is therefore sufficient to add to it the resultant of the equality to have the complete resultant of the proposed system

$$(ab = 0)\ (a'c + b'd \neq 0).$$

The solution of the transformed inequality (which consequently involves the solution of the equality) is

$$x \neq (a'c' + ad')x + (bc + b'd)x'.$$

56. Formulas Peculiar to the Calculus of Propositions.—All the formulas which we have hitherto noted are valid alike for propositions and for concepts. We shall now establish a series of formulas which are valid only for propositions, because all of them are derived from an axiom peculiar to the calculus of propositions, which may be called the *principle of assertion.*

This axiom is as follows:

(Ax. X.) $$(a = 1) = a.$$

P. I.: To say that a proposition a is true is to state the proposition itself. In other words, to state a proposition is to affirm the truth of that proposition.[1]

Corollary:

$$a' = (a' = 1) = (a = 0).$$

P. I.: The negative of a proposition a is equivalent to the affirmation that this proposition is false.

By Ax. IX (§ 20), we already have

$$(a = 1)\ (a = 0) = 0,$$

"A proposition cannot be both true and false at the same time", for

(Syll.) $$(a = 1)\ (a = 0) < (1 = 0) = 0.$$

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[1] We can see at once that this formula is not susceptible of a conceptual interpretation (C. I.); for, if a is a concept, $(a = 1)$ is a proposition, and we would then have a logical equality (identity) between a concept and a proposition, which is absurd.