Mutual Loan Association for Inventors.

MESSRS. EDITORS—I would call your attention to the subject of forming a Mutual Loan Fund Association, for the benefit of the poor inventors who make valuable improvements or inventions, and new and useful machines, but have not the means of securing the same and bringing them before the public, so that the inventor himself may reap his just reward for his arduous toil. I am well aware that this is not often the case, as the poor hard-working mechanics are, in a great many instances, the inventors of the very best machines or improvements we have in use, who receive little or no benefit from their inventions. But it is the speculators who buy their inventions for a small sum and realize a fortune in a short time. This should not be so; something should be done for the benefit of this class of inventors. I will leave the subject at present, hoping to hear something from your able correspondents on the same through the columns of your valuable paper. S. W.

Woburn, Mass.

[The writer of the above, in an additional note, states that he is the inventor of a valuable improvement, and intimates that if such an association as the above existed he would be a candidate for its consideration; that he has a family to support, and his means are too small to enable him properly to patent his invention, &c.

In our opinion, the time has gone by when "poor inventors" are *obliged* to sell their inventions for a song to speculators who realize millions therefrom. There are some inventors, we admit, who are fools enough to do this, but they lack common sense. They are just as likely to throw away a treasure in money, or to kill the golden-egged goose, if in their possession, as to relinquish for nothing their title to a valuable invention.

Some inventors keep their secrets locked up fast within their own breasts, and then grumble because they have not at command all the money they want. They seem to think that Providence has dealt unfairly in not creating them millionaires as well as geniuses.

Other inventors are very indolent, and live from one year's end to another without making any effort to let people know what they have done, or without *trying* to find aid.

Then there is a class of perpetual-motionists, and people who re-invent old and worthless contrivances; always insisting, however, that they have discovered the veritable philosophers' stone. Such persons, if they fail to draw others into their foolish schemes, become eloquent on the grievances of "poor inventors." Well they may, their inventions are "poor" as well as their purses.

So far as our observation goes, inventors have little cause for complaint on account of scarcity of material aid. No such scarcity exists. On the contrary, there is a great and growing demand for *good* inventions of all kinds; if proper steps are taken, there is generally no difficulty in obtaining abundant assistance to develope them. But to find aid, inventors must cast about a little, and if necessary make active exertions. They ought not to expect that men of means will take a greater interest in the success of an invention than they do themselves.

We should be glad to see a Loan Association established, as proposed by our correspondent, if it could succeed or do any good. But we fear that such a concern would be obliged to discriminate more closely than do capitalists, and never touch an invention unless its excellence was established beyond peradventure. "Poor inventors" would therefore still continue to suffer quite as much as they do at present.

Safe Method of Preparing Laughing Gas.

Noticing in a number of the last volume of the SCIENTIFIC AMERICAN some in tructions in regard to the preparation of Laughing Gas. and fearing injurious results might, under some circumstances, be anticipated from an attempt by the novice, I would present the following, as successfully and safely adopted by myself several years since.

Prepare a flask by fitting to it a glass tube suitably bent. Into this flask put two or three ounces of nitrate ammonia. For a gas holder, fit to a large stone jug a cork pierced with two apertures by a burning iron. Into one of the apertures put a tube of glass or tin so that it shall come within half an inch of the bottom of the jug when the cork is put in its place, and let the other orifice be stopped with another cork. For a pneumatic tub take a common wash tub and fit to it a strip of board passing through the middle, and about eight inches from the top, so that when the tub is filled with water the board will be covered. The board must have a hole through it, over which the mouth of the jug is to be set. Having prepared things as before directed, fill the jug with water and invert it over the aperture of the board, bend the tube belonging to the flask so that it will just enter the mouth of the jug, and setting the flask on the lamp stand apply a very gentle heat. The salt will soon melt and gas be extricated in abundance.

When the jug is nearly full—which can be told by the noise of the bubbles—slip the hand under its mouth and set it upright, then immediately put the cork with the tube through it in its place. Having prepared the gas, let it stand over the water that remains in the jug for an hour or two, shaking it occasionally, so that if it should contain any nitrous gas it may be absorbed.

To respire the gas prepare a bladder or oiled silk bag by attaching to it a tube which exactly fits the second aperture in the cork, and having squeezed all the air out of the bladder or bag pass in the tube. Next pour such a quantity of water into the jug through the long tube as you wish to obtain of the gas. The gas cannot escape through the long tube because its lower end is immersed in the water—it is therefore forced into the bladder or bag. When this is full withdraw the tube from the jug, and holding the nose with one hand, with the other apply the tube to the lips and respire it backwards and forwards from the bladder to the lungs. The lungs must be first exhausted of air by breathing out before the gas is inspired. The quantity breathed is from two to four or even eight quarts. H.

Hartford, Conn.

Double and Single Steam Engines.

MESSRS. EDITORS—I am running machinery from a line of shafting sixty feet in length, driven by a single cylinder; the shafting has six couplings, and I find them much worn and loosened after one season's running—an effect I attribute to the unsteady motion of the engine while passing the "dead points." A pair of burrs are also driven by the same engine, and a similar effect is produced, as a set of cogs in the sub wheel have been worn out in three months, which I think would not be the case were the power furnished by a water wheel, or two steam cylinders.

If the reason assigned be the true one, the evils can be overcome partially, by using very heavy fly wheels, and much quicker motion of the engine; but the true remedy, in my estimation, is two cylinders working on one crank shaft. VHERON LEE.

Central College, Franklin Co., O., Sept. 13, 1855.

Reaping and Mowing Machines—Controverted Point.

MESSRS. EDITORS—I observed by proxy, in the SCIENTIFIC AMERICAN of July 7th, 1855, page 341, a dispute about the original inventor of the reel and the raker's seat for grain reapers, as patented by McCormick in 1837. Now I do not like controversy, but even at this late date I am prepared to prove that in my experiments on grain reaping in A. D. 1824, '25, and 26, I used the reel as it is now used by McCormick and others, that I used the crank to propel the knives, and fingers to gather and hold the grain while it was cut. Improvements, truly, have been made on my original fingers for gathering the grain, but decided misimprovement has been almost universally adopted in the diminutive wheels on which reaping machines ride; the small size of the wheels often causes them to mire down in wet ground, and they always draw much harder in the grain field. No other thing about grain fields is so unphilosophical. In 1826 I used the large wheel of a common lumber wagon to run next the standing grain, as well also as the other wheel to propel the knives to cut the grain; and if that sized wheels had been in use universally, it would have saved the farmers hundreds of thousands of dollars. Does any neighbor editor still ask why I did not secure my invention by a patent? I again reply, that good judges then considered the patent laws only well calculated to lead men into litigations, and not secure inventor's real rights, therefore my friends refused to help me.

H. H. MAY.

Galesburg, Ill, Sept., 1855.

The Canadian Patent Laws.

Our readers are probably aware that under the present laws of Canada American citizens cannot obtain patents there, neither in person, by attorney, nor under any circumstances whatever. These provinces are completely sealed against us.

One of our correspondents, in writing to us recently upon this subject, says:—

"In your notice of the Patent Office report in your paper, I see our late Commissioner of Patents has wisely suggested to Congress again, the importance of allowing Canadians at least the same privileges in obtaining patents in the United States as our own citizens, which I much appreciate.

While I was at Quebec last winter, there was a bill brought up in the Provincial Parliament for the purpose of revising the Canadian patent laws, but it was so strangely opposed that it was laid over. Before Parliament broke up, however, there was a decidedly reciprocal feeling among the Members. I have just received a letter from a friend in Canada, assuring me that the bill will pass this winter with scarcely any opposition, in such a form as to give Americans the same privilege for obtaining patents in Canada that we give Canadians for obtaining patents in the United States. Their Patent Office is a meagre affair in comparison to ours. I verily believe I could pack all the models they have in their Office on a common wheel barrow. At present a single clerk and a Commissioner could do all the business. While there, I suggested to the Commissioner that perhaps I was intruding too much on his valuable time. But he said he had plenty of time, and could profitably spend an hour or two in social chat with inventors like myself.

But I presume there will be a great rush for Canadian patents as soon as the revision of their patent laws passes—which it undoubtedly will. I have written to my friends in Canada that it will be acceptable in the shape I have mentioned. We could not conscientiously ask more. P. M.

Wadham's Grove, Ill., Aug. 14, 1855."

Portable Steam Machines.

MESSRS. EDITORS—On page 394, Vol. 10, SCIENTIFIC AMERICAN, I notice the claim of S. R. Wilmot, of New York city, to the invention of a portable steam sawing machine, for the purpose, it appears from the editorial remarks accompanying the claim, of felling trees and cutting them up into logs—a machine so light and portable as to be easily carried about by one man. I have long been of the opinion that steam might be profitably employed to perform much of the hard labor of clearing land, especially where much of the timber is to be converted into cord wood, and also in pineries for cutting the trees into logs; but the desideratum hitherto has been to find a machine sufficiently light to be readily moved from place to place, and if friend Wilmot has accomplished this, and at the same time constructed a machine of sufficient strength, he has done much to diminish hard labor, and will confer a great favor upon this Western world by introducing it into these timbered regions. And why may not the same power be used to drive a thrashing machine, clover huller, straw cutter, &c., and in short, perform any of the stationary labor now performed by the horse? The expense of construction is said to be trifling, and the transportation cannot be great, and the expense of keeping must be less than the keeping of a horse. J. C. ROGERS.

Grand Rapids, Kent Co., Mich., Sept. 20, 1855.

[Our correspondent has struck a chord which must vibrate through the whole land. For performing any of the purposes named in the latter part of his letter, steam engines of every size are now manufactured in many places, and it is simply a question of economy with farmers whether they use steam or horse power.—The means are provided for supplying them with portable steam engines, and those who have large farms would no doubt find them profitable. The boiler is really the most important part of such an engine; it is the fountain of power, and the most bulky part of the machine. The smaller a cylindrical boiler is in size, it is stronger in proportion than a larger one of the same thickness of plate, but on this account, we advise the builders of such boilers to be very careful in the plate which they employ. Let perfect safety be the first consideration, in every case. All such engines should be strong, simple, and easily managed.

An Accomplished Blind Mechanic.

The *Journal de Chartres*, France, gives an account of a water mill, in the hamlet of Olsieme, near Chartres, built entirely by a blind man, without either assistance or advice from any one. The masonry, carpenter's work, roofing, stairs, paddle wheels, cogs, in a word, all the machinery pertaining to the mill, has been made, put up, and set in motion by him alone. He has also, the above Journal asserts, made his own furniture. When the water is low and the mill does not work, our blind miller becomes a joiner, and also turner, on a lathe of his own invention, and so he makes all manner of utensils, and pretty toy windmills for the juveniles. He lives quite alone, sweeps his own room, and cooks his own dinner; his mother, who has fifteen children to care for, lives a mile off, and does not trouble her head about "her blind boy," for "he earns his bread now," she says, "and does not want her." In 1852 this blind miller was rewarded with a medal by the agricultural society of the arrondissement, for a machine serving the double purpose of winnowing corn and separting the best grains from the common sort.

Decarbonizing Steel Plates.

Engraving on steel plates is an invention of comparative modern date, for which the world is indebted to the eminent American inventor, Jacob Perkins. It is impossible to engrave on the common hard steel plates, hence they have to be decarbonized or softened before the graver can act upon them—the method of doing this was discovered by Perkins. These plates are decarbonized by being placed in a vertical position in a thick cast iron box, and surrounded on all sides by a stratum of iron filings half an inch thick. The box is placed in a furnace and kept at a red heat for three or four hours, then cooled very slowly by stopping up all the air passages and covering the box with cinders to the depth of six inches. These plates are hardened again by placing them in the box with charcoal made from leather parings placed between them instead of the iron filings, and kept at a bright red heat for three hours, when they are taken out, and immediately plunged in a vertical position into cold water. All kinds of steel can be decarbonized in the same manner.

To Make Tomato Figs.

Pour boiling water over the tomatoes in order to remove the skin; then weigh them and place them in a stone jar, with as much sugar as you have tomatoes, and let them stand two days; then pour off the syrup, and boil and skim it until no scum rises. Then pour it over the tomatoes, and let them stand two days, as before, then boil and skim again. After the third time they are fit to dry, if the weather is good, if not, let them stand in the syrup until drying weather. Then place on large earthen plates or dishes, and put them in the sun to dry, which will take about a week, after which pack them down in small wooden boxes, with fine white sugar between every layer. Tomatoes prepared in this manner will keep for years

Fine Muslin Goods.

Perhaps the consumption of muslin embroidered goods affords as good a test of the wealth and luxury of a nation as the consumption and use of silk. If so, it shows a rapid rise in the wealth of the United States in the period of seven years, as one of our cotemporaries states, that during that period the importation of such fabrics have increased from $500,000 to $5,000,000 per annum. The greatest quantity of this comes from the city of Glasgow, in Scotland, whose manufacturers employ thousands of the female peasantry of Ireland in such embroidery. The work is sent from Glasgow to agents in Ireland, who distribute it among the peasantry in their own cottages.