

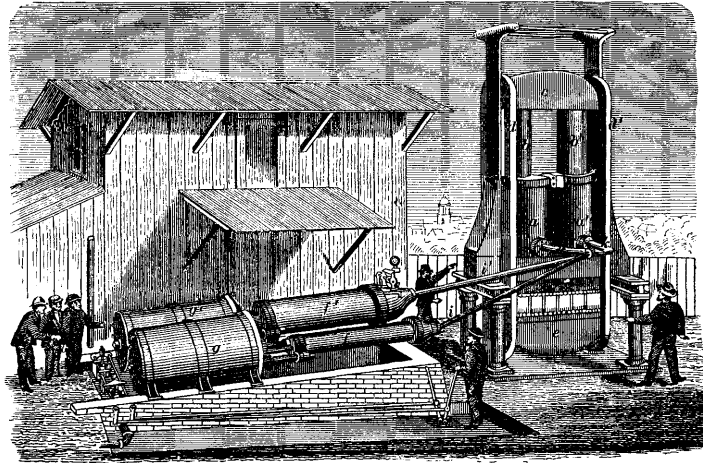
Steam - press.

One in which the platen is actuated by steam-power acting directly or intermediately. See list under PRESS, page 1784.

Fig. 5712 illustrates a steam and hydraulic baling-press. The cylinders $a a'$ inclose the rams $b b'$, carrying the cross-head c , which is connected by the links $d d'$ with the platen e . The cylinders communicate with each other and with the chambers $f f'$, in which the piston-rods of the steam-cylinders $g g'$ work through the pipes $i i'$ $k k'$. These contain the water or oil through which the pressure is communicated.

Previous to commencing operations, live steam is admitted to

Fig. 5712.



Steam-Press.

the cylinder g , forcing its piston out in opposition to the fluid pressure of the cylinders $a a'$, which, on steam being cut off, forces the piston back again, and the connecting pipe between g and g' being closed, the steam is readmitted to the other end of the cylinder g ; by this means it is thoroughly warmed, so as to prevent condensation during the subsequent operation. The bales are next placed on the platen, the communication valve between the cylinders $g g'$ is opened, permitting steam to flow from one to the other, forcing the piston f' forward, and the fluid into the cylinders $a a'$, causing the rams $b b'$ to ascend and raising the platen. When the pressure on the two pistons is equalized, the forward motion of this piston stops, an automatically acting valve closes, a valve is opened, admitting live steam to the cylinder g , again forcing its piston forward; this is of smaller area than the piston f' , and, receiving the full force of the live steam, exerts a much greater and more rapid pressure, completing the operation. The bale is then tied, and the stroke of the pistons reversed, enabling the bales to be removed and the operation repeated.

The several valves governing the admission and exhaust of steam are controlled by hand-levers.