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NO. 42.

NEW PROSPECTUS
OF THE
SCIENTIFIC AMERICAN.
ENLARGEMENT.
Volume I., Number 1—New Series.

The Publishers of the SCIENTIFIC AMERICAN respectfully announce to their readers and the public generally, that, on the first day of July next (1859), their journal will be enlarged and otherwise greatly improved; and at that time will be commenced "Volume I., No. 1, New Series," which will afford a more suitable opportunity for the commencement of new subscriptions than is likely to occur again for many years.

The form of the journal will be somewhat changed from what it now is, so as to render it better adapted for binding and preservation and instead of eight pages in each number as now, there will be sixteen and in a completed yearly volume the number of pages will be doubled to 332, or 416 more than now.

The SCIENTIFIC AMERICAN is published at a price which places it within the reach of all; and as a work of reference for the Workshop, Manufactory, Farm and Household, no other journal exceeds or even equals it in the value and utility of its information. Its practical recipes alone oft-times repay the subscription price ten-fold. Inventors will find it, as heretofore, the mirror of the Patent Office, and the reliable record of every claim issued weekly by the Office, the list being officially reported for its columns.

With the enlargement of the SCIENTIFIC AMERICAN, we shall be enabled to widen the sphere of our operations, omitting none of the features which now characterize it, but adding many new ones, which will render the work more valuable to all classes of the community than it has heretofore, among which is the devoting of space to a Price Current, and a column or two to the Metal and Lumber markets, and such other branches of trade as may be interesting and useful.

The increased outlay to carry out our design of enlargement will amount to eight thousand dollars a year on our present edition; and in view of this we appeal to our readers and friends to take hold and aid in extending our circulation. Think of getting, at our most liberal club rates, a yearly volume containing about 600 original engravings and 332 pages of useful reading matter, for less than three cents a week! Who can afford to be without it at even ten times this sum?

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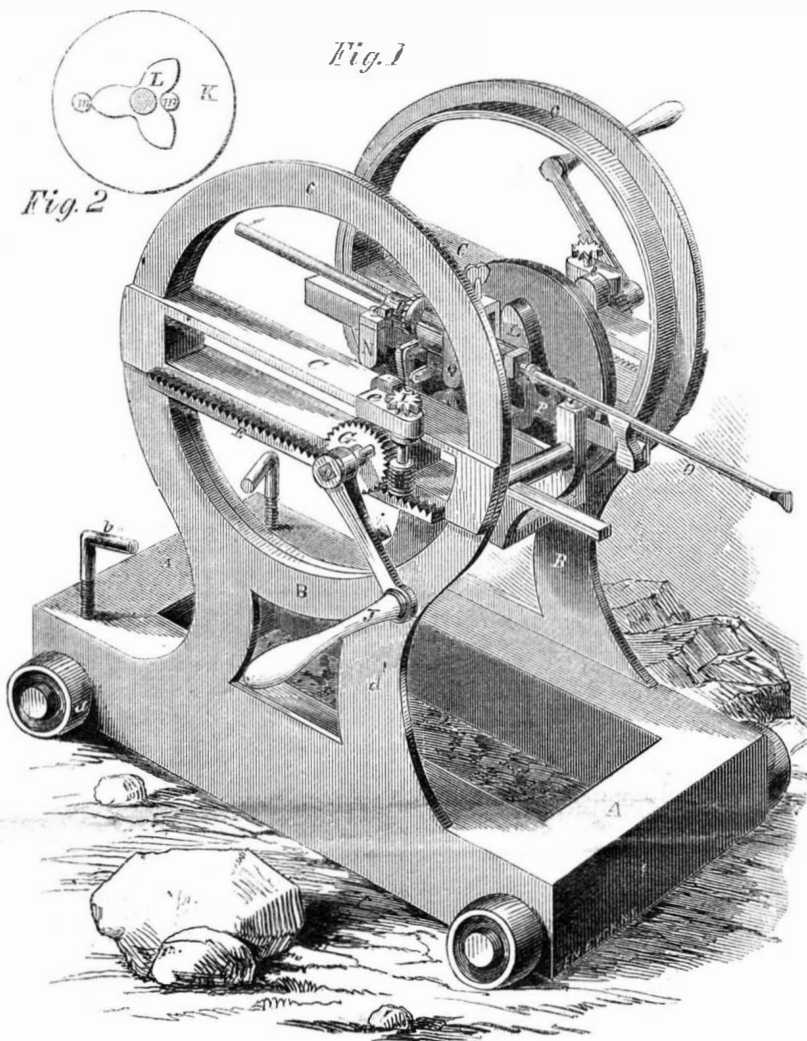
MUNN & CO., Publishers and Patent Agents,
No. 37 Park-row, New York.

Beautiful Electrotype Table Tops.

A most beautiful invention, connected with ornamental tables, has lately been exhibited in London. It consists in securing, with varnish, mother-of-pearl, precious stones, curious shells, &c., on a plate of copper intended for a table top. These are arranged in an artistic manner to represent figures, leaving spaces of clean copper between them and then submitting it to an electrotype bath, where a deposit of copper is made to fill up the spaces between the stones, &c., and thus hold them embedded in the metal. After this the plate is submitted to a silver electroplating bath and the copper covered with silver, thus forming a curious and exquisite table cover ready to be placed on a pedestal.

WE have to thank Capt. A. A. Humphreys of the Topographical Engineers, for his able report of recent explorations and surveys, and the excellent maps which have been constructed under his supervision.

WHITE'S ROCK AND COAL DRILL.



A really good drill is a great desideratum for mining purposes, and has long been wanted; one so arranged that it could be worked by hand or power as the size of the bore or the facilities of the mine or quarry enabled to be done. The subject of our engraving is such a machine, and is the invention of Lyman White, of Davenport, Iowa, the patent being granted this week.

Fig. 1 shows a perspective view of the whole machine and Fig. 2 an isolated view of the working cam. A is a frame which is mounted on small rollers, *a*, that can be adjusted by screw rods, *b*. To each side of the frame, A, is an upright supporting piece, B, formed of an annular top piece, *c*, and two supports, *d*. Within each piece, *c*, a bar, C, is placed, and secured in the desired position by screws. C are slotted longitudinally nearly their whole length, and a bearing, *e*, is fitted so that it can slide in the slot. D is a shaft which rotates in *e*. On the outer edge of C a rack, E, is placed, in which the teeth of a wheel fit, that is connected with the worm wheel, G, both of which turn loosely on the shaft, D. A screw, H, gears with G, and on the top of H is a small toothed wheel, I, that is moved one tooth every time the crank, J, makes one revolution by the pin, *i*, passing between the teeth of I. By this means the drill is fed to its work. On the shaft, D, a wheel or disk, K, is placed, and it is provided on its face with a cam, L. On D there is suspended a box which carries a carriage, N O P, on which are placed the rollers, *m m*, that, passing both sides the cam, L, cause

the carriage to be moved back and forth by the cams. The drill, O, is secured in a frame in this carriage that is provided with a ratchet wheel at its end, so that the drill may be rotated as it is at work. The operation is very simple. By turning the cranks, J, the drill receives a rapid percussive and return motion, giving three blows to one rotation of the crank, and at the same time the drill is fed to its work and itself turned to cut the whole round. It can be advantageously used by farmers to remove rocks from the farm, and is so simple that any mechanic can construct it. A two-inch bore and under can be done by hand, and it is only above that size that animal or steam power will be required. The editor of the *Iowa State Democrat* has seen it in operation, and speaks very highly of its performances.

Any further information can be obtained by addressing the inventor as above.

Flaxen Ringlets.

Poets have often sung in raptures of blue-eyed, laughing flaxen-haired girls, but George Speight, of London, a thoroughly practical man, understands things better than those dreaming rhymsters who make sonnets to their sweethearts' ringlets, for he makes flaxen ringlets for those sweethearts. He has just taken out a patent for making plaits and curls for headresses and other head ornaments and employs Russian or American hemp dyed to the exact shade desired, and glossed up with aromatic grease, and curled to adorn the head of some happy fair one either with flowing auburn or raven locks as may be desired.

When it is taken into consideration that long brown hair for making ladies' artificial curls costs from \$10 to \$12 per pound, Mr. Speight may be considered a sort of benefactor to all those individuals who are deficient in natural cranial ornamentation, although we think his invention will rather *spite* the girls in Normandy, who cultivate their hair expressly for our wigmakers.

Peddlers in human hair traverse France, and attend the country fairs, to which the girls flock who have long tresses for sale. These are offered for examination, and a bargain struck for each fleece according to its length, color, and texture—the dark auburn being the most prized. When this is done, down sits the devoted fair one on a stool, and a large pair of ruthless scissors soon completes the operation, and the price being paid, the shorn damsel goes on her way rejoicing. Beautiful long tresses which a fashionable lady would not part with for thousands of dollars are parted with by the French rustic maidens without a sigh and for very small sums, little dreaming that in a short time afterwards, they may be attracting a score of admirers in Broadway. Such has been the way of the world heretofore, but Mr. G. Speight intends to have a different order of things hereafter—if he can.

New Gold Discovery.

The Melbourne (Australia) *Argus* states that great excitement has been created at the celebrated Bendigo Diggings by the discovery that a conglomerate metal, very common, but which has been hitherto disregarded, will yield not less than 150 oz. of pure gold to the ton, with a very large per centage of zinc. The analysis is as follows:—Zinc, about 45 per cent; iron, about 20 per cent; sulphur, about 15 per cent; arsenic, about 10 per cent; other extraneous substances, about 9 per cent; gold, about 1 per cent: total, 100—giving a result of 1 oz. of pure gold out of every 100 oz. of the conglomerate. It states that "this discovery has opened up a fresh mine of incalculable wealth." From the nature of the alloy it will not be an easy process to reclaim the gold, and it will not pay the expenses in Australia. If this conglomerate were imported at a small cost to New York, it could be smelted and refined with profit.

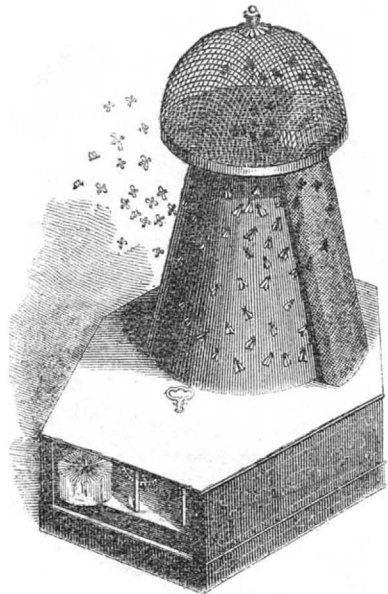
MOLDS OF ENGRAVINGS.—Gutta-percha can be dissolved in olive oil by the agency of heat, and it then becomes a plastic mass, which is kneaded with warm water to wash it, and the moisture then pressed out. It is now laid on the face of an engraved plate, which is designed and copied by the electrotype process, and heat is applied to the under surface. The composition is thus melted and fills up every line of the engraving; it is then suffered to cool and when it becomes dry and hard, it is easily removed and forms a mold containing a perfect copy of the engraving. The face of this mold is now dusted with pure plumbago, and placed in an electrotype trough, when a coat of copper is deposited upon it. In a very simple manner multiplied copies of engravings can thus be obtained.

PROSPECTUS.—We hope the friends of the SCIENTIFIC AMERICAN will send without delay for our prospectus, with a view to getting subscribers on our new volume; and from those who have already received them we hope to soon hear a good account.

New Inventions.

Clough & Burrell's Fly Trap.

We always thought that a lighthouse was intended either to warn the mariner of danger or show some friendly channel; but these inventors call their trap a lighthouse trap, and instead of warning flies of their danger, it, with spider-like guile, allures them to their death.



Our illustration shows one of these traps. The clockwork is in the base, from which rises the central column, which is covered with sand and on which the bait (molasses and sugar) is to be spread with a sponge. A rotating spindle passes through the center of this and carries a platform on the top, from one side of which the catcher projects downwards, close to, but not in contact with the sanded cone. On the top of this platform a cage, containing water in its base, is placed, into which the flies are attracted by the light, when started from their enjoyment of the sweets of life by the catcher. When the spring is wound up and the trap baited, the catcher and cage commence revolving around the sanded cone, and the flies are caught, made prisoners, and finally find a watery grave.

The inventors are I. S. Clough and Saml. R. Burrell, of New York, and the patent was issued this week. Any information or traps may be obtained from I. S. Clough, No. 231 Pearl street, New York.

New Farm Gate.

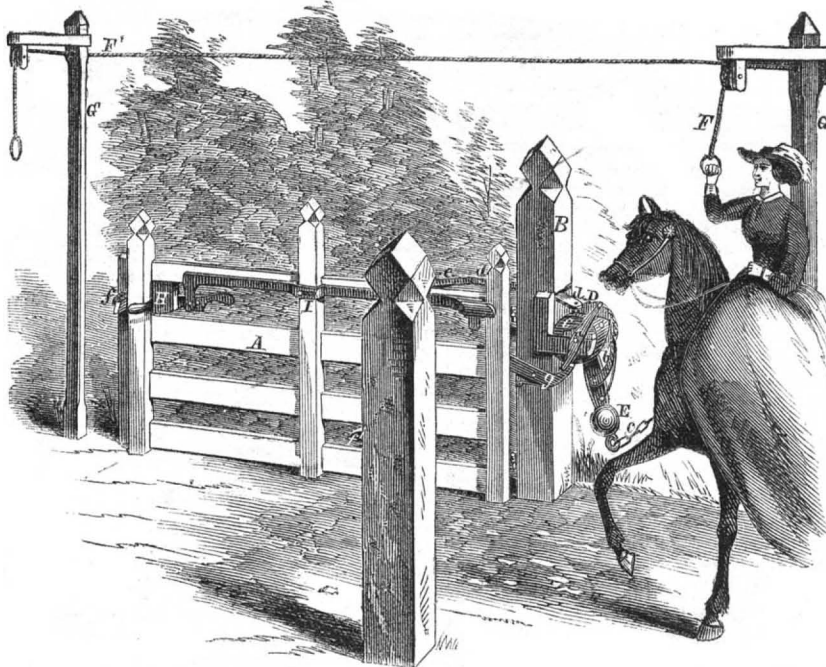
The extreme simplicity of this gate will recommend it to all who wish to have the carriage way to their house, or the entrance to a field or drive, closed with a gate that can be opened by a person on horseback or in a conveyance without dismounting.

The gate, A, is swung as usual from a post, B, to which there is attached a framing that carries a grooved drum, C, and a double lever, a. On the end of the drum is a ratchet-wheel, D, in the teeth of which a pawl, b, is kept by a spring, the ratchet being connected to a weighted lever, E, the tendency of which is to pull the pawl over the teeth without moving, C; but when the weighted lever is elevated by either cord, F or F', that depend from the posts, G G', and are connected by a chain, c, to E, then the ratchet or grooved drum are rotated a quarter of a revolution, or the distance of one groove. In the grooves of C a pin works which is rigidly connected to a lever, d, that has its fulcrum inside B, and that is connected by another lever, e, and a sliding joint to the gate, the fulcrum of e being on the end of a link that is hinged to B. The latch, H, is kept in the catches, f and f', according as open or shut, by a small spring, and the inside end of the latch is connected to the double lever, I, that is operated by one arm of a striking it and so elevating the latch when in one position, and by the other end of

a striking and depressing the double bent lever, g, that operates a pin on the other side of I, when the gate is in the position shown. As the grooves in C run in opposite directions, it follows that, on pulling the cord on one side the gate to open it, when the other cord

is pulled it must close the gate, and vice versa. This gate is very durable; there is no sunk mechanism to get out of order or become clogged with dirt or frozen up, and by removing the pin which connects the lever, e, to the gate, a common farm gate is made.

BOGGS' FARM GATE.

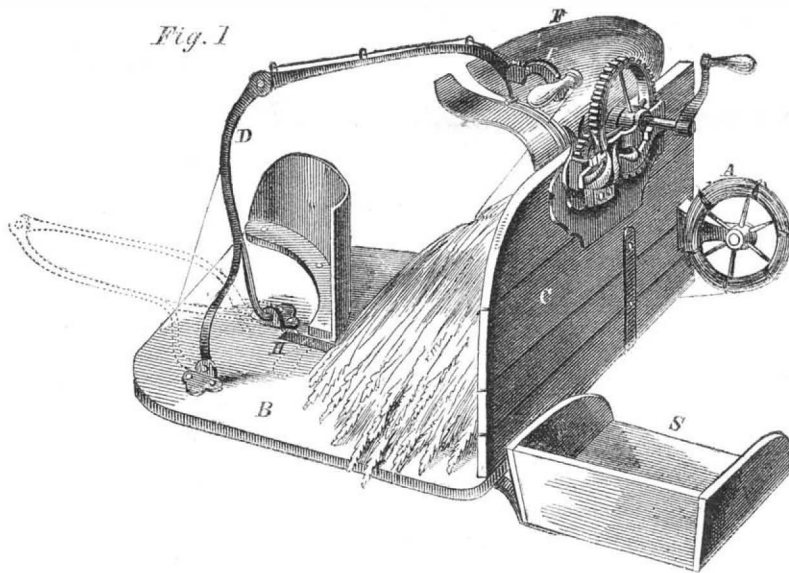


There is nothing strange in its appearance to frighten cattle or horses. It is very easily constructed, and is cheap.

The inventor is W. T. Boggs, of Cincinnati,

Ohio, and the patent is dated Oct. 19, 1858. He will be happy to furnish any further information concerning the invention upon being addressed as above.

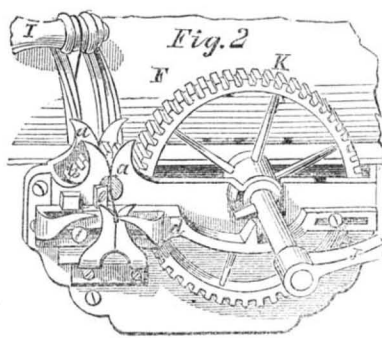
SHERWOOD'S GRAIN BINDER.



This binder, the invention of Allen Sherwood, of Auburn, N. Y., can be attached to the platform of any reaper, and it requires only the attendance of one man.

A reel of wire, A, is attached to the side of the harvester, and along the bottom of the supplemental or binding platform, B, a groove, H, is made, through which the wire is passed to the jointed arm, D, along eyelets in which the wire returns. We may as well describe the operation, by which the machine will be fully appreciated. The operator sits on the seat, S, Fig. 1, and taking the handle, I, of the jointed arm, D, in his left hand, he passes it over the shield, F, on the top of the side, B, and down to the position indicated by dotted lines on the platform. The grain is then raked on the platform, B, and the binder, by elevating the handle, I, passes the wire completely around the sheaf and brings the end to the device seen in Fig. 2, which is placed on the outside of the slide, C, of the device. The wire passes between the two jaws, a, and between two eccentric cog-wheels, b, which are rotated by a wheel, K, operated by means of a handle, J, which the operator keeps in his right hand. These

wheels, b, twist the two ends of the wire to secure it round the sheaf, and a stop, c, on the shaft of K, catching against another one a sliding frame, d, that carries a knife, e, causes the wire to be cut off, and the sheaf

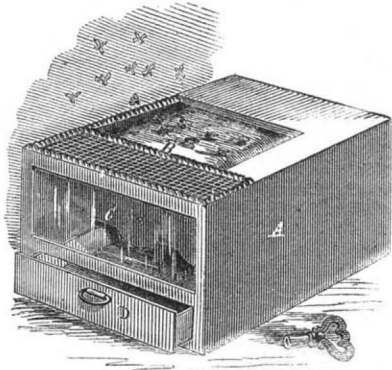


drops away bound and fastened, and the operator is prepared to perform the same operation again, which takes less time than we have taken to describe it. The whole complete weighs only about forty pounds, and it is constructed so as to be sold very cheap. The wire must be flexible iron wire and will not cost much, and can be used for other pur-

poses when the grain is threshed. The sheaves can be easily unwired by a peculiar pull with a gloved hand, although they are not likely to come unfastened by any of the exigencies of transportation from the field to the thresher. Any one can operate it after a little practice, and there is no doubt that it does its work quickly and well.

It is a subject of two patents, Jan. 26 and Sept. 14, 1858, and has been assigned by the inventor to E. P. Senter & Co., of Auburn, N. Y., who will be happy to furnish any further information.

Automatic Fly and Mosquito Trap.



We must confess that it is very cruel to take life and cut short the ephemeral existence of even flies and mosquitoes, but the fact is, they are much too friendly, and have such an uncomfortable way of showing their attachment to our persons, that we willingly seize hold of any means to exterminate these diminutive blood-suckers. Our illustration shows a trap which not only catches but confounds and kills the insects who may happen to be attracted by its seeming innocence.

It consists of a box, A, in one end of which there is a common clock movement, which gives motion to the endless band, B. This band is moistened with a few drops of rum, or molasses and vinegar, and set in motion, when the flies attracted on to it are carried down into the body of the box, where a corrugated or winged drum knocks them off into the bright tin drawer, D, that is half full of water, and the flies, being first stunned by the blow of the roller or drum and further confused by the intense light of the polished tin and the humming noise of the clockwork, quickly lose the power of resistance and drown in the water. When mosquitoes are desired to be caught in the night time to keep the room clear enough to give us rest, a light must be placed opposite the glass front, C, in order that the light may be reflected by the polished tin and so attract the mosquitoes.

It is the invention of S. W. Smith and H. Bigelow, and any further particulars may be obtained from the former by addressing him at 534 Broadway, New York. The patent is dated Feb. 15, 1859.

Inquest on Patents.

A discussion took place a few days ago, in the New York Academy of medicine, on the question whether the Academy should pass an opinion on surgical instruments and apparatus which have been patented. Dr. McNulty contended that it was contrary to the spirit of the Code of Ethics of the National Association for physicians to obtain patents, and consequently that they should not act upon other people's patents. This sentiment met with much opposition, and the general opinion was that surgical appliances should come under a different rule from nostrums; the former being usually invented, at least in part, by mechanics, who could not do without the patent. A resolution by Dr. McNulty, to the effect that the consideration of no patented article should be entertained by the Academy, was lost.

We have received from the author, F. W. Evans, a very interesting account of the theology, sociology, and history of the Shakers, together with a life of Ann Lee.

Scientific American.

NEW YORK, JUNE 25, 1859.

Special Notice.

All subscribers to the SCIENTIFIC AMERICAN who have paid the full subscription price (two dollars) for the complete volume which has heretofore terminated in September, are informed that by remitting \$1 60 more, their subscriptions will be continued for one year on the New Series commencing July 1st.

CLUBS of subscribers who have paid up to September, and wish to renew their subscriptions or form new clubs at that time, can do so at the club rates, deducting 30 cents each from all the present subscribers and complying to our advertised rates on new ones; for instance a club of 10 subscribers who have paid \$15 for one year's subscription up to September, may have their subscriptions continued till the end of Vol. II., New Series, or one year from July 1, 1859, by remitting \$12.

The Past, the Present and the Future.

In accordance with the announcement (made in No. 35) of our intention to enlarge the SCIENTIFIC AMERICAN, and commence a new series on the 1st of July next, the present number terminates Vol. XIV.; and with the next issue we shall appear before our readers in a new form, with new type, and thus introduce "Volume I., Number 1, Enlarged Series"—a sixteen-page paper instead of an eight.

The SCIENTIFIC AMERICAN will next week enter upon its *fifteenth year*; and we hope we shall be able to show to our friends and the public that it still has a vigorous existence, and that it enters upon a new career with the intention of proving itself still more worthy of the confidence and support of a generous and enlightened reading public.

We know from a long experience that our journal has a host of friends everywhere; and the hearty response which has been made towards it, in reference to the proposed scheme of enlargement, assures us that we have not taken this step in vain. We desire here to repeat—what we have often had occasion to do—our warmest thanks for the generous support and confidence which has been given to us during the thirteen and a half years in which we have had control of this journal. Without multiplying words on this point we will proceed at once to give a few details concerning the enlargement and alteration in the form of the SCIENTIFIC AMERICAN. The necessity for the change has long been apparent, not only to ourselves but also to our readers, and the difficulty against which we had to contend was principally one of prime cost; and, as our custom is, we sat down to count the expense and to consider how we could best accomplish our objects. To double the present size of the journal without resorting to the expedient of using a very inferior quality of paper is out of the question, as no sane man would undertake to publish a journal twice the size of this and use equally as good paper for \$2 a year, with our present liberal clubbing rates. We thought of a number of plans whereby we could serve up a more acceptable weekly entertainment to our readers, such as a double sheet monthly or bi-monthly, or a loose supplemental sheet weekly; but a little experience in both these particulars convinced us that neither plan would be satisfactory. We therefore resolved, as the last resource, to change the form of the journal by using a larger sized sheet but folding it into a sixteen-page paper instead of an eight; and thus slightly reducing the size of the pages. The size of the sheet upon which each number of the new volume is to be printed is 28 inches by 40, or just one-half larger than

the sheet now in the hands of the reader; and by a better and more economical arrangement of the space we shall be able to present to our readers almost a double quantity of useful reading matter, and at the same time afford them a more compact, and, we believe, a more convenient volume for binding and preservation. In reference to the amount of reading matter we would further explain, to render this point clear, that, in the present issue, the letter-press covers a total available space of 872 inches, while in the new form the total available space will be 1,536.

It must be apparent to all that this improvement will open to us a wider field for the expression of thought and the results of investigation than we have hitherto enjoyed; and while we do not intend to depart from our legitimate sphere, wherein we have so long labored and wherein there is yet much to be accomplished, we hope at the same time to develop more fully the varied operations connected with invention and the industrial arts and sciences.

By the pen and the aid of the graphic pencil we shall delineate, week by week, the actual progress of invention, discovery and manufactures; and, as heretofore, the SCIENTIFIC AMERICAN will be the only reliable organ of all those ingenious men who, by their continual discoveries in various fields, are ever advancing the world in the knowledge and application of the arts and sciences; and thus the beneficial influence of this journal will be made to extend to all classes of society.

We shall publish the proceedings of scientific associations and bodies so far as their deliberations bear upon the interests of the Inventor, the Mechanic and the Manufacturer; also reports of patent trials, and biographical notices of scientific men and inventors—a feature which we shall endeavor to render useful and attractive. As examples of this kind we refer to our recent notices of Humboldt, Lardner, Olmsted, Watt, Robertson, and Commissioner Bishop.

As heretofore, we shall pay particular attention to the department devoted to giving valuable information to our correspondents, which we shall endeavor to make still more varied and interesting. We shall also vigilantly watch the operations going on in our markets in metal, lumber, and such other departments as may be deemed useful to our readers.

With the foregoing hints and glimpses of our future course, we close our labors on the present volume; and cheered by strong assurances of cordial support from thousands of our subscribers, we shall work on vigorously, trusting that all who already read the SCIENTIFIC AMERICAN will confidently believe that our past exertions form a partial exponent and satisfactory guarantee of our future efforts.

Fawkes' Steam Plow.

A powerful steam plow of thirty horse power having been constructed in Philadelphia for Mr. J. W. Fawkes, of Lancaster, Pa., the inventor issued circulars of invitation for a grand exhibition of its powers, to take place at Oxford Park—about 10 miles from Philadelphia—on the days of the 15th, 16th, and 17th inst. Having taken a deep interest in the subject of steam-plowing, we accepted the invitation of Mr. Fawkes to be present, and expected to be highly gratified with the display. We regret to state that, from the defect of two pinions gearing into the wheel on the main drum, our anticipations were doomed to disappointment. On Wednesday (the 15th), after the plow had traveled round the race course, it was set to work, but had not proceeded above 30 yards when the cogs of the pinions referred to were ripped off, and further operations entirely defeated. We regretted the result as a great number of persons, like ourselves, who had come from a distance to witness the operation, felt mortified, both on their own account and that of Mr. Fawkes. He deserved better success, as his

plow contains some good features and had made a very successful private experiment on the day previous. The plow is 18 feet long by 7 wide, has two horizontal cylinders of 9-inch bore and 15-inch stroke. The boiler is a "vertical tubular," and carries 150 lbs. of steam. The principle feature about it is that the whole frame and machinery are supported on a large rolling drum six feet wide and six feet broad. The power of the engine drives this drum, and it drags a gang of eight plows behind it in an adjustable angular frame. The motion from the crank-shaft to the drum shaft is imparted through cog-gearing, and it was defective teeth in one of these cogs which caused the break-down. It will soon be in operation again, and, with better pinions, it will no doubt give satisfaction, and may yet be the successful competitor for the prize of \$6,500, offered by the Illinois State Agricultural Society.

Humboldt's Will.

The late Baron de Humboldt has bequeathed to his domestic, Seiffert, who lived with him thirty-three years, all his immense library, all his furniture, and all his articles of value, with the exception of a few which he charges him to present to certain persons. His manuscripts, however, are not comprised in the donation, and among them is a geographical work of greater extent than any hitherto published. The domestic is his testamentary executor. The money in hand at the time of the baron's decease was under five hundred thalers. Of this sum he had given four hundred thalers to the servants, with written instructions to apply the money to the expenses of his funeral. As a proof of the little value M. de Humboldt set on personal distinctions, it may be stated that the great number of decorations which he had received from the sovereigns of all countries were found lying pell-mell in a cupboard. His legal heirs, the sons and grandsons of his brother William, had caused the property to be put under seal, not being aware of the donation to Seiffert. This old and faithful servant had some years before been appointed guardian of a royal palace at his master's request, but the king dispensed with his fulfilling the duties of his post during the lifetime of Humboldt.

To Stop Bleeding of the Nose.

Bleeding from the nose is very frequent in young people. Generally this is checked by the person sitting upright, bathing the nose externally with cold water, or vinegar and water, and sniffing it up the nostril. If, however, it continue, a moderate pinch of powdered alum may be put into a couple of tablespoonfuls of water, and thrown up with a squirt; or a plug of cotton dipped in this wash may be passed into the bleeding nostril, for generally it is only one side which does bleed; but care should be taken to fasten a strong thread securely round it, lest it be pushed in or slip so far back into the nostril that it cannot be got out without much difficulty. When there is frequent disposition to bleeding from the nostrils, it is necessary to prevent costiveness, and to take some saline purge continually, so as to keep the bowels rather relaxed. Persons who are subject to severe headaches, followed by bleeding of the nose, should never try to arrest the latter suddenly, but allow it to bleed freely for some time, in order to prevent congestion of the brain.

THE ATLANTIC FERRY.—Twenty-two steamships arrived at this port, Boston, and Quebec, during the month of May, from Europe. Twenty-one steamers in thirty-one days! Almost as many went the other way. It is only twenty-one years since the little Cork steamer, *Sirius*, the first to cross the Atlantic, made her appearance off the Battery. She was eighteen days in making the passage. Now it is accomplished in nine days. The arrival of the *Sirius* produced a sensation throughout the country. Now the arrival of twenty-two steamers in one month scarcely excites a remark. *Tempora mutantur.*

Cast-Iron Stairs.

When a fire takes place in a dwelling, in general the staircase, being of wood, goes early; means of escape are cut off; the inmates can neither get down to the street, nor up to the trap-door, so as to get on the roof of the next house. It has been suggested, as a remedy, to have the stairs made of cast iron; the one end of the steps to be inserted into the wall when the house is being built; the other end of the steps to be made fast in an upright square or round iron pillar, going from the ground to the top of the house. The stairs could be carpeted, and the steps made highly ornamental, with eyes cast for the stair-rods. Of course we only refer to private dwellings, as iron stairs of a very durable and ornamental character have been erected in several of the cast-iron stores in this city.

RIFLE CARTRIDGES.—The conical bullets for rifles sometimes oxydize and become too large for the bore of the barrel, and from this cause some of the British troops have experienced greater trouble in India. To prevent this evil Capt. J. Norton recommended the following method of making cartridges:—"If the shot is coated with thin tough paper pasted on its cylindrical body, and a little forward on its conical front, the lead cannot then oxydize, and the shot preserves its proper size in all climates. The oxyd of lead is a poison, and causes wounds to mortify. This fact ought to be made known generally, and without any delay."

FRIGHTENING RATS.—An old work on catching rats contains the following simple method of banishing these pests from houses. The author says: "I shall here give the reader another maxim I have often followed very successfully. Take a pint of common tar, half an ounce of vitriol, and a good handful of common salt: mix them all well together in any old deep pan. Soak some pieces of paper, and place enough of this into the holes, sufficient to stop them, and then let the bricklayer make good after you; and if you should find any of the holes opened again, it is quite certain you did not put in a sufficient quantity; then put in some more; and if it is done as it ought, they will never approach there again while either taste or smell remains in it."

A REMARKABLE INSECT.—A paper has been sent to the Paris Academy of Sciences by M. Daffour, which describes the anatomy of a small insect not more than four millimeters (about the sixth of an inch) long, which possesses an organism as complete as a large vertebrated animal. It has a nervous system, brain and ganglia and a respiratory system. All the members of this insect are very minute and fragile, and have excited the wonder of the Parisian savans. We do not doubt it; Paris savans are an enthusiastic class of men.

SUBSTITUTE FOR TOBACCO.—"Any person," says the *Colonial (West India) Standard*, "who knows anything of the fragrance of the Pimento when in full blow, may form some idea of it by a pipe charged and lighted with the dried berry simply crushed in coarse bits. It cannot be well smoked in short pipes, but with the long cherry stick of a meerschaum it affords a treat beyond anything known in the use of tobacco. The coolies and native laborers are bringing Pimento into use in the place of tobacco."

A USEFUL HINT.—If a man faints away, instead of yelling out like a savage, or running to him to lift him up, lay him at full length on his back on the floor, loosen the clothing, push the crowd away so as to allow the air to reach him, and let him alone. Dashing water over a person in a simple fainting fit is barbarity. The philosophy of a fainting fit is, the heart fails to send the proper supply of blood to the brain; if the person is erect, that blood has to be thrown up hill; but if lying down, it has to be projected horizontally, which requires less power, as is apparent.

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