### 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 em-

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 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 The Latest Intelligence from the Panama Canal. iron, bronze, or special alloys, has very few parts, and is arranged with the utmost simplicity. The plained to the American Society of Civil Engineers at passages leading to and from the pump barrel are the room of the Society on Twenty-third Street, New 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 bar- having been unable to stand the malarial climate of rel, and clogging or intermittent action is pre- the Isthmus. He said that the company had only trated herewith, is the property of H. B. Richards,

# Scientific American.

# Preserving Dead Bodies.

sieve.

[JULY 2, 1887.

for upward of two months.

The ingredients are 20 pounds of hydrated sodi-

um 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

added little by little, in

such a manner as not to makelumps. Themixture

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 addi-

tion of alcohol. It is in-

jected in the carotid or

DUTCH BELTED CATTLE.

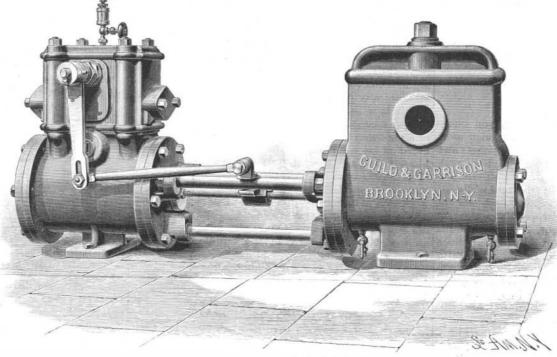
an excellent representative

We present a portrait of

the femoral artery.

The glycerine is

sages is obtained by removing a single large nut and taking off the valve cover. The valves can then The Daily News Paris correspondent telegraphs: The be lifted out by hand if desired. The gauge and infollowing discovery by Dr. Bouchard, of Bordeaux, for terchangeable system is followed in the manufacture preserving dead bodies is important to medical stuof both the steam and pump ends and their parts, so dents and artists engaged in anatomical studies. Acthat in case of any pieces breaking down or wearing cording to a paper read recently in the Academy ployed, particularly in European factories, where the out by exceptional usage, they can be easily replaced. of Medicine, the tissues of corpses prepared after this method remain unaltered



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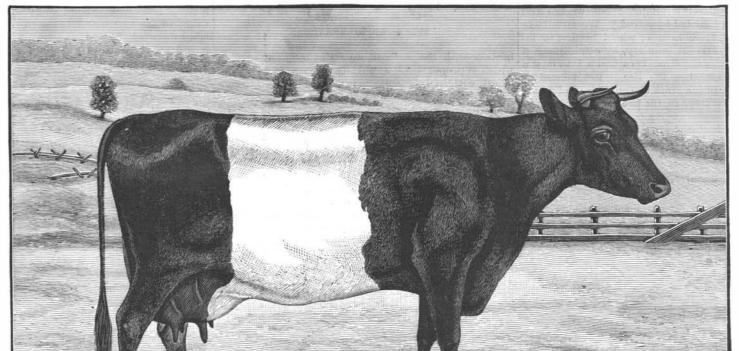
uniform, and allows the pump to be run at fast or slow speed, according to the varying requirements of the work to be done.

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

The present condition of the Panama Canal was ex-York, on the evening of June 15, by Mr. T. Boulange, undertaking, who arrived from Panama a few days ago,

The action of the steam valve motion is positive and of a unique and novel breed of dairy cattle. They are natives of Holland, and antedate the seventcenth 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 low lands in Holland. In color they are black, with a continuous white belt around their body, the white being pure white, the one of the chief engineers at the Isthmus on the great | black jet, making a beautiful and imposing contrast. Their form is usually very fine, and they are wonderfully productive as milkers. Lady Aldine (124), illusvented. The novel arrangement of the pump valves money enough on hand to continue work for four Avona Farm, Easton, Pa. She stands at the head of





DUTCH BELTED LADY ALDINE.

aids this uniform flow. They are placed in direct | months. The death rate among the laboring men had | the noted Aldine family, which have become famous line of the currents, and move up and down in averaged 60 per cent. Of 72 Frenchmen who went to as prize winners. Three of this family-Harry Alding cages, which, while they regulate the lift, do not ob- the Isthmus from France one year ago, but 11 remain (51), Minnie Aldine (126), Jennie Aldine (180)-have restruct the flow. Of course the form and material of to-day. Forty-five died in that period, and six left on cently been purchased by a gentleman in Orange, N. the valves must depend upon the nature of the liquid. account of sickness. Mr. Boulange intends to remain J., with the view of introducing the stock into eastern Access to the delivery or the suction valves and pas- in the United States. New Jersey, where it is but little known.