

A MINIATURE BREWERY.

The Study Place of Men Who Hope to Become Beer Brewers.

There is a complete and model brewery very close to the City Hall, New York, but it is one that never sells its beer nor advertises it, or whose proprietors show any concern about what becomes of it. This model brewery plant is one that has recently been added to the apparatus in use in the United States Brewers' Academy. The little brewery, established for the teaching and practice of brewing under the observation of those who want to learn the trade, is as pretty a series of bits of mechanism as any machinery exhibited at the Chicago World's Fair, and it is big enough to brew ten hundred of lager beer a day the year around. It occupies four miniature stories built up within two real stories of the academy building, and it forms a brewery entire, from the make-believe cellars to the kiln of the equally complete malting which is joined to it. The plant is more than complete, for it contains apparatus for more than one system, in order to allow students to practice more than one method of any branch of the business upon which the brewers disagree.

The time has come by when any man with a tea-kettle and a washtub can successfully establish a lager beer brewery in any populous part of this country, as was once the case in the days of the fathers of our big brewers, if not in the days and actual cases of some of these brewers themselves. Even after lager beer had become a popular drink, and when the best brewers had become millionaires, they still followed the custom of appointing as brewer master or foreman any clever employe who had been a good workman and kept out of trouble by dumb luck and good mimicry of what he had seen other brewers do. This was the rule until within a very few years, and even then the brewers who expected their success to come from dumb luck and country custom that they had seen that they knew. This led them to appreciate their sons to other brewers, and they always sent the boys to the biggest brewer—usually America or Europe, hoping that they would manage to pick up some secret that was at the bottom of such a brewer's popularity. Of course, in nearly all such cases the prosperity was due to abnormal business methods, which might have been studied in the counting rooms of the breweries, but could not be even guessed at by an apprentice among the workmen. When such an apprenticeship had been served the heir to the business would lack what was for his turn to become foreman of a business managed on blind traditions and operated by the force of dumb luck. All that is part of the dead past. The science of beer brewing is based on chemical processes, and the brewers of the future must understand at least as much of chemistry as enters into the business. They not only must know how beer is brewed, but they must understand why one step follows another, and how to detect and remedy any fault that occurs during the brewings.

To put it as one brewer of the new type expressed it: The old plan was, when anything went wrong with the brew to suspect that some discharged workman had put something into the mash-tub, and to take it out in damning him. The new plan is to take a mechanical and determine the stage of fermentation, examine the yeast, note the temperature, and, if necessary, make a chemical examination of the liquor itself. In that way, and in that way alone, can an even grade of beer be produced the year around.

To one who thinks only of the millionaire brewers and makes no account of the great number that merely struggle along,

it would seem as though the Academy were was a school for the making of great fortunes. One would imagine that such a school would be notified by prospective pupils. The fact is that this academy graduates only about sixty men and boys a year, and that is pretty nearly all that go there to study. It is a school for master workmen and not for brewery owners, although the owners are sending their boys there quite as an essential to the successful ownership of such properties in the future. All pupils in the academy must be practical brewers, except the few of eight and ten, and possessors of a good common-school education. The art of brewing must be comparatively simple, because a man or boy need only work two years in a brewery in order to become a "practical brewer," and they say at the academy that if he is a bright fellow he can become such in one year.

The Brewers' Academy has two terms a year, beginning respectively on the first Monday of January and the first Monday in February. The school is now twelve years old, and until recently was attended by far smaller classes. The young men who attend it, if they are workmen, are such as are acquiring \$17 or \$18 a week, but the academy fits them to fill places as brewmasters and foremen, and, as such, they may receive anywhere from \$1,800 to \$15,000 a year. The academy does not promise success places for its alumni, but it notifies the brewers of America that they will do well to call on the professors before going elsewhere to fill vacancies in their establishments, and the brewers keep their eyes on the little school. To-day the majority of the graduates hold responsible positions in large breweries. The head of every department in Elvert's in New York city is a graduate of the academy, as is the head and graduate of the academy. Though nearly all the pupils get diplomas these are not all of the first class, and even if a graduate holds a first-grade diploma he cannot be a foreman or superintendent unless he knows a secret that cannot be taught—the art of managing men. The great rich brewers are sending their sons and rich brewers in this school, in order that, whether they are to take practical charge of the breweries or not, they may know as much as their master workmen. Among the pupils have been young Busch of the Anheuser-Busch Company, young Huber and two of the Lehmanns of Brooklyn, Leup of St. Louis, Paist of Milwaukee, Kruger of Newark, and young Wozz and young Schmitt of New York. The superintendents or brewmasters of no fewer than 124 of the breweries of America are from this school, and that argues an improvement in the beverage and a revolution which is taking the business out of the domain of luck and turning it over to science.

The common practice of the big brewers is to send to give their boys and girls a good common-school education and then put them in their own or some one else's brewery for two years' apprenticeship, after which they send them to the Brewers' Academy, or scientific instruction. Then they may put them through college, but they are more likely to give them a term or two in one of the so-called "business colleges" in order to ground them in bookkeeping or superficial mathematics, and then fitted to manage both ends of the business. This mainly applies to the German lager beer brewers. The Americans who are in the ale-brewing business, as a rule, are not so well educated, and their business and are content to make use as their fathers and predecessors made it. They regard brewing as an art, whereas the new idea is that it is a science. However, an English class is maintained at the academy, one that averages about eight or ten pupils. The German class is thirty strong.

There are six professors in the academy corps, and they teach both theoretical and practical brewing. First, they take up an introduction to general chemistry, defining and explaining elements, combinations, acids, bases, and salts, and the characteristics of carbon, alcohols, acids, albuminoids, etheral oils, resins, color in matter, and what the German chemists call bitter studs. This course includes chemical experiments and the examination of whatever is used in breweries, which is to say not merely the hops and barley and water of old-time brewing, but rice, corn, wheat, glucose, and other sugars—the ingredients for the modern substitutes for and accompaniments of barley malt. Then follow lessons in natural philosophy, optics and thermal studies, and the use of the polariscope, microscope, and thermometer. After this comes the training in the use of the model brewery—the actual making of beers, for draught and for export, the brewing of weiss beer—both according to the regular methods—and the making of malt. These studies are extended by training in the use of the microscope upon all the materials, a study of boilers, engines, pumps, ice-making machines, and other apparatus, and by a study of fermentation in the use of the saccharometer, and by a course in weights and measurements and mathematics of such grades as enter into the calculation of vessel capacities, proportions and the rest.

NONE BUT ANGELS NEED APPLY.

Many a good and noble fellow in the ranks of our prohibition army is sadly discontent in his usefulness by vanity and personal ambition. The only one fitted for leadership, and safe at all times, is the one who will work wherever he is placed, who is above self-seeking and ready for any sacrifice. He who is not sufficiently well grounded in the reform to be oblivious to envy and personal rivalry, possesses neither the dimensions or devotion of a leader. The cause is everything, the man nothing.—The Tanager.

THE WORLD'S BEER PRODUCTION.

The advocates of total abstinence from alcoholic liquors can hardly derive much encouragement from some figures published by a French paper on the world's production of beer. It appears that in the whole of Europe 3,636,000,000 gallons of beer are produced every year. Germany makes the largest quantity, and upholds its national reputation with 1,051,064,000 gallons, of which 630,380,850 gallons are contributed by Northern Germany, 337,167,400 gallons by Bavaria, 60,817,000 gallons by Wurttemberg, 55,191,000 gallons by the Duchy of Baden, and 16,703,000 by Alsace Lorraine. After Germany comes the United Kingdom, and then Austria follows with 292,025,000 gallons. Bohemia alone is represented in this amount by nearly 110,000,000 gallons, and Lower Austria (including Vienna), by more than 44,000,000 gallons. The people of Belgium consume 230,000,000 gallons, of Denmark 52,492,000 gallons and of Norway 37,673,000 gallons. Next in order come Russia, with 64,427,000 gallons, Switzerland with 28,101,000 gallons, Spain with 22,550,000 gallons, Italy with 3,029,000 gallons, Turkey with 3,080,000 gallons, Roumania with 220,000 gallons, Luxembourg with 2,090,000 gallons, Servia with 2,046,000 gallons and Greece with 213,000 gallons. It is curious to note that outside of Europe little beer is produced, except in the United States, where the manufacture

was by the last statistics shown to be 812,200,000 gallons. Japan produces 4,855,000 gallons, Australia 35,440,000 gallons, and Algeria 550,000 gallons.

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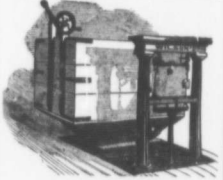
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