LATE FOREIGN INVENTIONS.

Treating Oils for Paint and Varnish.—Drying oils (such as linseed which is employed for painting) become semi-resinous by absorbing oxygen when exposed to the air. In order to render them quick-drying, however, they require to be boiled for a considerable period, and some oxydizing agent is incorporated with them. "Boiled oil" which is prepared for painting is very troublesome to manufacture, and the process is quite tedious. An improved mode of treating such oil for making varnishes and for painting has lately been patented by F. Walton, of Denton, England. He takes clear linseed oil, mixes it with about five per cent of acetate of lead, then puts it into a vessel where it is forced by a pump into a great number of small streams, like a shower; then it meets with a current of warm, dry air raised to the temperature of steam heat, when it rapidly absorbs oxygen and acquires the same drying quality of boiled oil, but is much clearer in color and superior for most purposes. Sometimes the air is heated as high as 550° Fah., in order to facilitate the operations.

Bank Paper and Ink for Writing.—A peculiar preparation of paper and ink has lately been patented by J. A. Ballande, of Paris. He introduces into paper pulp about 30 per cent of proto-chloride of mercury (calomel), and the paper is ready for use. An ink is now made with 1,000 grains of alum, 50 grains of salammoniac and 50 grains hyposulphite of soda, mixed with a little gum mucilage. This ink will not become black unless used with paper prepared in the above manner. A dark color is produced when the hyposulphite of soda combines with the calomel; but this would soon fade were it not for the alum and alkaline salt in the ink—these fix it. No chemical means known to M. Ballande can remove the writing produced in this manner, without altering the texture of the paper. It is the best means believed to be yet discovered for preventing the alteration of important signatures, &c., in bank bills and other valuable papers. Any white paper may be sponged on the surface with a dilute solution of calomel, then dried, and is ready for use with the above ink; but the most perfect way of preparing the paper is undoubtedly in the pulp.

Cheap Bolting Cloths.—In order to supersede the expensive silk bolting cloths employed for bolting flour, by some cheaper and equally as good a material, a patent has been taken out by I. and L. Howard, of Bethnal Green, London, for a fabric made of woven glazed cotton thread. Common glazed or sewing cotton is woven in a loom to make bolting cloths of the same capacity as those made of other material. These cloths may be woven in the cylindrical form in which they are employed as bolts, or they may be made into a flat web in a common loom, and afterward cut out into the proper form. When such bolting cloth is made, it is dressed with a solution made with one pound of gum dissolved in a gallon of water. When dry, it is fit for use, and may also be employed for sieves as a cheap and very enduring fabric to supersede haircloth.

Coating Iron with India-rubber.—A peculiar method of coating iron with india-rubber and vulcanizing it has been patented by T. B. Daft, of London, whereby plates of iron so treated may be employed for shipbuilding, and have a most permanent and impermeable surface. The surface of the iron is first scoured bright with dilute sulphuric acid, sand and water; then sulphurized india-rubber is applied to the surface, and all the air is excluded. For this purpose, two thin sheets —one on each side—of india-rubber are applied to a sheet of iron four feet by fourteen inches, and the edges of them brought close together so as to seal up the iron between them. Before the sealing action is performed, however, all the air is excluded under the sheets by commencing at the middle and rolling them toward the edges, when the sheets are then united together. A pile of sheets being thus prepared, they are placed with a sheet of common tinned iron between each pair, then cramped and pressed tightly together and set into the vulcanizing chamber where they are subjected to high pressure steam, and the india-rubber thus becomes most permanently attached to the iron. Other articles of iron besides sheets may be coated with vulcanized india-rubber by following the above directions, with some modifications, which will easily suggest themselves.

Silicate of Soda Soap.—A patent has been taken out by Wm. Gossage, of Widnes, England, for making a strong alkaline soap mixed with the silicate of soda (soluble quartz). Two tuns of rosin and one of palm oil are melted in a suitable vessel, and heated to 180° Fah. In another vessel, an alkaline mixture of two tuns of silicate of soda solution and twenty-five hundred weight solution of caustic soda, containing 30 per cent of real soda. This mixture is then heated to 210° Fah. in a large iron vessel, and the rosin and palm oil mixture is introduced. A strong boiling action immediately ensues, a thorough mixture of all the substances is soon effected, and a strong detergent soap produced. This soap is allowed to remain for about twelve hours in the vessel before it is transferred to the frames to become solid by cooling.

New Material for Pencils.—Some black lead in powder mixed with india-rubber in solution, a small quantity of lampblack and some finely powdered charcoal, are incorporated together and subjected to great pressure. This forces out all the moisture and reduces the mixture to a hard block, which may be subdivided and cut out into suitable lengths for pencils. A patent has been taken out for this pencil composition by R. J. Cole, of London.

Pipe Clay Soap.—L. Rowbottom and H. Bolton, of Penketh, England, have obtained a patent for composite soap composed of caustic potash and ammonia made into a paste with pipe clay, and mixed with any of the common soaps, then formed into cakes. The patentees claim superior cleansing properties for this soap.

THE $1,000 PRIZE.

A WORD FROM MR. HYATT ABOUT THAT FLYING MACHINE.

MESSRS. EDITORS:—Allow me a small space in your paper to briefly answer a large number of your readers who write to ask of me money for their experiments. My apology for not sooner replying to these friends is that I have been absent in Kansas, engaged in behalf of 30,000 starving people there.

Now, as to the flying machine: I can advance no money for experiments, happy as I should be to oblige the many ingenious men, each of whom is perfectly sure that he alone of all the world has the exact method to do it.

I think I know how the thing can be done; and if I spend money in experiments, it will be upon my own plan; but I have too much else to see to at present. Nevertheless, I give the other inventors fair warning that, unless they get up towards the moon by September next, I shall "go in" myself. THADDEUS HYATT.

New York, November 12, 1860.

ELECTRICITY IN MAKING IRON.

MESSRS. EDITORS:—In regard to the practical working of my new iron refining process, now being patented here and in Europe, I can give you the following details:—

It is well known that there is no chemical compound existing which is able to withstand the decomposing power of electricity. Affinity of matter is modified, given and destroyed by electric action, and to this mighty power we must therefore look as the only ever-effective decomposing, recomposing and purifying agent. It is upon electric action (produced in a manner different from any previously employed) that my electric process is based. Not satisfied with my successful experiments on a small scale, I have now tested my process on a larger scale, on pig iron as well as cast iron, and the results have been beyond my expectation. For instance, I took old scrap iron (pieces of old burned out cast iron stoves and such iron as is sold here for from $10 to $12 per tun), and subjecting this iron without any admixture of cinders or pig iron to my process, I produced, in one single heat, malleable iron of such a nature that it was at once rolled into nail plates, a sample of which, as well as of the nails cut from the same, you will please find here inclosed. My apparatus is more especially adapted for puddling furnaces, and the cost of one, doing the work for eight or ten puddling furnaces, is not more than $500. The expense of keeping it at work is not more than 50 cents per day; the other extra expenses amounting to $1 50 per tun. No re-heating being required, no change of furnace, and the machinery so simple that every common workman is able to conduct the process, I see no reason why our iron manufacturers should not adopt at once this new and simple method. I am now making arrangements for the introduction of my process in a large blast furnace for the purpose of making malleable iron or steel directly from the ore, as also in a large nail manufacturing establishment, and I shall be pleased if you accept an invitation to see the process with your own eyes.

A. L. FLEURY, Chemist,
No. 543 Broadway.

New York, November 16, 1860.

MIND YOUR I's AND J's.

MESSRS. EDITORS:—I wish to call the attention of your numerous readers, especially inventors, their agents or attorneys, and writers generally, to the fact that a distinction between the script letters, I and J, is as essentially necessary as the distinction between 6 and 9. It is a mark of great carelessness or slovenliness in writing, to substitute, from mere caprice or habit, the one for the other, raising, as it invariably does, suspicion as to the culture or scholarship of such writer. This lazy substitution of letters often leads to misunderstandings and delays in specifications, deeds, wills, and other papers in script, as it often does not correspond with the more carefully printed letters in the drawings. It often causes delay, and sometimes bitter disputes, when, in the address to individuals, I is made to stand for Isaac, and also for James, Ira or John. Writing Ian for January, Iune for June, Ino. for John, &c., is not often misapprehended; but sometimes, when the context is obscure, the proper writing of this letter would determine the sense, and not leave us to speculate whether I stands for June, Judge, John, Isaac, Indigo or Iron.

Where initials are used for abbreviation, writers have no right to sacrifice the correct execution of a letter to the whim of what is vulgarly deemed taste or flourish, by not allowing the letter J to drop properly below the line of writing, its distinguishing feature, and which is the unalterable form in standard script letter.

The fault here cited has, in part, obtained from the old but false and whimsical mode practiced by not the best publishers and printers, of omitting, in our spelling books, the letter I or J, thereby leading children to think that the two letters are synonymous, than which a more unscholarly superstition never haunted the English alphabet.

It is a principle in abbreviations that the mode adopted be in all cases unmistakable; but when it happens, as it frequently does, that ignorance tramples upon this principle, and slipshod caprice adds to this abbreviation a leading letter that is undeniably wrong, the communication of ideas is utterly impossible. B.

Washington, D. C., November 7, 1860.

AGRICULTURAL INVENTIONS CALLED FOR.

MESSRS. EDITORS:—Having been for some time a constant reader of your valuable paper, I would suggest to the inventive genius of the country that there is a vast expanse as yet unexplored, awaiting the achievement of man. I am a farmer, have reaping and thrashing machines, and many other things that are really labor-saving implements; but yet we lack in some things. We want a machine to cock hay, drawn by horses in such position that, when at work, they will not walk on the hay. We also want a machine to table broom corn. It will need to be drawn by one horse to walk between two rows; then if any lies down it must stand it upright, so that the stalks may be broken at the right angle and hight, the table to hold the brush, as it is cut by the workmen, following, and put on the table to dry. This machine might be constructed mostly of wood, and come within the means of all broom corn growers. There are many men that raise their 100 tuns annually, and tabling is a very laborious back-aching business. An average day's work now is an acre, when, with a machine, a man and horse might table 10 acres per day easily.

P. W.

Romulusville, N. Y., November 10, 1850.

WE have the authority of Professor Agassiz for the assertion that a grasshopper's organs of hearing are in his legs.