grows a stouter and more odoriferous leaf, and the irrigated lands a finer and larger leaf. The *Bulletin du Musée Commercial* states that the information respecting the tobacco industry in the Dutch East Indies has been furnished by the Belgian Consul-General at Batavia, who has also forwarded samples of the native products to the Commercial Museum at Brussels.

IMPROVED CHEMICAL APPARATUS.

By GEORGE H. BOSTOCK, F.C.S., etc.

I HAVE devised an improved form of filter stand, in which the inconvenience arising from the projecting end of the rod, on which the support for funnel slides, is done away with. In this form I make use of the rod and socket arrangement. A glance at the accompanying sketch fully illustrates my meaning without further explanation.

A is the rod having funnel support affixed on its upper end; B is the hollow pillar into which A slides, being held firmly at any height by means of the screw at C.

Any ordinary joiner can make a filter stand after this pattern.

Having often been annoyed by the frequency with which the valve made of India rubber tubing—generally used when performing analyses by reduction, etc.—gets out of order and will not act, I was led to make use of a modification the nature of which is explained in a few words: instead of the piece of tubing with a slit in it I make a glass bulb, the size of which varies with that of the flask in use, and over this bulb I slip a small piece of India rubber tubing sufficient to cover the bulb completely. The shank of the bulb should be about 3 cm. long, and should be dropped into the neck of the flask, so that the globular portion rests on the top. When ebullition has entirely ceased, and the flame is removed from under the flask, the partial vacuum caused by the rapidly cooled gases inside draws the bulb tightly down on the flask neck, thus making a perfectly airtight stopper, which requires considerable force to remove.

A is the neck of the flask; B is the bulb with its

covering of India rubber; and C is the bulb without its covering.

The principal merit of the contrivance is its simplicity and certainty of action.—*Chem. News.*

MANUFACTURE OF ALPHA-NAPHTHYLAMINE.

DR. OTTO N. WITT has recently described the methods used for successfully manufacturing this important base. It is essential that pure naphthalene be used, and a convenient charge consists of 250 kilo. mixed with 200 kilo. of nitric acid of 40° Be., 200 kilo. of sulphuric acid, and 600 kilo. of the acid used in a former nitration. The operation is performed in cast iron cylinders, fitted with a cooling jacket to prevent the temperature from rising above 50° C. After twelve hours, the contents are transferred to leaden vats to cool, the waste acid run off, and the product washed with water until it is no longer acid. The reduction is effected in plant similar to that used for preparing aniline from nitrobenzene, iron borings and hydrochloric acid being the reducing agent employed. The temperature in this operation should not exceed 50° C. After about seven hours the reduction is complete, and milk of lime is added to the mixture. It is next distilled in a current of superheated steam, and the black oil is subsequently rectified in wrought iron stills. Naphthylamine prepared in this way is a colorless oil, solidifying to nearly white crystalline cakes, containing no β -naphthylamine, but small quantities of another base which is probably paranaphthylene-diamine. α -naphthylamine has been used for some time in the manufacture of "martius" or Manchester yellow, which is a salt of dinitro-(α)-naphthol, and is obtained from α -naphthylamine by the action of nitric acid. The sulphonate of this salt is obtained by the Schollkopf Aniline and Chemical Company from α -naphthol-sulphonic acid by the action of nitric acid, and is known under the name of brilliant yellow. α -naphthol sulphonates are also used for the preparation of Tropæolin 0000 and scarlet G, which are azo colors obtained from them by means of the diazo compounds of aniline. When toluidine is substituted for the aniline, cochineal scarlet 2R is produced, and with xylydine the dyes formed are called azococcin 2R and cochineal scarlet 4R. Naphthylamine is also used for other dyes which are not at present the subject of any patent, and the demand for it is gradually increasing. It forms with sulphanilic acid and nitrous acid a red coloration which affords a very delicate test for minute quantities of nitrites.—*Industries.*

HOW TO ADMINISTER GASEOUS ENEMATA.

WISHING to try the treatment of pulmonary diseases by means of gaseous enemata, the following appliance was used, on the suggestion of Dr. J. Clark Stewart:

An ordinary siphon bottle, charged with carbonic acid gas and water in the usual way; a pound bottle containing a sulphide in solution, closely corked, and having a long inlet and a short outlet tube, both of glass; a rubber tube attached to the siphon connecting it with the bottle containing the sulphide solution, and the tubing with the metal tip of an ordinary fountain syringe conveying the sulphureted hydrogen from this bottle, where it is generated, to the rectum. When ready for use the siphon is inverted—for in this position only the carbonic acid gas escapes—and the cock is opened slowly. It is very easy to regulate the supply of gas in this way. The advantages of this appliance are:

1. Cheapness, a thing always worthy of consideration in trying new methods. All the material required will not cost over one dollar, and any physician can put it in working order.

2. Convenience for manipulation, there being no delay in generating carbonic acid gas and preparing the ordinary gas bag. It also does away with the double-valved syringe bulb and its continuous manipulation.—*Dr. H. M. Bracken, in the Medical News.*

It may interest microscopists to know that the zinc double salt of tetramethylamidodiphenylthienylcarbinol, otherwise thiophen green, is excellent for staining sections, especially as a contrast color to carmine. It is soluble in water, alcohol, and chloroform.

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TABLE OF CONTENTS.

	PAGE
I. CHEMISTRY.—Improved Chemical Apparatus.—A simple filter stand, an automatic stopper for analyses by reduction.—4 illustrations.....	10470
II. CIVIL ENGINEERING.—Ruling Gradient.—How to determine the best gradient for a railroad, economical aspect of the problem.—2 illustrations.....	10457
The Big Warrior Bridge near Cordova, Alabama.—A recent bridge of 215 feet span, its general features of construction and capacity.—1 illustration.....	10460
The Panama Ship Canal.—Present condition of the work and future prospects.—1 illustration.....	10459
III. ELECTRICITY.—Electric Execution.—Note on Edison's plan for inflicting capital punishment.....	10457
Improved Alternate Current Dynamo.—The Mordey dynamo, its peculiarities and characteristic features.—3 illustrations.....	10456
Practical Applications of Electric Welding.—By O. K. STEWART.—The present aspect of this important question, and what is now being done in practical work.....	10456
The Most Powerful Electric Light in the World.—St. Catherine's lighthouse on the Isle of Wight.—A half inch arc of 60,000 candle power with carbons nearly 2½ inches in diameter.—1 illustration.....	10455
IV. MECHANICS.—Automatic Spoke Lathe.—An American lathe as described by a European authority, a tribute to native ingenuity.—2 illustrations.....	10461
V. MICROSCOPY.—Thiophen Green.—Note on a coloring matter, available for sections.....	10470
VI. MINING AND GEOLOGY.—Coal Getting by Hydraulic Press.—A hydraulic press arranged to act as a substitute for explosives in dislodging coal.—1 illustration.....	10462
Mica Mining in North Carolina.—By WM. B. PHILLIPS.—Continuation of this interesting paper, treating of the genesis of mica.....	10462
Quartzites and Siliceous Concretions.—A most interesting discussion of this subject.—The formation of chalcidony and other silicas, and the origin of geodes.....	10466
VII. MISCELLANEOUS.—French Shadows.—An easily arranged form of popular amusement, capable of adoption for parlor representation.—3 illustrations.....	10466
Science and Revelation.—The relations of science and revelation, religion considered by Prof. STOKES.—A plea for their harmony by the great mathematician.....	10465
The Royal Society.—Notes of exhibits at the conversazione of the Royal Society of May 8.....	10464
VIII. NAVAL ENGINEERING.—Improved Collapsible Life-Boat.—A boat designed to enable ships to carry a better equipment of life-boats.—6 illustrations.....	10460
IX. ORDNANCE.—The Krupp Rapid Firing Gun.—A new German machine gun.—Its capacity and ballistic power.—1 illustration.....	10461
X. PHOTOGRAPHY.—Photographs of Projectiles in Motion.—A curious investigation, with illustrations showing the wave of condensation formed by high speed projectiles.—8 illustrations.....	10463
Photographs of the Eye by Flash of Magnesium.—A photograph showing the retina of the eye as in total obscurity.—An interesting contribution to physiology.—1 illustration.....	10463
XI. SURVEYING.—The Omni-Telemeter.—An ingenious instrument for triangulating for distances without calculation.—1 illustration.....	10464
XII. TECHNOLOGY.—Potato Starch.—Technical and chemical investigations of this problem, and the formation of starch in the life of the plant.....	10464
XIII. GEOGRAPHY AND EXPLORATION.—Dr. Von Luschan's Journey in Asia Minor.—Notes of a recent paper read before the Berlin Geographical Society.....	10468
The French Association in Algeria.—The tour of the French Association for the Advancement of Science.—Their examination of the artificial oasis Oued Rir.—4 illustrations.....	10468
Tobacco Cultivation in the Dutch East Indies.—The cultivation and curing of the tobacco leaf for exportation and for home consumption.—Different methods adopted for the two uses.....	10469

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