Resulting In

This can support a ParticipialClause

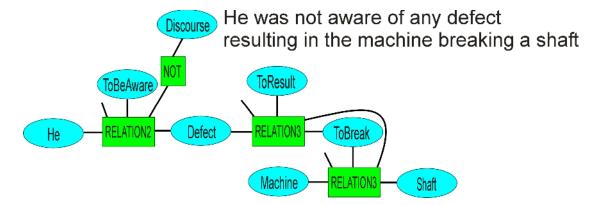
He was not aware of any defect resulting in the machine breaking a shaft.

It is possible to say

He was not aware of any defect (that was) resulting in the machine breaking a shaft.

making "resulting" a participial, but not

He was not aware of any defect resulting in the machine that was breaking a shaft.



"resulting in" expects a relation. It can be just a noun phrase, with the noun phrase signifying a relation.

He was not aware of any defect resulting in a catastrophic failure.

Or "in" indicating a location only

He had heard the inflamed rhetoric, but was not aware of any riot resulting in Thebes.

He had heard the inflamed rhetoric, but was not aware of any riot resulting in Thebes becoming lawless.

We put up a ParticipialClauseRelation, have it taken up if a NounPhrase and ParticipialPhrase or NounPhrase ParticipialPhrase NounPhrase is found.

How many other cases?

He was aware of the machine breaking a shaft.

He knew about the machine breaking a shaft.

He knew about the house being mortgaged.

This is

He knew that the house was mortgaged. (or was being mortgaged)

"delays due to the bus stopping between stops"

He was aware of delays due to the weather slowing the train

This is ambiguous, or supports both meanings

He was aware of the train being slowed by delays due to the weather

He was aware of the delays that were caused by the weather slowing the train.

The machine breaking a shaft was not unusual.

The machine continually breaking a shaft was replaced under warranty. – Need to look at overarching relation to decide between the object and the relation.

Participial Clause

The machine having broken a shaft, it was repaired immediately.

This is of the same form as

After the machine broke a shaft, it was repaired.

Because the machine broke a shaft, it was repaired.

A Partial Participial Clause

Having completed the entrance exams, the student was admitted.

John, having completed the entrance exams, was admitted to college.

John, upon completing the entrance exams, was admitted to college.

We could insert "upon" before "having" most of the time, but

Having completed the entrance exam won't hurt his chances of promotion.

We could insert an ImpliedSubjectPronoun.