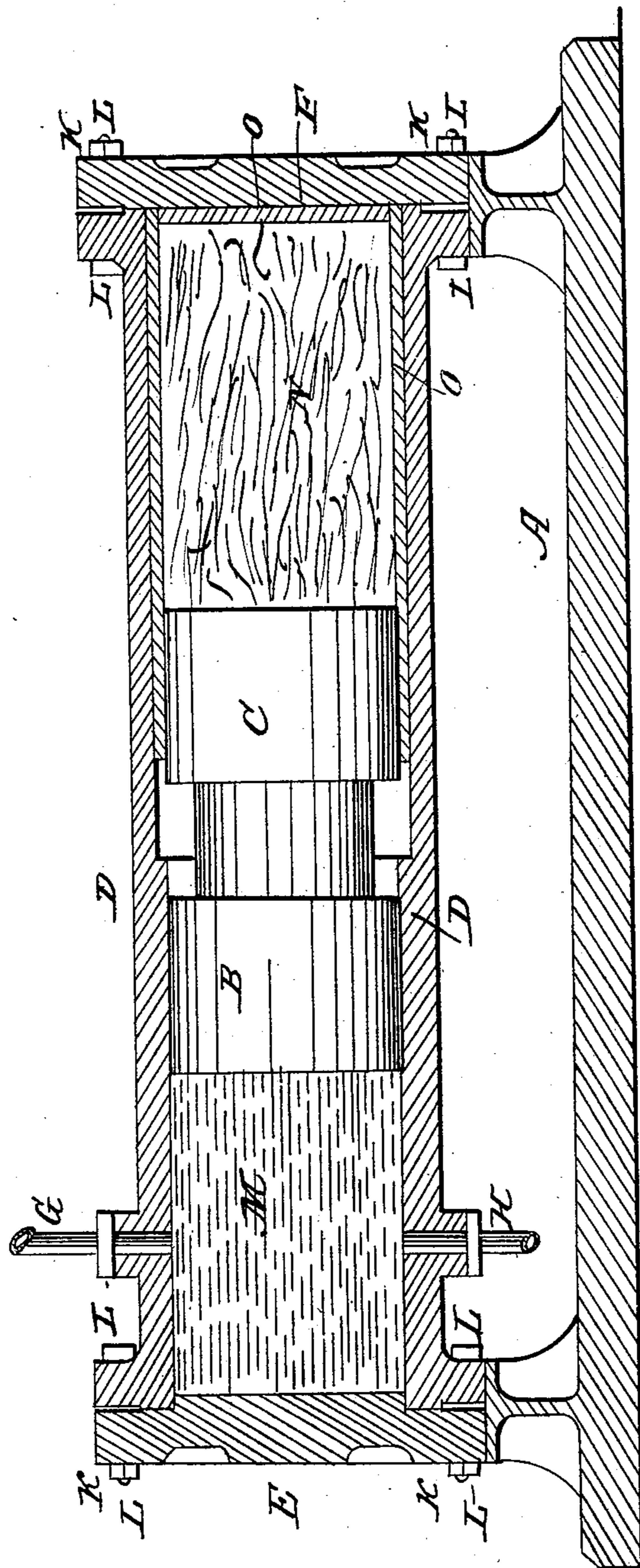


T. P. SHAFFNER.

Hydraulic Press to Prevent Corrosion.

No. 60,570.

Patented Dec. 18, 1866.



WITNESSES
Ostains Knight
Edward H. Knight

INVENTOR

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United States Patent Office.

IMPROVEMENT IN HYDRAULIC PRESSES TO PREVENT CORROSION.

TALIAFERRO P. SHAFFNER, OF LOUISVILLE, KENTUCKY.

Letters Patent No. 60,570, dated December 18, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, TALIAFERRO P. SHAFFNER, of Louisville, in the county of Jefferson, and State of Kentucky, have made new and useful improvements in Hydraulic Presses; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawing, which is made part of this specification, and in which my improvement is represented in longitudinal section.

The object of my invention is to so construct the chamber of the press that chemical combinations may be conducted therein under pressure, by the use of acids, and without subjecting the walls of the chamber to corrosion. The invention consists of an anti-corrosive lining to the press chamber, whether the power applied be hydraulic or otherwise.

In the drawing—

A is the bed-plate, and D D the cylinder, whose heads, E F, are removable by means of unscrewing the nuts K, of the bolts L, for the purpose of reaching the chamber M N respectively. The form of the press shown is commonly known as a hydraulic press, and the chamber M is connected by the pipe G with a water force-pump, while the pipe H affords the means of discharging the contents of the chamber when required. The chamber N is lined with a material which will withstand the corrosive action of acid, such as glass, bone, rubber, porcelain, &c., so that when acid is contained in the chamber no corrosion of the press shall ensue. For this purpose the piston, B C, is partially or wholly of an anti-corrosive character, or is lined or faced with a substance that will resist acid, as at C, which is represented as of an anti-corrosive quality, while the other portion, B, being only exposed to water, is of an ordinary metallic nature.

As an instance of one purpose to which I intend to apply my invention, I will state the saturation under pressure of fibre in nitro-sulphuric acid for the purpose of making nitro-fibre gun-cotton, for instance.

This mode of making gun-cotton, as practised by some, is tedious, and I consider it a great object to saturate the fibre with the combination of acids under pressure, by which time is saved and a reasonable degree of certainty and speed combined upon the operation.

The form or style of the press is not a material matter to my invention; the one shown in the drawing is an ordinary hydraulic press, but I do not confine myself to any particular form of press, but specify my invention as consisting of a non-corrosive lining to the press chamber and piston face—to those parts exposed to the action of the acidulous contents of the chamber.

The construction and arrangement of the press may be so modified as to operate by exhaustion, instead of by the direct pressure; thus the acid may be pressed into the fibre, or it may be drawn into it, by applying the principle of exhaustion. It may then be forced out, after the fibre has absorbed a certain portion, and the remainder may be again used. Clear water may then be introduced by pressure or by exhaustion, and being subsequently removed the acidulated water may be used commercially. Clear water being again introduced will by washing perfect the cotton, or it may, for the latter washing, be removed and cleansed in a tank.

Having described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A non-corrosive lining to the chamber of an hydraulic or other press, and to the piston or that end of it presented to the said chamber; and this I claim, whether the said parts consist wholly of material capable of withstanding the action of acids, or whether only such parts are thus protected as are exposed to the said action.

The above specification of my improvements in hydraulic presses signed this 18th day of October, 1865.

TAL. P. SHAFFNER.

Witnesses:

ALEX'R A. C. KLAUCKE,
EDWARD H. KNIGHT.