

7. Sy. Ferri Iodid.
8. Tr. Arnica Flor.
9. Tr. Jalapæ Co.
10. Triticum.
11. Turpethum.
12. Viburnum.

CLASS II.

1. Elix. Aurantii Cort.
2. Emuls. Ol. Morrhuæ.
3. Ext. Buchu Liq.
4. Ext. Hyoscyam Liq.
5. Ext. Pruni. Virg. Liq.
6. Ext. Senega Liq.
7. Ferri. Hypophosphates.
8. Ferri. Phosphas Solubil.
9. Hydrarg. Iodid Flor.
10. Syr. Antiseptica Arom.
11. Liq. Formic. Aldehyde.
12. Liq. Acid, Hydriodici.
13. Syr. Ferri Phosphat Co.
14. Syr. Ipecac.
15. Syr. Hypophosphitem.
16. Syr. Hypophosphit. Co. c
- Quin. et Strych.
17. Syr. Senegac.
18. Tr. Opii Deod.

The Microscope in the Shop

To the pharmacist who is so in something more than name the microscope is perhaps the most useful scientific instrument which can find a place in the shop. Too frequently its aid is not requisitioned even by the possessor of one, and the cause is in many cases due to it being kept carefully locked up in its cabinet out of reach of the inquisitive apprentice. If, instead of being so carefully preserved, a moderate priced instrument were placed under a bell glass, and always had attached to it a double nose-piece, a half-inch and a sixth-inch objectives, its true value would be soon appreciated. The value of it is not the amount of money it costs, but the amount of usefulness which can be got out of it. The amount of information which may be obtained by submitting all doubtful substances, and also many substances of good repute, to the scrutiny of the microscope is astonishing. It will often solve the strangest problems in the most unexpected way. Quite recently several bottles were returned containing liquids and deposits which were said to have formed in each. The said deposits

*A Pharmacist in the Pharm. Journal (Eng.)

were quite foreign to the original contents of the bottles. A microscopical examination proved the sediments in the different bottles to be absolutely identical in character and certainly of a common origin. This fact led to inquiries, which proved that the sediment had been found in one bottle only, and in some unexplained way had been distributed among the other bottles by a servant. At the dispensing counter the microscope should, and in the hands of resourceful pharmacists does frequently give good service. To place on a glass slip the deposit which has formed in a mixture and ascertain whether it is amorphous (perhaps mucilaginous) or crystalline is but the work of a few minutes, and information is gained as to chemical incompatibility or the mere precipitation of inert matter of vegetable origin. Although the microscope may fail in some



A Handsome Interior.

instances to solve the problem forthwith, yet it very rarely happens that it does not give speedy assistance in indicating the direction whence the final solution will come. On one occasion a parç rate of iron and quinine failed to give a bright solution with water. The usual causes of cloudiness were investigated without avail. A second lot was obtained from the manufacturers, but it turned out equally bad, and the makers could not give any explanation; they contended that their methods were such as they had always adopted. On submitting the carefully collected deposit to the microscope it was seen to consist of ordinary dust and minute fragments of straw. The manufacturers were then able to trace the source of the trouble to a defect in the partition between the room in which the drug was put into bottles and the contiguous room which was used for packing purposes.

Doubts sometimes arise as to the correct dispensing of medicines, and the microscope will be found of great use in helping to determine the composition of mixed powders and pills.

It is so common for the pharmacist to buy his drugs in the form of powder that one would think that the microscope would be indispensable if he is to be, as he ought to be, surety for the drugs he sells. The wholesale druggists of this country are as a class above suspicion, and upon their reputation the retail pharmacist leans with an assurance which is very praiseworthy. There is no necessity to say a word to shake so estimable a confidence in the wholesale dealers, especially as the temptation to adulterate powdered drugs is extremely small. But the retailer ought, in these days of contentious commerce, to be in a position to demonstrate the grounds of his confidence to his customers if need be. In the matter of spices and condiments the druggist is on different ground, and must be content to see the greater part of his trade pass into the hands of the grocer, unless he can compete with him in price or sell a superior article. In order to be master of the situation the pharmacist must be certain of the quality of his goods, and he cannot do better than submit all his ground spices to microscopical examination. Cinnamon is sometimes mixed with starch, of which there should be

normally present only a small quantity. Powdered walnut shells and the ground twigs of the cinnamon tree are also used for the same purpose. All these substances would be at once revealed by the microscope. Ground white pepper is not infrequently found mixed with other substances such as foreign starches, ground olive kernels, walnut, almond and hazel-nut shells. Exhausted coriander, fennel and anise fruits are also said to have been used for adulterating pepper. Ground mustard may contain an unusual amount of added starch, and it occasionally happens that such diluted mustard is fortified with cayenne pepper. Cheap arrowroot is not always what it pretends to be. Having a complaint as to the price of arrowroot, and hearing that a neighboring grocer was selling it at a low price, it was decided to investigate the matter by making a pur