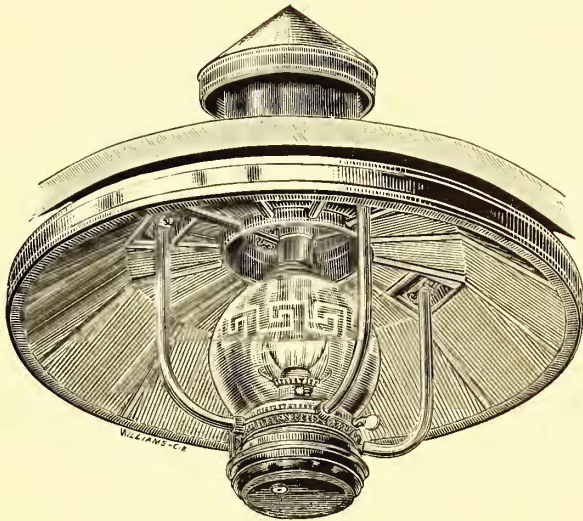


Post's Center Lamp.

The new feature in the lamp* illustrated in this connection consists in the ring that is placed at the bottom to hold the oilpot. Besides this, the lamp has the usual reflector at the top and this may, of course, be made in any style that may suit the road for which it is intended; though it is represented in this case as the corrugated



POST & CO.'S CENTER CAR LAMP.

reflector. Ventilation is secured at the top through the roof; and the oilpot and attachments are secured to the roof by ordinary brackets.

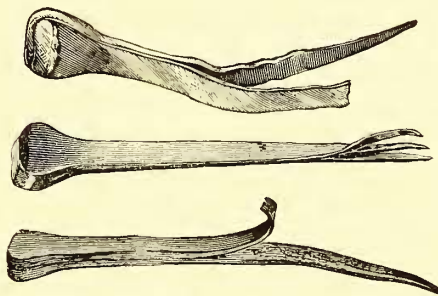
*Post & Co., Cincinnati, O.

How to Tell a Horse's Age by the Teeth.

At three years old the horse should have the central permanent nippers growing, the other two pairs wasting, six grinders in each jaw, above and below, the first and fifth level, the others and the sixth protruding. The sharp edges of the new incisors will be very evident, compared with the old teeth. As the permanent nippers wear and continue to grow a narrow portion of the cone-shaped tooth is exposed by the attrition of the teeth on each other. The mark will be wearing out; the crowns of the teeth will be sensibly smaller than at two years. Between three and a half and four years the next pair of nippers will be changed, the central nippers will have nearly attained their full growth, a vacancy will be left where the second stood, and the corner teeth will be diminished in breadth, worn down, and the mark in the center of the tooth will become faint. The second pair of grinders will be shed. At four years the central nippers will be fully developed, the sharp edge somewhat worn off, and the mark somewhat wider and fainter. The next pair will be up, but they will be small, with a mark deep and extending quite across them. The corner nippers will be larger than the inside ones, but smaller than before and flat, and the mark nearly effaced. The sixth grinder will have risen to a level with the others, and the tushes will begin to appear. At five years the horse's mouth is almost perfect. The corner nippers are quite up, the long, deep mark irregu-

lar in the inside, and the other nippers will bear evident tokens of increased wear. The tushes are nearly grown, the sixth molar is up and the third molar is wanting. This last circumstance will prevent the deception of attempting to pass a late four-years-old as a five-years-old. At six the mark on the central nippers is worn out. At seven years the mark is worn out in the four central nippers and fast wearing away in the cor-

ner teeth. The tushes are rounded at the points and edges and beginning to get round inside. At eight years old the tushes are rounded in every way; the mark is gone from the bottom nippers. There is nothing remaining in them that can afterward clearly show the age of a horse. After this the only guides are nippers in the upper jaw. At nine years the mark will be worn from the middle nippers, from the next pair at ten, and from all the upper nippers at eleven years. At nine years the center nippers are round, instead of oval. At ten years the others begin to become rounded; at eleven years the second pair are much rounded; at thirteen the corner ones have the same appearance; at fourteen the face of the center nippers become somewhat triangular; at seventeen they are all so.—Harness.

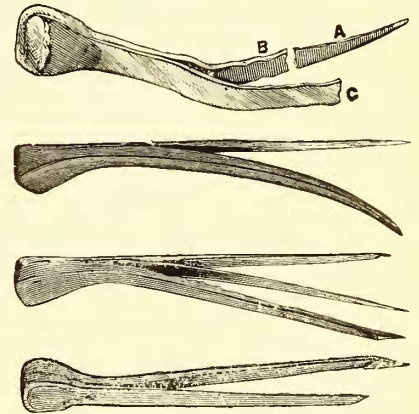


The Manufacture of Horse Nails.

Undoubtedly many of our readers can recall the times in their boyhood days when they have stood around the village blacksmith's anvil and watched with wondering gaze the operation of drawing to a point and the shaping by skillful blows the blazing nail rod, and dodged the sparks that flew from beneath the hammer—especially if they happened to have been barefooted ur-

Many of these same readers would now be equally charmed and astonished should they visit the extensive works of the Putnam Nail Company at Neponset, Mass., and see a large room full of wonderful machines, each performing automatically the same work done by the blacksmith, but with far greater precision and a hundred times greater rapidity. The nail rods are coiled upon reels, from which they are fed into the machines automatically, passing through jets of burning gas, which heats the iron uniformly to a welding heat, in which condition the hammers take it and forge it into the required shape and cut it off. Each machine turns out about sixty nails per minute. These nails are then thrown into a bath of cold water, no acids being used, to remove the scale, and from this into a tumbler or revolving cylinder that wears them smooth. They are then passed through another machine that strikes the blacksmith's last blow, and gives to the points a bevel to turn them outward when driven into the horse's hoof. This ingenious machinery, the patents on which are controlled by this company, gives them an immense advantage over all competitors by enabling them to produce, at low cost, a hot-forged and hammer-pointed nail equal in every particular, and superior in some respects, to the best hand-made nail a blacksmith can produce. This company has already attained a world wide reputation, and their nails are used and recommended by the most noted farriers in foreign lands, as shown by numerous testimonials.

While good nails may be made by other machines and different processes, there is always a liability, which no owner of a valuable horse would willingly take if he knew the danger, of iron becoming laminated, cracked or splintered by rolling and punching or shearing, so that when a nail is driven into the hard and horny substance of a horse's hoof it will split, and a sliver may penetrate to the quick, causing serious damage, as shown by the following cuts representing nails said to have been taken



from the hoofs of horses in different parts of the country.

Out of the six tons a day produced by the machines and over three hundred operatives of the Putnam Nail Company, probably not one nail will ever be found to split or crack in driving, as there never has been since the organization of the company in 1859. Persons interested in the care and protection of horses' feet will do well to call on Mr. Whitmarsh, the genial manager at the works, who will take pleasure in showing them through the factory and explaining the process of manufacture.