

United States Debt.

The total debt of the United States, on the 1st of March last, less cash in the treasury, was \$2,711,849,800. The aggregate legal tender notes in circulation at the same date was \$605,984,414.

London Thoroughfares.

There are, it appears, 339 thoroughfares in the city of London, and 163 of these are only of sufficient width to allow of a single line of traffic, while there are 101 which afford only a double line of traffic, and only 70 which afford room for three lines or more. There are 60,000 vehicles passing daily through the city.—*London Artizan.*

Photography.**The Modern Practice of Photography.**

This is the title of a new work by R. W. Thomas, F.C.S. which is thus recommended by the *London Photographic Journal*:—

"The introduction is followed by papers on 'How to Make the Negative,' 'How to Clean the Glass Plate,' 'How to Varnish the Negative,' 'How to Print from the Negative,' and 'How to Prevent Fog, Stains, and Streaks in the Negative.' The practical information contained under these heads is brought down to the latest date, and the book altogether is an excellent introduction to the art.

"The following 'Rules and Cautions,' which we extract (with the exception of the last, against which we, knowing the extreme danger of cyanide, must protest), are well worthy of committing to memory:—

"1. Do not disturb the deposit which will occasionally be found at the bottom of the bottle containing the collodion.

"2. Remove all particles of dried film from the neck of the bottle before pouring the collodion on the plate.

"3. Never use damp cloths, leathers, or buffs for giving the final polish to the plate; negatives with an indistinct and muddy surface are frequently produced from this cause.

"4. Let the film set properly before immersion in the nitrate-of-silver bath; its condition can be ascertained by gently touching the lower part of the coated plate with the end of the finger.

"5. Never omit to pass a broad camel-hair brush over the plate just before pouring on the collodion.

"6. Bear in mind that as light is the producing agent so it will prove a destructive one; no less than four folds of yellow calico should be used to obstruct white light; and in that case the aperture covered should be no larger than is necessary to admit sufficient light for working by. Examine occasionally the yellow calico: when this material is used to exclude white light, it becomes bleached by constant exposure. Do not trust alone to any coloured glass; no glass yet made, is adialectic under all aspects of light and conditions of exposure.

"7. When the negative requires intensifying, carefully wash off all traces of the first developing

solution before proceeding to intensify. This operation may be performed either before or after the iodide is removed by fixing.

"8. Glass baths are preferable to porcelain, ebony, or gutta-percha baths for solution of nitrate of silver.

"9. In using either spirit or amber varnish, before pouring it off, keep the plate horizontal a few seconds—this gives time for soaking in, and prevents the formation of a dull surface arising from too thin a coating.

"10. Rub the lenses occasionally with a soft and clean wash-leather; the rapidity of action is much influenced by the brightness of the lenses: their surfaces are constantly affected by moisture in the atmosphere, which, condensing, destroys the brilliancy of the image.

"11. The white blotting-paper used for some photographic purposes is not suitable for filtering solutions; that only should be employed which is made for this purpose, and is sold under the name of filtering-paper.

"12. *Hyposulphite of Soda.*—A great deal of rubbish is sold under the name of this salt; as a test of its quality, $1\frac{1}{2}$ drachm should entirely dissolve in one drachm of water, and this solution should dissolve rather more than $4\frac{1}{2}$ grains of iodide of silver.

"13. *Chemicals.*—The purity of photographic chemicals cannot be too strongly urged—the cheapest are not always the most economical. The commercial preparations are generally not to be depended upon, as these, though perhaps unadulterated, are, strictly speaking, not chemically pure. It is best to procure them from well-known chemists, who understand the purpose for which they are intended, and make the preparation of these substances peculiarly a branch of their business.

"14. Never leave chemical solutions exposed in dishes; when done with, pour them back into glass-stoppered bottles and decant for use from any deposit, or filter if necessary.

"15. In all photographic processes it is absolutely necessary to be chemically clean; and this sometimes is not easy: as a rule, never be satisfied with cleanly appearances only but take such measures as shall ensure the absence of all extraneous matter in preparing the solutions, cleaning the glasses, dishes, &c.

"16. All stains on the hands, linen, &c. may be removed by means of cyanogen soap or cyanide of potassium, which should be applied without water at first, then thoroughly washed off. To assist the operation, the hands may be now gently rubbed with a fine piece of pumice-stone, when the stains quickly disappear."

Transferring Lithographs.

M. Rigault proposes a new method for reproducing lithographs. The lithograph to be transferred is first laid face uppermost on a surface of pure water, whereby all the parts not inked absorb water. It is then put between sheets of blotting paper, which absorb the excess of liquid. The lithograph is then laid face downward on the stone, to which it adheres perfectly with a little dabbing. Upon this a sheet of paper moistened with one part