

The kitchen stove, which has more to do with the comfort of the house than any other article of furniture, has already been the subject of many useful improvements; yet there seems to me that there are two things in which it can be still further improved. The first is, making the openings on the top of the stove large enough to admit kettles with smooth, rounded bottoms (without any jogs), like those hung from cranes over kitchen fires, before the kitchen stove was invented. The sides of the kettle might be more perpendicular, but if we would have no burned dishes sent to the table, there should be no jogs or corners. Kettles simply for boiling water are well enough. But let us have at least one place in which we can set cooking kettles with thick, rounded, smooth bottoms, even at the expense of less openings or more surface. If the raised work on stoves is placed thereon simply for ornament, without reference to radiation of heat, I would have it dispensed with altogether. A plain stove would be much more easily kept clean, and this partly applies to parlor stoves also.

We require some apparatus for *airing beds*—an apparatus which shall elevate and separate each article of bedding, including the upper tick, so that the air may pass freely between each, when the windows and doors of the bedroom are opened to admit a fresh current of air; and which, when removed, should leave the bedding as before. If every bedroom had a balcony and glass folding-doors broad enough to permit the bed to be wheeled out into the air, this would be an additional improvement conducive to the preservation of health and life.

Again: there is great need of an apparatus for *washing dishes*, provided with a drainer so fitted that the plates, saucers, cups and bowls, may be taken from the table in piles, and laid on their sides in the drainer; each article being separated by a slat from the next, and hot suds and rinsing water being dashed upon them by machinery, leaving them to quickly drain themselves dry enough for future use.

If the foregoing suggestions should meet with favor, I may find time, at an early future period, to enumerate some other wants in the housekeeping machinery, equally deserving the notice of your readers.

MRS. VARNEY.

San Francisco, Cal., Dec. 1, 1859.

THE CONSTRUCTION OF STEAMSHIPS

MESSRS. EDITORS:—Under this head, your correspondent "Nauticus" (on page 362, this volume, of the SCIENTIFIC AMERICAN) says:—"Steamers must be built so as to secure great buoyancy, in order that they may not load too deep or light up to fast by the consumption of fuel and stores." He should have added, and reduce the resistance of a given cross section of immersion. The difference in pressure of the fluid to be moved at different depths, seems to be generally lost sight of. It being for the first 14 feet, only a mean of about 3.50 lbs. per square inch, while the mean pressure for the next seven-feet is about 8.75 lbs., and still the next seven feet it becomes about 12.25 lbs. per square inch. To overcome this power as the cube of the velocity sufficiently explains the reason of the *Great Eastern's* failure to meet the expectation of her proprietors; and why the Lake Erie steamers perform so well. Having spent much of the early part of my life upon the Atlantic, and leaving there with the prejudice common to all ocean taught men—the idea that nothing new could be learned upon the lakes; I soon found my mistake and set about improvement to meet the requirements of the then rapidly increasing business above the flats of Lake St. Clair. With this in view, I projected the first center-board vessel ever built upon Lake Erie or the lakes above, although I believe some small vessels had slip keels: her prow was long with very little dead rise, and ends quite sharp for the times; she was so far out of the ordinary line of model as to cause much remark, and the most experienced builder then in the West, asserted that he would not have such a vessel built in his yard, fearing his reputation would be injured thereby. But when the vessel was afloat, she told her own story, "by showing her heels" to all others; while she was carrying, relatively, a much larger cargo. From this vessel followed the immense tonnage of similar ones, comprising the great fleet of the lakes; some of which vessels have attracted considerable attention by their short passages across the Atlantic, and generally by showing superior sailing qualities when in company with sea-going vessels of different classes.

These vessels when properly fastened, and not over sparred, are as safe for ocean service as any vessel can be.

Steamers were similarly built as to model one at a time when there were no harbors on the lakes. I was the first to take the charge of one to make trips regularly through the entire season to the upper lakes. She was then the largest steamer in America, but would appear small now; yet small as she was, she had to "bang out all weather," and she did this most successfully, and lived to die of old age.

The present fleet steamers of Lake Erie have similar floors with elongated ends and fine wave lines; hardly disturbing the water as they move through it. To give strength to their sides, instead of building them deep, and adding much unnecessary weight to be carried, arches of wood and truss work of iron are so disposed as to give great strength of "back bone" to a shoal vessel with little weight. If New Yorkers would stand in relation to ocean steamers, as they have done, and do now, in the fleetness of their sailing ships, let them discard their prejudice, look at facts, get a Buffalonian to build them a steamer, and they will soon follow with others, and be able to say "Come on, Cunarders! we don't want any Government subsidy." B.

Chicago, Dec. 14, 1859.

A WESTERN WONDER.

MESSRS. EDITORS:—In No. 23, "new series" of the SCIENTIFIC AMERICAN, I notice, under the caption of "A Remarkable Fact," an incident related by Professor Mitchell, of a gentleman in St. Louis of great scientific attainments. I venture to say that the gentleman referred to is Professor G. Seyffarth, A. A. M., Th. D.; and this caused me to reflect and wonder why it is that Professor S. is not more generally known. It is astonishing how many scientific men of very small caliber become known and exalted by the populace; while a man of no pretensions, with a modesty that can hardly be equaled, like Professor Seyffarth, is left unknown to the world until his ashes can hardly be found, when, lo! his fame spreads abroad, and becomes brighter from generation to generation, and the world is astonished that such a mind was not valued in the time of its earthly existence. Professor Dr. Seyffarth is doubtless well-known by the scientific men of the world, but not popularly; yet his researches in chronology have never been equaled by any mortal being, and are more valuable than all the gold found in California.

C. G. M.

Fort Wayne, Ind., Dec. 13, 1859.

NEW IDEAS ON AIR NAVIGATION.

MESSRS. EDITORS:—Under the above title you recently gave Dr. P. Reis' notion of "navigating a vessel in the air, independent of balloons, on the vacuum principle. This is a new idea founded upon an old error. The amount of force procured by Professor Magnus' method is just equal to the amount of force given by his fan-blowers. When air is blown through a tube it drives away the air before it, and this causes an inflow of surrounding air, which, coming from all sides, meets in front of the tube, forming there a cone of air, moving off in a straight line before the tube, and thus causing a partial vacuum inside the air cone, similar to that in the upmoving current in a thunder gust. The same phenomenon takes place in smoke-stacks. The smoke-stack depends for its draft upon the motion of the air over its outlet or top. This may be the result of a natural current over the stack, or by blowers. A current of air passing unobstructed by surrounding obstacles over the top of a smoke-stack, always induces a strong draft in the flue, whether the wind be north, south or west; but the fire does not burn as well with a south wind as with the others, because it throws into the fire more humidity and less oxygen than the others. I have only noticed the above dissemination of a "new idea" because the deductions imply the discovery of a law in nature to navigate a vessel in the air that is greater than the power used to induce the vacuum. The idea itself is an interesting one; it pertains to all manner of ventilation and currents, and is deserving of much thought, for it will explain various anomalies in flue drafts, water currents and air currents; but it will not serve the purpose of driving a vessel through the air, any more than the same amount of force applied to wings or flappers acting on the body of the air.

JOHN WISE.

Lancaster, Pa., Dec. 12, 1859.

CHEMISTRY OF TANNING.

MESSRS. EDITORS:—While reading an article on tanning (on page 384, present volume of the SCIENTIFIC AMERICAN), it appeared to me that the opinion expressed regarding the operation being purely chemical might be strengthened by an observation of the curious effect produced by electricity upon hides while in the "bait." If, during this part of the process, a thunder-storm occurs, the leather produced is invariably inferior in quality. The nature of the injury thus received is such that no eye can detect it; but when made up and put to use, the leather appears to want tenacity, and "gives out" prematurely. I will not undertake to say how the deterioration is produced; but it seems to me that if, while the hides and tannin are in process of combination, the simple presence of electricity in the surrounding atmosphere is capable of affecting the resultant product so seriously, the operation thus interfered with must be chemical and not mechanical.

A. F. O.

Albany, N. Y., Dec. 19, 1859.

GLASS-DRILLING.

MESSRS. EDITORS:—In reference to some receipts for drilling glass, recently published in the SCIENTIFIC AMERICAN, I would state that I take a common drill, harden and use it without drawing the temper, and keep the point wet with water. I have thus drilled a half-inch hole through glass one inch thick. It is more difficult to drill through window glass than that which is thicker. As regards another subject often brought before the notice of your readers, I would remark that water-wheels and machinery have the appearance of going faster when all is still around, or when it is so dark that no other objects are seen in motion. A steamer has the appearance of going faster on the river than when going at the same speed on the ocean.

L. W.

Waterbury, Conn., Dec. 12, 1859.

RAIN AND PAINT PHENOMENA.

MESSRS. EDITORS:—In No. 23, of the present volume of the SCIENTIFIC AMERICAN, is an article bearing the above caption; and I think the phenomena may be readily accounted for. The oil which had been used in the painting of the houses was probably rancid; and having an affinity for the carbonic acid in the atmosphere generated from decaying vegetable matter, resulting from the destruction at this time of year, of foliage &c. From the rapid corrosion in this case by oxygen in the oil assisted by carbonic acid, it is not to be wondered at that the paint changed to the seer and yellow ray. The drabs or neutrals are especially subject to weather stains.

The rain storm from north-east, which again changed the color held in solution chloride of sodium, from oceanic evaporation, necessarily re-bleached the paint.

New York, Dec. 19, 1859.

E. F. B.

THE CENTRAL PARK.—The Paris correspondent of the New York *Evening Post* writes that Mr. Olmstead, Superintendent of the Central Park, has been in that city for a few days on official business. He visited the Bois de Boulogne several times, and through the politeness of Mr. Phalen, had opportunities of studying it to every advantage. I think I may venture to say that he left in no respect discouraged by anything he saw or heard. He found the Central Park had many advantages which neither nature nor art had conferred upon the famous Parisian drive, while in respect to the improvements the New York work will, in many very important respects, bear a favorable comparison with any park upon the Continent. The roads of the Central Park are wider than the widest of the Bois de Boulogne, and they will be out of sight except when not immediately under foot; whereas in the Bois the eye is frequently offended with long white streaks of road, cutting up the distant lawn and destroying all the illusions so essential to broad landscape gardening. Then the Bois is not underdrained; the soil is very thin, the trees are not only for the most part of small size, but they are not thrifty, and never can be very handsome. In all these respects the Central Park has greatly the advantage. Mr. Olmstead left Paris with Mr. Parsons, of Flushing, L. I., to visit some nurseries and to make some purchases, of which the Park will bear abundant testimony another summer.