INTERESTING CORRESPONDENCE.

AN EXPERIMENT WITH GLASS MIL PANS

MESSRS. EDITORS:—In your valuable paper of Oct. 13th, I notice the following:—

"BUTTER MAKING.—Every improvement which facilitates the making of high quality butter is of deep interest and importance to agriculturists. We do not hesitate, therefore, to point attention to the subject of glass milk pans which have been introduced into this region. Experience has shown their extraordinary value in the dairy, by the saving of labor and the securing of cleanliness and sweetness in the manufacture."

Upon this you remark:—

"We quote the above from an Irish agricultural journal. If we mistake not, glass milk pans have been used to some extent in this country, but with what success we are not advised."

As this subject has now the recommendation of a foreign paper, our farmers will probably be ready to adopt the suggestion. On the 10th of June, 1856, I furnished to the *Ohio Farmer*, published at Cleveland, Ohio, the following communication:—

Editor Ohio Farmer:—It is a common remark that thunder sours milk. This remark, though correct enough for common use, it is well known is not correct in fact. It is not the thunder, but the *electricity* which affects the milk.

To preserve milk, then, pans should be non-conductors. Tin or other material that is a conductor, is usually used, and the effect is that milk (especially in thunder showers) sours before the cream rises.

I have been experimenting a little, and the following is the result:—

I took the milk of the same cow, milked at the same time, and divided it equally, putting half in a glass pan and half in a tin pan, and placed them side by side. In just twenty-four hours were two thunder showers, and at the end of that time the milk in the tin pan was sour—that in the glass pan sweet and good. At the end of twelve hours more, that in the tin pan was thick *clabber* or "*lobbered*," as the Yankees call it, and that in the glass pan *began* to sour. From this I believe glass pans will preserve milk one-third longer than tin pans. Will our dairymen try it?

Well, they did not try it, as it was nothing but an *American* suggestion. As it now comes across the ocean it will probably attract attention. I hope so.

L. V. BIEBER.

Akron, Ohio, Oct. 24, 1860.

RUBBER BELTING GETTING SMOOTH.

MESSRS. EDITORS:—In the last number of your valuable journal I notice that one of your friends asks how to remove the glazing from rubber belts.

What in the world does he want to remove the glazed face from them for? A glazed face is just what I want on a rubber belt; you may be sure you have your belt in good working condition if the face polishes up smooth so as to shine. I have been running rubber belts for fourteen years and have now over three thousand feet of all widths, from two feet to two inches, running in the factory with which I am connected, and I always want to see the faces smooth up and become glossy.

There is considerable difference in these belts, even in the same lots, but those do best that polish on the face by use, provided they are at the same time flexible.

I think it is a great mistake to have belts thick; to get power it is much better to add to the width and never strain the belt too hard; then get your pulleys as smooth as possible, a very little swollen in the middle—say one-eighth of an inch to the foot in width. In starting rubber belts, the dust should be brushed off them frequently; if it begins to polish, you may be sure you will have no trouble with it.

Some of my neighbors use double leather belts which are very expensive—very nice they are, to be sure—but for economy and keeping up a uniform speed, give me a rubber belt of liberal width, not too thick, but flexible. I have run such belts from three to five years without altering a lacing, and have now running some which have been in use from seven to ten years. There is another good thing in rubber belts; they keep tight on the edges. I have found it a good plan to lag pulleys with a piece of rubber belt; if fitted on neatly it makes a really good lagging; some of them shine and look handsome.

At Chickering & Sons' great piano factory, which is close by me, they run with rubber belts; their main belt and pulley are as smooth as glass. There is not, in New England, better or neater adjusted machinery than theirs. B. M. C.

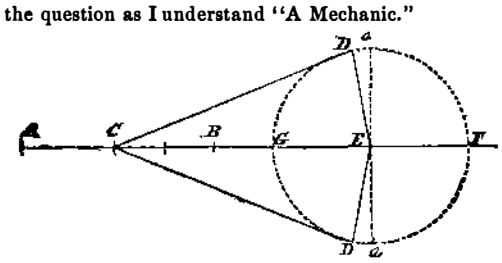
Roxbury, Mass., Oct. 16, 1860.

[In addition to the above, we would state for the information of those who frequently inquire for the address of dealers in belting that the best vulcanized rubber belting known to us is manufactured by the New York Belting and Packing Company, Nos. 37 and 38 Park-row, New York, and by the Boston Belting Company, of Boston.—EDS.

THE CRANK MOTION AGAIN.

MESSRS. EDITORS.—In your issue of September 1st., 1860, there is a demonstration by Professor Byrne of a certain fact respecting "a property of the crank motion," in which the Professor seems to misapprehend the drift of the question by your Cincinnati correspondent.

Using the same diagram, I will attempt to answer the question as I understand "A Mechanic."



Suppose the line x (C D) be applied to A G, or we start with the crank at G. Now carry it forward on the line A F, till D coincides with E, and the line x with C E. It is evident that C will be at the middle point of A B. Now elevate the point D along the perpendicular E e, to the point e; it is equally evident that the other extremity of the line x will approach the center, E, equal to the distance from E to the foot of a perpendicular let fall from the point D on the line A E.

It seems to me that this illustration answers "the reason why." A practical fact connected with it is: the greater the length of C D, the more regular will be the motion of the crank. W. F. H.

Columbia, Tenn., Sept. 7, 1860.

A SUBTLE QUESTION IN PHILOSOPHY.

MESSRS. EDITORS:—I have noticed in some late numbers of your paper statements that but one-tenth part of the useful effect due to *theoretical* calculation is realized by steam power.

Permit me to ask: Is not one-half of all power—steam or other power—to be deducted from theoretical calculations of what should be the result? Does not this follow from the admitted law that action and re-action are equal? We may say that but one-half the useful effect is realized. This, however, is not the language of an enlarged philosophy. Were all the result of power to be realized in one direction, the result would not be useful but destructive. Chaos would instantly resume its dominion. AN OLD SUBSCRIBER.

[To our correspondent's question we answer: No. If a cannon is pointed vertically upwards and discharged, though one-half the force of the powder is exerted in driving the ball upward, and the other half in pushing the earth downward, yet the whole power is exerted in increasing the distance between the ball and the earth. In the same way, when a piston rod is pushed out of a cylinder by steam, though one-half of the power of the steam is expended in pressing forward the piston and the other half in pressing back the cylinder, yet the whole power is expended in pressing apart the outer end of the piston rod and the inner end of the cylinder, and it is conceivable that it might all be utilized as dynamic power.—EDS.

PRESERVING IRON WITH ZINC.

MESSRS. EDITORS:—I saw it stated in the SCIENTIFIC AMERICAN for last week, that a Belgian, named Stipheen, had discovered that zinc placed in contact with iron or steel would prevent them from rusting. Now, this has been known to me for some time, and I have by this means kept from the effects of the damp sea fogs, which prevail here, table cutlery, my gun, &c. I made use of zinc in this way in endeavoring to preserve from rust a valuable gun, which neither oils, cases nor india-rubber coverings would protect from the effects of moisture. I did not suppose that there was anything but what was well known to the scientific world in this property of zinc in preserving iron, which is, I presume, owing to electricity.

My gun nas also led me to prepare an oil which, as a lubricator and preservative from rust, excels anything I have ever used.

I expose some of the best refined coal oil to a considerable cold and use the more liquid part which rises to the top, mix with a very little refined castor oil, then some unslacked lime, and, after being shaken well and submitted to a slight degree of heat, filter it.

There are a number of little contrivances and preparations which I have made which I never supposed were of sufficient importance to be called inventions or discoveries, but if there is anything patentable in them, I should be mightily pleased to see my name on the list of inventors which appears weekly in the SCIENTIFIC AMERICAN. T. DANIELS.

Staten Island, Oct. 15, 1860.

RAISING SUNKEN SHIPS.

MESSRS. EDITORS.—In No. 12 of the present volume of your valuable paper, in the column of "Notes and Queries," you speak about the means employed by an American company for raising vessels in the port of Sevastopol. These means appear to me to be insufficient, and I call your attention to a patent which I obtained through your valuable services, on a vessel, which I think will produce the desired effect, especially when used in connection with the diving bell of Dr. Payerne, which I am authorized to use. My vessel can sustain a much larger weight than an ordinary vessel, on account of its being full and fastened by chains, and its side screws and air tube will give it a very great effect.

With one of my vessels and two diving bells, every sunken vessel could be raised without the aid of tarpaulins and pump. F. S. PRONNIER.

85 Greenwich-street, New York.

A WISE SUGGESTION.

MESSRS. EDITORS:—In your last number (Oct. 6th) you state that you think seriously of introducing the French measures—metre and gramme—into your paper. Permit me, as a "constant reader," to suggest that as your journal is intended not only for the man of science but also for the mechanic and manufacturer, who are not always familiar with that standard of measure, it would be more agreeable and acceptable to your readers in general to give in each case both the French measure and its equivalent in the United States standard. Such a course would add but a trifle to the length of an article, would inconvenience nobody, and would do more than anything else could to familiarize our practical men with that truly scientific system.

MARSHALL S. BIDWELL, JR.

Monterey, Mass., Oct. 9, 1860.

[If we introduce the use of French measures, we shall certainly adopt this advice.—EDS.

MORE LETTERS FROM INVENTORS.

We know that mechanics and manufacturers, in common with all other trades people, like to read letters from persons engaged in the same business in other sections of the country. We believe that inventors and patentees are also interested in hearing from their brother inventors, and this is our apology for presenting the annexed letters.

MESSRS. MUNN & Co.—About three years ago, you secured a patent for me, made an engraving, and published a description of it. I have followed your suggestions as to the sale of rights, and have made a good property by it. H. F. STANARD.

Wayne, Mich., Oct. 17, 1860.

MESSRS. MUNN & Co.—I received my deed a few days since from the Patent Office, for my invention of a cotton stalk puller, &c., procured for me by you. I am very thankful to you for your promptness in prosecuting my business, and I shall spare no opportunity to recommend you to others. Since I received my deed, I have had several solicitations from solicitors for any business I might have in future, but must decline their kind offers, as I think I can see that you possess superior advantages in this line of business, consequently you shall have my business and influence. HENRY SNYDER.

Dayton, Ohio, Oct. 22, 1860.

MESSRS. MUNN & Co.—I am happy to inform you that I received my patent on the 13th. I am highly gratified,

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