becomes

$$\frac{1}{2}\left(50y - \frac{2}{5}p_4\right) = p_5.$$

$$\therefore\ y = \frac{1}{17}\ \therefore\ a\sqrt{z} = \sqrt{y} = \frac{\sqrt{17}}{17}.$$

Therefore also $c\sqrt{z} = t\,(a\sqrt{z}) = \frac{\sqrt{17}}{34}$. Therefore, by (20),

$$yB'\sqrt{z} = -2\,(c^2z)(c\sqrt{z})\ \therefore\ B'\sqrt{z} = -\frac{\sqrt{17}}{68}.$$

And, by the second of equations (9), $B = -\frac{1}{68}$. Therefore

$$B + B'\sqrt{z} = -\frac{1}{68}\,(1+\sqrt{17}).$$

And $u_1u_4 = \frac{\sqrt{17}}{17}$. Therefore

$$\begin{aligned} x = {} & \left[-\frac{1}{68}(1+\sqrt{17}) + \sqrt{\left\{\left(\frac{1+\sqrt{17}}{68}\right)^2 - \left(\frac{\sqrt{17}}{17}\right)^5\right\}}\,\right]^{\frac{1}{5}} \\ & + \left[-\frac{1}{68}(1+\sqrt{17}) - \sqrt{\left\{\left(\frac{1+\sqrt{17}}{68}\right)^2 - \left(\frac{\sqrt{17}}{17}\right)^5\right\}}\,\right]^{\frac{1}{5}} \\ & + \left[-\frac{1}{68}(1-\sqrt{17}) + \sqrt{\left\{\left(\frac{1-\sqrt{17}}{68}\right)^2 + \left(\frac{\sqrt{17}}{17}\right)^5\right\}}\,\right]^{\frac{1}{5}} \\ & + \left[-\frac{1}{68}(1-\sqrt{17}) - \sqrt{\left\{\left(\frac{1-\sqrt{17}}{68}\right)^2 + \left(\frac{\sqrt{17}}{17}\right)^5\right\}}\,\right]^{\frac{1}{5}}. \end{aligned}$$

§37. *Eleventh Example.*—Let

$$x^5 - \frac{4x}{13} + \frac{29}{65} = 0.$$

The equations furnishing the criterion of solvability are

$$-\frac{4}{13} = \frac{5n^4(3-m)}{16+m^2},$$

$$\frac{29}{65} = \frac{n^5(22+m)}{16+m^2},$$

and they are satisfied by the values $m = 7$, $n = 1$. By §25, $n = 2t$. Therefore $t = \frac{1}{2}$. Therefore, from (11), $y = \frac{1}{65}$. Therefore

$$a\sqrt{z} = \frac{\sqrt{65}}{65}\ \therefore\ c\sqrt{z} = t\,(a\sqrt{z}) = \frac{\sqrt{65}}{130}.$$

Therefore, by (20), $yB'\sqrt{z} = -2\,(c^2z)(c\sqrt{z})$. Therefore $B'\sqrt{z} = -\frac{\sqrt{65}}{260}$. And, by the second of equations (9), $B = -\frac{9}{260}$. Therefore

$$B + B'\sqrt{z} = -\frac{9+\sqrt{65}}{260}.$$