throw near the river, but it increases rapidly northward, Utica shale on the east side adjoining Precambric rock on the other, so that the throw there would seem of equal magnitude with that of the Little Falls fault. The Noses fault involves the entire thickness of the Beekmantown and Trenton formations, the latter only 17 feet thick here, together with an unknown amount of the Utica. The two former aggregate 500 feet, so that a minimum value is thus given, to which must be added the thickness of Utica involved. According to Prosser the Hoffman fault throws out the entire Utica and Trenton and some of the Beekmantown, so that its throw is just about 1600 feet.[1] It is, then, the greatest of the Mohawk faults, as it is also the most easterly.

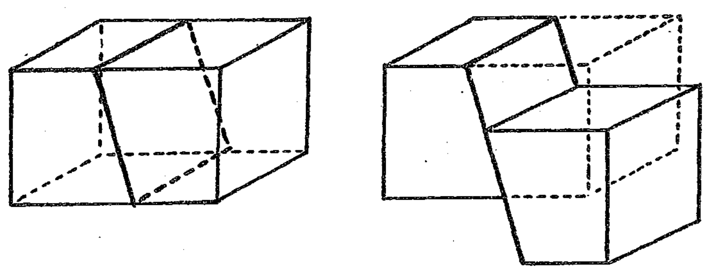

Fig. 5 To illustrate extension owing to normal faulting. First, the unfaulted block is shown with the position of the fault plane, second, the block after faulting, with the original position dotted. The lateral extension, or heave, is manifest. The hade of the fault is 15° and the lateral extension about one fourth of the vertical displacement.

This whole faulted district closely adjoins on the west the district of Appalachian folding. This is a region of sharply compressed rocks, producing folding and thrust faulting. The region under consideration was but slightly affected by these forces, thrust faults being absent and folds present only in the most minor degree. Normal faults are however abundant, in fact are present in both districts. But normal faulting implies surface tension instead of compression, since, except in cases where the hade is absolutely vertical, the rocks have greater lateral extent after the faulting than before [fig. 5]. Since absolutely vertical faults are exceptional, much normal faulting in a district of parallel faults must produce a respectable amount of surface extension. The period of tension would seem to have followed that

[1]N. Y. State Mus. Bul. 34, p.476.