

New Inventions.

Recent Foreign Inventions.

Great Cement Wash.—A patent has been obtained by J. B. Daines, London, for a cement solution for coating the surfaces of stone and plaster, and which appears to be excellent for this purpose. It consists of 8 parts, by weight, of linseed or other oil, in which 1 part, by weight, of the flour of sulphur is dissolved. The oil and sulphur are placed in a stoneware or iron vessel, and heated to about 270° in a sand bath, when the sulphur dissolves. It is laid on with a brush, and is stated to be a protective against damp. If it effects the object of protecting stone and plaster surfaces from damp, it is a most useful discovery.

Water-Proofing Oil.—A patent has also been obtained by Alex. Parkes, of Bury Port, Wales, for a preparation of oils similar in its nature to the improvement of Mr. Daines.—He treats oils with the chloride of sulphur, which changes their character, rendering them similar to vulcanized india rubber, and insoluble in mineral naphtha and sulphuret of carbon. He heats about 2 parts, by weight, of the chloride of sulphur with 8 parts, by weight, of oil, up to about 250°, when the combination of the two is effected. This vulcanized oil, it is stated, can be mixed with gutta percha or india rubber, to cheapen the manufactured articles made from these materials. This, apparently, is also an important invention.

Mr. Parkes has also taken out a patent for a varnish made of gun cotton dissolved in alcohol, or any solvent of gun cotton. This varnish is transparent, and he applies it to coat silk, sewing cotton, thread, leather, plaster, wood, &c., to render them water-proof. As gun cotton dissolved in chloroform is a well-known varnish, we are at a loss to conceive how Mr. Parkes' varnish can be considered a new invention.

A Choking and Blinding Bridle for Fiery Horses.—A patent has been secured by A. E. & C. L. Guillemere, London, for an effectual method of taking the wind out of a runaway horse. Two goggles are adjusted to rods connected with the bridle, also two plates on the ends of bars, connected with the bridle—the goggles to close the eyes, and the plates to close the nostrils of a fiery horse when he runs away, by simply pulling a thong connected with the reins. This invention is a genuine eye-closer and wind-stopper, and will certainly bring the most fiery "Rosinante to a dead stand-still in a twinkling. The eye goggles are an old French invention, and the nostril-closers are a recent American invention; Messrs. Guillemere have combined these two inventions, and have produced an apparatus, which, with the addition of another simple device applied to the horse's rear, which we choose not to name, would render it perfect.

Improved Fertilizer.—R. P. Forlong, of Bristol, Eng., has patented a new manufacture of manure, which is stated not only to be a fertilizer, but capable of protecting the young shoots of plants from the turnip fly, and vermin. The patentee takes bone dust and the flour of sulphur, and mixes them together in equal quantities, by weight. He then subjects them to just such a heat in a furnace as will fuse the sulphur, and cause a thorough combination of the materials. When this effect is obtained, he removes the compound and sets it aside to cool and solidify. After this it is ground fine between a pair of burr stones. The richness of this fertilizer is reduced for use by mixing it with an equal weight of gypsum. It is applied in the usual way—like guano. From this description, any farmer who has a small grinding mill will be able to make this new fertilizer, and give it a fair trial.

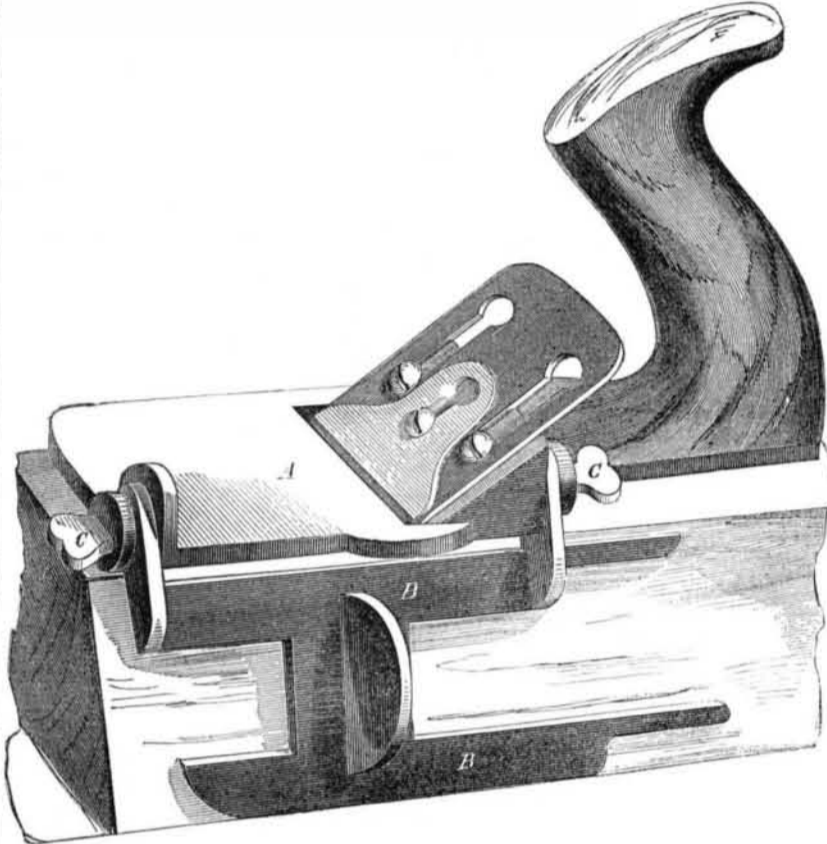
Shirts.—Henry Woodron, of London, has taken it into his head to institute a radical reform in shirt-making, and has taken out a patent for his invention. From time immemorial the sleeves of shirts have only been made of such a length as to terminate below the shoulder, and it requires a shoulder strap

to unite them with the collar. He cuts the sleeves in such a manner that the tops of them reach to, and are sewed to the collar-band direct, and thus he dispenses with the common shoulder straps. He also removes another ancient shirt land-mark, by making them in such a manner that they can be put on and taken off like a coat. The bosom is buttoned at the one side, which is not a new idea.

Rice Starch.—T. Roberts and J. Dale, of Manchester, Eng., have secured a patent for

manufacturing rice starch without the use of an alkali to separate the gluten, as has been the previous practice, in rice starch making. They take rice in the grain, but do not grind it in the usual way. They first wash and soak it in water until it is quite soft, and then grind it into a meal paste. It is then placed in heaps until it heats and ferments, by which action the gluten and starch are separated. When boiled in water the mass yields a paste equal in quality to common rice starch.

IMPROVED BEVEL PLANE.



Improved Bevel Plane.

Our cut shows an improvement in carpenter's planes for use on bevel work, patented by Mr. Jacob Devoe, No. 5 Sixth Avenue, New York City.

The face or stock of the plane, A, is composed of a metal plate, broader in front than behind; the rear part is just wide enough to fit the bottom part of the handle. The cutting irons are arranged in the usual manner.

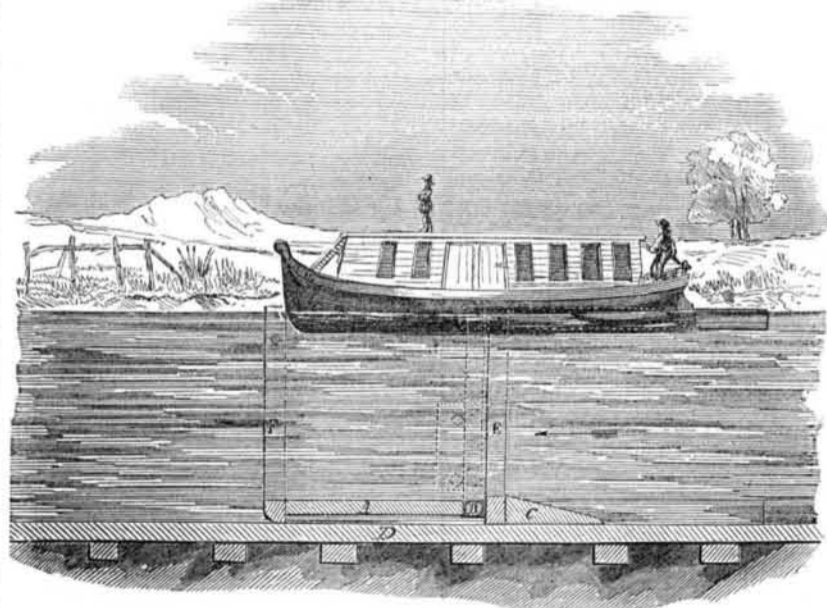
The improvement consists in the adjustable leaf, B, which is attached and set to a given angle by means of the thumb screws, C C. Whenever it is desired to plane the stuff on a

bevel, or to change the bevel, it is only necessary to alter the position of leaf, B. The use of a square is thus dispensed with, and much time saved.

Bevel planes are generally encumbered with hinges, screws, and circular slots, rendering them inconvenient in use, expensive in manufacture, &c. But this improvement is perfectly simple, easily made, and instantly altered.

The advantage of the metallic stock over wood, for certain species of work, is known to all carpenters. Address or apply to the inventor for further information.

IMPROVEMENT IN TIDE GATES.



New Tidal Flood Gate.

In many parts of the country, especially on the sea-board, advantage is taken of the rise and fall of tides to obtain an economical motive power for grinding grain, and other purposes. Creeks are generally selected, across which dams are thrown, having self-acting flood gates so arranged that when the tide

rises the water enters behind the dam; but when the tide falls the gates close, and a pond or reservoir of water is obtained to drive the wheel.

The tidal gates commonly used are, for the most part, hinged at the top or on the sides. Hinged at the top they are objectionable, because they require a log or beam to be thrown

across the sluice, and thus all navigation of the creek is cut off. Drift stuff and ice also collect against the gate, and create much trouble.

Gates hinged at the sides are objectionable, because, after a short time, they sag, and bear on the bottom of the flume, and become inoperative. The ice, also, collects near their upper hinges, and occasionally damages them.

The improvement illustrated in our cut consists in hinging the gate at the bottom, so that when the tide rises the gate falls flat on its face, and leaves the creek open and clear for navigation.

A is the gate, hinged at B to the block C on the bottom of the flume, D. The water running in direction of the arrow keeps the gate down. When the current changes, the gate will rise by its own buoyancy into the perpendicular position indicated by A', and the dotted lines. E is a cleat, to support the gate when raised upright and pressed by the tide. F is a button for holding down the gate when desired.

This gate is said to cost only about one-half as much as the ordinary kind, is not liable to leak, is less obstructed by ice, leaves navigation free, &c.

It may be used to great advantage as a back or guard gate, being, in such case, operated by windlass and chain. It may also be employed, in the same manner, for the upper gate of canal locks. In all cases it may be operated quickly and easily.

This invention was patented April 8th, 1856, by Mr. George W. Flanders, Lynn, Mass., from whom further information can be obtained.

Engravings.

MESSRS. EDITORS—Having recently patented a valuable improvement in steam engines, I desire to have my invention illustrated in the SCIENTIFIC AMERICAN. But I am ignorant of the method of procedure in such cases. How much do you charge for publishing engravings? E. E.

In reply to our correspondent and to hundreds of other inquirers upon the same subject, we would state that engravings of new inventions are published in the SCIENTIFIC AMERICAN free of charge. Our columns are at all times open to the circulation of intelligence concerning improvements; and if those who are interested in such things fail to avail themselves of the opportunity it is their own fault.

All we require is that patentees shall furnish the cuts at their own cost, that they shall be new, well done, properly lettered, and so drawn as to show the invention clearly, and of proper size.

We have, undoubtedly, better facilities for getting up mechanical engravings than any concern in the country, for we keep a corps of designers and engravers whose sole business it is to draw and engrave machinery. Inventors will, therefore, find it to their interest to employ our artists when they can, as they will then be sure of having their work executed in the most artistic manner, and under our own supervision.

Our charge for such work will be as low as any, of equal workmanship, and when done will be sure to answer our requirements for publishing.

Second-hand engravings are never published in the SCIENTIFIC AMERICAN; nor are inventions illustrated in our columns which have been published in other journals; therefore the reader is always assured, as they behold the engravings and read the descriptions, that they have something new.

Engravings of stoves we ignore from our columns entirely, unless they contain some feature entirely different from what already exists, which few at the present day do.

Our paper enjoys a very wide circulation, being, probably, read every week by not less than one hundred thousand persons, and is, beyond all doubt, the best medium extant for bringing new inventions before the public.

Prof. Morse, the inventor of the American Electro Magnetic Telegraph, left this city on a visit to Europe, on Saturday last week? It is stated that he visits Europe to assist in some experiments in submarine telegraphing.