

to earth in a little shop kept by a practical brazier and tinsmith of the old-fashioned kind.

This soft quality is very useful also on iron and steel work that does not really require the strongest kind of joint. The parts do not get so much burnt, and it makes a useful cross between the usual brazed joint and an ordinary soft soldering. The soft quality is made of equal parts copper and zinc; the hard, two of copper to one of zinc.

The flux for hard soldering is almost invariably borax, or some compound of which borax forms the base. The old-fashioned braziers always used borax, and borax is frequently found in the domestic stores, which saves buying.

After so much prelude about materials there is little left to say concerning the actual technique of brazing. The lamp is started, and while it is getting warm the work may be set up on the hearth. The joint, as for soft soldering, must have its surfaces where the brass is to run filed clean and bright, and where possible the joint should be pinned to fix the parts in position. French nails make excellent pins for this work.

The lamp is now pumped up fully and turned on the work, the borax and brazing wire being conveniently handy. The brazing wire is held in the flame, and when warmed stuck into the borax tin, and some borax picked up on it and wiped about on the joint. The borax swells up and bubbles, then settles down, fusing into borax glass. Enough should be put on to glaze over the joint, with a little surplus. By this time the work will be at a red heat, and the end of the brazing wire should be kept on the joint, and pressed on it a little. Pretty soon the brazing wire breaks off at the tip, leaving a lump on the joint. A little time after this, this piece runs suddenly to a globule and down into the joint. More brass can be added as required, and a little additional borax. The beginner should err on the side of too much rather than too little brass, as just at first one is rather apt to mistake the molten borax for the molten brass. The brass has a molten silvery look not easily mistaken when once realized as characteristic, and it runs like water, whereas the borax seems more viscous.

Brazing Brass or Copper

Brazing brass or copper with the soft kind of brass is quite as simple as brazing steel with the hard kind, the only precaution being that the heat must not be kept indefinitely on the work, especially with a large lamp. As soon as the brass runs the lamp should be drawn back a few

inches, still keeping the flame on the work, and the job kept just hot enough to keep the brass molten, but no hotter. This in order to prevent the work itself being melted, and no more than a little care is required.

Given the necessary outfit and a very little practice, the ordinary amateur is quite man enough to do pretty well all the brazing repairs needed on his car that are within the reach of the lamp he uses.

KEEPING THE BOY ON THE FARM

(Concluded from June issue.)

The child's first impressions are gotten at home and from those with whom he moves and lives. These impressions are fixed on the impressionable mind and will determine, in a large measure, the future of that child. The home and the home environment, then, are partly responsible for keeping the boy on the farm or sending him to town. In too many cases the father is so busy making money on the farm that he forgets everything else, even his little son, whom he expects will become a farmer. The only instruction the boy receives at the hands of his father is how to work. A valuable lesson to learn, to be sure, and a lesson that helps to make the farm boy so successful when he pursues professional or other vocations—but work alone will not interest the boy sufficiently to keep him on the farm. The small boy should be given a direct interest in the farm. A calf or a pig that he could call his very own would be a great incentive to this interest. Instructions from the father on feeding and caring for the same would add to the boy's knowledge. Interest coupled with knowledge of farming is the strongest force of operating to keep the boy on the farm. The boy whose interest is centered around farm life will not leave for the city as soon as an opportunity affords itself.

But we find too many fathers intent on developing the boy's muscles and not his interest. The boy soon learns that his muscular development will afford him more pleasure if expended along lines in which he is interested. Rural folks have been slow in accepting new ideas and conveniences. This is particularly true of the farm homes. These conveniences are more significant to the boys and girls than to many of the older folks. They hear about these conveniences from their city cousins whose fathers are not better able financially to procure them than the country boys' father.

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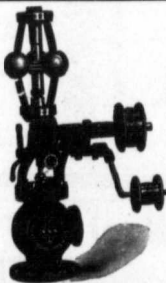
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