

solution, which withstood dilution with water in all proportions. The alcoholic and dilute alcoholic solutions gave the peculiar color reaction and precipitate with ferric chloride and a deep flesh-colored precipitate with lead acetate. Acetic acid dissolved the substance to make a yellow solution which was immediately precipitated upon dilution with water. Acetone and acetic ether dissolved it with deep wine-red colors. It was largely soluble in glycerin, but this solution was precipitated by addition of water.

From the yellow-tinged water solution of this substance, hide-powder did not absorb either this color or the property of reacting characteristically with ferric chloride.

Furthermore, when subjected to dialysis the saturated water solution of this final substance gave a dialysate similar to that from the decoction, in so far as the reaction with ferric chloride is concerned, but differed in behavior toward gelatin, for the evaporated liquid, although it developed an intensified color through concentration, did not show precipitation with gelatin; again showing that the iron color-reacting and gelatin precipitating effects do not reside in the same substance.

The outcome of this work has been to find that the substance or mixture which gives the reaction with ferric compounds is (1) non-absorbable by hide powder, (2) that it is dialysable through parchment and (3) that its saturated water-solution does not precipitate gelatin.

In view of these attributes, so distinctly negative for tannins, and of the explanation for the irregular behavior of the gelatin test, it seems conclusive that *casacara sagrada* does not contain a tannin.

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## A CONVENIENT APPARATUS FOR BLOOD COUNTING.

BY E. R. SERLES.

Everyone who has been in a clinical laboratory has at some time or other been called upon to make a blood count. Under the old method of filling the pipettes by means of the rubber tube and human lung power, many difficulties are encountered. The novice finds it very difficult to watch the tiny column of blood rise to 05 and at the same time hold the rubber tube so that there are no kinks which will cause him trouble when he places his tongue on the opening in the mouth piece.

In order to eliminate the difficulty mentioned above, the author substituted for the lung power a 2-cc. hypodermic syringe and shortened the rubber tube to about one inch. This worked much better, but the flexibility of the rubber tube still caused slight changes in the length of the air column above the blood and gave rise to errors when the pipette was carried from the blood droplet to the diluting fluid.

The new apparatus, which consists of an ordinary haemocytometer pipette with the top end reinforced and ground to fit the nozzle end of a 2-cc. Luer syringe, makes an ideal piece of equipment.

In order to insure perfect connection, the nozzle of the syringe barrel A may be coated with a film of castor oil. This not only insures a close fit of the two parts, but it allows for the easy removal of the syringe when you wish to transfer it to other

pipettes. A drop of oil on the plunger of the syringe facilitates the operation of that portion of the apparatus.

The advantages noted in using the above apparatus are as follows:

The operator may take up the blood column with one hand, since a slight raising of the plunger by the thumb and forefinger is sufficient to fill the pipette to 0.5. The other hand is free to use as occasion arises.

Second, the eye may be placed on a level with the graduations on the pipette.

Third, the column remains fixed unless the plunger is moved and if the plunger is covered with castor oil, accidents rarely occur.

Fourth, as soon as sufficient diluting fluid has been drawn into the bulb of the pipette, the apparatus may be rested in the hollow between the thumb and forefinger of the left hand and rotated with the right as you would roll a pencil between your thumb and fingers.

Fifth, the syringe attachment facilitates the washing of the pipettes in the various solutions when through using them.

Sixth, one syringe may be used for as many pipettes as desired. However, one for red and one for white cells is more convenient.

The author likewise uses another simple device which was designed by a former associate, Dr. R. C. Sherwood.

The above consists of a rubber stamp which is a replica of  $\frac{1}{16}$  the counting field of the slide.

This enables the operator to systematically record his count.

The pipettes were ground by Central Scientific Company, Chicago, Ill. The rubber stamp was manufactured at the Northwestern Stamp Works, St. Paul, Minn.



Fig. 1.

		8	7	6	9
		10	8	4	5

Fig. 2.

AMERICAN BUSINESS.

"He would be a rash man who would state that we are finally upon the golden stairs to the industrial millennium, but there is great hope that America is finding herself upon the road to a solution of the greatest of all her problems. That is, the method by which social satisfaction is to be attained with the preservation of private industry, initiative and a full opportunity for the development of the individual."—Secretary Herbert Hoover.

ROMANCE IN BUSINESS.

Every art and profession has its romances and these interest the public if told in words

understood by the lay reader. This comment is prompted by a book recently published by Captain Mallet "Plain Tales from the Far North," which brings out the romance in fur trade, even though important matters of the business are not discussed in detail. The story portrays the points of contact and human nature and is rich in imaginative appeal. The specific purpose of the comment is to emphasize again the importance of the book on pharmacy, to be written in popular style, the preparation of which will receive further consideration at the Philadelphia meeting; editorial mention has been made in previous issues of the JOURNAL.