1. Calf pen partitions are telescoped inward for tractor cleaning. Manure from raised portion of pens is scraped onto lower level as needed. Telescoping arrangement is also used for putting calves in pens.

2. Pole is angled outward at base to improve clearance when using tractor for cleaning.

3. Front side of roof located sufficiently toward rear of pens and at a height to permit noon solar penetration to back edge of pens for 2 winter months at 36° N latitude and for 4 winter months at 44° N latitude. Penetration will be greater at other times that sun is shining. Calves, when in extended portion of pen, will be fully shaded at noon for 2 summer months at 36° N latitude and a summer month at 44° N latitude. Since the calves do not need to stand fully at the front of the pens, partitions offer some shade near dawn or dusk, and their bodies are usually above floor heights, they will have adequate shade for the entire summer even at 44° N latitude. Maintaining the height of the front edge of the roof will increase the area that receives solar energy.

4. Structure designed for a 30 lb./sq. ft. roof load.