

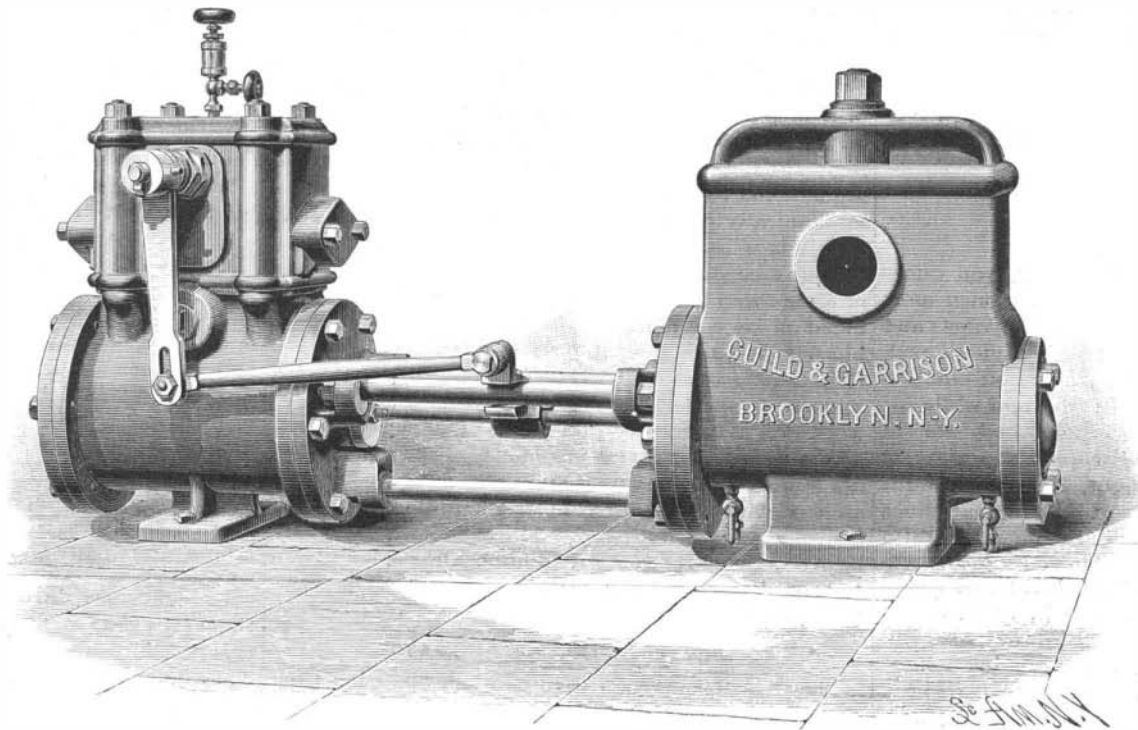
IMPROVED FILTER PRESS PUMP.

The separation of solids from liquids, the clarifying of liquors, and the washing of precipitates are operations required in many industries. For this purpose the filter press has been found a convenient and useful instrument. In the sugar industry it is largely employed, particularly in European factories, where the diffusion process obtains for the extraction of sugar from beets. In the mineral oil industry, it is used for expressing the oil from the paraffine; or, in treating animal oils, for separating the stearine. In the manufacture of drugs, extracts, chemicals, colors, starch, etc., it also finds a place.

The successful manipulation of the filter press depends in large measure upon having a pump adapted to the special service required. To meet the various requirements of filter press work, Guild & Garrison, steam pump builders, of Brooklyn, N. Y., have designed a special line of pumps, one pattern of which, known as class B, is shown in the illustration. The pressure required and the material to be moved must necessarily determine the pattern of pump best suited for the service. Class A, for instance, is intended for thick liquids and very heavy pressures; class C, for liquids containing fiber, pulp, etc.; class D, for liquids carrying grit or crystals.

The pump illustrated is adapted to moderate pressures and the pumping of liquids containing little or no gritty material. As with the other classes, it is the result of a long experience in the manufacture of pumping machinery generally, and of pumps for this service in particular. The liquid cylinder is cast in iron, bronze, or special alloys, has very few parts, and is arranged with the utmost simplicity. The passages leading to and from the pump barrel are made direct, free, and spacious. The valve openings are but continuations of these passages, and are free from obstructions. The liquor is thus able to flow without interception into and out of the pump barrel, and clogging or intermittent action is prevented. The novel arrangement of the pump valves

sages is obtained by removing a single large nut and taking off the valve cover. The valves can then be lifted out by hand if desired. The gauge and interchangeable system is followed in the manufacture of both the steam and pump ends and their parts, so that in case of any pieces breaking down or wearing out by exceptional usage, they can be easily replaced.

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The action of the steam valve motion is positive and uniform, and allows the pump to be run at fast or slow speed, according to the varying requirements of the work to be done.

Other valuable features are claimed by the manufacturers, who should be addressed for further details of construction.

The Latest Intelligence from the Panama Canal.

The present condition of the Panama Canal was explained to the American Society of Civil Engineers at the room of the Society on Twenty-third Street, New York, on the evening of June 15, by Mr. T. Boulange, one of the chief engineers at the Isthmus on the great undertaking, who arrived from Panama a few days ago, having been unable to stand the malarial climate of the Isthmus. He said that the company had only money enough on hand to continue work for four

Preserving Dead Bodies.

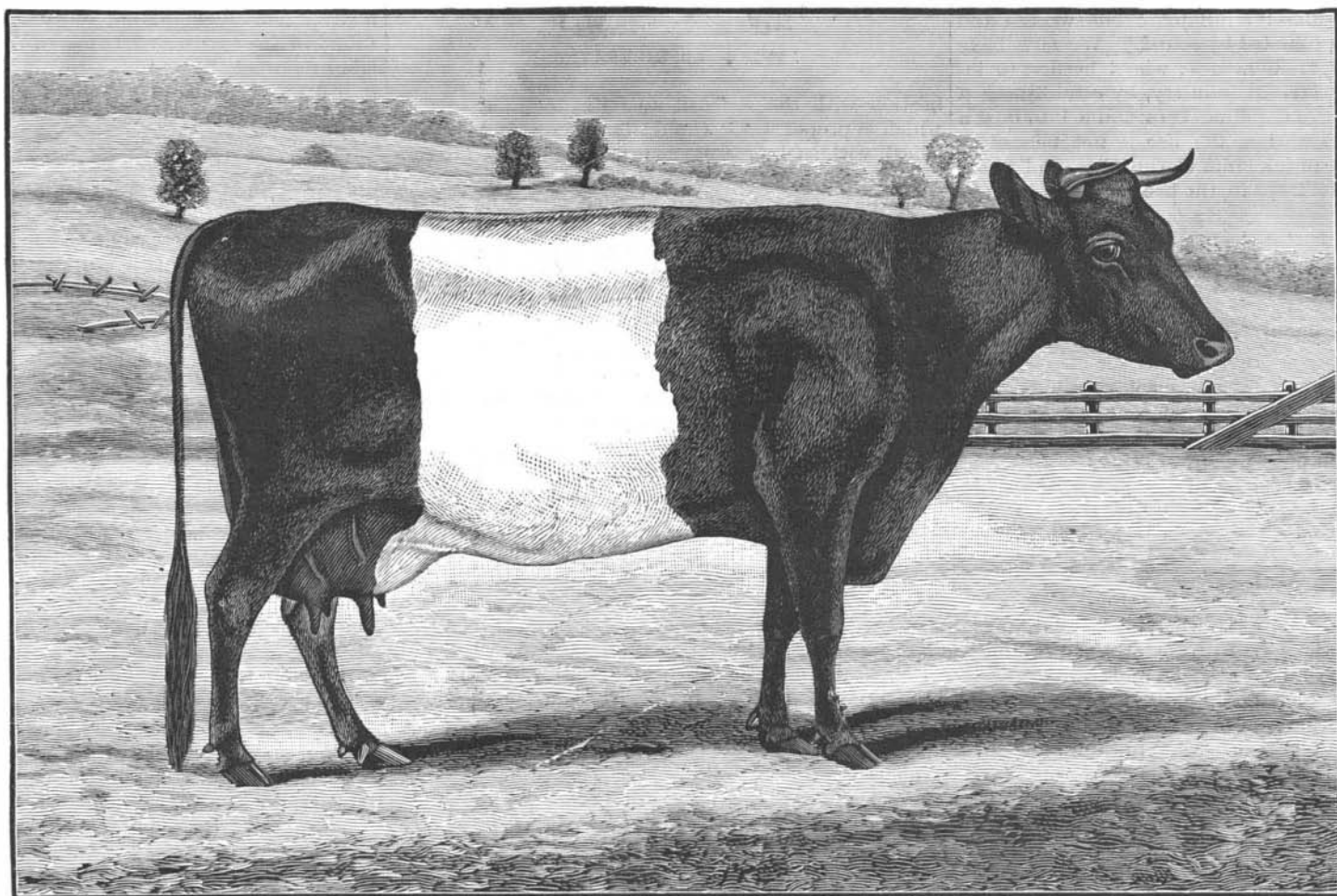
The *Daily News* Paris correspondent telegraphs: The following discovery by Dr. Bouchard, of Bordeaux, for preserving dead bodies is important to medical students and artists engaged in anatomical studies. According to a paper read recently in the Academy of Medicine, the tissues of corpses prepared after this method remain unaltered for upward of two months. The ingredients are 20 pounds of hydrated sodium borate, containing ten equivalents of water, and 34 pounds of glycerine at 30° Reaumur. The borate is reduced to fine powder and shaken through a hair sieve. The glycerine is added little by little, in such a manner as not to make lumps. The mixture is then brought up to a temperature of 80° C. (176° F.), being meanwhile well stirred to dissolve the borate. The solution is finally allowed to drip through a woolen cloth. It is of the consistency of glycerine, but can be made of the required thinness by addition of alcohol. It is injected in the carotid or the femoral artery.

DUTCH BELTED CATTLE.

We present a portrait of an excellent representative

of a unique and novel breed of dairy cattle. They are natives of Holland, and antedate the seventeenth century, when the cattle interests in Holland were in the most thrifty condition, and this type and color were established by scientific breeding—admitted to be the highest attainment ever reached in the science of breeding cattle. The historian Motley well said: "These are the most wonderful cattle of the world."

In their native country they are owned and controlled by the nobility, and present a very novel feature in the landscape, grazing in the lowlands in Holland. In color they are black, with a continuous white belt around their body, the white being pure white, the black jet, making a beautiful and imposing contrast. Their form is usually very fine, and they are wonderfully productive as milkers. Lady Aldine (124), illustrated herewith, is the property of H. B. Richards, Avona Farm, Easton, Pa. She stands at the head of

**DUTCH BELTED LADY ALDINE.**

aids this uniform flow. They are placed in direct line of the currents, and move up and down in cages, which, while they regulate the lift, do not obstruct the flow. Of course the form and material of the valves must depend upon the nature of the liquid. Access to the delivery or the suction valves and pas-

months. The death rate among the laboring men had averaged 60 per cent. Of 72 Frenchmen who went to the Isthmus from France one year ago, but 11 remain to-day. Forty-five died in that period, and six left on account of sickness. Mr. Boulange intends to remain in the United States.

the noted Aldine family, which have become famous as prize winners. Three of this family—Harry Aldine (51), Minnie Aldine (126), Jennie Aldine (180)—have recently been purchased by a gentleman in Orange, N. J., with the view of introducing the stock into eastern New Jersey, where it is but little known.