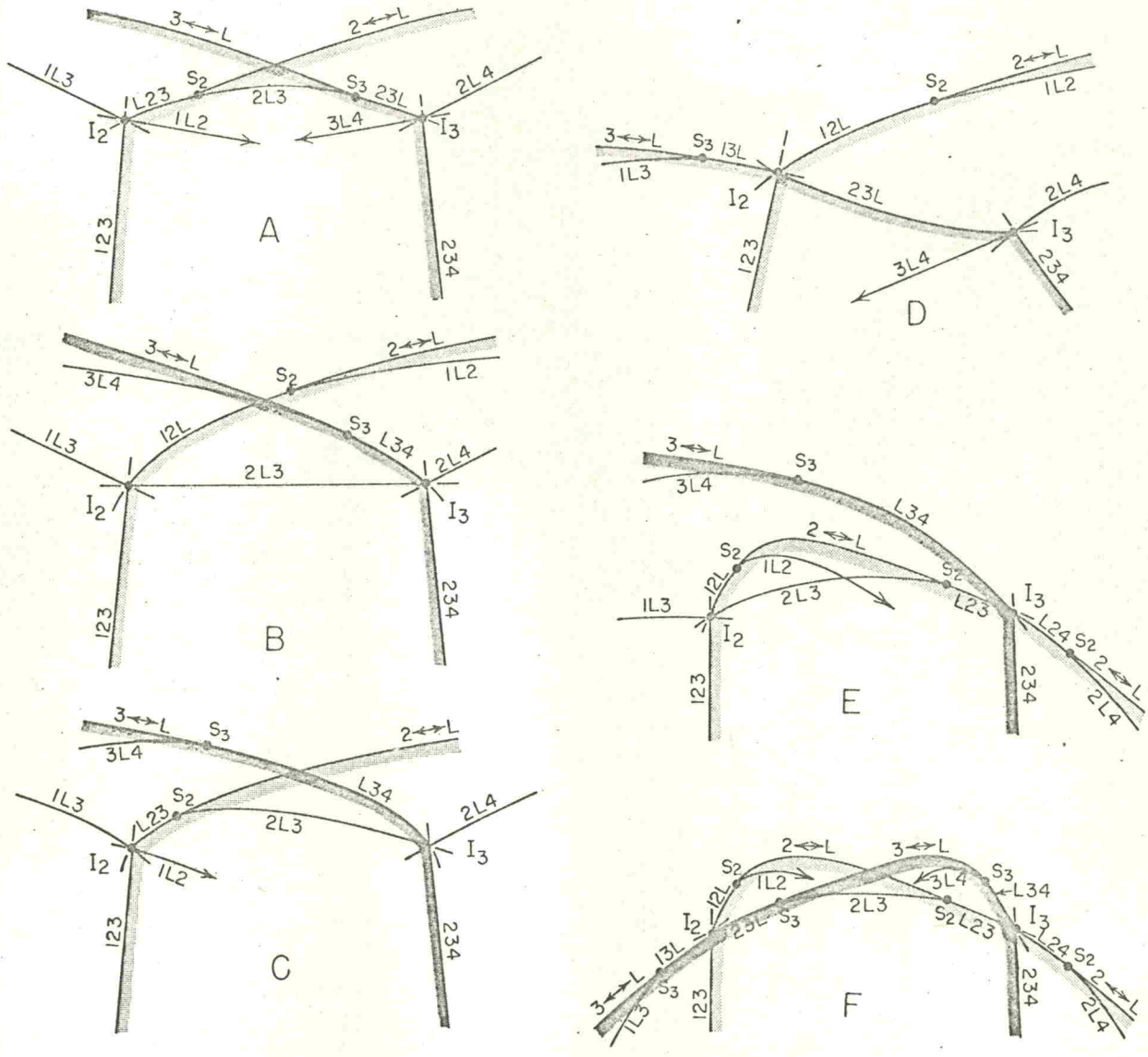

FIG. 5. The six possible types of *P-T* projections of binary systems having two intermediate phases whose stability ranges overlap on the liquidus, phase 2 being stable to the right and 3 to the left. An arrowhead indicates that the curve when extended may cross any of several different curves or sets of curves. Different shadings mark curves that bound *P-T* regions in which phases 2 and 3 respectively are stable. Letters A thru E correspond to those of FIG. 4.

If each possible I_2 can occur with each possible I_3 there would be nine combinations of two invariant points in all as indicated in Figure 4. If we discount three which are mirror images of others, there are only six general forms that the *P-T* diagrams may take. We have worked these out and they are labeled A through F in Figure 4. Their *P-T* projections are shown in Figure 5. C′, D′, and E′ which are mirror images of C, D, and E can be obtained from the latter by simply numbering the solid phases in sequence, 4–3–2–1 instead of 1–2–3–4. For example, 23L4 becomes 32L1 or rather 1L23.

In constructing these diagrams, we have made the assumption that phase 3 will ultimately melt congruently at the left side of the diagram while phase 2 must do the same at the right side. This is based on the idea that the farther away a phase exists from its breakdown curve, the greater is its stability relative to the same other solid phases.

All of the *P-T* diagrams of Figure 5 have one feature in common: the two invariant points are connected by a univariant curve along which the three phases, 2, 3, and L common to both invariant points coexist. However, the compositional sequences on this univariant curve near either invariant point can be L23, 2L3, or 23L. Different compositional sequences at the two invariant points require one or two singular points on the connecting curve at the