Is it permissible to use a union instead of a struct for a value, so as not to allocate space for all of the types when only one is needed? If I am mistaken in my interpretation of where to use a union please let me know.

A union is fine. Back when memory was dear, people used unions to save any space they could. Now that memory is plentiful, unions aren't needed so much.

Just for those who might try to use unions as a way to convert from one type to another, don't. That behavior is as undefined and is dependent on your compiler, computer, and current weather.

Meaning, you can't stick an int into a union and then read it as a double, for example.

Sticking an int into a union and reading it as an int is fine. As is sticking a double into the same union and reading it as a double.