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Contents:

(Illustrations are indicated by an asterisk.)

*Improved Beater Hay Press.....	369	Postal Money Orders.....	375
Steel in English Iron-roads.....	369	Decay of Conversation.....	373
Classical vs. Scientific Education.....	370	Foreign Patent—Motive Power.....	375
Sorghum for Dyeing.....	370	Special Notice.....	375
A Photographic Baby.....	370	The SCIENTIFIC AMERICAN & Religious Paper.....	375
Great Engineering Feat.....	370	Free Lecture on Maryland.....	375
Nashua Iron Works.....	370	Crab-apple Cider.....	375
Lea's Cleaning Solution.....	370	*Gillespie's Water-wheel Governor.....	376
Miscellaneous Summary.....	370	*Funk's Oil-stone Fountain.....	376
Desultory Reading.....	371	A New Scientific Society.....	376
Unlimited Glass.....	371	What Can be Done for Inventors.....	377
New Books and Publications.....	371	The SCIENTIFIC AMERICAN for the Ensuing Year.....	377
Powder.....	371	Improvement in Photography.....	377
Introduction of the Porcelain Manufacture.....	372	The Attempt to Burn the City.....	377
Chinese Adulations of Tea.....	372	ath of Professor Silliman.....	377
Our Social Correspondence.....	373	Oil Cups.....	378
Duck Guns.....	373	Good Inventions in Demand.....	378
Rule for Cutting Screw Threads.....	373	Markets for the Month.....	378
Official Report on Davie's Composition.....	373	Patent Claims.....	378, 379, 380, 381
St. am Plows wanted in Louisiana.....	373	Notes and Queries.....	382
Trial of the Ames Gun.....	373	*Improved Carpet-bag Frame.....	384
Flying of the Albatross.....	374	Telegraphic Present to the Combination Type.....	374
Recent American Patents.....	374	Sweeping the Streets of New York.....	384
An Immense Establishment.....	374	*Kimbball's Watch-movement Holder.....	384
Forging Iron by Hydraulic Rams.....	375	New Safety Apparatus.....	384
Curiosities of French Restaurants.....	375		

WHAT CAN BE DONE FOR INVENTORS.—ADVICE GRATIS AND ADVICE FOR PAY.

For the information of Inventors, we would state that it is the custom, at the office of this paper, to examine models or drawings and descriptions of alleged new inventions, and to give written or verbal advice as to their patentability, without charge. Persons having made what they consider improvements in any branch of machinery, and contemplate securing the same by Letters Patent, are advised to send a sketch or model of it to this office. An examination will be made and an answer returned by early mail. Through our Branch Office, located directly opposite the Patent Office in Washington, we are enabled to make special examinations into the novelty and patentability of inventions. By having the records of the Patent Office to search, and the models and drawings deposited therein to examine, we are enabled to give an inventor most reliable advice as to the probabilities of his obtaining a patent, and also as to the extent of the claim that it is expedient to set up when the papers for an application are prepared. For this special examination at the Patent Office we make a charge of Five Dollars. It is necessary that a model or drawing and a description of the invention should accompany the remittance.

The publishers of this paper have been engaged in procuring patents for the past eighteen years, during which time they have acted as Attorneys for more than TWENTY THOUSAND patentees. Nearly all the patents taken by American citizens in FOREIGN countries are procured through the agency of this office.

Pamphlets of instructions as to the best mode of obtaining patents in this and all foreign countries are furnished free on application.

For further particulars as to what can be done for inventors at this office, see advertisement on another page, or address

MUNN & CO.,
No. 37 Park Row, New York.

THE "SCIENTIFIC AMERICAN" FOR THE ENSUING YEAR.

On the first day of January next we shall commence Volume XII. of the New Series of the SCIENTIFIC AMERICAN, and we scarcely need to remind our readers that in the present state of Journalism in this country, things are so much changed by the exigencies of the war, that publishers are compelled to carry burdens almost too heavy for them.

In spite, however, of these burdens, which we confess to have felt to some extent by a decreased profit for our labor, we have maintained the standard of the SCIENTIFIC AMERICAN equal to that of any previous year. The paper we believe has lost none of its old renown; indeed, if we may trust to the judgment of many of our oldest readers, we may well cherish the conviction that it was never before so well edited. We are conscious, at least, that our labors in this particular have never been more earnestly directed to gratify our readers. The valuable information published in the SCIENTIFIC AMERICAN can not be obtained from any other journal. In the volume now closing the mechanic will find that special attention has been paid to his interests; the manufacturer will observe many hints on workshop economy, new fabrics, systems and schemes, the inventor and patentee will find the fullest and earliest intelligence on all that belongs to his peculiar calling; and the general reader will observe that all the great industrial enterprises, all the newest and best plans for ordnance, torpedoes, small arms, steam engines and telegraphing are noticed and discussed. Articles on the large manufactories have been illustrated also, and described at length.

The SCIENTIFIC AMERICAN has had early intelligence of every rebel iron-clad of note, and also descriptions of our own monitors, and illustrations of the Government ordnance, and experiments on iron-clad targets. The great question of the expansion of steam has again arisen, and is still being tested. The Hecker and Waterman experiments, as well as those of Government, are yet under way; and the partial results of the former have already been published. Illustrated articles on machinists' tools, as well as practical rules and hints, will be found in the approaching volumes. The first volume will open with an article on "Lathe Tools," in which all the newest and most approved forms, as well as the work to which they are adapted, will be lavishly illustrated. The attractions, past and forthcoming, of the SCIENTIFIC AMERICAN, render it indispensable to every workshop, and we intend that it shall be welcome at the fireside.

IMPROVEMENT IN PHOTOGRAPHY.

We recently published an account of a new discovery in photography, by Jacob Wothly, of Germany, by which printing upon paper by means of the salts of Uranium had been successfully accomplished. The prints were stated to compare favorably in appearance, and in every other respect, with the pictures ordinarily produced upon albumenized paper and the salts of silver.

The discovery of Wothly was immediately bought up by a company of gentlemen in London, who had made it the basis for a joint stock concern having a very large capital. Letters Patent have been obtained in Great Britain, and we presume that measures have been taken to secure patents in this and other countries. But until the patent is granted here all our photographers are at liberty to make use of the process, and for their convenience we subjoin the following directions, extracted from the British specification:—

To one pound of plain collodion add from 1½ to 3 ounces of nitrate of uranium and from 20 to 60 grains of nitrate of silver.

The paper is prepared for printing by simply pouring the above sensitized collodion upon its surface, and hanging the sheets to dry in the dark.

The printing is accomplished by exposing the paper to light under the negative in the usual manner, and for about the usual time required for silvered paper; print until the desired depth is reached. It is not necessary, as in the ordinary process, to print the positive to a greater intensity of color than the fixed picture is intended to have.

After printing immerse the picture in a bath of acetic acid for about ten minutes, or until that portion

of the salts not acted upon by the light has been dissolved. The picture is now fixed and finished by thorough washing or rubbing with a sponge or brush, or by rinsing in pure water; then dry. Changes in the tone of the picture to suit the taste may be made before drying, by using a bath of chloride of gold, or of hyposulphite of soda.

Such, in brief, is the new Wothlytype process. We have given it a few trials, with the most gratifying success. We presume that it will ere long be recognized among photographers as an established and excellent method of printing. It is not claimed that it surpasses the silver printing, but the superior convenience of the Wothlytype process will be a very strong reason for its employment, if the pictures it produces prove equal, or nearly equal, in durability and other qualities, to those resulting from the old method of printing.

The uranium sensitized paper, it is stated, can be preserved for an indefinite time in properly-prepared receptacles, from which light is excluded. This is another important advantage, as the common silvered paper loses its value soon after preparation.

The uranium prints, made as above described, have a smooth and glossy appearance. When an unglazed surface is desired the sensitive salts are dissolved in alcohol and water, adding some saccharine substance. The paper is then coated with the mixture.

The best results of the Wothlytype process ensue when a well-sized, fine and very hard-rolled paper is employed. It is recommended to coat the surface of the paper with a sizing of starch, arrow-root or gum tragacanth.

We shall frequently refer to this subject again, and intend to keep our photographic readers fully posted in regard to all the most useful details. In the meantime, the information here presented will enable them to give the new process a preliminary trial.

The holders of the Wothlytype patents are likely to realize immense sums as the proceeds of a very simple but most useful discovery. The patent claims rest chiefly upon the combination of the salts of uranium and silver.

THE ATTEMPT TO BURN THE CITY.

In our last number we briefly mentioned the attempt to destroy this city by fire, on the night of Friday, the 26th of November, by a band of depraved criminals. The plan of the villains was to set fire simultaneously to the principal hotels, and to such hay barges and lumber yards as they could reach. For this purpose they entered the hotels as lodgers, and piling the furniture in the middle of their rooms, covered it with turpentine and phosphorus, and set it on fire. In this way twelve of the principal hotels were fired, but fortunately, in every case, the flames were extinguished before they had obtained sufficient headway to destroy the building.

The failure in so many instances of a scheme apparently so well contrived, may inspire the feeling that it is impossible to burn down a great city. Several of the papers have remarked that the mistake of the criminals was in closing tightly the windows and doors of the rooms, by which an access of air was prevented, and the fire was smothered. This closing of the windows was doubtless a precaution on the part of the incendiaries to enable them to escape before the fires were discovered, as the saving of their necks was more important to them than the success of their fiendish scheme.

Had the knowledge of these incendiaries been equal to their wickedness, they could have secured an abundant supply of oxygen for their fires, without any opening of doors or windows. It is perhaps not advisable to point out the accessible and well-known substances which would have furnished a supply of oxygen, but it is advisable that the community should be warned of their existence, in order that proper precautions may be taken to frustrate any similar attempt that may be more intelligently planned.

DEATH OF PROFESSOR SILLIMAN.

Benjamin Silliman, LL. D., died at his residence in New Haven, Conn., on Wednesday, the 24th of November, in the 86th year of his age. He was born at North Hartford, Conn., Aug. 8th, 1779. His father was a lawyer of distinction, and served as a Brigadier General in the War of the Revolution.

Professor Silliman was educated at Yale College,