Annealing Iron and Steel Wire.—Cast-iron Wheels.

Fish-hook making, in cast-iron vessels, with covers fitted closely to them, to exclude the air. These vessels were uniformly heated in a cylindrical furnace of brick-work, covered with a dome, and having a hole in the centre of the dome, to serve as a chimney. The furnace was strengthened by a number of projecting buttresses, which were built around it, and by iron chains surrounding the brick-work. The fire was made upon a circular grate, which ran all round the inside of the furnace, and was supported upon walls; air-holes to supply the fire being also made at regular distances through the external wall of the furnace. A door of brick-work was built up, after the coal fire had been lighted, and the vessels containing the steel-wire, had been deposited in the furnace; this of course, was taken down again after the annealing was performed, and the furnace had become sufficiently cool to remove the vessels.

In Cadell's "Journey to Carniola, Italy, and France, in the years 1817 and 1818," he says, vol. i. page 245, that in the iron wire works, near to Pistoja, in Italy, "after the wire has been drawn, it is hard; and, in order to restore its flexibility, it must be heated, and suffer to cool, gradually. For this process of annealing, large cast-iron vessels are employed, four feet high, in form of a truncated cone, with the base uppermost. The wire is put into the vessels, which are then covered and luted tight. The vessel is surrounded by a brick-wall, at some distance from its sides, and burning charcoal is put in, between the vessel and the wall. These cast-iron vessels are made at the furnaces in the Maremma, and they are almost the only articles of cast-iron I observed in Tuscany."

In our first volume, page 423, we mentioned, that Mr. Corcoran, of Mark-fane, wire weaver, inclosed his wire in closed cast-iron vessels, surrounded with ground flint, and then exposed them to a red-heat, in proper furnaces. And that, although the wire thus became quite flexible and pliant, yet it was as bright as though it had not been heated at all.

Remarks by the Editor.—We had been so long familiar with the foregoing process, that we had supposed it to be the universal practice in wire manufactories. The Messrs. Sellers of this city, have used it for many years; it was also followed by Messrs. White & Hazard, at their wire drawing manufactory, at the falls of Schuylkill, and by many other persons in this country; but as it may be new and useful to some persons who work in wire, we have re-published it.

On the proper Method of casting the Rims, or Feltoes, and the Naves of Wheels in cast-iron, and affixing wrought-iron spokes in them.—By Jacob Perkins, Esq.

In the ordinary method of doing this, the wrought-iron spokes are laid in their places, in the sand moulds, and the melted cast-iron is
poured in at the same time, both to form the rim, and the nave. The consequence of this evil practice, is, that the rim, in cooling, shrinks; and as the spokes are fixed immovably in the nave, they cannot move inwards as they ought to do, and the rim, of course, breaks.

Now, in order to avoid this misfortune, we have only to cast the rim first, and allow it to become quite cold, whilst the spokes are at liberty to move in the mould, during the time the rim is cooling; the nave may then be cast, and the wheel will remain perfectly sound.

Account of an Improved Felt Polisher for the Lathe, invented by the late Mr. Wm. Allen. By Thomas Gill, Esq.

Mr. Allen, an excellent workman in the manufacturing of ivory, and tortoise-shell, into a great variety of beautiful articles, such as tea-caddies, snuff-boxes, &c. had constant occasion to give a fine polish to his works, in finishing them. He generally employed polishers made of felt, with the finest rotten-stone and oil, as usual, for this purpose; but in those used in the lathe, and which were of a narrow cylindrical form, with their rims and peripheries covered with felt, by gluing a band of it upon them, he found great inconvenience, to arise from the gap left between the ends of the felt, occasionally receiving into it particles of gritty matters which continually arose, and caused scratches in his works, which he had great difficulty in afterwards removing. After suffering this inconvenience for years, he at length fortunately hit upon a method of clothing his polishers with entire rings of felt, free from the above evil, by employing the sides of the crowns of hats for that purpose. One hat-crown thus cut into rings, affording the material for clothing several polishers.

He had, indeed, great reason to congratulate himself upon this fortunate discovery; and when we consider how many artizans are under the continual necessity of employing similar polishers, in the finishing of their different works, we conceive that we are rendering them an essential service, in making this communication.—

Notice of some Showers of Fishes, in various places in Scotland; and of Shells in Ireland.

Shower of Fishes in Argyleshire.—The rare occurrence of such falls, renders them so remarkable, as to be remembered after long intervals of time, and even after every circumstance connected with them is forgotten. When any phenomenon is not considered in its relation to any particular cause, few will attend to its possible relations to preceding events; and fewer still will esteem it of such importance, as to treasure up the observations which they might have happened to make, even although these might be of great importance, in illustrating the nature, and causes, of the circumstance observed.