

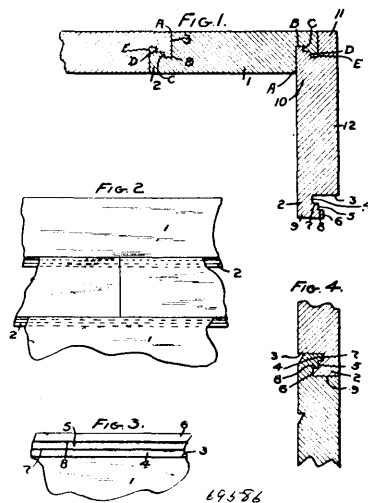
stantially as set forth. 2nd. A furnace for burning dust-like fuel, having a fire box with a charging opening in its front and a projecting hearth below said opening, said hearth and the front of the fire box being mainly composed of non-heat conducting material to avoid the conduction of heat from the fire box, means back of the fire box for inducing the entry of air at said charging opening, and means for feeding the dust like fuel down, outside of the fire box to said hearth in regulated quantity, substantially as set forth. 3rd. A furnace for burning dust-like fuel, having a fire box with a laterally elongated charging opening, a projecting hearth at the lower margin of said opening and extending the width of the same, said hearth being of non-heat conducting material, a hopper for the fuel above the level of the charging opening and above said hearth, means for feeding the fuel from said hopper in regulated quantity, and means for inducing the entry of air at said charging opening, the space or field through which the fuel falls, being open to the atmosphere above, substantially as set forth. 4th. A furnace for burning dust-like fuel, having a grate, an ash box, a door to the ash box, an arch of refractory material over the front portion of said grate, a charging opening with a projecting hearth of non-heat conducting material, a slide composed mainly of non-heat conducting material and adapted to close said opening, and means for feeding the fuel dust down to said hearth exterior to said slide, substantially as set forth. 5th. A furnace for burning dust-like fuel, having a charging opening in its front, a slide of non-heat conducting material over said opening, a projecting hearth of non-heat conducting material at the lower edge of said opening, a feeding device for the fuel above the level of the charging opening and over said hearth and separated from the latter by a space open to the atmosphere on all sides, whereby the fuel in its descent falls through an unenclosed space, as set forth. 6th. A furnace for burning fuel in the form of powder or dust, having means for inducing a draft, a grate to support a bed of burning fuel, an arch of a refractory material above said grate, a charging and air opening, a closing slide or door at said opening, and means for feeding the fuel dust down exteriorly to said closing slide to the opening, whereby the dust is drawn into the fire box under the lower edge of said slide. 7th. A furnace for burning dust-like fuel, having a fire box, a charging opening, a slide adapted to be raised and lowered so as to partially or wholly close said opening, said slide having serrations at its lower edge, and means for feeding the dust-like fuel down exterior to said slide, so that it may be carried into the fire box under the lower edge of the slide by the entering air. 8th. A furnace for burning dust-like fuel, having a fire box with a charging opening, and means for feeding the fuel down in front of and exterior to the furnace front to said charging opening, in combination with a vertically movable slide cover said charging opening, and automatic means for regulating the feed of fuel and the height of said slide in proportion to the heat of the furnace, whereby a substantially uniform heat is maintained. 9th. A furnace for burning dust-like fuel, having a fire box, and means back of the fire box for inducing the entry of air into the charging opening of the same, of means for supplying the fuel to said fire box, said means comprising a receptacle for the fuel exterior to the front of the furnace above the charging opening with an outlet at its bottom, a rotatable feeding shaft in its bottom, a motor, mechanism between said motor and said shaft, whereby the latter is driven by the former, and means for regulating the extent of the fuel feed independently of the speed of the motor. 10th. The combination with a boiler and a draft regulator 11, connected therewith, of a furnace for burning dust-like fuel for generating steam in said boiler, said furnace having a fire box, provided with a charging opening, a suspended, vertically movable slide *i*, over said opening, mechanism for raising and lowering said slide, and means for feeding the fuel down exterior to said slide to the lower edge of same, and an operative connector with coupled said draft regulator, with the fuel feed regulator and with the devices for raising and lowering said slide, whereby the draft regulator controls both the fuel feed and the air supply, substantially as set forth. 11th. A furnace for burning dust-like fuel, having a fire box with a charging opening and grate, a sliding cover, said opening for regulating the same, means for feeding the fuel down exterior to the fire box and to the lower edge of said slide, means for inducing air through said opening to the fire box, and outer protecting doors, between which and said slide the fuel descends, substantially as set forth. 12th. A boiler furnace for burning dust-like fuel, having means for feeding said fuel in regulated quantity down exterior to the front of the fire box at the charging opening, a fire box with the charging opening in its front adapted to be fully opened for the admission of cold air over the fire bed, a grate in said box to support a bed of burning fuel, an ash box below said grate, and means for closing said ash box against the entry of air under the grate, whereby a banked fire may be carried.

#### No. 69,586. Timber Joint. (*Joint pour bois de construction.*)

James F. McCune, Eugene F. Harris, George W. Powell and Harry E. Frazier, all of Indianapolis, Indiana, U.S.A., 4th December, 1900; 6 years. (Filed 12th November, 1900.)

*Claim.*—1st. As an article of manufacture, a board with a lateral extension along each edge from diagonally opposite corners of the board, there being a groove in each extension at its connection with the body of the board and two steps from the groove to widen the head of the extension, the angles of the extension being right angles,

the dimensions of the groove and outer step being the same, and all parts of each extension being of the same form and size as the corresponding parts of the other. 2nd. As an article of manufac-



ture, board with a lateral extension along each edge from diagonally opposite corners of the board, each extension having a groove at its connection with the body of the board and two steps therefrom to form the head of the extension, the thickness of the extension at the inner step being half the thickness of the board, and its thickness at the groove and outer step being respectively less and greater than half the thickness of the board, and the dimensions of the groove and outer step being equal. 3rd. A timber joint comprising two boards whose adjacent edges are similarly but reversely cut, each extension having a groove at its connection with the body of the board and two steps therefrom to form the head of the extension, the angles being all right angles, and the dimensions of the groove and outer step being the same. 4th. A solid corner timber joint comprising two boards, one a corner board that has its corner adjacent to the other board cut out to form a widthwise double stepped rectangular groove and extension throughout its length and the other board with its inner adjacent corner cut out to form a double stepped rectangular groove to receive the extension of the corner board and to leave an extension of similar form to fit in the groove in the corner board, the thickness of such extension being such as to make said board flush on the outside with the edge of the corner board.

#### No. 69,587. Cigarette Making Machine.

(*Machine à cigarettes.*)

Wilhelm G. Hartlaub, 32 Houttuin, Rotterdam, Netherlands, assignee of Georg Anton Jasmatzki, 17 Blasewitzer Strasse, Dresden, Saxony, German Empire, 4th December, 1900; 6 years. (Filed 2nd January, 1900.)

*Claim.*—1st. In a cigarette machine, the combination of a table having a groove for reception of the charge of tobacco, a hollow nose in line with said groove, on which the cigarette tube is imposed for filling, a plunger for forcing the charge of tobacco into said tube, means for operating the plunger, a lever serving to clip the tube on the holding nose, and means connected with the plunger operating mechanism for advancing said lever to clipping position at an intermediate point in the forward movement of the plunger and permitting its retraction at the end of such forward movement, as explained. 2nd. The combination of the tube holding nose *o*, a plunger *y*, for forcing tobacco into the tube held by said nose, means for operating said plunger, a clipping lever carrying a cushion to clip the tube on its holder, a lever *e*, for advancing said clipping lever to acting position during the forward movement of the plunger, a tripping device serving to release the tube at the termination of the forward movement of the plunger, and means connected with the plunger mechanism, for actuating the said lever *e*, and tripping device, substantially as set forth. 3rd. The combination of the plunger *y*, tube holding nose *o*, a clipping lever *k*, for clipping the tube on the nose, levers *e*, actuating said clipping lever, connected means for operating the plunger *y*, and lever *e*, spring projected pin *l*, through which the lever *e* acts on the clipping lever and the slide *g*, carrying a tripping rod *s*, and connected with the plunger for forcing the pin *l* out of operative position, and thereby releasing the clipping levers at the