

floating, or the gold will be apt to crack. Proceed in this manner, a little at a time, and do not attempt to cover too much at once, till by experience the operator finds he is able to handle the gold with freedom. Be careful in proceeding with the work, if any flaws or cracks appear, to take a corresponding piece of gold and apply it immediately; sometimes, also, it will be found necessary, when the gold does not appear to adhere sufficiently tight, to draw a pencil quite filled with water close to the edge of the gold, that the water may run underneath it, which will answer the expectation.

CLEANING FURNITURE.—Mix a little turpentine with some boiled linseed oil, and rub gently with a soft rag, giving plenty of "elbow grease."

BLACK AND GOLD FURNITURE.—The wood should be stained as follows:—Procure 1 lb. logwood chips, add two quarts of water, boil one hour, brush the liquor in hot, and when dry give another coat. Now procure 1 oz. of green copperas, dissolve it in warm water, well mix, and brush the solution over the wood, it will bring out a fine black; but the wood should be dried out-doors, as the black sets better; a common store brush is best. If polish cannot be used, proceed as follows:—Fill up the grain with black glue—i.e., thin glue and lampblack brushed over the parts accessible (not in the carvings); when dry, paper down with fine paper. Now procure, say, a gill of French polish, in which mix 1 oz. best ivory-black, or gas-black is best, well shake it until quite thick pasty mass, procure half a pint of brown hard varnish, pour a portion into a cup, add enough black polish to make it quite dark, then varnish the work; two thin coats are better than one thick coat. The first coat may be glass-papered down where accessible, as it will look better. A coat of glaze over the whole gives a London finish. N.B.—Enough varnish should be mixed at once for the job, to make it all one colour—i.e., good black.

Horse Shoeing and Smith's Work.

TO PREVENT HORSES INTERFERING.—Nature has provided a proper hoof for the horse, but sometimes it is round and flat and the animal will strike itself with the crust when not shod; the natural tendency being to travel very close, especially with the hind-feet.

Well-informed minds, together with the mechanical skill of many blacksmiths, have been brought to bear upon this topic, and after years of experience and research they have been unable to remedy this evil. As such I term it, because horses have suffered much, and become depreciated in value because of being addicted to the annoying habit of interfering.

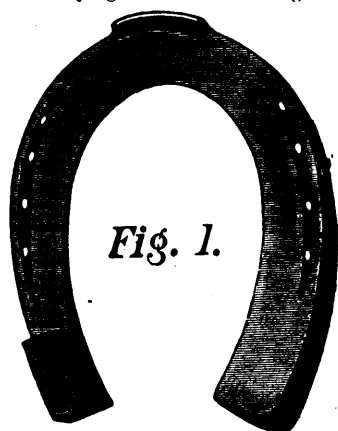
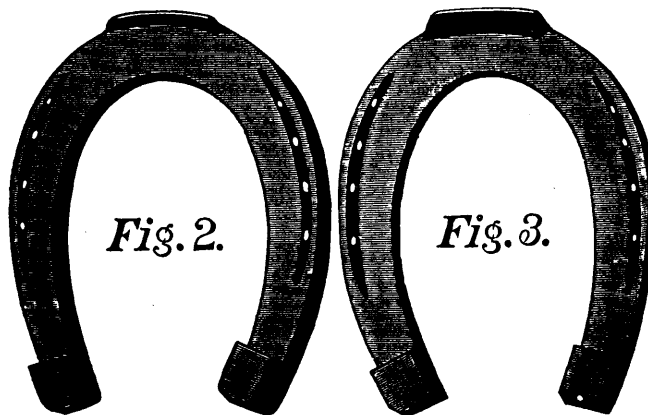


Fig. 1.

I here propose to give a sure and certain remedy that has never been known to fail. The preparation of the hoof is by no means as important as that of the shoe; yet, should the animal interfere very badly, it may be better to leave the outside a trifle the lowest; however, the smith ought to be governed by circumstances, not as to the shoe, but to paring the hoof. All that can be removed from the inside without putting the hoof out of shape ought to be done. Also pare the hoof at the toe instead of the heel, simply rasping it so as to form a level surface. Prepare the shoe carefully in accordance with the following directions, and as illustrated on foregoing engraving Fig. 1:

Make the inside twice the width and twice the thickness that you do the outside, gradually tapering the width and thickness from the toe-calk. Make the heel-calk on the inside or heavy part of the shoe, about an inch long, and lengthwise from heel to toe, and incline it a little inward to the frog of the foot. Don't allow your shoes to remain on longer than four weeks at most, and use as small nails as possible.

OVER-REACHING.—Young horses are more subject to over-reaching than old ones. It very frequently disappears as the speed of the animal is increased. At a moderate gait, the front



INTERFERING AND OVER-REACHING.

feet do not always get out of the way in time for the hind ones, as they are brought forward. Sometimes the heels are cut or badly bruised, and occasionally the shoes are torn from the fore feet.

Remedy.—Have the front shoes made nearly twice the weight of the hind shoes. Lower the toe-calk on the fore shoe and increase the ordinary length of the calk on the hind shoe, and do not make the fore shoe to project more than half an inch beyond the heel. If the horse should have a good square heel, don't allow the shoe to project any. Observe to instruct the smith to pare the toe or forward part of the fore foot, and *not* the heel, simply rasping it to form a level surface. See illustration of shoes, Figs. 2 and 3.—"*Pratt's Treatise on Horseshoeing.*"

TYPE MADE OF GLASS.

It would appear, according to an English contemporary, that the usefulness of toughened glass bids fair to be greater and more serious than was at first supposed. Some experiments are reported to have been made in France, with a view to showing whether this substance can be pressed into the printer's service, and substituted for the metal composition of which types are made. The metal now used does not at first sight strike the observer as the best that could be found. It is bright enough when the letters first come from the foundry, and before they have seen any service; but a few days' wear gives them a very much more dingy appearance, and before they are finally returned to the melting pot they have degenerated into a very squalid form, looking dirty on their bodies as well as battered on their faces. The idea is now to discard these long proved but unattractive servants and fill their places with glittering types of glass. The advantages in point of cleanliness alone would, it is alleged, be not insignificant. But there are other and more solid improvements involved in the new system. The toughened glass, which is not to be made in quite the same way as that used for tumblers and wine glasses, and need not, of course, be quite as transparent, is naturally much harder than the old metal, and can hardly be crushed out of shape by those little accidents which so shorten the life and spoil the beauty of the only type we now employ. It is also capable of being cast into more delicate shapes, so that the difference, for instance, between the thin and thick strokes can be more clearly defined. Finally, it is now found that the new material can be cast in exactly the same molds as the old, and that, therefore, there need be no expense incurred in altering the machines and implements now used in the manufacture of type. If our information is correct, and the experiments have been completely successful, the adaptability of toughened glass to printing and to numerous other purposes is likely, ere long, to be fully established.