Lately, several prominent American apiarists have declared in favor of natural increase, in spite of several well-known disadvantages, from which artificial increase is free. Some are not even afraid to clip the wings of the queens, in order to facilitate hiving the swarms, although other disadvantages are produced thereby. To this they are certainly led by many reasons, as for instance, by the observation that a swarm, placed in a hive provided only with starters, builds not only a number of beautiful worker combs, but commonly surpasses an equally strong but artificially formed colony, to which brood-frames and empty combs have been given. What may be the cause of this? We answer; since a natural swarm builds almost exclusively worker combs at first, they may be allowed to build whole combs. The building instinct being satisfied and the colony being obliged to form cells for brood and honey as rapidly as possible, the energy of the bee is unusually aroused, and this continues for some time during the main honey-harvest. Such colonies therefore surpass very often not only an artificially formed colony, but sometimes even a colony which was prevented from swarming.

If we consider this well when forming artificial colonies we shall be able to get the advantages of both methods without their disadvantages. I know of three methods of forming artificial colonies which meet the above mentioned conditions, and which are, to my knowledge, but little known and little or never applied in this country.

1. Brushed swarms. This method of forming colonies was first established by friend Gravenhorst, and the method is as follows: at any place of the apiary, but not too near the old colony, place an empty hive provided with seven or eight Langstroth frames (containing exclusively starters) and a division board, which separates the space occupied by these frames.

the hive containing the old colony is opened and all its frames together with the bees are put in comb baskets. In this proceeding we must be very cautious, in order that the bees may fill themselves sufficiently with honey. If many bees have remained in the otherwise empty hive or box, we must brush them out of it into the new hive and place the old hive forthwith back to its old stand. Then all the bees are brushed from the frames into the new box, without minding the queen, and the brushed-off combs are replaced in the old hive. It is well to sprinkle the bees thus brushed off, with some sugar water, whereupon both hives are closed. The whole thing may be done in a few minutes. A great part indeed of the brushed-off bees will return to the old hive; they ought to be given a young queen forthwith on the second or third day, and they will be reinforced by runaway bees in a short time. However, a great part of the bees will remain with the queen of the new hive especially all the young bees. Shortly the new colony will become lively with the bees flying to and fro. Such colonies are easily and rapidly formed and if no mistake be made, they surpasst natural swarms not unfrequently. I tried abou twenty different methods to form artificial colonies in my long practice as apiarist, and according to my experience I hold this method to be in most cases the best one.

2. Alighted swarms. These are established in the well-known way, by placing an empty hive which is provided merely with starters, before a strong colony. We must give, however, the new hive at first for the beginning, *one* brood frame, where the queen is imprisoned, in order to make it easy for the bees to cluster on. A young impregnated queen will do; but it is better, to take the queen of the old colony for the swarm, and if this queen should be found on a frame with a brood issuing, this frame with the adhering bees must be given immediately to the new swarm without imprisoning the queen, and the old colony must be re-queened in some other way. This brood-frame must be taken away from the colony the next day, and the bees brushed from it back into the hive, in order to establish the latter completely in the state of a swarm.

Such artificial swarms consist now exclusively of worker bees, which are but little apt to take care of the later issuing brood. To remedy this evil, we must brush, immediately in establishing the swarm, some young bees from some brood-frames into the hive.

The old colony is now in a less favorable condition; it is deprived of all carrying worker bees and must be fed so that the young brood shall not suffer. But even then it takes always several days, before any bees fly out again to gather food.

In order to avoid this evil, Mr. Gravenhorst gives all the frames together with bees to an other hive, which has just furnished a brushed swarm, *i. e.*, we unite the two old colonies and obtain thereby a very strong colony, which will yield one or more after-swarms. If we intend to prevent after-swarms, we must add, on the eighth or ninth day, an impregnated queen in the cage, and form with her an alighted swarm the next day; at the same time we must cut out all queen cells except one. These last alighted swarms consist almost exclusively of young bees and build the most beautiful worker combs. The old hive has no longer any unsealed brood, and does not suffer therefore by this displacement.