

Holyoke.

A NEW MANUFACTURING ENTERPRISE.

Another enterprise must be added to the numerous and varied industries of Holyoke. This is the manufacture of water, gas and sewer pipes from felt paper, or burlaps, and asphaltum, a patent for which was issued in 1873 to G. L. Eagan of San Francisco, and which has since been bought by New York and Philadelphia parties. The patent covers the right to use any non-liquid, plastic compound with cloth or other material in making the above pipes. This manufacture was begun at South Holyoke, yesterday afternoon, by G. M. Fuller of Northampton and S. R. Bell of Hadley. Here they have a building, 30 feet by 20, with steam and water-power furnished from Newton & Ramage's paper mill close by. The process of manufacture is simple. The refined asphaltum, which is brought from Trinidad, South America, is first melted, then mixed with clay or sand or other foreign substance, and to this mass a certain chemical is added, which hardens the whole on its cooling. The plastic compound is then dropped from a tank, provided with regular apertures, upon the cloth or paper beneath, which is wound upon a hollow iron bar, six feet long, called the "shell," and which is kept revolving, thus producing a pipe of the desired thickness. Quite powerful pressure is brought to bear upon the revolving pipe, so as to force the compound thoroughly between the fiber of the cloth or paper, thus forming a solid pipe. The shell is so made that it can be easily withdrawn, leaving a pipe that will cool in 10 minutes sufficiently hard for use. All sizes can be made from two-inch to 36-inches; those for sewer and gas purposes having a basis of paper and those for water one of cloth. A three-inch pipe, though not so solid as those that will be made hereafter, stood a pressure of 300 pounds to the square inch without showing any signs of breaking. D. W. Crafts, superintendent of the Northampton gas company, gives it his endorsement for gas purposes. By using the smaller sizes as water-service pipes, telescoped within each other, but so as to be easily separated, it will be almost impossible for them to become frozen up, as the compound is nearly a perfect non-conductor of heat. A section of two-inch pipe filled with water was exposed all night, last winter, out-doors, with the thermometer 14 degrees below zero, without the water becoming frozen. It is claimed that it will not decay by use in sewers; but, of course, that remains to be seen. The cost is about the same as of common cement pipe, and, with their present arrangements, Fuller & Bell expect to be able to make 250 or 300 feet per day with four hands. Several thousand feet have already been ordered, considerable going to Hartford, Ct. The clay for the manufacture comes from beds near by, and the sand is at their very doors. Only six thicknesses of cloth or paper are used for the common sizes. A similar pipe, though made of liquid asphaltum, is said to have been in use, successfully, for many years in France, though, owing to the use of the liquid material, it is necessary to use 60 thicknesses of cloth. A company in Michigan was formed, some years ago, to make similar pipes from strips of white pine and a liquid preparation of asphaltum, but the pipes were found too weak to resist the pressure necessary. It is said that a New York company was formed, years ago, to make a similar article, but that the cloth and paper decayed, leaving the asphaltum shell too weak to be of service. It is hard to see how this pipe, however, whenever the compound is forced so compactly into the cloth or paper, can be injured by any such decay, even were it possible, which the inventors claim is not. The asphaltum does not taint the water, as might be expected, a piece having been left in a tank three months without imparting any unpleasant flavor. The invention promises well; and, if successful, will be quite an addition to the business of Holyoke.