It is probable, however, that some of the majors have a special tendency to this change by reason of some peculiar structure or form of the intestine and abdominal walls." Although McCook gave these excellent reasons for believing that the replete must develop from a worker of the ordinary type, he did not actually witness the transformation. His account covers a great many other details in the behavior of *M. horti-deorum*, but as many of these are common to most other Camponotine ants, I need not discuss them in this connection.

My own observations on *M. horti-deorum* were made during July and August 1903 and 1906. At first I worked in the Garden of the Gods and located several nests on the ridges where McCook make his observations many years ago. But the region is now so overrun by tourists that careful and continuous observation of ant-nests is out of the question. I therefore sought new localities and was soon able to find a number of fine nests south of the Fontaine-qui-Bouille, along Bear Creek and Red Rock Cañons. A few nests were also found at a much greater distance from the Garden of the Gods, west of Manitou and south of the Ute Pass. In all of these localities there are thickets of shin oaks (*Quercus undulata* and *gambeli*) and the nests are situated only on the summits of dry, stony ridges, just as they are in the Garden of the Gods.

During the two summers I excavated fully a dozen fine colonies of *horti-deorum* and was able to confirm in nearly every detail McCook's interesting account of the nest architecture and the habits of the ordinary and replete workers. I was unable to make observations at night but have no doubt that McCook's account of the foraging habits is perfectly accurate and trustworthy. I am inclined to believe, however, that the exudations of the *Holcaspis* galls may furnish only a portion of the food of the ants and that these insects may obtain much, if not most of their honey from the coccids and aphids on the oaks and other plants in the neighborhood. It would be strange, indeed, if these ants did not take advantage of this food supply which undoubtedly must be greater than that obtainable from the galls.

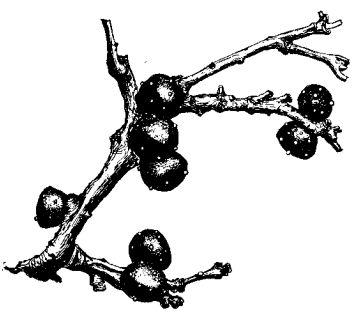

Fig. 23. Galls of *Holcaspis perniciosus* on twigs of *Quercus undulata*, showing the exuding droplets which are collected by the workers of *Myrmecocystus horti-deorum*. About ⅔ natural size.

I have been able to prove what has been surmised by previous observers, namely, that workers of the ordinary size and form develop into repletes. In the nests which I excavated during July there were many workers,