

hundred and fifty dollars. Some of the magneto-electric machines were so covered up that it was impossible to study their interior construction. In all of them the principle of the revolution of helices around magnets appear to obtain.

ELECTRIC ATTACHMENT TO LOOMS.—In case a thread broke in weaving, the fact was indicated by the violent ringing of a bell, and the stoppage of the machinery, all by automatic motion, and through the aid of a battery. The same attachment could have been applied to any other machine as well as to a loom.

ENGRAVING BY ELECTRICITY.—There were inventions of this character for copying in fac-simile any pattern whatsoever. One arm of a pointer moved over a picture, and the other over a lithographic stone or a metal plate, and the cutting instrument, by making or breaking the current of electricity, was made to cut or to pass over the plate, and to repeat the shading and depth of any original picture. There were several instruments of this character which apparently did their work well.

ELECTRIC CAR BRAKE.—The engineer is able to put down all of the brakes on a train of cars at the same moment, and to stop the train very suddenly by simply placing his thumb on the key which makes the connection with the battery. There were large cars with this attachment, and the whole thing worked well in the model.

ELECTRIC CAR SIGNAL.—In case the cars were broken asunder the fact would be instantly communicated to the engineer by the ringing of a bell.

ELECTRIC CLOCKS were as numerous as the ordinary time-pieces—in fact all the clocks on the towers appeared to be driven by electricity, and they consequently kept uniform time.

CASSELLI'S TELEGRAPH.—This instrument was one of the greatest curiosities in the Exhibition. It represented in autograph the message of the sender. Instead of signing your name to a dispatch you were to make a skillful portrait of yourself with a peculiar kind of ink, an exact copy of the same would be sent. Writing, pictures, patterns, and autographs could be transmitted by this machine with entire accuracy, and if the apparatus was to be attached to the electric engraving machine previously mentioned, the dispatch could be engraved at the distance of a thousand miles from the original copy. A pointer moving over magnetic ink, by making and breaking the circuit, was made to repeat it in fac-simile whatever was put under it. It was all the same whether it was plain writing, a drawing, a pattern, or a picture. The electrograph of Lenoir was a modification of CasSELLI's, and appeared to work very well. We saw numerous pictures copied by it.

ELECTRIC SIGNALS of all kinds were exhibited. To announce that a switch was wrong, that the draw was open, that the down train had not started, that there was danger ahead, was all practically arranged. For use in the house there was no end to contrivances. If the servant did not answer the bell, the bell would keep on ringing all day and all night until it was attended to. If a burglar entered a door or window, his approach would be announced by a lusty ringing of bells. If the water was too low in the boiler, ding dong would go the bell. If the house was growing cold, the mercury would sink in the thermometer and again the bell would ring.

ELECTRIC GAS LIGHTING.—There were contrivances for turning on and off gas by electricity, lighting any number of burners at the same instant of time. By connecting this with the burglar alarm telegraph, the opening of a door or window would set the bells ringing and light all the burners in the house at the same instant.

THE CHRONOGRAPH.—For measuring short intervals of time no instruments have been devised at all equal to those in which electricity is employed. A most important instrument was exhibited by Professor Glassner, of Liège, for measuring the velocity of a cannon ball by recording the interval of its passage from one point to another. The ball in its flight was made to break copper wires placed on its track at measured intervals, and the breakage of the galvanic current was recorded upon a revolving cylinder in a way to indicate the smallest fraction of time. The variation in the velocity of the ball from the commencement in the cannon until it was spent was accurately measured in this way. The same instrument was adapted to the measurement of time in all other observations, the record in all cases being made by electricity.

ELECTRIC MIRRORS.—In order to attract larks in hunting it is customary to have revolving mirrors. But the machinery hitherto employed has rather served to frighten away the birds. Electric mirrors were exhibited which were claimed to be perfect in their way.

ELECTRIC SAFETY LAMP.—The danger of explosions in coal mines from the careless use of Sir Humphry Davy's safety lamp has been frequently demonstrated. It is proposed to obviate this danger by the introduction of a lamp composed of Geissler tubes properly protected by wire and driven by a small Ruhmkorf coil and battery carried in a knapsack on the back of the workman. These tubes have the air pumped out of them and the light comes from a constant stream of electricity passing from one end to the other. If the glass breaks, no fire can be communicated to the outer gases, as the connection with the battery is broken at the same instant and no spark can pass. This kind of a lantern could be used by travellers for reading at night on the railroad, as the whole apparatus can be carried in a carpet bag and can be easily suspended from a hook.

TESTING IRON BY MAGNETISM.

It is well known to engineers that it is a most difficult and often impossible thing to find out the existence of a false weld in a forging, or of a blow hole or honeycomb in an iron or steel casting. The only safe way of doing this is by carefully measuring the elongation of the piece under a given load, as with a false weld all the work is thrown on the diminished area at the defective weld, and the thicker parts are scarcely extended by the force which is perhaps rupturing the bar at the flawed spot. It need scarcely be said that there are many important cases where this process, or the equivalent, but dangerous one, of trying the effects of an impulsive force, could neither be mechanically nor commercially practicable. Every one knows that a simple method by which internal flaws and solutions of continuity in constructive details could be easily detected would be of enormous value to the world. Such a method, says the *Engineer*, has undoubtedly been discovered by Mr. S. M. Saxby, R. N., who has very judiciously been allowed by the Admiralty, during the course of this year, to experiment with it in the royal dockyards. Though comparatively new, and not yet completely worked out, the process will possibly have a yet more extended application than finding out only mechanical flaws in iron, and possibly in cast iron and steel.

The principle upon which this method is founded is so simple that it certainly seems strange that it had previously escaped notice. It has been known for nearly a century and a half, that when a bar or any mass of soft iron is placed in the position of the dipping needle, it is at once sensibly magnetic; the lower extremity being a north pole in our latitudes, and the upper extremity a south pole. In the southern hemisphere the poles are of course reversed. The same action, only weakened, takes place in a bar hanging in a vertical or any other position; only the effect is weaker the more the position of the longitudinal axis, for instance, a long bar, departs from that of the magnetic dipping needle.

When a small compass needle is slowly passed in front of a bar of very good iron, placed in an east and west direction, the needle will not be disturbed from its proper direction, which is of course at right angles to this, or north and south.

But this is true only with homogenous bars of best quality—to bars without any mechanical solutions of continuity. With internal flaws or interruptions of continuity the bar is no longer regularly magnetic. It has long been known that a good compass needle, or a good permanent magnet, must be homogeneous and without flaws in order to take and retain its maximum amount of magnetism. In a word, any mechanical solution of continuity is accompanied with a polar solution of continuity, and the given bar or mass with flaws—whether permanently magnetised or temporarily so by the inductive action of the earth—is no longer one regular magnet, but several different magnets, with the different magnetism separated from each other. The delicately-poised magnet of a compass can thus be made to tell the presence of such solutions of continuity.

In making tests, practically, the bar is placed in the equatorial magnetic plane, or east and west. On moving the magnetic needle in a line parallel with the axis of the bar, as long as the iron is sound, the position of the needle is east and west; but on the recurrence of a flaw the latter deviates more and more until entirely reversed, when placed over the imperfect spot.

By the enlightened permission of the Admiralty Board, Mr. Saxby, as stated, has already been allowed to test his method in various ways in the royal dockyards of Sheerness and Chatham, and we will describe some of the practical results of these experiments. Amongst these were a number of very remarkable trials conducted in the presence of the master smiths, the foremen of the testing houses, and several of the chief engineers of the royal navy. Mr. Saxby, for instance, was requested to find out the weakest spots in a number of bars, and to tie a string or make a chalk mark on each spot. Immediately afterwards all these bars were put into the testing machine and broken, the prediction in every case being verified.

The smiths of the royal dockyards seem to have properly tried Mr. Saxby's powers in almost every possible way, and most ingenious devices were sometimes resorted to for the purpose. As examples out of many, in the center of a bar of 1 inch square forged iron, was welded a piece of unmagnetised steel about 5 inches long. The needle detected a fault at about the center of the piece of steel.

A bar welded together out of a piece of bowling and a piece of common iron, had at about its middle a drilled hole, into which a magnetised steel pin had been riveted. The compass magnet soon found out the pin, the difference in quality of the two ends of the bar, and also an unsuspected fault at the end. A bar of round iron was brought to him painted over; it had been "jumped together" in three different pieces and qualities of iron—a bar worked up out of scrap of galvanised iron, another of common iron, and the third of bowling. The needle detected very unequal qualities, the verdict being that the bar was unfit for being manufactured into any article.

In another case, in which Mr. Saxby's experiments were carried out in the presence of a large number of naval chief-engineers, he put down in writing the results of his magnetic examinations, in order that they might be subsequently compared with what was known as to the actual quality of each bar. A bar, one and a quarter inch round, and three feet eleven inches long, was pronounced by the compass needle as being not of the same iron throughout, and with a south end better than the other. It was then stated by the master smith to have been made up of pieces of good and

bad. A rather shorter bar was found to be good iron, but doubtful in condition; it was afterwards explained to be "uncertain," and on testing it in the machine it was stated to be "crystallised." A third piece was found to be of very good iron, but with slight irregularities; the smiths stated it to be scrap iron, and the best to be got in the shop. Two pieces of five-eighth inch manufactured iron were discovered to be not good. Another piece of one and a quarter inch bar was found to be good iron, though made of different qualities—it had been afterwards annealed. With another bar, to Mr. Saxby's written question whether it was not steel, it was answered that the bar in question was a near approach to steel, being a piece of galvanised wire rope welded up. To the remark that another bar was unfit for use he was told that it had been twisted round when at a low heat, and then hammered cold. Some singular proofs of the power of magnetic testing over the ordinary methods of determining quality and condition of iron have been shown. Pieces of iron brought for testing by most able and experienced master smiths, of such quality as would be selected for the most important work, have, on being tested, been marked at spots as defective, and on cutting have accordingly been found at those spots to be partially fibrous, partially crystallised.

The following experiment was made in order to throw light on an important practical question in smiths' work: A round bar 17½ inches long was specially worked, and had been brought to be tested without anything of its history being known to Mr. Saxby. He found that in the middle of its length it was seriously faulty, and even unfit for use. He was then told that the bar, though solid, had been "upset" in the middle of its length, and then hammered down to its original diameter at a temperature below welding heat. This will be held to confirm the opinion of good workmen that "upsetting" should be done at a temperature as near as possible below that of welding.

Mr. Saxby has not yet been successful in testing rolled plates for lamination. In these, again, the neutral, or zero lines, should run at right angles to the dip in a homogeneous plate; but the more complex structure of the plates has made the investigation more difficult. Another difficulty doubtless consists in the fact that the usual shape of a plate does not allow the magnetism to separate itself in such a marked way as in a bar, usually longer by many diameters. The investigation, with a resulting perfect method, can scarcely be said to be completed in this direction. The chief difficulty at present seems to be that the internal structure is too irregular.

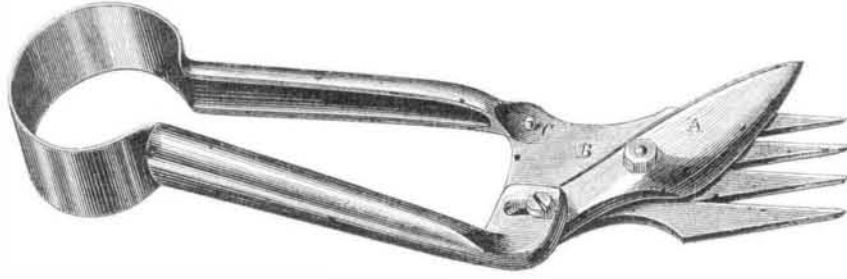
Up to the present but few experiments have been made with steel, and very few with cast iron; those already made have, however, been satisfactory. Any difficulty that might be supposed to attend the presence in wrought iron of what is termed by the Astronomer Royal sub-permanent magnetism is easily overcome. A few taps on the end of a bar of wrought iron, when lying east and west, sufficient to cause vibration, would demagnetize it, and leave it in a fit state to be examined by the needle; and polarity subsequently found would indicate either a steely nature of the bar or inferior iron.

Some brief considerations will now determine the value of Mr. Saxby's invention to engineers, whether for trying new work of all kinds, or even working details in a suspicious state. In estimating the value, in the widest sense of the term, of any wrought iron forging, three qualifications may be considered as governing: (a) Its limits of elasticity, or the amounts it will yield in any given direction without taking permanent sets; (b) its ductility, or the permanent alteration it will take before actual rupture; and (c) its ultimate resistance, or the amount of the load it will stand, per original unit of cross sectional area, before actual rupture. These three qualifications, in a complete forging, are evidently—1st, The absence of defective welds, or of large solutions of continuity in the mass; 2d, the absence of smaller flaws or solutions of continuity—either due (a) to the presence of scoria or slag, causing what are termed "greys," or small flaws, either parallel or across the longitudinal axis of a bar, or (b) to cracks (often unsuspected) caused in the working when portions of the forging are too cold; or (c) to actual separations at the facets of the elongated crystals of which iron always consists, and due to loads of whatever kind beyond the elastic limit; 3d, the chemical constitution of the bar—such as its freedom from phosphorus, sulphur, arsenic, silicium, manganese, etc. (apparently everything but carbon in small quantities)—originally governing its mode of crystallization, and hence more or less its elasticity, ductility, and ultimate resistance to rupture. Now Mr. Saxby's method can detect the presence, and negatively of course the absence, of small or large solutions of continuity. It can detect false welds, smaller flaws caused by bad workmanship or wear, and, we believe, what is commonly termed "crystallization," which will, probably, once be generally acknowledged to consist in a disruption or parting of the facets of the amorphyously arranged crystals of which iron is built up. It can, of course, only detect the results of the chemical constitution of iron, as evidenced in the less perfect cohesion of the crystals when alloyed, in relatively considerable quantities, with foreign bodies. There is little doubt that the magnetic method is a test of the homogeneous character of the iron and of its freedom from fissures and cracks, and so far it undoubtedly forms a test of quality. It will appear scarcely credible that a common pocket compass needle should be able—almost like the divining rod said to be used for finding out springs of water—to discover important defects in large iron bars. A mere statement of the fact does sound almost incredible until the simple means actually employed are explained.—*Engineer*.

Improvement in Sheep Shears.

The advantages of these shears over those ordinarily used are apparent at a glance. A movable cutter, A, is pivoted to the face of the stationary cutter, B, which is divided into fingers or bars, each one presenting a cutting edge to the action of the movable blade. A slot in the free end of the spring handle, and a screw in the end of the vibrating cutter, with a stop, C, on the opposite side of the plate, B, governs the throw of the blade. The forks of the plate readily enter the matted fleece, thus facilitating the operation of shearing, and the action of the blades insures a drawing cut requiring less power, and producing a cleaner cut than the ordinary shears. The form of the cutter and its throw can be regulated to suit any hand. These shears are also well adapted for shearing horses.

Patented by John Ralston, June 4, 1867, who may be addressed for rights, etc., at Slippery Rock, Butler county, Pa.



RALSTON'S PATENT SHEEP SHEARS.

THE SCIENCE OF EXTINGUISHING A FIRE.

Accounts of experiments showing that violent conflagrations may be extinguished by very small quantities of water, by means of buckets or small hand pumps. By M. Van Marum: The flame of any burning substance must cease, according to well known principles and experiments, as soon as any cause prevents the atmospheric air from touching its surface; thus, when a small quantity of water is thrown upon a body in a state of violent conflagration, this water is at first partly reduced to vapor, which, rising from the surface of the burning substance, repels the atmospheric air, and consequently represses the flame, which, for the same reason, cannot again appear whilst the production of the vapor continues.

From experiment it appears that the art of extinguishing a violent conflagration with very little water consists in throwing it where the fire is most powerful, so that the production of vapor from the water, by which the flames are smothered, may be as abundant as possible; and in proceeding to throw the water on the nearest inflamed part, as soon as the fire ceases in that where you began, till you have gone over all the burning parts as expeditiously as possible. In thus regularly following the flames with the water, they may be everywhere extinguished before the part where you began has entirely lost, by evaporation, the water with which it was wetted, which is frequently necessary, to prevent the parts from taking fire again; after the flames of a burning body are extinguished, it cannot again take fire, for the above-mentioned reason, till all the water thrown upon it be evaporated.

Being convinced that very little water may suffice for extinguishing ordinary conflagrations, particularly at their commencement, I have endeavored to convince many of my fellow citizens of it by repeated experiments; and I have advised the procuring of small portable engines to be used in cases of necessity. One experiment was the following, a small hand pump being used: I constructed a shed of dry wood, forming a room twenty-four feet long, twenty wide, and fourteen high, having two doors on one side, and two windows on the other. This shed was provided with the wood-work of a roof, but was not covered, and stood about six inches from the ground, that there might be a thorough current of air to increase the fierceness of the flames when the building should be set on fire. The inside of it was completely covered with pitch, and lined with straw, which was likewise pitched. To this straw lining I fastened wood shavings, and cotton dipped in oil of turpentine, to set fire to the whole inside of the shed at once. Soon after the fire was applied, the flames, being increased by the wind, were everywhere so violent that all the spectators thought they could not possibly be extinguished. I however succeeded, in about four minutes, by the method already described, with five buckets of water, part of which was wasted through the fault of those who assisted me, as the following experiment proved.

I invited but very few to be present at this first experiment on the 8th of May, but on the 11th I repeated it in the presence of a very numerous company, after repairing and restoring the shed to its original state. The fire was not less violent than in the preceding experiment. I then directed the water myself, without any assistance, and effectually extinguished the fire in three minutes, having used only three buckets of water, each containing about four gallons and a half.

Another experiment was made at Gotha, where a shed of old and perfectly dry wood was erected, under the direction of M. Van Marum, in front of the duchess's garden. Its dimensions were in every respect equal to that which served for the same experiment at Harlem, being twenty-four feet long, twenty wide, and fourteen in height. There were two doors on the northeast side, and two large apertures, in the form of windows, on the northwest side. The top was quite open to give the flames a free passage.

The inside of this shed was covered with pitch, and afterwards with straw mats, plentifully besmeared with melted pitch. To the bottom of these straw mats were fastened cotton wicks, dipped in spirits of turpentine, that the place might take fire in every part at once. In consequence, the fire, being considerably increased by the wind, was at first

so powerful, and the flames, enveloped in thick clouds of smoke, rose with such violence to the height of several feet above the opening of the roof, that the nearest spectators were obliged to retire precipitately, and many of them declared that it would be impossible to extinguish the conflagration, and that the shed would be entirely reduced to ashes. When the straw mats were completely consumed, the wood of the shed was soon in flames in every part. The circum-

stances under which this experiment was made were highly unfavorable; for the wind drove the flame exactly out at the doors on the northeast side, at which the water for extinguishing it was to be introduced. But notwithstanding this, M. Van Marum placed a small portable engine before the door, nearest the southeast side, without regard to the fears and opposition of his assistants, and ordered it to be worked there, stationing himself as near as the heat of the fire would permit him; he first directed the water to the southeast side, as near the door as possible, and as soon as the flame was extinguished in one part he guided the water to another. He then directed it along the north east side, so that in a few minutes the flames were completely extinguished on those two sides. The engine was then placed before one of the apertures made in the form of windows, on the northwest side. He in a very short time extinguished the southeast side, and then coming to the middle of the shed, which was still on fire in several places in the crevices of the planks and the holes made by the nails, he completely extinguished the fire, which from time to time broke out again in small flames, and this terrible conflagration was entirely got under. According to the calculation of several of the spectators, the fire was extinguished in three minutes at most, after the engine began to work, three buckets of water being used.

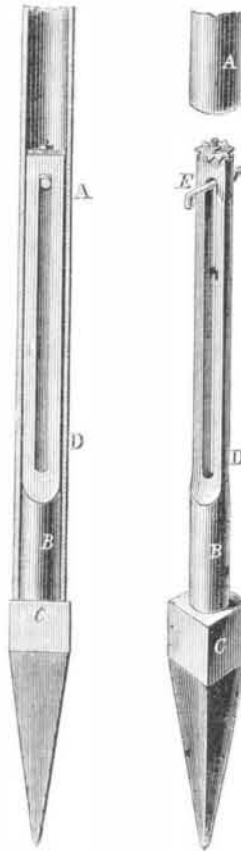
From what has been stated, it results, that to stop the most violent flame it is necessary only to wet the surface of the burning substance where the flame appears, and for this purpose only a small quantity of water is required, if it be applied with judgment to the burning part.

BENNETT'S DEVICE FOR SINKING WELL TUBES.

The practice of procuring water by simply sinking or driving iron tubes to the water deposit, instead of digging and walling wells, is now quite common, and to facilitate the formation of such wells is the object of the contrivance here-with illustrated.

A represents the tubing, which is driven into the earth by positive force. In this is fitted the shank, B, of the opening point, C. The point is made square in cross section or pyramidal in form, instead of round, as usual, the advantage of which is that it retains its position and preserves its direction better in driving and holds better in place when the tubing is partially raised to admit water. For a certain distance above the shoulder of the point the shank is cylindrical, fitting quite closely the caliber of the tubing. Above this point, D, it is beveled or chamfered, forming, above that point, a flat bar having a longitudinal slot, through which is passed a bolt, E, that also passes through the sides of the pipe. At the top of the shank is a star-shaped diaphragm, which cuts off the passage in the center of the tube, and compels the contents to pass up around the outside of the diaphragm through the radial openings. This device serves as a check to the sand in the center of the tubing, where the current is strongest, and precipitates it down on the outside next the sides of the pipe where the friction will tend to prevent its ascension. Testing can be done at any time during the progress of the work. It is done by raising the tube just above the point, D, enough to admit the water. It will be noticed that by securing the diaphragm to the top of the shank it will always stand at the same height above the water, no matter how much the tubing itself may be adjusted up or down. This prevents the deposits of sand near the induction point.

Patented Oct. 20, 1867, by R. N. Bennett of Branchport, N.



Y. Territorial rights for sale by him, or by John Schanck, Pittsford, Monroe Co., N. Y.

Death by Lightning.

The effects of a shock of artificial lightning on a gentleman of our acquaintance, who is very sensitive to the electric discharge, may be here described. Under ordinary circumstances, the discharge from a small Leyden jar is exceedingly unpleasant to him. Some time ago he happened to stand in the presence of a numerous audience with a battery of fifteen large Leyden jars charged beside him. Through some awkwardness on his part he touched a wire which he had no right to touch, and the discharge of the battery went through his body. Here life was absolutely blotted out for a very sensible interval without a trace of pain. In a second or two consciousness returned; the recipient of the shock saw himself in the presence of his audience and apparatus, and, by the help of these external facts, immediately concluded that he had received the battery discharge. His intellectual consciousness of his position was restored with exceeding rapidity, but not so his optical consciousness. To prevent the audience from being alarmed, he observed that it had often been his desire to receive accidentally such a shock, and that his wish had at length been fulfilled. But while making this remark the appearance which his body presented to him was that of a number of separate pieces. The arms, for example, were detached from the trunk, and seemed suspended in the air. In fact, memory and the power of reasoning appeared to be complete long before the optic nerve was restored to healthy action. But what we wish chiefly to dwell upon here is, the absolute painlessness of the shock; and there cannot be a doubt that to a person struck dead by lightning, the passage from life to death occurs without consciousness being in the least degree implicated. It is an abrupt stoppage of sensation, unaccompanied by a pang.—*Harpers.*

Manufacture of Iron.

From a paper read by Mr. Frederick Smith, and published in the Transactions of the Institution of Mechanical Engineers, we extract the following notice of the processes gone through in producing the different kinds of iron made at the Round Oak Works, England, and known as "common," "best," "best best," and "best best best:"—"Common" iron is made from puddle bars from hot-blast mine pig, cut, piled, and heated with best coal for about an hour and a half in one of the bar mill furnaces, and rolled in the bar mill to the section required. "Best" iron is made from a mixture of cold and hot blast pigs, but the top and bottom of the pile are of puddled iron that has been worked over twice at the hammer and forge rolls, so that all "best" iron is worked over at least twice, while the upper and lower parts of the pile are worked over at least three times. "Best best" iron also consists of a mixture of cold and hot blast pig, and is treated nearly the same as "best," only that the whole pile is worked over thrice at the hammer and forge rolls. "Best best best" iron is made entirely of cold blast mine-pig, and rolled out into 3 1/2 x 3/4-inch bars. They are sheared into small snippings, and then run in barrows to the ball furnace, where they are worked together into a ball of about one cwt. in the course of a few moments. The ball is hammered and reheated in the furnace; hammered again, and then put through the forge rolls; the bars produced by these rolls are then cut up and piled, heated at a bar mill furnace, and rolled in the bar mill. In this process, to form "best best best" iron it is heated five times, hammered three times, and rolled three times.—*Bulletin of American Steel and Iron Association.*

What Advertisers Say.

LAWRENCE, MASS., Dec. 24th, 1867.

MUNN & Co., SCIENTIFIC AMERICAN, New York:

DEAR SIR:—Your favor is received, announcing increased rates for advertising. You will please continue our advertisement until forbid. Were we to curtail our advertising, the SCIENTIFIC is the last that we should withdraw from. We are yours, truly, J. C. HOADLEY & Co.

191 BROADWAY, NEW YORK, Dec. 24th, 1867.

MESSRS. MUNN & Co.:

GENTLEMEN:—Yours at hand announcing advance terms for advertising. Please insert inclosed advertisement on your outside page until otherwise ordered. Even at your new prices this is the most profitable advertising I can do. I know it from the fact that I have expended \$12,000 in the leading journals, and no one has brought me the same profitable harvest as the SCIENTIFIC AMERICAN. May you always prosper. Yours truly, GEO. E. WOODWARD.

USE OF A GRINDSTONE.—Mechanics who value a good condition of their tools and other appliances for doing work, should never allow their grindstones to be used by strangers indiscriminately without some restrictions as to the manner of using. Every stone for grinding tools should be provided with a rest and the men taught how to use it. We have seen the face of a stone gouged so as to require a thorough razing by ten minutes' injudicious grinding. Such accommodations are costly.

CORRECTION.—In acknowledging a fine list of subscribers from Castleton, Vt., two weeks ago, we stated that the club was made up by Mr. H. O. Osborn. The credit should have been given to H. O. Brown. A gentleman from the place, calling our attention to the mistake of name, states that Mr. Brown is too modest to call our attention to the error, and adds that when the seventy men in his mill become better acquainted with our paper another large list of subscribers will be forthcoming.