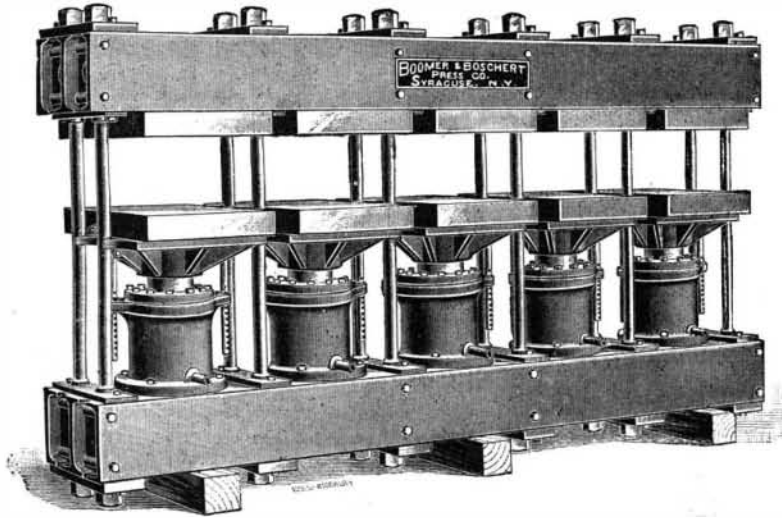


A GANG HYDRAULIC STEAM PRESS.

The improvements which have been made in all descriptions of presses by the Boomer & Boschert Press Company, of Syracuse, N. Y., during the past twenty years have been little less than remarkable, and have fully kept pace with the demands of manufacturers in all lines of industry. In hydraulic presses, especially, the company has been particularly successful in building work for a great variety of uses, but all distinguished by strength and simplicity of construc-

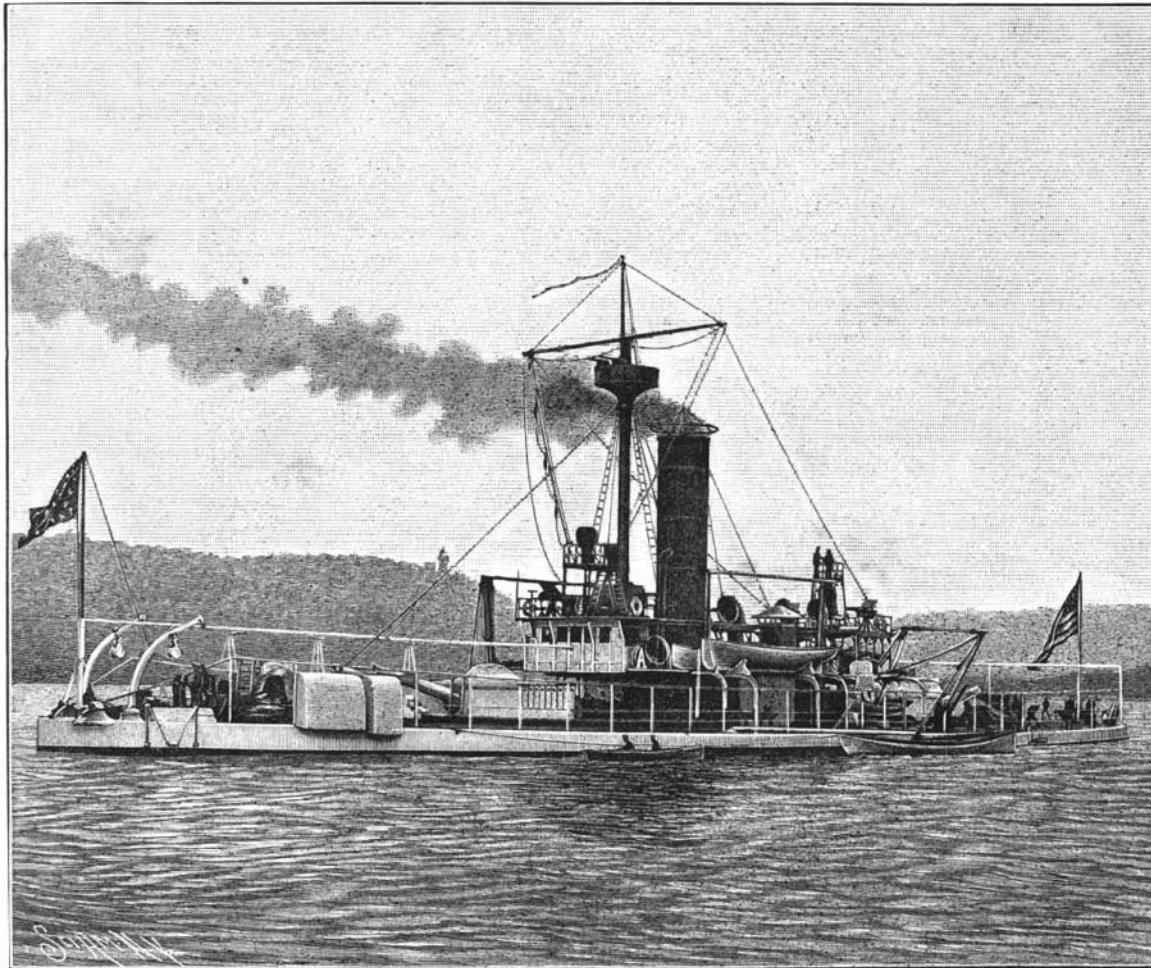


A GANG HYDRAULIC STEAM PRESS.

tion and operation. The illustration shows a gang of small presses, built by the company, to be operated from an accumulator, and which can be constructed in this manner at less cost than separate presses. Each press is, however, independent. The head and base are formed of continuous steel beams, and the construction and operation will be readily understood. In order to save opening the press to its fullest extent each time, and to adjust for different thicknesses of moulds, stops are provided consisting of shafts attached to and dependent from the platens, passing loosely through holes in the lugs cast on the cylinders, with holes and pins for limiting the drop of the platen. The number of presses in a gang may be from two to ten or more.

THE MONITOR MIANTONOMOH.

It is worthy of note that the first service of this vessel, after her recent completion, was in the firing of the salute in connection with the unveiling of the Ericsson statue, and taking part in the ceremonies of the naval parade which signalized the inauguration of the era of the Columbian Exposition. The keel of the vessel was laid by John Roach & Sons, at their works on the Delaware River, in 1874, and she is in many respects a reproduction of the old wooden monitor Miantonomoh. She is 250 feet long, of 55½ feet beam, with a draught of 14 feet, a displacement of 3,815 tons, and indicated horse power of 1,030. She has only about 3 feet of freeboard. The ship is of iron except the armor plates, which are of steel, the hull having a protective belt 6 feet deep and 7 inches thick. The outer plating of the turrets is 11½ inches thick, backed by 10 inches of wood, this being again backed by two steel plates, each ½ inch thick. The turrets are 24 feet in external diameter, and rise a little over 6 feet above the deck. They are each surmounted by a conning tower a little less than 8 feet in diameter at the base, and projecting two feet above the main turrets. In each turret are two 10 inch breech-loading rifles manipulated by hydraulic gear. The vessel also has a fighting mast of hollow steel through which ammunition is hoisted to a fighting top. She has a double bottom, there being a clear space of 28 inches between the two skins. She is lighted throughout by electricity. Her speed is rated at 10½ knots per hour.



THE MONITOR MIANTONOMOH.

Acetic Acid as a Menstruum.

Professor Remington has been advocating, at a meeting of the Philadelphia College of Pharmacy, the use of sixty per cent acetic acid as a menstruum for extracting drugs. The suggestion was not put forward as a novel one, but it was urged that the acid is an excellent solvent of the active portions of drugs, and is both preservative and antiseptic. Dr. Squibb has obtained very definite and positive results by its use. It appears to form soluble compounds with the active principles of drugs in many instances. Acting on the knowledge that volatile oils are very soluble in the acid, Professor Remington has prepared specimen extracts from various spices by its aid, treating them with four times their weight of the solvent. The whole of the active parts of cassia, cinnamon, cayenne, etc., are said to be extracted and inert residues left. As regards commercial value, acetic acid is, of course, far preferable to alcohol, and it is said to be more effective, weight for weight, than alcohol of the same strength.

According to the *Pharmaceutical Review*, experiments made with nux vomica and belladonna disclosed the fact that complete exhaustion can be obtained by the aid of this medium in less time than with an alcoholic menstruum, while fluid extracts, intended primarily for culinary purposes, are now prepared in a similar way from cinnamon, cloves, cardamom, pepper, ginger, mace, nutmeg, celery, pimento, garlic, mustard, vanilla, and tonka bean. In strength each minim of the finished extracts represents one grain of the material operated upon, and the preparations are said to be admirably adapted to the purposes for which they are intended. They are perfectly miscible with water, and are not of necessity more than slightly acid, since the excess of acid in the weak percolates can be recovered to a great extent by distillation.

The Australian Frozen Mutton Industry.

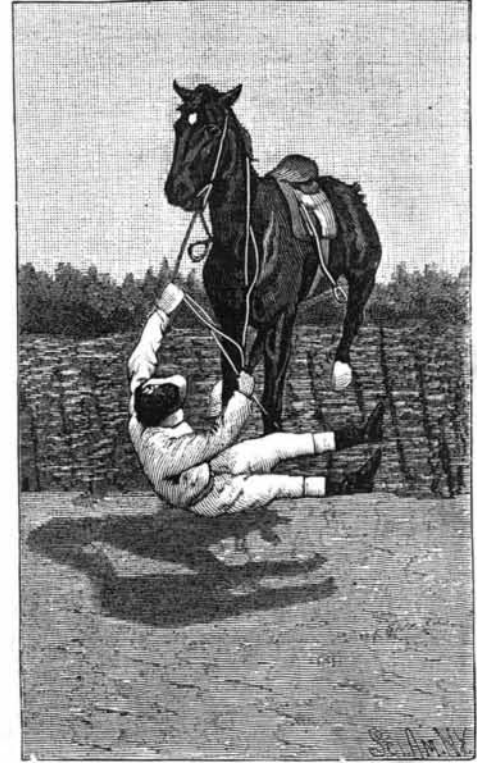
Some idea of the gigantic proportions which this industry has attained may be gathered from the fact that one of the establishments alone, the Australian Chilling and Freezing Works, at Aberdeen, on the Great Northern Railway, 162 miles from Sydney and some 87 miles beyond Newcastle, can freeze 850 and chill 1,500 sheep daily. The vessels load at Newcastle, a special train conveying the mutton to that port, where as

many as 6,000 sheep have been loaded in one day. The steamers carry their cargoes to England. The vessels are provided with refrigerating machinery and deliver their cargoes in frozen condition.

THE Pharos lighthouse, Alexandria, was built B. C. 285; height 550 feet, light visible 42 miles.

BETWEEN SADDLE AND GROUND—AN INSTANTANEOUS PHOTOGRAPH.

Many curious pictures are now frequently seen as a result of the facility with which instantaneous photographs can be taken. Our illustration represents a view of this kind, where a rider has been thrown from his horse but has not yet reached the ground. The inci-



BETWEEN SADDLE AND GROUND—AN INSTANTANEOUS PHOTOGRAPH.

dent occurred at a steeplechase meeting at Ashe, in the Isle of Wight, where Mr. R. Thirlwell's horse Cosmetic refused his third hurdle, and threw Mr. R. Woodlands, his rider. Mr. Charles Knight, of the Royal Studio, Newport, was on the spot with a camera, and he was fortunate enough to get a "snap shot" of the incident just as Mr. Woodlands was falling to the ground, the effect being to make the latter appear as if performing an acrobatic impossibility by supporting himself horizontally on the reins. For our illustration we are indebted to the *London Graphic*.

Something to Think About.

Mr. Carroll D. Wright gives us some very interesting facts. He estimates—and in the matter of statistics he

is an expert—that there are in this country at the present time rather more than twenty-two millions of persons who are "engaged in gainful occupations."

Subtracting from our sixty-five millions most of the wives and daughters, all of the decrepit and aged, and all the school children, it will be seen that we are a work-a-day nation in its shirt sleeves. The class of do-nothings because they have too much money and the other class of do-nothings because they are born loafers do not count for much either in number or influence. But Mr. Wright adds that not only is the aggregate of those who do work on the increase, but also the aggregate of those who are willing to work, but can't get it. There's the rub. That is the reason for the existence of labor organizations, for strikes, and for the unceasing conflict between capital and labor.

The remedy? There is but one. Skilled labor is nearly always in demand. A first-class workman is seldom out of a job. It is necessary, therefore, for the new generation to cease

dawdling, to give up being jacks of all trades, to give themselves vehemently to some special department, and to become masters of that. There never yet was a time when it was not easier to earn \$4 a day because you are worth it than to earn \$1 a day at work which a million others can do as well as you; and, as the *New York Herald* says, the lesson is clear and it is emphatic.