1.

tical thrusts on the guide bars, was a noticeable feature. In the early thirties American designers adopted a crosshead which was guided top and bottom by round bars. (fig. 2.) Lack of ready ad-