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WHAT CAN BE DONE FOR INVENTORS—ADVICE GRATIS AND ADVICE FOR PAY.

For the information of our new subscribers, we would state that it is the custom, at the office of this paper, to examine models or drawings and descriptions of alleged new inventions, and to give written or verbal advice as to their patentability, without charge. Persons having made what they consider improvements in any branch of machinery, and contemplating securing the same by Letters Patent, are advised to send a sketch or model of it to this office. An examination will be made and an answer returned by early mail. Through our Branch Office, located directly opposite the Patent Office in Washington, we are enabled to make special examinations into the novelty and patentability of inventions. By having the records of the Patent Office to search, and the models and drawings deposited therein to examine, we are enabled to give an inventor most reliable advice as to the probabilities of his obtaining a patent, and also as to the extent of the claim that it is expedient to set up when the papers for an application are prepared. For this special examination at the Patent Office we make a charge of Five Dollars. It is necessary that a model or drawing and a description of the invention should accompany the emittance.

The publishers of this paper have been engaged in procuring patents for the past SEVENTEEN years, during which time they have acted as Attorneys for more than TWENTY THOUSAND patentees. Nearly all the patents taken by American citizens in FOREIGN countries are procured through the agency of this office.

Pamphlets of instructions as to the best mode of obtaining patents in this and all foreign countries are furnished free on application. We also publish a large pamphlet containing the PATENT LAWS of the United States with a digest of facts relative to the rights of inventors and assignees. This pamphlet is important to every person who owns a patent or is about to apply for one. Sent by mail on receipt of six cents.

For further particulars as to what can be done for inventors at this office, see advertisement on another page, or address

MUNN & Co.,
No. 37 Park Row, New York.

CULTIVATE FLAX.

At no time since the introduction of cotton cultivation in this country, and the use of cotton in the arts, did it reach to its present high price in the market. The same quality which sold for twelve cents per pound in 1860, is now selling for ninety cents. The cause

of this is well known—three-fifths of the supply have been cut off by the war. Could an abundance of flax be obtained, probably the use of cotton would almost cease as an article for manufacturing purposes. As there are no prospects at present of an adequate supply of cotton being furnished for several years to come, our farmers should more generally engage in the cultivation of flax as one of their crops. If each of the farmers in the Northern States would devote a few acres this year to the raising of this fibrous material, a very large quantity would be thus secured for manufacturing purposes, and for linseed oil. The fiber would be used in place of cotton, and the oil obtained from the seed would render us independent of India for this useful substance. It is true, a greater quantity of flax was raised last year than for many years previously; still the supply did not meet the demand. A large number of the manufacturers of woollen goods have found it superior to cotton as a mixture with wool, and hereafter they will use it by preference for this purpose, if they can obtain sufficient quantities at reasonable prices; and besides its employment in such fabrics, there are many other purposes for which it is equally as applicable and useful.

Formerly flax was extensively cultivated in New England, New York, New Jersey and Pennsylvania. Every farmer was accustomed to raise a sufficient quantity to make coarse family shirting and sheeting. It was spun on hand wheels, and woven in hand looms in each household. The same climate and soil for its successful cultivation still exist, and beyond this we have now in the Western States the most extensive domain and the best soil and climate in the world for raising it in unlimited quantities. We are confident that our Western States may raise flax and become to the textile manufacturers of the world what the Southern States have been to them in raising cotton; and now is the time to make preparations for engaging in such efforts.

In the Eastern States the early part of May is perhaps the best time to prepare the land; in the Western States the latter end of April is the best. The soil should be plowed deep, and pulverized with a fine-toothed harrow, rolled, and put into as good a condition as an onion bed. A loamy soil, which had been planted the year previously with potatoes, answers admirably for flax. As it respects the quantity of seed to be used, Mr. George Anderson, of Lansingburgh, N. Y., who is very well informed on the culture and manufacture of flax in Europe and America, stated in a communication on page 310, Vol. VI. (new series), of the SCIENTIFIC AMERICAN, that "from a bushel to a bushel and a quarter per acre, gave the best results" in Northern New York. In Illinois about three quarters of a bushel of seed to the acre have given about the best return. In Ireland a much greater quantity of seed is used, but thick sowing is not attended with such favorable results in America. Many Irish flax-growers who have come to America, have abandoned thick sowing after repeated trials. From the flax raised on one acre of ground, about fourteen bushels of good seed can be obtained, and for the seed alone, the crop is not unremunerative. But it is for fiber chiefly that we are urging its cultivation, and certainly six hundred pounds of good fiber can be raised from an acre of land. At thirty cents per pound (one-third that of cotton at present prices), the value of an acre's product, would be not less than one hundred and eighty dollars. Never before has such an inviting prospect for the cultivation of flax been presented to our farmers.

ABUSES IN PUBLIC CONVEYANCES.

It is hazarding very little to say that the means of public conveyance in this city are entirely and utterly inadequate to meet the wants of our people. The omnibuses in old times, twenty years ago for instance, ran for a shilling about half the distance they now travel for five and six cents, and were clean, comfortable and well managed. To-day, mildly speaking, some of our lines of omnibuses are a disgusting nuisance. They are infested with rowdies, drunken men and other objectionable characters, who ought never to be allowed to enter. We have repeatedly been witness to the entrance of men into a stage when they were so intoxicated as to be almost unable to

stand. Why these louts are taken up by the drivers is a mystery to us, except on the supposition that they have no self-respect themselves, and suppose other persons to be equally deficient. It is high time these abuses were stopped; the public now generally prefer to walk rather than to be submitted to such degradation and discomfort as attends a ride in an omnibus for any distance. Not only are these abuses conspicuous in the management of omnibus lines in this city, but a thorough reform is needed in the construction of the vehicle itself. Time is valuable, and it is only by economizing it that the public can keep their heads to the current. They cannot afford to walk where they can save a quarter of an hour by riding, and this is one reason why the demand is so great for public conveyance; another reason, and one that is generally kept out of sight, is that Jonathan is prone to be lazy sometimes, and had much rather loll on a cushion than to use his legs. But to whatever cause we may legitimately attribute the demand, it is certain that it exists; witness, in proof, the crowded cars and omnibuses that rumble up town every night, overloaded, yet besieged by numbers who turn away unsatisfied. Those who do secure a place are generally hustled and elbowed out of it, so that in the end they are rather sorry that they did not walk. Yet again some individual enters and beholds five women spread out on the seats on either side, who, if they regard at all the glances which he throws toward the unoccupied seats, only acknowledge the claim by mildly beaming, or impertinently gaping down his modest suggestion.

This is all wrong. Men have some claims as well as the women, but when, fatigued with the duties of the day, they enter the omnibus, which ought to afford them repose, they are too often cheated out of its comforts by the insolent and ill-bred occupants. The remedy for this is very plain; the ferry-boats teach people good manners in this respect, by partitioning off the seats with railing, so that no greedy individual can take up more than the law allows him. So should it be in the omnibus; divide the seats, give to each person his proper sphere and this evil will have been abolished. If the fare is not high enough to pay for all these comforts, raise it, and the better class of people will pay it. Rowdies and drunken men are not human beings, in a social sense, and are entitled to no more consideration than animals. The steps of the omnibuses require altering materially. No lady can get into one now-a-days without violating her dignity, to say the least. The steps might be made lower or to act automatically, by projecting forward as the door is opened, they would then be out of the way and afford no resting place for the dead weight of boys that generally encumbers them.

We are continually bragging about our energy and progressive principles, and abusing John Bull roundly for being an old foggy and an antediluvian, but John has had the sense to see that the streets of London must be relieved of the pressure of traffic, and has accordingly tunneled beneath them and is now running the underground railroad successfully. We must submit, meanwhile, to a few more years of discomfort and inconvenience, and finally adopt the same idea. Why not have a subterranean railroad of this kind? Anybody who has witnessed the "confusion worse confounded" that exists at that gorge opposite the Museum, where streets converge from all points, must see at once that some speedy relief is not only desirable but demanded.

HARBOR DEFENSE—A NEW USE FOR PETROLEUM.

We publish, on another page, a communication all the way from North Wales, in which the writer suggests a mode of harbor defense which is at once novel and extraordinary. He proposes that petroleum oil, with the aid of rockets, be used to set fire to the enemy's fleet. Let us inquire into this scheme and see how far it can be successfully employed. Of the article of petroleum we have an abundant supply, but how shall we collect and store it in quantities sufficient to meet the emergency?—that is the practical question. If the famous Oil Creek in Pennsylvania could be turned this way, we could set about building a huge aqueduct to conduct it to a suitable reservoir for its receptacle, dug out of the crown of Staten Island. A sluice way could be made to the base of