

altogether out of the hop, but it also renders what is left less liable to ferment in the bale, and there is less danger of 'heated bales.' This very fact, that sulphur is death to fermentation, constitutes the great objection to the use of such extravagant quantities of sulphur as will injure the fermentation of the beer in which hops drenched with sulphur are used. But the ordinary practice of fifteen, or even twenty, pounds has not been observed to injure the fermentation of the beer." The correctness of the gentleman's statement may well be questioned. There is no way that sulphur can thus prevent fermentation in the bale or in the manufacture of beer, unless it remain in the hops after the drying is finished and until the hops are used. As a proof that it does not do this, we refer our reader to the "United States Dispensary," which substantially says that, after three or four weeks, only the slightest traces of sulphurous acids can be found in the hops when subjected to a thorough chemical test, and after two months the most severe analysis fails to find even a delicate trace. The Dispensary handles this subject from the fact that hops are used as a medicine, and decides that the hop is in no way injured by smoking it with sulphur. The dealer and the brewer want a fancy article. To make it so it must be bleached with sulphur until the hops are of an even color. Then, too, it is claimed by competent growers that the sulphur penetrates to the stem of the cone, seizes the vapor in the hop and carries it away, thus assisting the heated air in bringing the hop into a condition that it will be preserved. We have discussed the use of sulphur in drying hops because certain unscrupulous buyers ask the question, "What makes your hops so even in color?" and when told it is caused by the use of sulphur, condemn the practice in order to cheapen the price. It is a safe estimate that three-fourths of the growers in this valley are using only one to two pounds of sulphur to a flooring, when fifteen pounds pure sulphur are frequently used in the East. The buyers will not pay a good price for discolored hops, and also try to cheapen the finely bleached ones by condemning the use of sulphur. Growers should remain firm in their prices and not permit themselves to be thus browbeaten. Some of our hop growers turn the hops in the kiln. We are creditably informed that this is not necessary in order that the hops dry evenly, if time enough is given them. It only breaks them up and thereby injures the market value. This is done when they desire to dry two floorings in a day. With kiln capacity enough to permit a flooring to dry twenty hours or more this may be avoided. Nor should they permit men to tramp on the hops while in the kiln, warehouse or baling room. To give the dealer and brewer a perfectly fancy article the hops must be uniform in color and the cones kept in as perfect a shape as possible. Nature produces a perfect hop in these valleys, and all are alike interested in having the picking, curing and baling done in such a manner that all hops shall be measured by this standard.

When the hops are sufficiently dry, they are shoved off the kiln floor through a door into the second story of

the store room, known as the "cooling floor." The test of proper drying is the brittleness of the stem of the cone, and much experience is required by the dryer in order to determine this exactly. If not sufficiently dry they will heat in the bale and spoil, while over-dried hops are liable to break and powder in handling; yet it is better to have them too dry, as they will afterwards absorb considerable moisture, and careful handling will preserve them from breaking. When thoroughly cooled they are lowered to the main floor of the warehouse, and unless needed for immediate shipment are allowed to accumulate in layers, one drying above another until the whole crop is thus in store. This is done in order that the hops may be thoroughly toughened and bales be uniform in quality. The latter result cannot be reached unless the early and late pickings are thoroughly mixed. This is accomplished by taking the hops off in perpendicular sections, portions of each layer thus getting into every bale. When this is done a sample taken from any bale will represent the entire crop. Baling is performed in portable presses of sufficient power to make a compact, smooth bale of about 200 pounds weight. Care must be taken in handling and baling the hops not to break or powder them, so that there may be no loss in strength by the sifting out of the lupuline, the fine yellow powder which contains the bitter principle; also that the appearance of the cones, upon which the market value largely depends, may not be injured.

The comparison of the hop industry with that of wheat growing, which has become the one staple agricultural product of the Northwest, is so favorable to the former, both in point of profits and the quantity of land required, that our farmers who possess soil suitable for hop culture feel a strong inclination to embark in it, on a small scale at least, and thus render themselves independent of the financial uncertainty attending a total reliance upon a wheat crop. Hops, fruit, vegetables, cattle, dairy products, wool and pork are the panacea for the ills under which our farmers are suffering, as a result of the world's increased production of breadstuffs.

ASBESTOS is becoming a valuable and much used mineral. It has been lately discovered, in its purest form, in Lower Canada, and the quantity is said to be practically without limit. The fibers are long, pure white and as fine as silk, and the district covered comprises two counties near Quebec, to which city the product is brought to be crushed and cleaned, and from which points large shipments are now being made to England and the United States. The possibilities of this mineral range over a field that is simply marvelous. Fireproof paper, rope and ink that resist the action of fire, as well as the weaving of textile fabrics, such as table cloths, asbestos cloths, gloves, etc., while in the range of building materials, fireproof paint, packing for safes, floor deadening, roof protection, covering steam pipes, etc., are among the most common uses. Its cheapness is its chief recommendation to many, but its thoroughly incombustible nature is of special value.