12/30/92 Chap 4 - 14

**Example 4.5** The net shown in Fig. 3.4(d) can be reduced to the one shown in Fig. 4.7(a) after firing  $t_2$  to remove the token in  $p_1$  and then fusing  $t_1$  and  $t_2$  into  $t_{12}$ , and  $t_3$  and  $t_4$  into  $t_{34}$ . The net in Fig. 4.7(a) can then be reduced to the one shown in Fig. 4.7(b) after eliminating self-loop transition  $t_{12}$  and place  $p_3$ . It is easy to see that both the nets shown in Fig. 3.4(d) and Fig. 4.7(b) are bounded and non-live (and non-reversible).

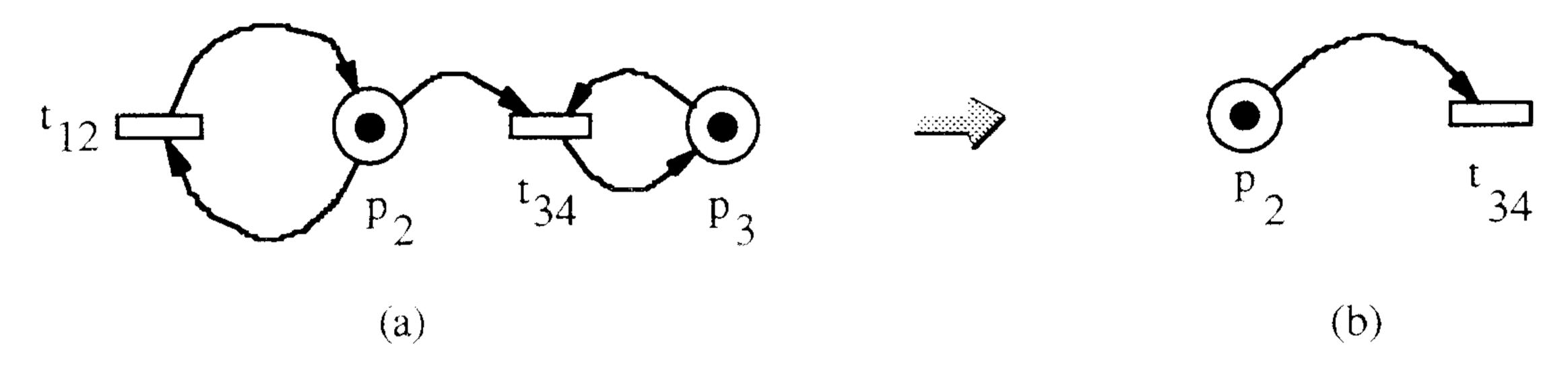


Fig. 4.7. Example 4.5: Illustration of reduction rules. The net shown in Fig. 3.4(d) is reduced to the two nets shown, where all the nets are bounded, nonlive, and nonreversible.

**Example 4.6** The net shown in Fig.4.8(a) can be reduced to the nets shown in Fig.4.8(b) by using the transformations shown in Fig.4.6. Note that all four nets shown in Fig.4.8 are bounded and live.