be taken to prevent the madder from undergoing a second fermentation. The madder in the vessel c, after being washed and precipitated, is just as good as the other. We might, perhaps, employ the first liquor, separated from the fermented madders, with advantage, in the preparation of the heated vessels used in making indigo, or woad, as well as in the improvement of the madder. D. B. F.

[*Von Dingler's Polytec. Jour.*

Remarks by the Editor of the Technological Repository.

The Editor was some time since favoured by Dr. Dingler with some exquisitely beautiful specimens of calico-printing, produced in a manufactory in which he is concerned, and chiefly by the *discharging process*, now coming into such universal employment amongst us. The reds, pinks, and purples, were exceedingly pure and brilliant, and might possibly have been produced by treating the madder upon a plan similar to the above. At any rate, coming from such a quarter, and from so intelligent a judge as Dr. Dingler, this communication is entitled to the highest consideration amongst our dyers and calico-printers. The beautiful *self-green* produced from the chromic acid was first noticed by the Editor amongst these specimens.

Additional particulars of Mr. Perkins's High Pressure Steam Engine. By JOHN MARCH, Esq.

Greenwich, July 12, 1837.

SIR,—Having very recently witnessed at St. Catherine's Dock, London, the extraordinary power of Mr. Jacob Perkins's high-pressure, single-stroke, safety engine, I have the pleasure of stating a few important facts, reserving for myself a future representation of its additional advantages, my present observations having principally in view to explain some points which seem to have been much misunderstood, or, if observed, not to have been sufficiently appreciated. Indeed, it appears that the observations which the inventor has confidently made, long before the engine was first proved, have been nearly treated as mere assumptions. Any information, therefore, given to the public on so interesting a subject, will, it is presumed, prove acceptable.

The most important fact to be considered is the *perfect safety* of Mr. Perkins's *steam generators*, which may now with truth be declared to have wholly superseded the necessity of using boilers of any description, to which, however well made, must be attributed the fatal accidents so frequently recorded.

From calculations made with very proximate accuracy, it evidently appeared to me, that the quantity of water injected per minute was 266 cubic inches, being less than one gallon by 16-288ths, or 1-18th.

It becomes necessary to state, that the work to which Mr. Perkins's single engine was applied, was to pump water out of the dock

now constructing; to perform which, two double engines, on the principle of Boulton and Watt, are used; one of sixteen, the other of ten horse power. As the two engines required some repairs, they were stopped, and that of Mr. Perkins was applied to perform the same work, which it has most successfully effected, by keeping the water clear; thus doing, alone, a work equal to that of the two engines; that is to say, the work of 26 horses' power. Mr. Perkins's engine, in performing this, worked with a pressure of 35 atmospheres (equal, according to some, to 525lbs., but, according to Doctor Wollaston's more correct mean, equal to 490lbs. to the square inch), with a consumption, per hour, of only one bushel of a mixture of coke and coal; and the constant rate of the engine was sixty twenty-inch strokes per minute. The coke used, far exceeded the proportion of Newcastle coal. Now, on a reference to Mr. Watt's calculation, the quantity of coal used for a 26-horse power steam-engine per hour, is three bushels; and as we may fairly conclude that this single engine of Mr. Perkins performed the duty of two engines, together equal to 26 horses; so the reduction of two-thirds of the fuel may, by a parity of reasoning, prove to be a point of the highest importance; the advantage is still further increased through the use of coke. Indeed, from the peculiar construction of Mr. Perkins's generators, coke seems much better adapted than coal, which expends itself too readily, and before the caloric can have its full action. The smoke which is observed to issue from the chimney of most steam-engines, at every fresh supply of coals, is another evil, which will be obviated by the manner in which Mr. Perkins's generators are fixed, they acting in a great measure as smoke consumers.

I most attentively made my observations during the trial of this engine; and some share of experience enables me to say, that for an experiment (for it is only an experimental engine), it may be fairly pronounced to be as conclusive and satisfactory as any that has ever been made.

I am, sir, your most obedient servant,

JOHN MARCH.

To T. GILL, Esq.

[*Tech. Rep.*

Note by the Editor.—We have not received any late, direct information from Mr. Perkins on the subject of his engine, but have carefully selected whatever the public Journals have offered, the whole of which has been of a favourable character. The preceding account, is of nearly the same date with those given in our last number, and serves to corroborate them. We, however, have conversed with a gentleman just arrived from London, and whose judgment upon such subjects is second to that of very few persons, and who avers, that there has not yet been any fair test of the operation of the engine, and that it will eventually be found to fall very far short of the anticipations of its ingenious projector. We shall continue to present every thing which bears directly upon the question, until it is put completely at rest.