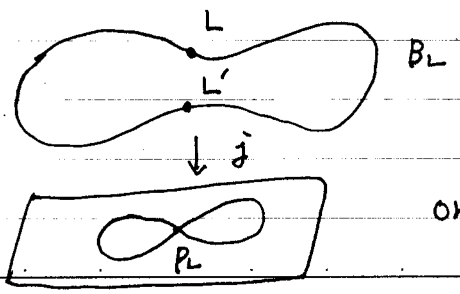
$j(\iota(L)) = p_L$.

Pf $p_L \in S - R$ since $p_L$ is not singular point of $\overset{h_L \cap S}{C_L''}$.
~~$\Rightarrow T_x(X) \cap X = \sigma(p_L, h_L) \cup \sigma(p_L, h') \cup \sigma(p_1, h) \cup \sigma(p_2, h)$ where $h = T_{p_L}(S)$, by P989 back page, note.~~

First, choose any point $p \in h_L \cap S$ which is neither $p_L$ nor a singular point.
$\Rightarrow \sigma(p) \cap X = \sigma(p, h_1) \cup \sigma(p, h_2) \Rightarrow T_x(X) \cap X = \sigma(p, h_1) \cup \sigma(p, h_2) \cup \sigma(p_1, h) \cup \sigma(p_2, h)$, $h = T_p(S)$ and $\ell_x = h_1 \cap h_2 = \overline{p_1 p_2}$.
$\Rightarrow$ By the result above, we know that $h = T_p(S)$ is not equal to $h_L$, since $p$ is smooth.
Suppose $L \cap \sigma(p, h_1) \neq \phi$ since $p \in C_L$.
Assume $L \cap \sigma(p, h_2) \neq \phi$, also. $\Rightarrow L \cap \sigma(p, h_1) \ni \overline{p\, p_L}$
$\Rightarrow L \cap \sigma(p, h_1) \cap \sigma(p, h_2) \ni \overline{p\, p_L} \Rightarrow \overline{p\, p_L} = \ell_x$
$\Rightarrow L$ passes through $x \Rightarrow$ Since $\#(T_x(X) \cap X) = 4$, $L$ must be one of $\sigma(p, h_1)$, $\sigma(p, h_2)$, $\sigma(p_1, h)$ or $\sigma(p_2, h)$.
$\Rightarrow L \neq \sigma(p_i, h)$ since $h \neq h_L$ and $L \neq \sigma(p, h_i)$ since $p \neq p_L$. $\Rightarrow L$ can not meet with both $\sigma(p, h_1)$ and $\sigma(p, h_2)$. $\Rightarrow j : B_L \longrightarrow C_L$ is one to one generically, i.e., for generic $p \in C_L$, $j^{-1}(p)$ is a single point.
Second, assume $B_L \ni L$. By the argument above,
$\Rightarrow$




since $j$ is one to one outside $p_L$ and $q$ (singular point), $j(L) = j(L') = p_L$ must be an ordinary double point, which