

HAG, Chapter I, Section 4, Exercise 10:

Let Y be the cuspidal cubic curve $y^2 = x^3$ in \mathbf{A}^2 . Blow up the origin $O = (0, 0)$, let E be the exceptional curve, and let \tilde{Y} be the strict transform of Y . Show that E meets \tilde{Y} in one point, and that $\tilde{Y} \cong \mathbf{A}^1$. In this case the morphism $\varphi: \tilde{Y} \rightarrow Y$ is bijective and bicontinuous, but it is not an isomorphism.