If the part to be cast is just a slab or disc, or something equally simple, then the die can easily be opened when the metal forced in has cooled, so that the casting can be taken out.

But just look at the cab and chassis of your Big Bedford, and you will soon realise that the maker could not just pull apart the two halves of the die in which this is made while the casting is in it. The reason for this is that there are recesses or undercuts on the casting, into which parts of the die fit, so that the two sections cannot be separated from each other, and the casting taken out, unless something is done to allow for this.

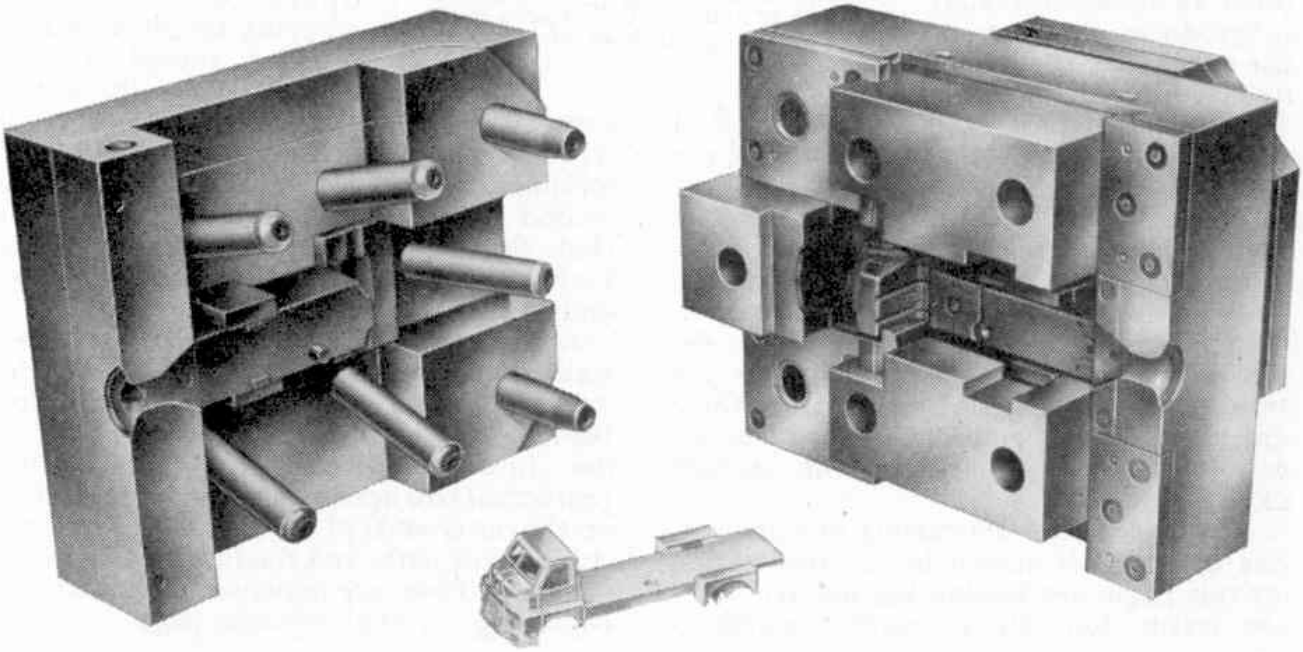
And something of course is done. In these cases the die is not actually made in just two sections. One of the sections has parts that slide out sideways when the two sections are pulled apart, to clear the casting and permit its ejection from the mould.

How this is arranged can be seen at a glance from the accompanying picture of the two parts of the die that produces the Big Bedford chassis. When these are placed face to face, metal injected into the space between the two sections forms the casting that you can see pictured in the same illustration. Above and below this space in the right-hand die are two sections designed to slide out sideways when the die is opened after casting. In each of these side jaws or slides two holes are bored, and into them fit the angled dowels, or spigots, opposite them that can be seen in the left-hand section. These slope outward at such an angle that the side jaws slide outward as the mould opens, far enough to take them clear of the casting.

With this particular model there are actually three sliding sections, the third being an end jaw or slide shown on the left of the moving half die, with the corresponding dowel on the right of the fixed half die.

Suppose that a die, such as the one illustrated, has been made from tough steel, by careful machining, filing and polishing, and it is now to be used for actual die casting. For this the two sections of the die are mounted in a die casting machine. One of them is bolted to the fixed platen of the machine. The other is mounted on the moving platen, also part of the machine. This platen can be moved horizontally to close the two half dies, as of course it must do for casting.

This is clearly shown in the fine illustration on the opposite page, in which an operator is seen lifting out a casting of the Big Bedford cab and chassis that has just been made. One of the two sections of the die can be seen mounted in position; that is the fixed one. The other slides in from the right at the movement of a lever that brings the two half dies together. A plunger operated by compressed air then forces molten metal from the cylinder into the die, where it fills the space between the two sections.

The metal solidifies almost immediately,

At the foot of the page are seen the two halves of the die in which the Big Bedford cab and chassis section is cast. In front of the dies is an actual casting from them.