Correspondence

"The Science of Aerostation."

MESSRS. EDITORS :—If Mr. La Mountain, before criticizing Mr. Shaw's aerostatic contrivance, as he has done on page 246, current volume of the SCIENTIFIC AMERICAN, had given a little more patient and elaborate study to the structure of that machine, he would not have fallen into some errors. With regard to trimming and tacking in a balloon with an ordinary car, any attempt to turn the balloon by any gearing like that in question, would indeed have been like attempting, "while sitting in an arm-chair, by taking hold of the rounds, to lift one's self off the floor." But listen to Mr. Shaw :—"The balloon itself moves, while the car is kept stationary by the action of the propeller on the atmosphere." This propeller performs the same office in the balloon as the center board or keel in a ship, namely, presents a resisting force and keeps it from drifting, while the wind bears away the sails and imparts motion to the ship." This circumstance Mr. La Mountain entirely overlooks. Again, it is very easy to demonstrate, mathematically, that in all solids, as you increase the linear dimensions, the surfaces increase as the squares, and the solid contents as the cubes, of those dimensions. The calculations of the writer, in the fourth paragraph, with regard to the spherical form of the balloon, are perfectly correct, and are based upon the foregoing principle. But as to the flattened sphere, he (in substance) says that however greatly you increase the diameter above twenty feet, the balloon will not more than lift itself. "You will gain nothing." This is inferring that in the case of the flattened sphere, the contents increase equally with the surface or as the squares of the diameter, which is not true, as in all solids they increase as the cubes of the linear dimensions.

SETH C. CHANDLER, JR.

Boston, Mass., April 30, 1863.

MESSRS. EDITORS :—The communication from Mr. John La Mountain, aeronaut, which was published on page 246, current volume of the SCIENTIFIC AMERICAN, has, no doubt, furnished much incorrect information to many who have not the advantage for observing differently. Although his reasons appear sound, and are probably correct as to the impracticability of trimming and tacking the flying machine he speaks of, in the atmosphere ; yet, while he notices Mr Shaw, the inventor, as "very much like a man who has no practical ideas on the subject whatever," referring to his idea of condensed gas as a motive power, he exposes his own deficiency. As it relates to the strength of boilers in sustaining a pressure of steam, your correction of his statement is in accordance with the experience of many engine builders, &c. Many stationary engine boilers are now worked to a pressure of 600 lbs. per square inch. As to the difficulty of condensing gas, I think he has something to learn that would be novel to him, and would suggest that he rest a while from his "patient and elaborate" study of the subject, and make a few observations on "mother earth," and perhaps he will stumble on something that will serve some of his purposes hereafter. The passenger cars of many of our railroads are lighted with gas, which is, of course, carried with the car, in a condensed state. It is forced into iron cylinders until the pressure reaches 340 lbs. per square inch. The thickness of iron is but $\frac{1}{8}$ of an inch, only $\frac{1}{3}$ as thick as that in a locomotive boiler. The apparatus for condensing it is very simple, and consumes but very little power. I have taken a great interest in the science of aerostation, and, although not an aeronaut, beg leave to differ with some of that profession, on some points, and I think that ballooning is but as the old stage coach when compared with the steam car. J. A. M.

Reading, Pa., April 27, 1863.

[Our correspondent asserts that there are boilers driving stationary engines which are worked at 600 lbs. pressure per square inch. This is a very broad statement, and should be supported with the citation of cases. We are not aware of a single case of a boiler being worked at such a pressure. Mr. Shaw's balloon seems to have attracted a great deal of attention from mechanics, and provoked criticisms which will doubtless be taken by him as kindly as they are intended. The mechanical arrangement of the machine has been questioned by Mr. La Mountain in regard to preserving the ovality of the sphere ; that this is very readily obtained by the insertion of stays internally will be apparent to all. That the other features mentioned by correspondents, as, for instance, the action of the propeller on the air, and that of the gearing, are liable to criticism, is not to be denied ; but we must avow our skepticism as regards the statement that the cylinders containing gas for burning in cars are only $\frac{1}{8}$th of an inch thick, and are charged at a pressure of 340 lbs. per square inch. The locomotive drawing those cars has a cylinder boiler from 38 to 40 inches in diameter, and from $\frac{5}{16}$ths to $\frac{3}{8}$ths of an inch thick, and is strongly braced and stayed to carry a working pressure of even 200 lbs. to the square inch. If the diameter of the gas-containing cylinders is at all in comparison with that of the boiler, how are we to reconcile the fact of $\frac{1}{8}$th of an inch of iron sustaining a pressure of nearly one-half greater than that borne by $\frac{3}{8}$ths of an inch? Is our correspondent willing to apply a pressure of 340 lbs. per square inch to any locomotive in his knowledge, and stand by to superintend the operation?—EDS.

Operations on the Blockade.

We have been favored with the following letter from an officer on the blockade off the North Carolina coast. The precise locality of the ship, signature of the writer, &c., are omitted for obvious reasons. The letter will repay perusal :—

"At present there are only four steamers blockading this place (that is on this side), you can see by looking on the map that there is a shoal makes out seaward for —— miles ; it is only —— of a mile wide, so we are obliged to support —— blockades. At present we are on the north side of the shoal ; there are —— steamers on the south side. We can communicate with each other by a narrow channel across the shoal. The Admiral sent a small tug boat on the other side a few days ago, while we ought to have one or two on this side, for, as you know, we require them to run close-in-shore in the night, so as to intercept the 'runners' of which there are plenty just now. Our captains think if they run into six or eight fathoms of water they are very close in, when, in fact, we are four or five miles from the shore ; while the class of vessels that run the blockade draw but six or eight feet of water and can steam in and out within a mile of the shore. There were at one time eight steamers at the wharf in ——, and in one week they all got out safely, heavily laden with cotton and turpentine. There was one steamer that came down recently and anchored just inside of the bar ; she had two pipes and side-wheels. We knew she was loaded ready to run out, and we kept her in check for two days. She became restive, however, and made an effort to run on the other side. I was turned out one calm night at 2 o'clock A. M. ; I heard the firing of guns (some twenty were fired), and thought it was the steamer just mentioned. Sure enough ! I saw that she had disappeared from her place, and that another had taken her berth. At high water this last one moved up to ——. The U. S. steamer —— came around, and her crew said that the 'two-smoke-stacks' steamer had run out and they thought they had hit her, but 'any hit or no hit' she must be in Nassau by this time, with a cargo worth probably more than a million of dollars. In fact the rebels say that they run an opposition line that makes weekly trips. Now, if the Government would only send us two tugs this would all be stopped. I dont know but I wrote you about the steamer that run in in broad daylight ; it was so, however, about two in the afternoon. It was a bold stroke for 'Johny Reb' and a successful one ; we fired several shots but without effect. The rebels have several Whitworth guns on shore and our captains are afraid of them ; they *only* throw five miles and do execution at that distance ! This vessel has taken several schooners since her arrival here ; but I have given up all hope of capturing a steamer unless by chance. The rebels are steadily putting up batteries along the coast—what they call 'two guns and casemates' they have one of about eight guns and six of two heavy guns. There is one battery being built with a large amount of tressel-work ; it is made of heavy timber and runs from the sea-shore back about 1,000 yards, and has a tower some 100 feet high, in the top of which, I think, they are going to place a gun to fire down on our iron-clads, and other vessels. At the foot will be two guns and in casemates they are putting up things in good shape for us. But I think the iron-clads can get in without any difficulty, in spite of these formidable arrangements. I hope they will do it and soon too. I have no more to write this time, only we all enjoy good health with plenty of sea air and 'salt junk ;' I dont think there is much danger of the gout on that. . . . . . I am sorry to say that two more steamers ran in last night and had the impudence to blow their whistles —I suppose to give us warning to keep out of the way or else be run down."

HORSE-POWER.

The nominal and actual horse-power of an engine are two entirely different things. The actual horse-power means the pressure of steam in pounds upon the area of piston in inches, multiplied into the velocity of the piston in feet per minute, divided by thirty-three thousand. The working power of the engine, therefore, is in proportion to the pressure of steam. By the nominal horse-power of an engine its size and character—high or low pressure—are meant. It would be well if there were a general fixed standard recognized as the meaning of a nominal horse-power for an engine, but no such standard exists in any country, we believe. In a work lately published in London, edited by J. Hopkinson, it is stated that a nominal horse-power is different in several engineering localities. For condensing engines the "Manchester rule" is 23 square inches of piston per nominal horse-power ; the "Leeds rule" is 30 circular inches per nominal horse-power. For non-condensing (high pressure) engines the Leeds rule is 16 circular inches per horse-power ; the Manchester rule is 10 square inches of piston, and the Glasgow rule consists in squaring the diameter of the piston in inches and pointing off the unit figure ; this is essentially the same in form as the Manchester rule, as the process of division is by 10. By the Leeds rule an engine built in that place will possess about one-fourth more power than one built in Manchester or Glasgow rated at the same nominal horse-power.

THE REBEL SHOT.—The rebels say that the projectiles used by them at Fort Sumter, with which they made such an impression on the armor of the *Monitors*, were not of English manufacture, but were the invention of a Lieutenant Brooks. They flatter themselves too much in supposing that the Brooks' balls "riddled the boasted monsters like sieves," and so they probably are too sanguine in supposing that the invention of these balls will revolutionize naval warfare anew, just as the system of iron-plating seems to have become well established. On page 276 (current volume) of the SCIENTIFIC AMERICAN, a representation of the rebel shot "drawn from life" can be seen. The manner in which the rebels came by their projectiles is explained by us on page 314 of the present number.

THE STRUGGLE ON THE RAPPAHANNOCK.—On Thursday, the 30th ult., General Hooker, with his army, crossed the Rappahannock in the direction of Chancellorsville, and on the next day he was attacked by the forces of General Lee. There was fighting between the two armies with varying success for five days, when the Union army was compelled to retreat (on Tuesday the 5th inst.) to its former position on the north side of the river. The fighting was terrific and the loss of life on both sides was immense ; but at the time of our going to press, the full particulars have not reached this city.

IT is reported that a Yankee down East has invented a machine for corking up daylight, which will eventually supersede gas. He covers the interior of a flour barrel with shoemaker's wax—holds it open to the sun, then suddenly heads up the barrel. The light sticks to the wax, and at night can be cut into lots to suit purchasers.

GAS or air when heated to 491° doubles its volume, and exerts a pressure of 15 lbs. on the square inch above that of the atmosphere.

The Origin of Honey.

The following is an abstract of a paper on the above subject recently read before the Bristol (England) Microscopical Society, by W. W. Stoddard :—

Although honey is a familiar body, it is curious to note how little mention is made in any chemical or botanical work of the changes that take place in its elimination, of its origin, or even of its composition. Most chemical authorities simply state that the solid crystalline portion of honey is grape-sugar, but say nothing of the liquid. Johnson, in his "Chemistry of Common Life," says :—"Honey is formed or deposited naturally in the nectaries of flowers, and is extracted therefrom by the bees. When allowed to stand for some time, it separates into a white, solid sugar, consisting of white crystals, and a thick, semi-fluid sirup. Both the solid and liquid sugars have the same general properties. The solid sugar of honey is identical with the sugar of the grape." Such is the drift of the whole information that can be gathered respecting the composition of honey.

On dissecting the honey-bee, we find the proboscis continued into a beautiful ligula or tongue. It is a flexible organ, covered with circlets of very minute hairs. The ligula of the honey-bee differs from that of the other divisions of the bee family (the Andrænidæ), both in shape and microscopic appearance. It is probable that the bee uses the ligula by inserting it in the nectar, which would be plentifully collected by means of the hairs before mentioned. These hairs very likely answer a somewhat similar purpose to the teeth of the molluscan tongue. At the base of the proboscis commences the œsophagus, which, after passing through the thorax, terminates in an expanded sac, termed the honey-bag. This is an elastic glandular organ, placed before the entrance to the true stomach. Into this sac the saccharine fluid enters after being swallowed. Should, however, any more solid substance be present, it is forwarded into the true stomach for trituration by the numerous teeth with which it is furnished. The honey-gland also secretes a peculiar acid to be mentioned presently. The bee retains the fluid portion in the honey-sac till the proper time should arrive for deposition in the cell of the honeycomb.

At the base of the corolla of a flower, on the thalamus, is a part termed by botanists "the disc." It is that portion which intervenes between the stamens and the pistil. It is composed of bodies usually in the shape of scales or glands. When examined at the proper season, they are seen to abound in a thick, sweet fluid, which, since the days of Aristotle and Virgil, has rejoiced in the name of "nectar." On this account the part yielding it received formerly the name of "nectary." Even in the present day those organs are the subject of much misapprehension. Linnæus and his followers gave the term "nectary" to any gland or organ for whose office they could not otherwise account. The plants which furnish the greatest quantity of nectar, and are, therefore, most liked by the bees, generally excrete it from the disc of the flower. On many plants, however, as the ranunculus and fritillaria, a small glandular organ occurs at the base of each petal, and in which also nectar is enclosed, though not in such profusion as in the disc before alluded to.

As will presently be shown, the nectar is a simple solution of cane-sugar formed from the amylaceous sap of the flower, and elaborated for the nutrition of stamens and pistil. What the bees find in the flowers is the surplus left when these organs have been supplied. The author examined every flower he could collect at the early season of the year (April and May), and found sugar in them all, whether furnished with discs or nectariferous glands, or not; and came to the conclusion that sugar is necessary to the male reproductive organs of the flower, as it is in them chiefly to be found, the so-called nectariferous body merely serving the purpose of a reservoir.

The plants which in England are most attractive to bees are—mignonette, currant, hasel, wallflower, hollyhock, raspberry, broom, rosemary, lime, buckwheat, clover, willow, gooseberry, lemon thyme, heath, turnip, osier.

On examining an immature blossom of a wallflower, the vessels will be found filled with an amylaceous fluid which gives a distinct blue with iodine. After the lapse of from twenty-four to forty-eight hours, the flower having become much more expanded and the stamens more mature, the fluid on being again tested will have a sweet taste, and give a dirty bluish brown instead of a blue with iodine. On cutting out the discs of several ripe specimens of wallflower, the author obtained a sirupy, clear, colorless, fluid. This was mixed with a small quantity of distilled water, treated with lime and carbonic acid in the usual way, and filtered. The filtrate was then concentrated, and allowed to crystallize spontaneously on a glass slip. The result was a beautiful regular crop of crystals of cane-sugar. As the flower became more mature, the saccharine fluid was acted upon by the vegetable acids more and more, until at length, when the ovary being fertilized, and the flower dead, a last examination showed the saccharine residue on the withered disc to be nearly all grape-sugar, almost incapable of being fairly crystallized.

The bee, visiting the flowers when in their prime, inserts its ligula into the blossom, and laps up the greater portion of the liquid sugar, which, after passing through the œsophagus, is deposited in the honey-sac. It here comes in contact with the secreting glands, which emit an acid which the author's experiments showed to be identical with formic acid. This it is, doubtless, which causes the peculiar tingling sensation at the back of the throat when much honey has been swallowed, and which is more perceptible to some than others. The bee, after its arrival at the hive, empties the contents of the honey-sac into the comb, where it remains until the store of honey is taken. When separated from the comb, the purest honey is a clear, thick liquid, which after standing becomes thicker, till at length it "sets," as it is technically called. A small bit of this, placed under a quarter of an inch objective, shows that this is owing to the grape-sugar (which has gradually been forming at the expense of the cane) crystallizing out in extremely thin, regular, six-sided prisms. All the cane sugar is retained in the liquid portion of the honey. This crystallization proceeds as the whole of the cane-sugar becomes converted into grape. When this takes place, so great is the proportion of crystals that the honey is said to "candy," and is not considered so good from the presence of acetic acid, which is produced by the grape-sugar, which in its turn undergoes a change through the agency of fermentation. The honey crystals are not identical with those of cane sugar.

On more closely examining a slide containing a bit of old honey, besides the prisms will be seen small bundles of crystals. These are manna-sugar. They remain after honey has been fermented, and may thus be separated. With these, small round or oval bodies will also be noticed spread over the field of the microscope, and are the pollen globules, showing in a beautiful manner from what flower the honey was collected. Of course they vary with every locality; but it is worthy of remark that a bee will only visit the same species of flower at the same journey; for the examination of a great number of bees will show that two kinds of pollen are never found on the same insect, although they may be very different on another working on the same flower-bed. A single bee, with all its industry, energy, and the innumerable journeys it has to perform, will not collect more than a tea-spoonful of honey in a single season, and yet the total weight of honey taken from a single hive is often from sixty to one hundred pounds. A very profitable lesson of what great results may arise from persevering and associated labor!

The evidence on which the author relied for the presence of formic acid was by distilling the honey and receiving the distillate in an alkaline solution. The resulting solution, after decomposition by an acid and evaporation, afforded all the usual reactions, and readily reduced the salts of silver.

The foregoing facts, therefore, clearly show that—First :—Honey is derived simply from a solution of cane-sugar, identical in every respect with that from the sugar-cane. Second :—That it afterwards receives the addition of a small quantity of formic acid from the glands of the bee. Third :—That cane-sugar afterward becomes gradually altered into grape sugar by chemical decomposition. The flavor of honey is, of course, quite accidental, and dependent on the aroma of the flowers the bees have visited.

Coal is now being mined at Portsmouth, from the Rhode Island coal-beds.

Qualities of the Best Vegetables.

There is so wide a difference in the quality of vegetables, that we are frequently surprised to see the indifference in regard to the purchase of vegetable seeds for sowing and planting. This is an error, which may readily be corrected. No person who desires garden esculents of fine quality need be without the best, if he will only take the trouble to make his selection of seeds with a little more than usual care. Somebody has laid down the following as a criterion to a certain extent, by which the quality of some leading esculents may be determined. We think him right, and commend his views :—

"In the blood beet we always look for a deep color, smooth, handsome form, small top, and sweet tender flesh. In the orange carrot, small top, smooth root, and deep orange color. In the cabbage, short stump, large, compact head, with but few leaves. In the cucumber, straight, handsome form, and dark green color. In the lettuce, large, close head, pleasant flavor, with the quality of standing the heat without soon running to seed. In sweet corn, long ears, very shriveled grains over the end of the cob. In the cantelope melon, rough skin, thick, firm flesh, and high flavor. In the water melon, thin rind, abundant and well-flavored juice, and bright red core. In the onion, thick, round shape, small neck, deep color, mild flavor and good keeping quality. In the parsnip, small top, long, smooth root, and rich flavor. In the pea, low growth, full pods, large and tender peas, rich flavor. In the scarlet radish, deep color, small tops, clean root, and quick, free growth. In the squash, medium size, dry, fine-grained, deep-colored flesh. In turnips, handsome form, small tops and tap root, sweet crisp flesh."

Those who have never seen better sorts than they possess, suppose they are of the first quality, when they may be very inferior or almost worthless when compared with the finest varieties.—*Culturist.*

Bread-making.

In order to have good bread, there are three things very essential—good flour, good risings, and a careful hand. Now, if my lady friends will comply with the following directions, I will guarantee them as good bread as was ever broken by mortal. The day of hop yeast has gone by. It is not used by the country folks at the present day, only by here and there a family. Here is my way of making bread :—

Water Risings.—Take a quart pitcher and a spoon—scald them thoroughly—fill the pitcher half full of boiling water from the teakettle, which has been drawn fresh from the fountain. Let the water cool to the temperature of good hot dish-water; stir in flour sufficient to make them as thick as pancake batter; add one-fourth of a teaspoonful of salt and as much soda; cover them closely, set them where they will keep quite warm; stir occasionally. They will rise in five or six hours.

Wheat Bread.—Milk is the best wetting for bread—water will answer. Stir the wetting into the flour quite warm, then add the rising; stir it altogether to make a sponge. When sufficiently light, mix and mold into loaves. Let it rise again. The oven should be hot enough to bake a common loaf of bread in thirty minutes, without scorching or hardly browning in the least. Bread should never be cut until it is twelve hours old, and then only what is to be eaten immediately; better cut again than to have a plateful left. Who can bear to eat bread that has been sliced and dried a day or two?

Raised Biscuit.—Take some of the bread dough when light, knead a piece of butter as large as an egg into dough enough to fill a long tin—mold into small biscuits—let them rise again; bake for twenty minutes.

Indian Bread.—Take two quarts of Indian meal, pour on boiling water enough to make the meal quite wet; when cool, add a quart of flour, half a pint of risings, a little salt, and half a cupful of molasses. Mix altogether, put into large basins and let it rise; bake for three hours with a slow fire.

Johnny Cake.—A johnny cake, to be eaten with meat, should be made as follows:—One teacupful of sweet milk, one of buttermilk, a little salt and a little soda; stir in meal enough to make a soft batter; bake forty for minutes.—*Mrs. Cull.*

Tenpenny nails pass current, among the inhabitants of North Carolina, at five cents each.

Improved Vulcanizing Apparatus.

The introduction of india-rubber into dental practice, and the favor it has received at the hands of the profession, imparts a deep interest to all improvements calculated to facilitate its manufacture. We are assured by the inventor of the machine herewith illustrated, that no vulcanizing apparatus has been devised heretofore which was capable of vulcanizing two or more pieces at one time in a proper manner. Experience proves that pieces placed one above the other cannot be vulcanized alike at the same operation, and, therefore, it is usual to vulcanize each piece separately, at the expense of two operations. The improvements here illustrated effectually overcome this difficulty by changing the vulcanizing vessel from a cylindrical to an oblong form, wherein each flask is placed side by side, and each receives a due degree of heat.

Fig. 1

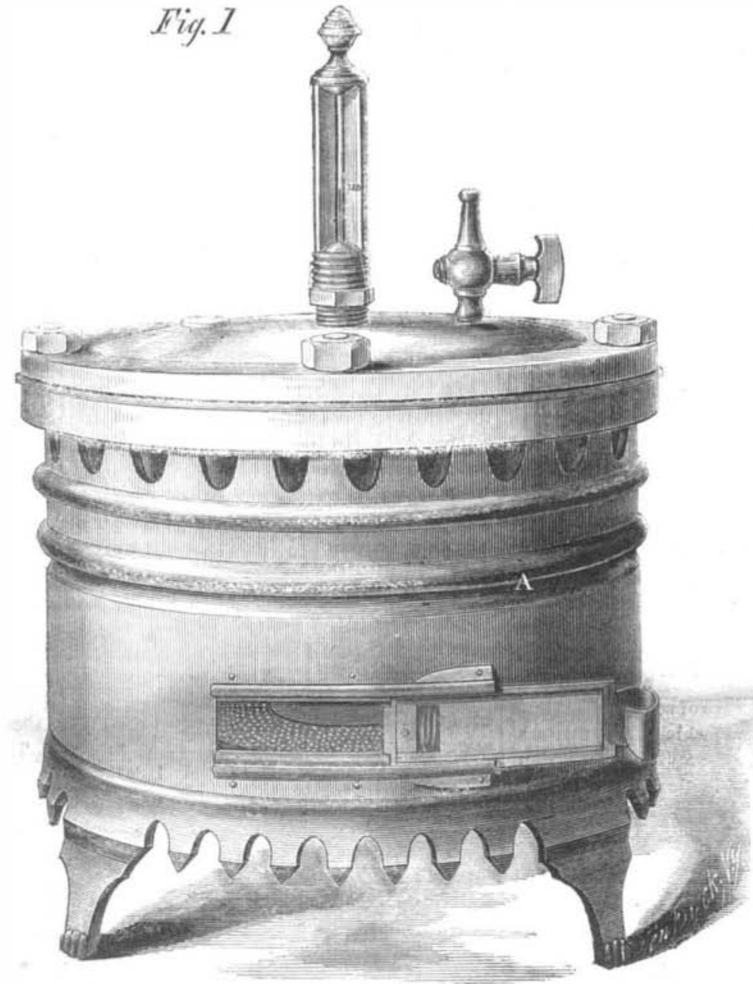
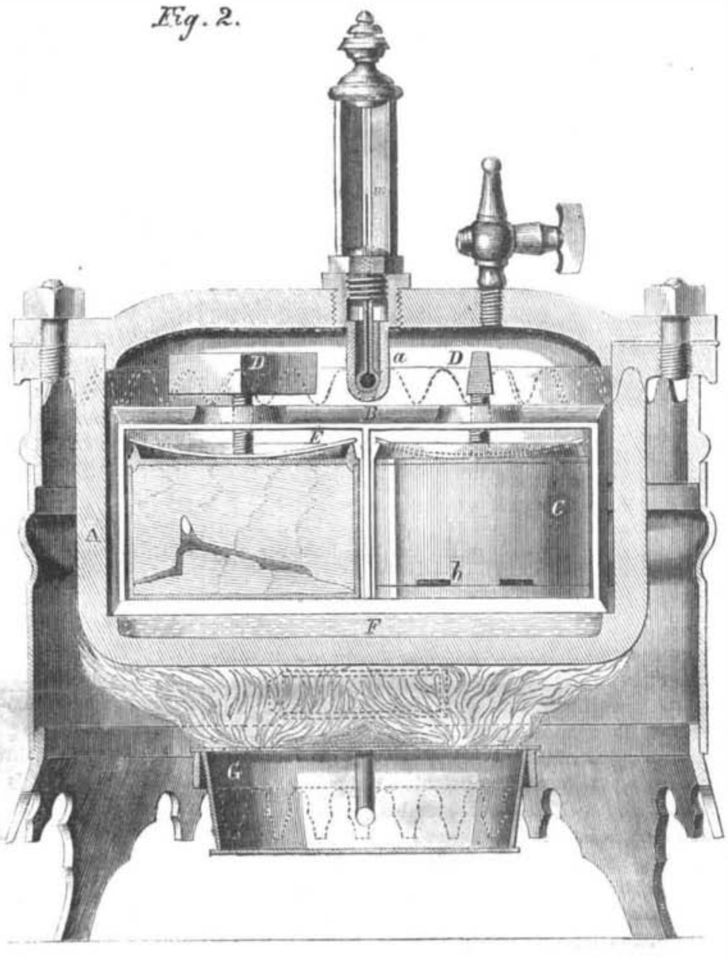


Fig. 2.

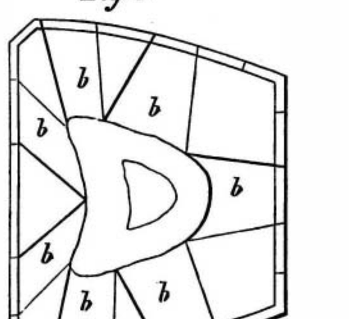


MC'DERMUT'S PATENT VULCANIZING APPARATUS.

Fig. 1 is a perspective view, and shows the outer ornamental sheet-iron casing, A, which surrounds the retorts and flasks. The small door at the bottom has a piece of talc let into it for convenience of observing the state of the fire. Fig. 2 shows a section of the apparatus through the flasks and retorts. The cast-iron chamber or retort, A, is lined with porcelain, and has a shoulder at the bottom on which the frame, B, sits; this frame contains the flasks, C; one of the flasks is shown in section and the other in perspective. The covers of the flasks are kept down by thumb-screws, D, working against springs, E. The water, F, is interposed to prevent the bottom from burning out; the steam is discharged through the small cock on top. The vulcanizing process is intended to be effected by gas, and the apparatus, G, at the bottom is provided for that purpose. When gas is not to be had, however, a small spirit lamp is substituted.

The thermometer ordinarily attached to vulcanizing vessels often occasions failures, by reason of breakage or leakage. The bulb being unprotected and placed within the steam chamber renders it necessary to pack the small glass tubes at great risk of breaking them. The improved mode of constructing and of applying a thermometer to a vulcanizing vessel, as shown in Fig. 2, has effectually overcome these difficulties, as will be readily seen by referring to the cut. The case is of solid brass with a socket for the tube, and the thimble or enlarged socket, *a*, for the necessary bulb, extending down through the cover into the steam, secures and protects the glass from all liability of breakage. The thermometer case may be used as a handle for removing the cover without risk or liability of fracture. When iron vessels have been used for this purpose (as is ordinarily done) the sulphurous gases acting upon the exposed surfaces of the iron produces a deposit of black oxide or sulphuret which discolors the whole interior; this injures the color of the vulcanite plates, and is effectually obviated by enameling the exposed surfaces. There has also existed, hitherto, a difficulty in packing the molds properly. The india rubber, as prepared for dental use, is slightly elastic and semi-plastic, and has to be rendered entirely so by the heat in the vulcanizing process. The difficulty laid in judging of the exact quantity of the rubber required to fill the molds; if too little is used the piece will be lost, or if too much the surplus will be forced out of the mold into the plastic joints of the cast, and coming in contact with heat, will harden and prevent the flasks from coming together; this will leave the piece too thick, change the articulation, and often spoil it. This difficulty is effectually removed by the improvements herein described and shown in Figs. 1 and 3, of providing channels, *b*, for the escape of the surplus rubber around the entire mold, and this is done by cutting away the plaster cast around the mold, to the depth of about the 32d part of an inch, and leading the channels to openings in the sides of the flasks for its escape; or recesses may be made in the plaster cast near the outside of the flask to receive such surplus. Provision for the escape of a surplus being thus made and springs provided, as shown in the drawings of Fig. 1, there is no difficulty in packing a mold; the main thing being to pack sufficient rubber to fill the whole mold, and when the rubber becomes plastic the springs will close the flasks, and the surplus will flow out into or through the channels, leaving the piece full and perfect.

Fig. 3



An application for a patent is now pending through the Scientific American Patent Agency. The apparatus is the invention of J. L. McDermut; further information can be obtained by addressing him at 130 West Twenty-fifth street, New York City.

Loss of the Steamship "Anglo Saxon."

The Montreal Steamship Company's iron screw steamer *Anglo Saxon*, which left Liverpool on the 16th of April for Quebec and Montreal, was wrecked four miles east of Cape Race on the 27th ult., during a dense fog. This vessel carried mails for Canada and the United States, and had on board 84 of a crew and 360 passengers, making a total of 444 persons. Of this number 187 have been saved, but all the others (257, it is believed) have perished. Seventy-three persons escaped on spars and the others in boats. The vessel struck upon a rock, and the deck broke up in about an hour afterwards. This company has been very unfortunate in the loss of vessels, as the *Anglo Saxon* is their sixth which has been wrecked since 1857. In order to make short voyages, the commanders of steamers are much too reckless in hugging the dangerous North-eastern coast, and running too fast during fogs.

New Portrait of Washington.—A new likeness of Washington, supposed to have been executed during his life-time by a French artist, has come to light at Salem, Mass., and is pronounced an excellent picture by Josiah Quincy, who knew the original.