

gorge themselves with honey and endeavour to reach some region outside of the danger zone. This we know; that if we drive smoke into a hive the inmates proceed to lap up the honey in the cells and ignore the bee-keeper when he proceeds to break up their home by removing the frames.

The smoker of to-day consists essentially of two parts, the bellows and the stove. Figs. 5 and 5A illustrate types on the market. In the first the grate is below the fuel, in the second it is above. The latter works nicely for a while, but soon the grate becomes clogged and the smoker is out of business. The writer therefore recommends the one with the grate below the fuel, which is shown in Fig. 5.

The stove is fed with any substance that will burn slowly and give off pungent smoke. Cotton or linen rags—never woollen—are very good, so are pieces of old sucking, especially if weather-worn. The writer has found an old tent, so rotten that it tore easily, a very suitable form of fuel. Greasy cotton-waste is excellent, and can usually be had for the asking at any factory or printing plant. Many bee-keepers use the prunings from fruit-trees once they are thoroughly dry, but they give off a great deal of a tarry substance the writer does not recommend their use.



Fig. 5.

Fig. 5A.

The smoker is started by placing a small piece of burning rag on the grate at the bottom, then this is fanned into flame by working the bellows gently. At intervals more is added, until the stove is too hot to touch, and then the full loading is done. A good smoker should keep alive for several hours without attention, when not in actual use, and be ready for business after a few puffs with the bellows. When in steady demand it should always be stood on end, so that a slow draft is passing through the stove all the time; if not wanted for some time, it should be laid on its side so as to secure very slow combustion.

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The sweet stores of the honey-bee are exceedingly tempting to many forms of animal life; therefore Nature provides her with a very efficient weapon of defence, not offence, in the shape of a sting, so whoever desires to rob the hive of its toothsome treasures must be protected against the little javelins. Ordinary clothing is a sufficient covering, so far as it goes, but in addition the head must be shielded, while with most people the hands are all the better of being protected. Many experts rarely use gloves, having attained a stage at which a sting gives little annoyance; but, as a matter of fact, the writer finds that much of the poor bee-keeping he has come across is largely due to the dread of stings. When a man has to lay off work for a couple of days because of a sting in his wrist, and at the same time does not know how to get perfect protection, he can scarcely be blamed for leaving his bees