

much better. After all, I think the result is a decided success. All the so-called pure rubber stoppers for chemical laboratories of American make are, as far as I am able to ascertain, manufactured of vulcanized rubber, which is not the case with those imported from Germany. The Professor of the chemical laboratory here has had the same experience. The 7,800 stoppers of different sizes have cost about \$110; if they had been bought at once at wholesale figures, the price would have been 30 to 35 per cent. less.

As the stock in hand for the advancement of the collection has to be a large one, I may draw attention to a method recommended by Prof. W. Hempel, of Dresden, Saxony, to prevent the stoppers becoming too hard (Bericht d. Deutsch. Chem. Gesell., 1882, vol. xv., Heft. 6, No. 184). Rubber stoppers or tubes retaining their elasticity should be kept in large glass jars, in which an open vessel with petroleum has been placed. It is better to keep the light from the jar; wooden boxes should not be used. Stoppers which have become hard should be brought together in a jar with sulphuret of carbon until they are softened, and afterwards be kept in a jar with petroleum just as the others. Before knowing this I used to soften such stoppers by squeezing in different directions, or by rolling with a piece of board. Of course Prof. Hempel's method is better, as it prevents the gradual evaporation of the fluids used for the solution of the rubber in the process of vulcanization. It is remarkable that until now none of the stoppers in the vials arranged in wooden boxes have become hardened, though the same stoppers not fixed in vials with alcohol grew hard. Probably the strong pressure of the alcohol by fitting the stoppers has some influence in keeping them soft; besides, the part of the stopper outside of the vial is mostly small. I do not know whether rubber stoppers for similar purposes have been used here or in Europe earlier than in the Cambridge Museum; if so, I would be very glad to know the results obtained elsewhere.

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## PRELIMINARY LIST OF THE SPECIES OF ACARINA OF NORTH AMERICA.

BY HERBERT OSBORN, OF THE IOWA AGRICULTURAL COLLEGE, AND  
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The Acarina, especially the more minute forms, have been but little studied in America, a fact which seems the more strange when we con-