soft and moist substances, a point admitting of experimental proof. "In order" to exhibit the mode ot filling, and the formation of different crystals in the same fracture, place a mass of clay-slate between the poles of a battery, immersed in a metallic solution; it will be seen that the currents pass only in the direction of the cleavage. If the slate be broken across, so as to represent veins or fractures, crystals will be observed to grow in each fracture transversely; that is, in the direction of the cleavage planes."

#### TO CORRESPONDENTS.

"F. C. W. of Illinois."-We do not know of the application of the escape steam from a common to propel a rotary engine. But it could not be patented as the principle is only involved in this, and the same principle is applied to Wolfe's engines. But would it not be cheaper to use the steam expansively, having a larger cylinder to the common engine, than to use the two ir. combination? We think it would. Your latter plan is entirely new and ingenious. We do not know of any thing of the kind in existence You must judge of the economy, and decide whether a patent would be profitable to you or not It certainly is original.

"J M. of Pa"-We are glad to receive (Post Paid) communications, and unless we think the writer in an error as regards his invention, we make no charge for publishing

"H. A. of N. Y."-We have answered you to Easton Village.

"W. H. R. of West Florida."-No. 49 last volume, Sci. American, will give you a good idea of the employment of circular saws for cutting logs. Explanatory cuts accompany the description. Two three feet saws will be required to saw a log three feet in diameter. The most recent work on the mechanic improvements you speak of, is Holtzapffell's, price \$10,50 cents. A good horse power will cost from 50 to 60 dollars. A good work on Grist Mills is not to be had. Scott's Millwright's Assistant is the best, and it costs 22 dollars.

"B. D. S. of Va."-It will be very easy to try your experiment on a small scale, but you may depend upon it that it will not realize the least beneficial results The pressure of water is equal upon all sides, and the resistance to be overcome must be by a momentum communicated to the machine .-No machine has power in itself but that which has life.

"J. P. of Mass."-The round rail of the bedstead is preferred for cheapness, because it is turned off very rapidly. By proper mertices in the round rail for slats, that could be taken out and put in in a few seconds, a more convenient bedstead might be made than any now in use. Iron bedsteads are fast superseding wooden ones, and yours is far superior to many in use.

"W. R. G. of N. Y."-You will have received our answer by mail, ere this time.

"S. V. of N. Y."-Use a little oxalic acid, and your iron spots will quickly diappear.

"G. R. of Pa."-Robert Fulton was a native of your own State. There is no truth in the statement that Henry Bell was employed on Fulton's first Boat. "Some books are lies from beginning to end."

"J. C. of Boston."-We have received yours and will proceed with all despatch in the business. Your paper has been regularly

"S. M. of R. I."-Put on a stronger spring to your cutter, and we warrant you a correct operation.

"IWG Pa "-The meaning of a sne cification is, that others may be taught to do the same thing and to distinguish the invention from others. There must be no false description, or the patent is void. The great fault with inventors is, that they wish to cover too much.

"J. B. of Ohio."-In the Patent list received from the Patent Office Mr. Blage of Sharon, Ohio, was the name for the invention of artificial slates.

"W. L. of Ohio"-You did not pay your postage, so we cannot give you the information you desire. Unpaid letters receive no attention at this office.

" A. T. of R. I"-Your method of preserving coffins is new and could be patented. It might prove valuable—but give it a good trial first. Send us a drawing of your "Bevel Try-square," as we do not exactly understand

"R. B. of N. Y."-We cannot procure for you a work devoted exclusively to Tracing Minerals, but can furnish you with various kinds of books on Mineralogy.

"W. S. B. & J. N. of N. Y."-Your money was duly received at this office, but by mistake your names were entered under Newark, Ohio. All right now.

### St. Louis Saturday Evening Post.

It is impossible for us to do justice to all our valuable exchanges in the way of noticing but when one comes to us that is exceedingly meritorious, we with pleasure recur to it. Our list of exchanges at present probably exceeds in number that of any other weekly journal. We have dailies, semi-weeklies, weeklies and monthlies, all of which comprise over 700 different publications and from almost every part of the globe. Among our Southern exchanges we regard the Saturday Evening Post published at St. Louis and edited by W. F. Chace, as one of the most interesting and ably conducted journals that comes to our sanctum-

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