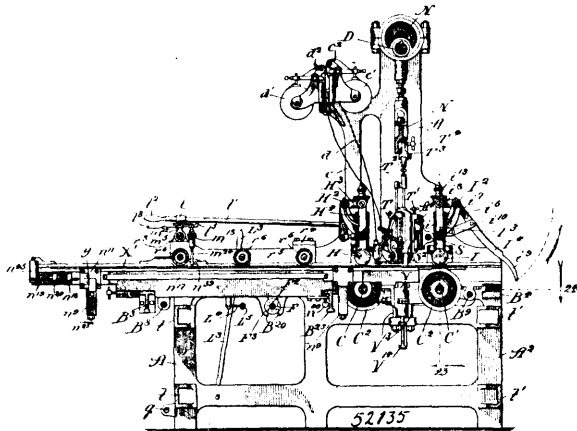


annular valve inclosing said vacuum chamber against which it has guide bearings adapted to close said annular valve seat against the return of the water elevated, substantially as and for the purpose specified. 5th. In a steam pump, the combination within a single inclosure of a vacuum chamber open at its lower end for the reception of water and provided at its upper end with a steam controlling valve, a separate water chamber communicating between the inlet water duct and the lower end of said vacuum chamber, a water controlling check valve located between said inlet water duct and said water chamber, a valve rod communicating between said inlet water controlling valve and said steam valve, an outlet water duct communicating from said vacuum chamber with the water discharge pipe, an outlet check valve located in said outlet water duct or pipe, a water return spray duct communicating from said outlet water duct with the interior of said vacuum chamber, all substantially as and for the purpose specified. 6th. In a steam pump, the combination of a vacuum chamber provided at its upper end with a steam controlling valve, an inlet water duct or chamber, a water controlling valve located in said inlet duct or chamber, a connection communicating between said water and said steam controlling valve, a discharge duct or chamber communicating from said vacuum chamber to the place of discharge, provided with a valve to prevent the return of water, and a spray duct communicating from above the check valve in said outlet discharge duct or chamber, to said vacuum chamber, substantially as and for the purpose specified. 7th. In a steam pump, the combination of a single vacuum chamber having a steam port controlled by a reciprocating valve, a water controlling valve located at the opposite end of such chamber, a rod connecting said valves, and a reciprocating piston or float adapted to slide on said valve rod within said vacuum chamber, substantially as and for the purpose specified. 8th. In a steam pump, adapted to be submerged beneath the water to be elevated, the combination of a water discharge pipe communicating with the water discharge duct of said pump, a steam pipe communicating with the steam duct of said pump, and an exterior covering pipe secured to said pump upon the exterior of said steam pipe and adapted to shield said steam pipe from contact with the surrounding water, said pump being suspended in the water supply, by said steam and water pipes, all substantially as and for the purpose specified.

No. 52,135. Machine for Making Box Blanks.

(Machine pour faire les blancs de boîtes.)



William Healy, assignee of Jacob Uhri, both of Chicago, Illinois, U.S.A., 1st May, 1896; 6 years. (Filed 4th March, 1896.)

Claim.—1st. In a machine for forming blanks by tacking a sheet to cleats, the combination with intermittently actuated tacking-devices and with feed-mechanism alternating in its action with the tacking devices, to feed the sheet and cleats intermittently across the said devices, of skipper-mechanism operating at predetermined intervals, to produce an increase of the distance between points of tacking, substantially as described. 2nd. In a machine for forming blanks by tacking a sheet to cleats, the combination with intermittently actuated tacking devices and with feed-mechanism alternating in its action with the tacking devices, to feed the sheet and cleats intermittently across the said devices, of skipper mechanism at the said feed-mechanism, operating at predetermined intervals, in the passage of the sheet and cleats through the machine, to accelerate the feed and thereby produce an increase of the distance between points of tacking, substantially as described. 3rd. In a machine for forming blanks by tacking a sheet to cleats, the combination of guides for the cleats, intermittent feed-mechanism for advancing the cleats longitudinally in their guides, and with the sheet through the machine, comprising primary and secondary feed-rollers rotating normally at the same rate of speed, and intermittently actuated tacking devices adjacent to the path of each cleat, alternating in its action with the said feed-mechanism to fasten the sheet, by successive operations to the cleats, and skipper mechanism at the said secondary feed-rollers, operating at predetermined intervals, in the passage of the sheet and cleats through the

machine, to accelerate the said secondary feed-rollers and thereby produce an increase of the distance between points of tacking, substantially as described. 4th. In a machine for forming blanks by fastening a sheet to cleats, the combination of guides for the cleats, intermittent feed-mechanism, for advancing the cleats longitudinally in their guides and with the sheet through the machine, an intermittently actuated tacking-device adjacent to the path of each cleat, alternating in its action with said feed-mechanism to fasten the sheet, by successive operations to the cleats, and skipper mechanism actuated by the said feed-mechanism, at predetermined intervals, in the passage of the sheet and cleats through the machine to accelerate the said feed-mechanism and thereby produce an increase of the distance between points of tacking, substantially as described. 5th. In a machine for forming blanks by fastening a sheet to cleats, the combination of a drive-shaft, guides for the cleats, feed-mechanism, comprising feed-rollers, a ratchet-wheel geared to the same, and a primary ratchet-wheel engaging-pawl actuated from the drive-shaft to turn the said ratchet-wheel and feed-rollers intermittently to advance the cleats longitudinally in their guides and with the sheet through the machine, an intermittently actuated tacking device adjacent to the path of each cleat, alternating in its action with said feed-mechanism to fasten the sheet, by successive operations, to the cleats, and skipper mechanism comprising a secondary ratchet-wheel engaging-pawl actuated from the said drive-shaft and normally out of engagement with the said ratchet-wheel, and pawl-engaging means operating, at predetermined intervals, in the passage of the sheet and cleats through the machine, to move the said secondary pawl into engagement with the ratchet-wheel, and thereby accelerate the feed to produce an increase of the distance between points of tacking, substantially as described. 6th. In a machine for forming blanks by fastening a sheet to cleats, the combination with intermittently actuated tacking-devices and with feed-mechanism alternating in its action with the tacking-devices to feed the sheet and cleats intermittently across the said devices, of skipper-mechanism at the said feed-mechanism, operating, at intervals in the passage of the sheet and cleats through the machine, to accelerate the feed and thereby produce an increase of the distance between points of tacking, the said skipper-mechanism being adjustable to regulate the said intervals, substantially as described. 7th. In a machine for forming blanks by fastening a sheet to cleats, the combination of a drive-shaft, guides for the cleats, feed-mechanism, comprising feed-rollers, a ratchet-wheel geared to said feed-rollers, and primary pawl at the said ratchet-wheel actuated from the drive-shaft for moving the feed-rollers intermittently to advance the cleats longitudinally in their guides and with the sheet through the machine, an intermittently actuated tacking device adjacent to the path of each cleat, alternating in its action with said feed mechanism, to fasten the sheet, by successive operations, to the cleat, and skipper-mechanism comprising a secondary pawl actuated from the said drive-shaft and adjacent to but normally out of engagement with said ratchet-wheel, a tripping device movable under the influence of the feed-rollers, a stop in the path of said tripping device, and a connection between said tripping-device and secondary pawl, whereby in the engagement of the tripping-device with the said stop the said secondary pawl is moved to engage the said ratchet-wheel and thereby increase the movement of the feed-rollers and thus produce an increase of the distance between points of tacking, substantially as described. 8th. In a machine for forming blanks by fastening a sheet to cleats, the combination of a drive-shaft, guides for the cleats, feed-mechanism comprising feed-rollers, a ratchet-wheel geared to said feed-rollers, and a primary pawl at the said ratchet-wheel actuated from the drive shaft for moving the feed rollers intermittently to advance the cleats longitudinally in their guides and with the sheet through the machine, an intermittently actuated tacking device adjacent to the path of each cleat, alternating in its action with said feed mechanism, to fasten the sheet, by successive operations to the cleat, and skipper-mechanism comprising a secondary pawl actuated from the said drive-shaft and adjacent to but normally out of engagement with said ratchet-wheel, a tripping device movable under the influence of the feed-rollers, a scale along which said tripping-device moves, a stop adjustable along the said scale and in the path of said tripping device, and a connection between the said tripping-device and secondary pawl, whereby in the engagement of the tripping device with the said stop the said secondary pawl is moved to engage the said ratchet-wheel and thereby increase the movement of the feed-rollers and produce an increase of the distance between points of tacking substantially as described. 9th. In a machine for forming blanks by fastening a sheet to cleats, the combination of a drive pulley provided with a clutch member, a drive shaft provided with a clutch-member, shipping-mechanism for said clutch-members operating to throw them into and out of engagement, to throw the drive-shaft into and out of engagement with its driving-pulley, guides for the cleats, intermittent feed-mechanism, actuated from said drive-shaft for advancing the cleats longitudinally in their guides with the sheet through the machine, a tacking-device adjacent to the path of each cleat and operated intermittently from the said drive-shaft to alternate in its action with said feed-mechanism and fasten the sheet, by successive operations, to the cleats, skipper-mechanism, operating, at predetermined intervals, to produce an increase of the distance between points of tacking, and means actuated by the said feed-mechanism for moving the said