The authors discuss ternary systems A-B-C, where A and B are transition metals and C are elements of the III, IV, and VB groups of the periodic table. The aim of the present work is to investigate analogous systems in which C is gallium. Compounds of this type are found, where A = Ti, V and B = Fe, Co, Ni. The structure of the compounds resembles that of MnCu$_2$Al, and the lattice constants are given in tabular form. The space group is Fm$3_m$ and 0$^5_1$. It is shown that in the systems Ta(Nb, Mo) - Fe(Co, Ni) - Ga, and Sc(Zr) - Ni - Ga, similar compounds do not exist. The results are obtained using x-ray methods on alloys of metals of purity not less than 99.9%, fused in an atmosphere of inert gas at 600°C. There are 3 tables.