

discoverer, voted on June 15, 1839, a pension of 6,000 francs annually to M. pass tarough a glass tank containing a clear blue liquid—but the process could CELEBRATED BY A WORLD fixing of the images of the camera ob

Daguerre and 4,000 annually to M.

of that art and its developments! Still

does now. And then there were honors,

SEMI-CENTENNIAL OF THE ART OF SUN PICTURE MAKING.

Louis Jacques Maude Daguerre-Joseph Nicephore Niepce-Many Reperimenters Before Them - Curious Stories About Ancient Pictures Made by Sunlight.

[Special Correspondence.]

NEW YORK, July 11.-The present year is being celebrated as a semi-centenary after a fashion that is, in several points, rather remarkable. The celebration is not confined to any one country, but is scattered all over the globe: it is not limited to any narrow bounds of specific date, but has spread over at least the first half of the year; hundreds of thousands of persons are the celebrants. and yet, outside the devotees of a particular branch of scientific art, the public knows very little of what is going on in this world wide demonstration.

This is the semi-centenary year of the discovery of the art of making pictures by sunlight. It is also the centenary of the birth of Louis Jacques Maude Daguerre, the discoverer of that art. These considerations have aroused the enthusiasm not only of the enormous regular army of knights of the camera, the professional photographers, but of the yet more vast multitude of amateurs, whose joy and pride in their beloved art finds delighted expression this year in an infinitude of papers, which they read to each other, and experiences which they mutually narrate in all languages, and appropriate resolutions without number. To give solidity and permanence to their memories of the glorious occasion, the Photographers' Association of America have prepared splendid "jubilee medals" in gold and silver, bearing a head of Daguerre in relievo, which will be distributed among them at their annual convention in Boston, in August.

The art crystallized into a practicality by Daguerre had been the dream of many men before him, and there were not wanting legends of its measurable accomplishment in strange ways by others. It is recorded that one La Roche, hundreds of years ago, did put into a bowl some solution the secret of which was known to him alone, the which when steadily gazed upon by any one would congeal, retaining in its depths a visible, clear and perfect picture of the gazer. If La Roche ever did anything of the sort he was in all probability piously burned as one in league with the foul fiend, but the chances are that he never did. Another of the historical myths in this connection is that M. Charles, a Frenchman, did in 1790 possess some process by which sunlight produced portraits in a dark impression upon a prepared surface. The yogees of India have from time immemorial claimed the power to produce pictures by occult means out of the "astral current," or ether, and to fix them permanently upon material surfaces by sheer force of will; but one has to have quite a robust faith to believe it. In 1802 Thomas Wedgewood published in the journal of the Royal institute of England "an account of a method of copying paintings upon glass and of making profile by the agency of light upon nitrate of silver, with observations by H. Davy." That was the first recorded attempt to produce images by the decomposing powers of light.

In 1814 Joseph Nicephore Niepce, of Chalons-sur-Saone, France, entered upon a series of interesting and important experiments on the chemical action of light, particularly with reference to its mon-

scura. Ten years later M. Daguerre, Niepce, one-half of those amounts to be then a scene painter with M. Degotti, at continued to their respective widows, in case of their survival. What a beggarly the Grand Opera in Paris, entered upon a similar course of experiment. He used sum it now seems to have been, viewed paper impregnated with a solution of the in the golden light of the untold millions nitrate or chloride of silver, but failed to gained by others from the employment attain an encouraging degree of success in that direction. Then he turned his it contented the generous inventor and attention to working upon polished mepossibly looked much larger then than it tallic plates, upon which he did better, but made slow progress, owing to the seeming impossibility of fixing with any permanency the images he obtained Niepce meanwhile had discovered a process by which using asphalte as a sensitive material on a basis of copper he got pictures. He found it in 1816, called it "heliography" and worked at it up to the time of his death, in 1833, without ever being able to develop it into a thing of any practical value. It was uncertain and altogether too slow, requiring from six to eight hours of exposure, even with good sunlight. He hoped to make it of use in producing etchings, and in 1827 put before the Royal society, of London, several pictures on metal plates, in the state of advanced etchings, the etching of which had been effected by acid subsequent to that part of the pro cess in which light had laid bare certain

portions of the resin covered plate.

Daguerre, as early as 1826, became ac

quainted with Niepce and made over-

tures for joint experimental work, but

was repelled coldly, and it was not until

1827 that cordial relations were estab-

lished between them, and not until 1829

that they formed a coalition for joint ex-

periment and mutual interest in their re-

spective discoveries. When Niepce died.

in 1833, his son, M. Isidore Niepce, took

his place in a continued arrangement

with M. Daguerre for conjoined interest

in the results of their continued experi-

younger Niepce discovered anything.

though it is possible that his researches

among materials may have been of valu-

able aid to Daguerre. Notwithstanding

all their years of patient experimenting

and study, they failed to attain what it

seemed the ironical burnor of mature to

at length reveal to Daguerre by an ap-

parent accident. A silvered plate, scali-

tized with iodine, when properly expessed.

showed on its surface no sign of an

image. Why it did not was not appa-

rent: but it was a failure, one of the

many, and as such was carelessly put

aside in a cupboard, where it remained

to be polished up and tried over again, it

bore-to M. Daguerre's great astonish-

best he had ever got. Searching for the

cause of this development, he found it

to be an open dish of mercury, in the

the intensity of the light by which each

part of the plate had been affected. Na-

ture had given up the key to another of

her mysteries. From that hint it was

but a short step for the experimenter to

hasten the process by exposing his plates

thereafter to the fumes from a dish of

warm mercury and so achieve success.

That was late in 1838. By the close of

January, 1839, Daguerre deemed his pro-

cess perfected and brought it to the

knowledge of the eminent scientist, M.

From the first it was deemed that the

discovery was so grand a one that it

should be given to the world; and the

French government, to accomplish that

nobly liberal gift to humanity and at the

same time in some measure reward the

When brought out the next morning

over night.

Arago.

the

ments. It does not appear that

intangible rewards, but dear to Frenchmen's hearts at least. People spoke very well of both Daguerre and Niepce while they lived, and long after they were dead statues were raised to their memory. The one commemorative of Daguerre was a bust put up at Cormeilles where he was born in 1789) by contributions from the photographers of the civilized world in 1883. Niepce's was a full length statue, erected by Frenchmen at his birthplace, Chalons-sur-Saone, in 1885. Daguerre died in 1851. A man named August Brassart, who made the plates for his experiments, is said to be still

alive and resident in Naugatuck, Conn. The people of Paris went almost wild over the new process when it was made known, as it was on Aug. 10, 1839. Everybody wanted to take sun pictures. The fever lasted about a year. Then exceedingly few continued the attempt. The great army of amateurs dropped it as one man. It was too difficult and uncertain for any but the most patient and persistent. One in Paris wrote to a friend in this country: "Do not attempt it unless, after making 100 failures, you are ready to go on and make 500 more." And he was right, in the condition of the art at that time. And not only was infinite patience demanded, but considerable means. The silver coated copper plates were costly; the polishing of them required skilled labor, which was not cheap; the chemicals required were expensive, And the results were so disproportionate! Gradually, however, improvements were

made. Sir John Herschel, as soon as the process was made known, pointed out that hyposulphite of soda would be better than a strong solution of chloride of sodium for washing away the iodide of silver that had not been acted upon by the light. M. Firzeau discovered a means, by the use of chloride of gold. for making permanent the pictures that previously were too apt to tarnish and deteriorate. M. Goddard, of London, in 1840, found an improvement in putting bromide of silver, in addition to the iodide of silver, upon the plate. In 1841 M. Claudet used chlorine vapor to increase the sensitiveness of the plate,

ment-a distinct and perfect picture, the thereby materially shortening the time necessary for exposure, bringing it from five minutes down to one minute. And in all this progress American cupboard, which had made a deposit on scientists were keeping well to the front. the iodized silver in exact proportion to

Professor Morse, the inventor of the tele graph, set up in his room in the old university building on Washington Square. New York, in 1839 the first daguerreotype apparatus in the United States, and with Professor John W. Draper made the first portrait of a human face produced by the process, which up to that time had been successful in picturing statues and other things that had to keep still any desired length of time. Professor Draper's wife was their first victim. The appellation of "victim" is justly applied, for the sitter's face was covered with a white powder and she had to sit in strong sunlight, motionless, for half an hour! To modify the painful effect of the glare of light Professor Draper filtered out most of the heat rays from the sunshine poured upon the sitter by causing it to hardly have been pleasurable to the vic tim even then. It was not long, however, before they got the time of exposure cut down to five minutes, then to four, three, and finally one. At that point it was a practical thing for popular use in making portraits

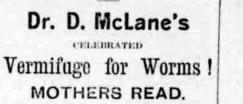
So much better was the work done by the American daguerreotypers than that produced in Europe, that over there its superiority was affirmed to be due to "the greater brilliancy of the American atmosphere," and that was insisted upon until some of the American artists went over there and beat the Europeans on their own ground. But for a long time the process continued to be a stupendous and amazing mystery to the general pub-Among the crowds always staring lie. at the exposed sample pictures at the daguerreotyper's door, one would explain; "You look in the machine and the picture comes if you look long enough." Another would say: "It is not so much the looking, but the sun burns it in when you look." And a third; "It is not so much the looking, but the plate itself is a looking glass, and if you sit in front of it long enough your shadow sticks on the plate." And the "dark room," where the developing was done, provoked many a row through sitters resent-ing the supposed suspicion of the artist that they wanted to steal his art, w he declined to leave the door standing open that they might see him at work.

J. H. CONNELLY. How Trees Grow.

There is rarely sufficient room near

any tree for all the seeds which it produces to germinate or for the seedlings to develop into fully grown individuals. Nature is lavish in sowing seeds that the succession of the plant may be insured. Most trees are gregarious, therefore, in extreme youth, from habit transmitted through many generations. They love company, and really thrive only when surrounded. Close planting is essential, therefore, to insure the best results. As the trees grow, the weaker are pushed aside and finally destroyed by the more vigorous, and the plantation is gradually thinned. This is the operation which is always going on in the forest when man does not intervene. It is a slow and expensive operation, however, and the result is attained by a vast expenditure of energy and of good material. The strongest trees come out victorious in the end, but they bear the scars of the contest through life.

The long, bare trunk and the small and misshapen head-the only form of a mature tree found in the virgin forest-tell of years or of centuries of struggle, in which hundreds of weaker individuals may have perished that one giant might survive. But man can intervene, and by judicious and systematic thinning help the strong to destroy the weak more quickly and with less expenditure of vital force. Thick planting is but following the rule of nature, and thinning is only helping nature do what she does herself too slowly, and therefore too expensively. This is why trees in a plantation intended for ornament, like those in a park or pleasure ground, should be planted thickly at first, and why they should then be systematically thinned from time to time; and it is because this systematic thinning is altogether neglected, or put off until the trees are ruined for any purpose of ornament, that it is so rare to find a really fine tree in any public place or private grounds. Of the implements required to produce a fine tree the ax is certainly the first and most important, according to Garden and Forest, in which the above first appeared.



Andrew Downing of Cranburg Township, Ve-nango County, gave his child one teaspoonfol of the genutine Dr. C. McLane's Celebrated Ver-mifuge, and she passed 17 worms. Next morn-ing on repetition of the dose she passed 13 more.

In our repetition in the face site passed the more. Japhet C. Allen, of Anthoy, gave a dose of the genuine br. C. McLane's Celebrated Vermifuge to a child six years old, and it brought away Si wortns. He scen after gave another dose to the same child, which brought away Si more, mak-ing El worms in about 12 hours. Mrs. Quigty, No. 122 Essex St., New York, writes us that she had a child which had been nowell for better than two months. She pro-cursed a bottle of the genuine Dr. C. McLane's Vermifuge and administered it. The child passed a large quantity of worms, and in a few

curved a bottle of the genuine Dr. C. McLanc's Vermifuge and administered it. The child passed a large quantity of worns, and in a few days was as hearty as ever it had been. Parents with such lextimony before them should not hesitate when there is any reason to suspect worns, and less no time in administering the genuine Dr. C. McLanc's Vernifuge. It never fails and is perfectly size. This is to certify that I was troubled with a hape worm for more than six months. I tried all the known remembers for this terrible afflic-tion, but without being able to destroy it. I got a bottle of the genuine Dr. C. McLanc's Verni-foge, prepared by Fleming Bros., Pittsburg, Fa., which I look according to directions; and the result was I discharged one large tape worm, measuring more than a yard, besides a number of small ones. MRS, M. SCOTT. Price Scents a bottle. Insist on having the genuine. (i)

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