

A NEW ELECTRIC LAUNCH.

The electric launch Vashti lately made a very successful trip on the Hudson River, running from Nyack to Sing Sing and return.

The party on board consisted of a number of well known newspaper men and electricians, who were unanimous in their opinion that this system of electric propulsion was all that could be desired.

The whole operation of the boat is under control of one person, and simple in the extreme.

The starting, stopping, and reversing is regulated by a single wheel, and any speed, from the maximum to zero, can be obtained by turning the wheel, as when moved to the right the propeller starts ahead, and the farther it is moved to the right the faster the propeller goes; on turning this wheel back to the starting point the motor comes to a standstill, and on turning it to the left the motion of the propeller wheel is reversed.

This starting wheel and the steering wheel are located together at the forward part of the cockpit and both can be operated by any one, though he be unfamiliar with boats and electricity.

The electrical energy is stored in 72 storage batteries which are underneath the floor and this gives the boat great seaworthy qualities, as they practically act as so much ballast next the keel. The motor also is under the

stated that they cannot be buckled or sulphated, and, having no active material to fall out, cannot in any way be injured by high rates of charge and discharge, by short circuiting, jolting, or standing idle. A cell of such qualities, combined with the remarkably slow speed motor, in which there is no revolving wire, and consequently minimum wear and tear and liability to accident, ought to solve the problem of electric traction for both street cars and launches.

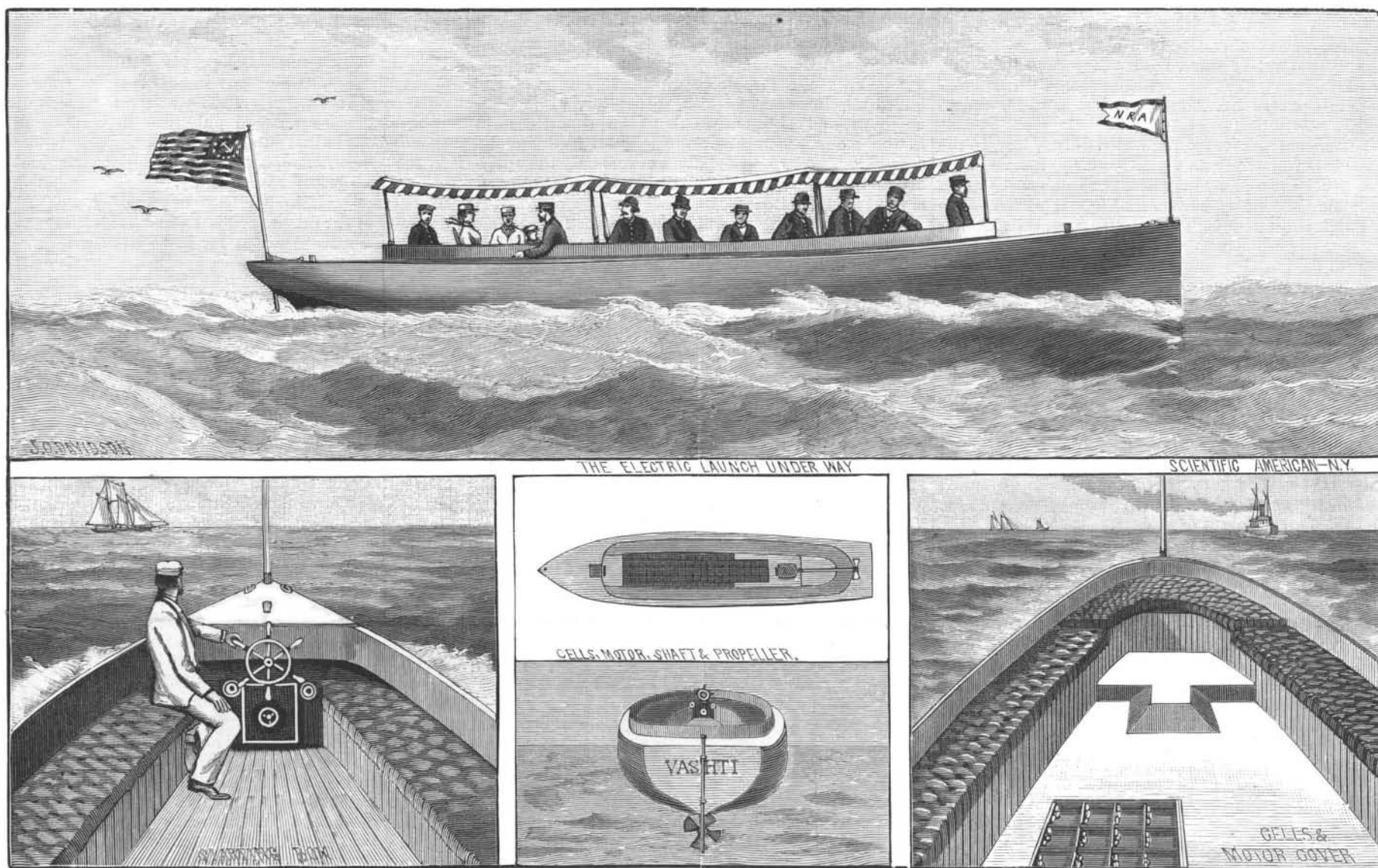
Pastes for Cancer.

One hears so much of the knife and of drugs in cancer that it is something of a novelty to meet with an article from an eminent and scientific physician arguing in favor of caustic pastes. Dr. A. K. Robinson, in the *International Journal of Surgery*, maintains that in epitheliomatous tumors, during the earlier stages, and even when they are of considerable size, the use of caustic potash will give much better results as regards complete removal of the disease than can be obtained with the knife, provided the same area of tissue is destroyed or removed in both operations. He is furthermore satisfied that from the use of the caustic potash, and some of the other caustics, there is formed in the tissues cauterized a toxalbumin which is destructive to the cancer cells, or organisms,

of butter. The paste must be freshly made each time it is used. It is spread upon muslin or rubber plaster in a layer about a quarter of an inch thick, and firmly applied to the part. Marsden advises that it be not applied at one time to a larger area than one square inch; but the writer has applied it to very much larger surfaces and has never seen any injurious effects. It is not suitable for cancer of the lip, or of mucous membranes, on account of the danger of poisoning by absorption. A study of its action on a tumor of small size will give an idea of the result obtained when the treatment is properly conducted.

Comparing zinc and arsenic, Dr. Robinson says: The effect of the chloride of zinc paste in twenty-four hours is the same as that of the arsenious acid paste in sixteen to eighteen hours; but the injury to the normal tissue is greater with the former than with the latter; consequently the Marsden's paste has a tendency to destroy the pathological tissue in a special manner, in addition to the action of a non-elective injurious agent, which destroys pathological tissue sooner than normal, provided the action requires to be exerted for a period of time to produce destruction of tissue.

The "cancroin" treatment of Adamkiewicz, the aniline dye treatment of Mosetig-Moorhof, the thallin papain treatment of Granville, and the voltaic treat-



THE NEW ELECTRIC LAUNCH VASHTI.

floor and placed in the stern of the boat. It is of special design, invented by Professor William Main, and manufactured by the Union Electric Company, of New York. It is the slowest-running electric motor ever made, and is connected direct to the propeller shaft, thus eliminating all speed-reducing devices, which are noisy and wasteful of power.

The Vashti is 30 feet over all, 6 feet 6 inches beam, 2 feet draught, and hull is built of oak frames, white cedar planking, copper fastened; the cockpit is 23 feet long in the clear and has seating capacity for 25 to 30 people; interior woodwork is fine quartered oak. It was built by Charles L. Seabury & Co., Nyack-on-the-Hudson.

Every part of the length and width of the boat is available for use of passengers, as all machinery is below the floor and out of sight. It is impossible to imagine anything more attractive, no engine, no fire, no smoke, no smell, all the weight below the water line, and there probably never was a boat which combined more perfectly the desirable qualities of comfort, speed and stability. The batteries hold a charge for a 9 to a 10 hours' run and the speed developed is 8 to 10 miles per hour.

The only question of success heretofore with electric storage and storage batteries in street cars has been in the durability of the storage cells. These cells (as well as the motor and switching apparatus) are made by the Union Electric Company, of 45 Broadway, and it is

if such exist. Perhaps, he adds, it is the inflammatory process alone that gives such good results in the primary tumor, but when one sees enlarged lymph glands at a distance from the primary tumor diminish in size after the cauterization, it is difficult to avoid the view that such an agent must be acting.

Of chloride of zinc the writer says: This can be used either in stick form, or in solution, or in a paste. It does not destroy tissue so rapidly as caustic potash, and it causes much more pain, which also lasts for a much longer period. It destroys both normal and pathological tissue, although not with an equal degree of rapidity, and it is a most valuable agent in the treatment of epithelioma. In all the cases suitable for the use of the potash the zinc can also be employed, and, in the stick form, on account of its slower deliquescence, and the ability to use it as a pointed pencil or arrow, it is much to be preferred for some cases. A chloride of zinc paste is one of the best means we possess in the treatment of cutaneous epithelioma, and has also been strongly recommended for mammary cancer.

In the use of arsenious acid in the form of a paste (Marsden's paste), Dr. Robinson says we have an agent that in a certain class of cases has given the best results seen from any treatment. Marsden's paste consists of equal parts, by weight, of arsenious acid and powdered acacia, rubbed well together, and enough water is added to make a paste about the consistence

ment of Parsons, all seem to have made little impression on cancer therapeutics, and we are brought by Dr. Robinson back to the treatment of our fathers; and, we may add, of many successful quacks.—*Medical Record*.

Naval Notes.

The new British war ship Iphigenia lately went on her forced draught trials, when she developed 9,302 indicated horse power, as a mean of four hours run, the contract power being 9,000. The mean air pressure in stokehold was 0.8 in. It is interesting to note as an indication of the power of this vessel to make spurts, that with a maximum air pressure of 1.2 in. she developed 10,016 indicated horse power, the speed on one run on the measured mile being 23 knots. The engines of the vessels are pronounced to be among the most perfect ever delivered at Portsmouth dock yard, which reflects great credit on Mr. Shepherd, the managing director of the company, as they are the first constructed by the company for the Admiralty. In the reversing, etc., trials, orders being given from the fore bridge, the time taken from the ringing of the gong to stop and full speed astern was just within the three seconds, from full speed astern to full speed ahead 2.5 seconds, from full speed ahead to stop, go ahead starboard engine, 2.7 seconds, and from stop her to full speed ahead starboard engine, full speed astern port engine, 2.3 seconds.

Recent Decisions Relating to Patents.

Letters patent No. 336,043, issued February 9, 1886, to Percival Everett, claims: "A weighing machine, having an aperture for receiving a coin, a weighted lever, a dial, and index hand, and intermediate mechanism connected with the same, and whereby the coin, when deposited in the receiver, shall operate the lever, and cause the hand to indicate the weight of the person or body being weighed." *Held*, that the patent possesses both invention and novelty, for, although a weighted lever, operated by a coin put through a slot, had been used for various other purposes, these elements had never been combined with mechanism to form a weighing machine. 1.

Letters patent No. 349,720, issued September 28, 1886, to Edward S. T. Kennedy for an improvement in boiler deflectors, consisting in the combination with a porcupine boiler and its jacket of horizontal flame deflectors of segmental form, placed within the combustion chamber in position for protecting the exposed ends of the tubes and deflecting the heated products of combustion toward the boiler cylinder, are void for want of patentable invention and novelty. 2.

Where two patents cover practically the same invention, the presumption is in favor of the senior patent, and it requires a clear preponderance of the evidence to show that the junior patentee was in fact the first inventor. 3.

Letters patent No. 299,503, issued June 3, 1884, to Ashton, for a combination of a muffling chamber surrounding a safety valve, with a pipe communicating from the spring chamber to the outside air, was anticipated by patent No. 297,066, granted April 15, 1884, to Coale. 4.

Letters patent No. 280,421, issued July 3, 1883, to the same inventor, cover, in claim 2, an improvement on the device covered by his patent of 1881, consisting in providing the inner sleeve of that patent with a flange annulus, and attaching to the hub and wheel a locking button, which engages with notches or teeth on the edge of the annulus and locks it to the hub, so that the sleeve will always turn with the axle or hub. The inner sleeve was also made adjustable as well as the outer one. *Held*, that these were mere mechanical adaptations of the device shown in the English patent of 1880 to Monks. 5.

In the patent of 1881, the bearing box, having a V-shaped groove, was attached directly to the frame of the machine, but claim 3 of the 1883 patent covered a combination wherein the bearing box was free, and was placed within and attached to a shell, which was itself fixed to the frame. *Held*, that this improvement was anticipated by the Salamon bearing patent of 1880, and the Jeffery patent of 1883. 6.

Letters patent No. 245,542, issued August 9, 1881, to Thomas W. Moran, for a rubber ball or cushion upon the extremities of velocipede handles, to counteract the jar on the hands in traveling and prevent injury to the machine in falling, are anticipated (if patentable at all) by the English patent of July, 1877, to Harrison. 7.

Letters patent No. 310,776, to William P. Benham, cover a method of fastening a handle bar consisting of a single piece to the steering head of the bicycle, so as to prevent any lateral or rotary motion, the claims being for the combination of an undivided bar and an open-slotted lug, and two sleeve nuts, or their equivalents, one on either side the lug, surrounding the bar, and adapted to lock it rigidly to the lug. *Held*, that, if there was any scope for invention in attaching a horizontal bar to a vertical one so as to be immovable, the patent was anticipated by the English patent to Illston, issued in 1879, which accomplishes the same result in substantially the same manner. 8.

Design patent No. 17,243, issued April 5, 1887, to Daniel C. Ripley, for footed bottles and jars, consisting of a spherical body, a figured ring-neck, covering a zone of the body, and having a raised pattern on its entire surface, was not anticipated by certain designs having a general resemblance thereto in shape, but lacking the raised ornamentation of the neck. 9.

Although the suit does not involve the method of producing the result, yet, in considering the question of anticipation, the court may properly take into consideration the fact that the patentee invented the method of making articles of glassware having a "blown" body and a "pressed" neck, thereby rendering possible the raised ornamentation of the neck in the patent. 10.

Letters patent No. 128,925, issued July 9, 1872, to Charles A. Taylor, covers, in claim 3, a fastening for trunk lids, which consists of a plate attached to the trunk body, and containing a socket, a hinged latch, and a double-acting spring to hold the catch either open or shut, and a tang fastened to the lid, which drops into the socket and is held by the catch. *Held*, that the claim covers a patentable invention, and was not anticipated by either the patent to Semple of 1866, to Cutter of 1868, to Locke of 1871, or by the Hillebrand or Ransom patents. 11.

Letters patent No. 108,085, issued October 11, 1870, to John B. Augur, for a new method of equalizing the pressure upon carriage springs, comprised a device con-

sisting of a rod attached to the rear axle of a sidespring vehicle, having two links rigidly attached, one to each of its ends, on which links the rear ends of the side springs are pivoted, so that when one spring is depressed the other is depressed also by the action of the rod connecting them, and the body of the vehicle is kept approximately level. A patent issued to Stringfellow and Surles in 1861 was for a method of giving the bodies of vehicles a backward and forward motion by means of side springs attached to four supports by shackle bars, these latter being united to the supports and the ends of the springs by tie bars with forked ends, whose object was to brace the supports, and prevent their being twisted by the lateral swaying of the body of the vehicle. *Held*, that, as it was not the object and effect of the tie bars of the earlier patent to equalize the pressure on the springs, that patent is not an anticipation of the later one. 12.

The Augur patent No. 108,085, for carriage springs, in which the connecting rod has vertical links for the ends of the springs, and is attached only to the rear axle, leaving the other ends of the springs rigidly attached to the forward bolster, is not an anticipation of patent No. 122,079, issued December 19, 1871, to Topliff and Ely, wherein the connecting rods are attached to both axles, so as to allow both ends of the springs to act, and have their connecting links horizontal or dependent. 13.

EXTENT OF CLAIM.

Letters patent No. 184,759, issued November 28, 1876, to Joseph T. Comboss, claim "the method of preparing metal plates for direct printing by means of pale boiled oil, Benguela varnish, turpentine, white lead, magnesia, and soapstone, in about the proportions and in the manner herein substantially set forth and described." *Held*, that the patent covers only the specified method of using this particular composition, and is valid to that extent. 14.

A construction which will make two distinct claims of a patent cover, not different things, but one and the same thing, is to be avoided, if possible; and, where a device performs two distinct operations, a claim may be based upon each without covering the other. 15.

The words "substantially as specified," in the claim of a patent, are to be given effect; and where the claim, read literally, would be inoperative, their effect is to include in the claim elements or devices contained in the specification that are wanting in the claim. 16.

1. *Am. Automatic Weighing Mach. Co. v. Blauvelt*, 50 Federal Reporter, 213.
2. *Kennedy v. Chicago City Ry. Co.*, 50 Federal Reporter, 196.
3. *Ashton Valve Co. v. Coale Muffler and Safety Valve Co.*, 50 Federal Reporter, 100.
4. Same.
5. *Pope Mfg. Co. v. Gormully & Jeffery Mfg. Co.*, 12 Supreme Court Reporter, 643.
6. Same.
7. *Pope Mfg. Co. v. Gormully & Jeffery Mfg. Co.*, 12 Supreme Court Reporter, 637.
8. Same.
9. *Ripley v. Elson Glass Co.*, 49 Federal Reporter, 927.
10. Same.
11. *Sessions v. Romadka*, 12 Supreme Court Reporter, 799.
12. *Topliff v. Topliff*, 12 Supreme Court Reporter, 825.
13. Same.
14. *Comboss v. Somers*, 49 Federal Reporter, 920.
15. *Page Woven Wire Fence Co. v. Laud*, 49 Federal Reporter, 936.
16. *Lee v. Pillsbury*, 49 Federal Reporter, 747.

Apples as Medicine.

Chemically, the apple is composed of vegetable fiber, albumen, sugar, gum, chlorophyl, malic acid, gallic acid, lime, and much water. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter, lecithin, of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood that old Scandinavian traditions represent the apple the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit for renewing their powers of mind and body. Also, the acids of the apple are of signal use for men of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters, which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles.

Some such an experience must have led to our custom of taking apple sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such fresh fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach, rather than provoke it. Their vegetable sauces and juices are converted into alkaline carbonates, which tend to counteract acidity.—*Southern Clinic*.

How the Columbian Anniversary was Celebrated One Hundred Years Ago.

While the world is doing honor to the memory of the great Columbus, it will be interesting to review that page of history covering the celebrations of 100 years ago.

It is probable that 1592 and 1692 passed without special thought being given to the discoverer of America. October of 1792, however, was not allowed to pass unheeded. Oddly enough the great celebration at that time was held in England, where the resentments caused by the American revolution were still rife. But the promoter of the affair was a native of the States, and had the good of his country thoroughly at heart. His name was Elhanan Winchester. And though he did not succeed in securing for himself an everlasting fame, he was during his life a noted character.

In 1788 Mr. Winchester conceived the idea of organizing a ter-centennial celebration. He had already acquired something of a reputation in America and England as a sensational preacher, and so he had little trouble in interesting the public in his scheme.

He made no attempt to gather the fruits of the world to be displayed to the curious. It never occurred to him that great temples should be reared for the purpose of demonstrating the progress of civilization. There was little pomp or ceremony about his "exposition." But all that he did attempt he made successful.

October 12, 1792, full 20,000 people gathered to listen to the address on "Columbus and his Discoveries," delivered by Mr. Winchester. The address was well received, and was afterward published in book form. The only copy of this publication known to exist to-day is in the possession of Mr. James T. Onderdonk, of Chicago, who prizes it very highly.

The orator took up the line of prophecy, and had this to say of the celebration of 1892: "The century to come will improve America far more than the three centuries past. The prospect opens, it extends itself upon us. 'The wilderness and solitary place shall rejoice, and the desert shall rejoice and blossom as the rose.' I look forward to that glorious day when that vast continent shall be fully populated with civilized and religious people, when heavenly wisdom and virtue and all that can civilize and bless the children of men shall cover that part of the globe as the waters cover the seas."

As the orator warmed up to his subject, glowing with the beatific prospect of America celebrating the four hundredth Columbian anniversary, his visions of the actual seem to have flitted through his brain. It is true he did not mention Chicago, or the World's Fair or the Sunday closing question, but he came much nearer the mark than many more celebrated prophets.

"Transported at the thought," he continued, "I am borne forward to days of distant renown! In my expanded view, the United States rise in all their ripened glory before me. I look through and beyond every yet peopled region of the New World, and behold period still brightening upon period. Where one contiguous depth of gloomy wilderness now shuts out even the beams of day, I see now States and empires, new seats of wisdom and knowledge, new religious domes spreading around. In places now untrod by any but savage beasts, or men as savage as they, I hear the voice of happy labor, and see beautiful cities rising to view, behold the whole continent highly cultivated and fertilized, full of cities, towns and villages, beautiful and lovely beyond expression. I hear the praises of my great Creator sung upon the banks of those rivers now unknown to song. Behold the delightful prospect! See the silver and gold of America employed in the service of the Lord of the whole earth! See slavery, with all its train of attendant evils, forever abolished! See a communication opened through the whole continent, from north to south and from east to west, through a most fruitful country. Behold the glory of God extending and the Gospel spreading through the whole land!"

The orator did not confine his information to the body of his speech, but appended to the published copy a description of a new city to be called Washington, situated at "the junction of the rivers Pawtomack and the Eastern branch." There is also added a schedule from the first census, then just completed, certified to by T. Jefferson, Secretary of State. The total population of the United States foots up no less than 3,925,253. Virginia leads with 747,000, Pennsylvania follows with 434,000; New York State with its 340,000 stands fifth; the Northwest Territory boasts of 5,000. In point of size the towns ranked Philadelphia, New York, Boston, Baltimore, and Charleston. In point of trade, New York, Philadelphia, Boston, Charleston, and Baltimore. The future World's Fair city was not a rival.

For two years after the delivery of this oration Mr. Winchester continued to stir up his British auditors with his pleas for universal liberty as well as universal salvation. Returning to this country in 1794, he died at Hartford in 1797.—*Inter-Ocean*.

Vegetable Digestive Ferment.

MM. Dacomo and Tommasi have studied the action of *Anagallis arvensis*, which they find possesses the property of destroying rapidly and without pain fleshy growths and even horny warts. They assumed that the plant contained a ferment, analogous in its action to pepsin and pancreatin, and instituted some experiments to decide the point. Some fresh meat and fibrin were placed in contact with a small quantity of the fresh plant reduced to powder, and, after being maintained at a temperature of 40° C. for four to five hours, they were found to be considerably softened, being dissociated almost completely in about thirty-six hours, during which the temperature did not exceed 45°. The presence of a ferment was thus regarded as established, and the authors are stated to have succeeded in isolating it under the form of a white amorphous substance, easily soluble in water. It is said to have no action upon starch, and further details as to possible practical applications of the ferment are promised upon the completion of continued researches. —*Rev. de Therap.*

THE DESTRUCTION OF SANGUIR.

The island of Sanguir is 25 miles long and 15 broad, situated in the great Malay Archipelago, which extends between the Indian and Pacific Oceans, or between China and Australia, corresponding geographically to the group of the Celebes, discovered in 1521 by Magellan, and occupied successively by the Portuguese, Spaniards, and the Hollanders, to whom it has belonged since the middle of the seventeenth century.

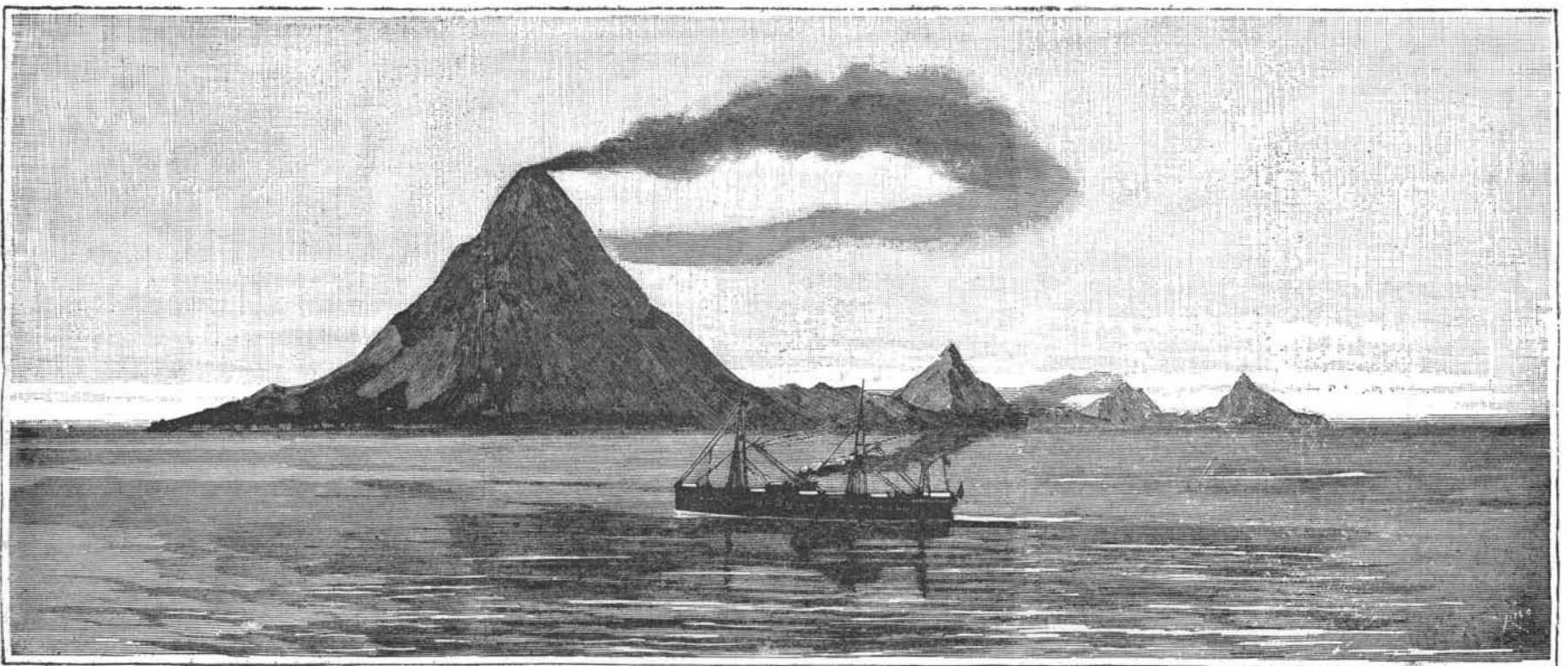
On the 7th of June last, the island of Sanguir was

pursuit of his crops instead of waiting for them to come to him; and it is a curious fact that after man has circled the globe in pursuit of wealth or amusement, he comes back to the culture of his own acres as the most dignified and satisfactory ending of his career, the only one which is not an anti-climax. Contented and not inglorious, Cincinnatus returns to his plow, Washington to Mount Vernon, Jefferson to Monticello, and Mr. Gladstone to Hawarden. The spectacle of Mr. Pitt, happy in a three years' release from political life, and enthusiastic in the culture of his garden, is one unfamiliar to the world, which scarcely disconnects him from the great arena in which he was the central figure, but is gratifying as an evidence of the humanness of that great statesman, and of that solid wisdom of which he gave perpetual proof in his public career.

Poets and philosophers alike have rejoiced in rural shades, in the charm of pleasant labor among their flowers and trees. Gardening is the delight of royalty and the comfort of the cottager. The greatest ladies in England have taken pride in designing their own parterres, while the gamekeeper's daughter rejoices in her little square of flowers. It is an occupation for the very rich, a solace for the very poor. It can occupy acres of territory, it can be carried on within the limits of a grocery box. It is the priceless heritage of man, this right to till the soil, this joy in its accomplishment. Whether the results be utilitarian or æsthetic, the satisfaction is common to all, there is no monopoly of this privilege. In this great half occupied country of ours, it is easily possible for a man to possess a morsel of territory for his own cabbage or marigold. There

the lost Paradise. The idea is common to all—the expression varies in each individual. If originality inspires the owner, the garden will be original; if the conventionalities be dear to him, you will find formality in the arrangement of his flower beds; the artist will interweave it with his taste and fancy, the poet will seek in it to embody his dream, the practical man will turn it into a potato field, the speculator will plant it with wheat, a sentimentalist will fill it with roses and lilies, an æsthetic with sunflowers. And from whatever clime you come you will read the man in his garden, nor need an interpreter to explain him to you.

There is no region where man's effort to reclaim the soil does not possess an interest for all other men. No tale of the march of conquering hordes captivates like the story of the founding of a state, and the state's foundations are laid by its plowshares. In Egypt the great river has been harnessed for the service of man, in Holland he has fought the sea to win a foothold for his sturdy independence, a garden for his bulbs. With the Romans marched the culture of Europe, in the wake of their great armies sprang up the cereals and the trees of the forest. Cæsar was no less a conqueror of the soil than of opposing armies. He carried in one hand the sword, in the other the life-giving grain. To him, first of all, Britain owes the planting of her barren acres with fruit trees, with the lime, the chestnut and the plane, possibly with the elm itself, though Dr. Walker thinks that noble tree may have been brought there by a crusader. And strange fact in the history of man, his triumph is the triumph also of the garden—its seeds and nuts, its grains and flowers



THE VOLCANO AND ISLAND OF SANGUIR, PRIOR TO ITS DESTRUCTION.

suddenly and violently shaken by the eruption of its only volcano, that of Gunona-Avu, by which the island was almost entirely destroyed, and 12,000 inhabitants met with death. The particulars were brought to the government of Holland by the captains of the merchant steamers Harlem and Cattertum. The volcano after its frightful eruption, which devastated the entire vicinity, sank down into the sea, together with all the northeast portion of the island. The opposite part, where the principal European ships were anchored, was saved.

Gardening a Human Bond.

If there is one pursuit that forms a link between human beings of different stations and habits, gardening is certainly that occupation, for whether it be the vocation or the avocation of man or woman, it appeals to so fundamental a taste that it makes a common ground upon which all can meet with interest and sympathy. It is the primal occupation of man, the final result and joy of his highest civilization. From the clod we come, to the clod we return, actually and figuratively, our fashioning from the dust of the earth pointing plainly to the fact that man was a graminivorous creation, deriving his sustenance from the grains he rescued from the tropic sands where he originated. It is a theory of the historical philosophers that man first developed into civilization in some rainless and unchanging region like Egypt, or the western slope of the Andes, and that there, under unvarying conditions of climate, he first established communities, and tilled the soil—hence, possibly, this old idea of his evolution from the dust of the earth.

As the animal with forethought to plant and dig was an advance upon his predecessors, so the agriculturist is a higher development than the nomad who goes in

comes a period in the lives of most when this primal desire demands accomplishment. Then upon his fragment of the earth's surface a man sits down, and content begins. Not idle content, certainly, since only by the sweat of his brow can man overcome nature, but that discounted content which is the human substitute for happiness.

Results may disappoint in detail, but the aggregate produces a certain mental well-being which peer and peasant alike share. The triumph of the harvest is for all, and though there may be years when harvests fail, they are the exception. There may be a harvest of the spirit, even if the crops fall short, a gain in health and knowledge from the hours of labor that are a balancing gain for disappointment. It is not only material results we gather in, but the harvest of experience, the gain of wisdom, the science for the coming years, and in these human benefits there are no hampering trusts. The planter may sell his crops a year or two ahead, and find himself short of the market, but there is no corner in experience which confines it to a chosen few, and of this gain the gardener, be he high or low, may be sure, so that his labor can never be a dead loss.

Moreover, he who loves his garden is in touch with his kind whether he find himself in Columbia or Cathay, for on this topic all may meet, the Russian mujik and the Czar, the Egyptian fellah and the Bey, the American traveler and the Daimio of Japan. There are gardens from Babylon to the Golden Gate which have delighted the heart of man from Eden until this day. To be cast out from a garden was the curse of Adam, and the struggle of fallen man ever since has been to repair that primal disaster. A hankering for an Eden is at the bottom of our wandering souls, and we are ever striving to fashion it to our conception of

springing up in the footsteps of Alexander and Xerxes, of crusader and Spanish don, to flourish and comfort long after the mailed hand that brought them was dust.

Thus in the path of the oppressor came a blessing, "out of the strong came forth sweetness." Here again that human touch links us with the old warrior of the past, bringing home from Damascus a rose slip to gladden the garden of his sweetheart, a sprig of vine to commemorate the hills of Palestine on the borders of some English lake. It is pleasant to think how the memory of his own garden made the Macedonian bring home to Greece the flowers that his master wrested from Darius. The rose from Persia, the lily of the farther East, are a bond of common interest between the old and the new; between the mailed past and prosperous present. The lotus of the Pharaohs is the glory of a Jersey mill pond, the peony of the Hoang-Ho is the ornament of a dooryard by the Charles, our very weeds bind us together to fight a common enemy, and thus the love and care of a garden brings man into fellowship with all the sons of Adam.—*Garden and Forest.*

Artificial Gum Arabic.

For the preparation of a so-called artificial gum arabic the *Rev. de chim. indust.* (through *Nouv. Remèdes*, 1892, No. 13 suppl.) gives the following process: 10 kilogrammes linseed are boiled with 80 kilogrammes sulphuric acid and 100 liters of water for three or four hours. The liquid is then filtered and four times its volume of alcohol is added. The precipitate is collected, washed and dried. The product is amorphous, colorless, insipid, and gives with water a thick mucilage.