

March 31, 1925.

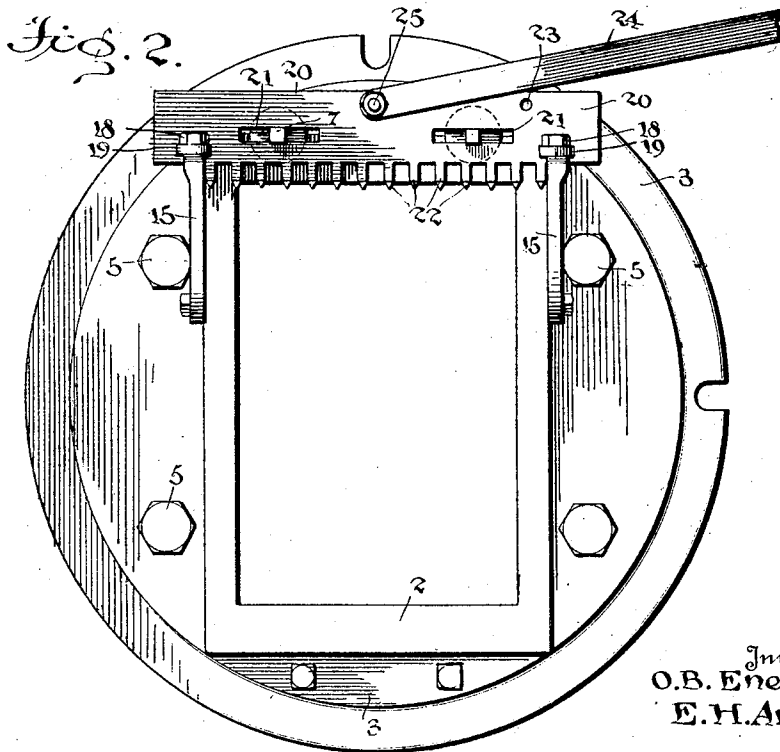
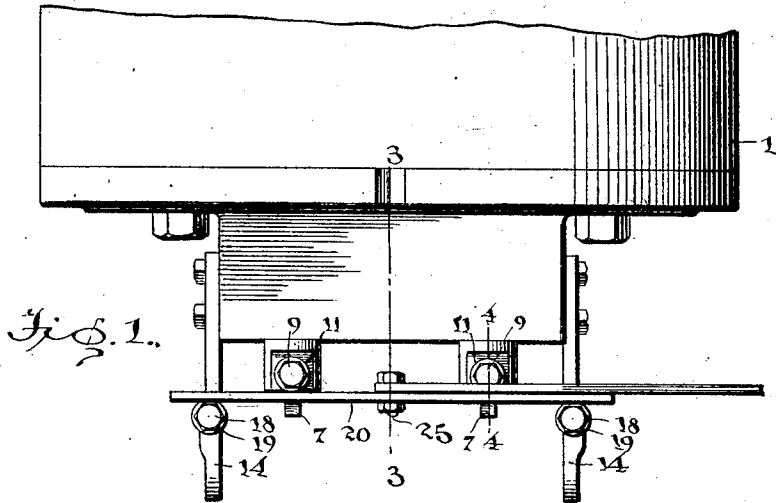
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O. B. ENEVOLD ET AL

FACING MECHANISM FOR TILES AND BRICKS

Filed Oct. 23, 1923

2 Sheets-Sheet 1



Inventors  
O. B. Enevold,  
E. H. Arndt,

By  
*Geo. P. Kimmel* Attorney

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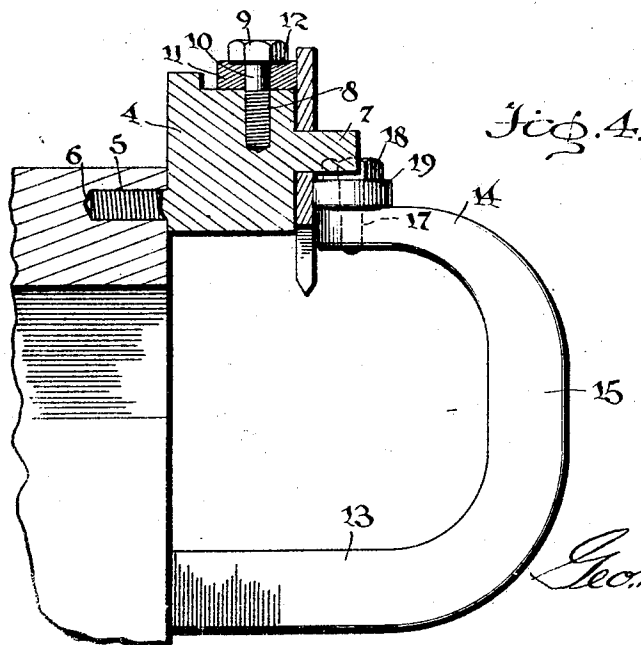
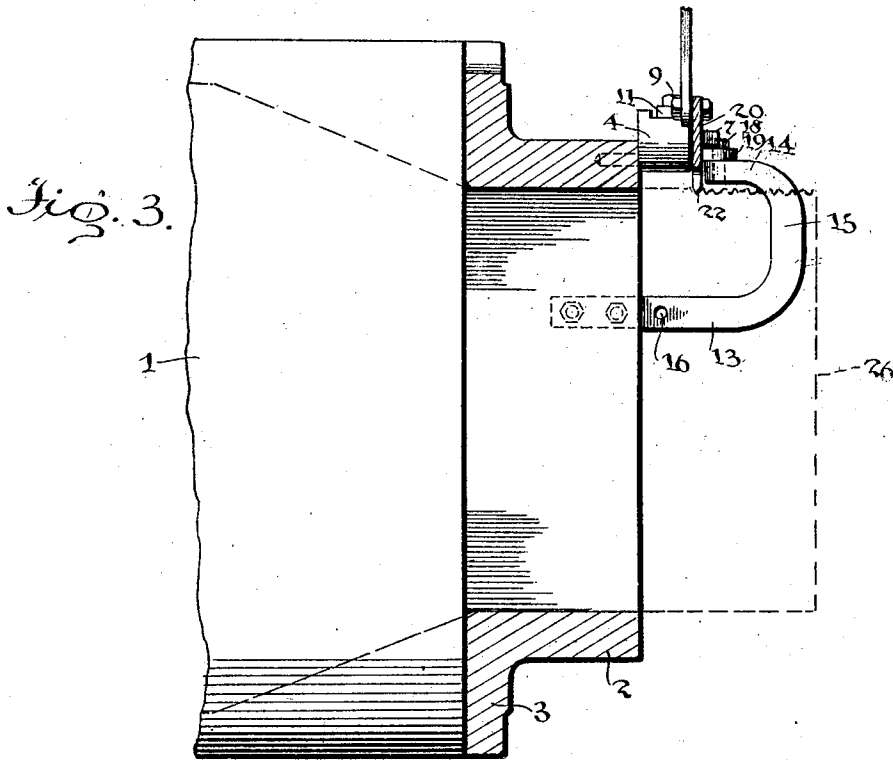
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Inventors  
O. B. Enevold,  
E. H. Arndt,

*Geot. Kinsman*  
Attorney

# UNITED STATES PATENT OFFICE.

OSCAR B. ENEVOLD AND ERICH H. ARNDT, OF ZUMBROTA, MINNESOTA.

FACING MECHANISM FOR TILES AND BRICKS.

Application filed October 23, 1923. Serial No. 670,325.

To all whom it may concern:

Be it known that we, OSCAR B. ENEVOLD and ERICH H. ARNDT, citizens of the United States, residing at Zumbrota, in the county of Goodhue and State of Minnesota, have invented certain new and useful Improvements in Facing Mechanism for Tiles and Bricks, of which the following is a specification.

This invention relates to a facing mechanism for tiles and bricks, and has for its object to provide, in a manner as hereinafter set forth, a facing mechanism adapted to be arranged in the path of travel of a stream of clay as it leaves a die or forming device for the purpose of acting on one face of the stream of clay to provide such face with a stucco design, and furthermore to provide a facing mechanism which can be operated in a vertical or horizontal position with respect to the stream of clay to provide for the facing thereof with a stucco design.

Further objects of the invention are to provide a facing mechanism, in a manner as hereinafter set forth, which is simple in its construction and arrangement, strong durable, compact, thoroughly efficient in its use, including provisions whereby facing elements of different designs can be arranged in operative position with respect to that face of the stream which is to be stuccoed, readily set up with respect to the die or forming device for the clay, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a top plan view of a facing mechanism in accordance with this invention, showing the adaptation thereof in connection with a die or clay forming device.

Figure 2 is a front elevation thereof.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a section on line 4—4, Figure 1.

Referring to the drawings in detail, 1 denotes a conventional type of clay directing element of a press and which is employed for directing the clay to a die or former so that the clay will be formed into a stream-like body. The die or former may be of any suitable contour and by way of example, it is illustrated to set up the clay in a stream-like body of rectangular cross section. The die or former is indicated at 2, is rectangular in contour, and has its inner end formed with a laterally extending annular flange 3, fixedly secured, in any suitable manner to the outer end of the element 1, and is shown secured through the medium of hold-fast devices 5' which extend through the flange 3 and engage in the element 1.

A facing mechanism in accordance with this invention, comprises a plurality of combined guide and supporting devices, as shown two in number, but it is obvious that the number of said devices can be increased if desired, a pair of combined guide and retaining members and a facing element interposed between said devices and members and slidably supported by the latter and retained in position on said devices through the medium of said members.

The facing mechanism can be set up for the purpose of operating horizontally or vertically with respect to pressed body of clay for the purpose of setting up a stucco design on such face, and when the mechanism is operated in a horizontal direction the combined guide and supporting devices are secured to and arranged forwardly of the top edge of the die 2, and the combined guide and retaining devices are secured to the outer face of the sides of the die 2 and project forwardly therefrom. When the facing mechanism is to operate vertically with respect to the stream of clay for the purpose of providing one face thereof with a stucco design, the combined guide and supporting devices are secured to one side and arranged forwardly of the front edge of said side, and the combined guide and retaining members are secured to the top and bottom of the die 2 and project forwardly therefrom.

Each combined guide and supporting device comprises a rectangular body portion

4, having formed integral with the rear face thereof a rearwardly extending threaded protuberance 5 which constitutes a screw and which is engageable in a socket 6, formed in the die 2 and having a threaded wall. The front face of the body portion 4, centrally thereof, has formed integral therewith and projecting forwardly therefrom a polygonal-shaped lug 7 for a function to be presently referred to. The body portion 4 is formed with a vertically disposed socket 8, which opens at the top face of said body portion and is formed with a threaded wall. The socket 8 is arranged between the center of the body portion 4 and the front face thereof. Fixedly secured in the socket 8, is a headed stud bolt 9, having its shank formed with a smooth portion 10, which constitutes a pintle for a roller 11, interposed between the top face of the body portion 4 and the head of the stud bolt 9. A washer 12 is seated in the upper face of the roller 11 and bears against the head of the stud bolt 9.

Each of the combined guide and retaining members consists of an L-shaped arm formed of a pair of parallel end portions 13, 14, the former being of materially greater length than the latter. The end portion 13 is connected to the end portion 14 by a curved intermediate portion 15 which extends from the forward terminus of the end portion 13 and merges into the forward terminus of the end portion 14. The end portion 13 extends inwardly with respect to the end portion 14 and is provided with a series of openings 16, for the purpose of adjustably connecting the member to the die 2 to enable the positioning of the inner terminus of the end portion 14 at varying distances with respect to the front of the die 2. The end portion 14 of the combined guide and retaining members is formed with an opening 17, having a threaded wall with which engages a portion of the threaded shank of a stud bolt 18 in a manner so that the head of the bolt 18 will be spaced from the end portion 14, and interposed between the head of the bolt 18 and the end portion 14, is a roller 19 which is positioned exteriorly with respect to the end portion 14. That part of the shank of the bolt 18, which is surrounded by the roller 19, constitutes a pintle for the latter.

The facing element comprises a rectangular drag plate 20 formed with a plurality of spaced rectangular longitudinally disposed slots 21 corresponding in number to the number of combined guide and supporting devices and when the plate 20 is mounted in operative position, the lugs 7 of the combined guide and retaining devices extend through the slots 21 and provide not only supports for the plate 20, but also guides and stops therefor. The plate 20 has its

lower edge formed with a series of spaced depending facing teeth 22, and said plate 20 is provided near its top edge with a plurality of apertures 23, for the purpose of pivotally connecting therewith a reciprocatory means for the plate. As shown, said means consists of a rack arm 24, which is pivotally connected, as at 25, to the plate 20, centrally thereof. The arm 24 is connected with any suitable actuating means therefor, not shown, but such means must be operated at a high rate of speed, at least fifteen hundred revolutions per minute so as to provide for an unusually rapid operation of the plate 20.

As shown in the drawings, the drag mechanism is set up to operate in a horizontal direction with respect to one face of the stream of clay indicated at 26, and the combined guide and supporting devices are shown as connected to and arranged against the forward edge of the top of the die 2. The combined guide and retaining members are secured to the outer faces of the sides of the die 2, project forwardly therefrom, and with the end portions 14 extended towards the combined guide and supporting devices and arranged in proximity thereto, but to one side thereof. The plate 20 is interposed between the combined guide and supporting devices and the end portions 14 of the combined guide and retaining members, and with the plate 20 positioned on the lugs 7. When the plate 20 is mounted in the position as stated, it has its rear face bearing against the rollers 11, near the top of said face, and its forward face bearing against the rollers 19 in proximity to the teeth 22. The position of the plate 20, when set up, is such that the teeth 22 will project in the path of the upper face of the stream of clay 26, so that as the clay leaves the die 2, the reciprocatory action of the plate 20 will cut the face of the clay and provide a stucco design thereon.

The manner in which the plate is set up with respect to the combined guide and supporting devices and the combined guide and retaining devices, permits of the insertion of plates having a different arrangement of teeth, or different styles of teeth, or if a plate 20 becomes damaged a new one can be substituted without removing the supporting devices or guide members. The stroke of the plate 20 is approximately three quarters inch and owing to its rapid operation the design is quickly formed on the face of the stream as it leaves the die 2.

The lugs 7 are of materially greater length than the thickness of the plate 20 so as to provide for supporting drag plates of varying thicknesses.

Although the preferred embodiment of the invention is as illustrated and described, yet it is to be understood that changes in



tween said devices and said members and further projecting in the path of the clay leaving the machine to act upon one face of the clay, each of said devices provided at its top with a roller mounted on a vertical axis riding against the rear face of said element and each of said members provided at its top with a roller mounted on a vertical axis and riding against the outer face of said element.

8. A facing mechanism comprising a plurality of spaced combined guide and supporting devices each formed with a forwardly extending lug and each adapted to be secured to the die of a clay forming machine and project forwardly therefrom, a pair of spaced guide and retaining members adapted to be secured to the die of the machine and project forwardly therefrom and further extending rearwardly in proximity to and to one side of said devices, and a slotted reciprocatory facing element supported upon said lugs and interposed between said devices and said members and further projecting in the path of the clay leaving the machine to act upon one face of the clay, said lugs of a length to provide for the mounting thereon of elements of different thicknesses, each of said devices provided at its top with a roller mounted on a vertical axis and riding against the rear face of said elements and each of said members provided at its top with a roller mounted on a vertical axis and riding against the front face of said element.

9. A facing mechanism comprising a plurality of combined guide and supporting devices each formed with a forwardly extending lug and each adapted to be secured to the die of a clay forming machine and project forwardly therefrom, a pair of curved combined guide and retaining members adapted to be secured to the die of the machine and project forwardly therefrom and further extending rearwardly in proximity to and to one side of said devices, a slotted reciprocatory facing element supported upon said lugs and interposed between said devices and said members and further projecting in the path of the clay leaving the machine to act upon one face of the clay, and each of said members provided with means for adjustably securing them in position to vary the distance between said members and said devices.

10. A facing mechanism comprising a plurality of combined guide and supporting devices each formed with a forwardly extending polygonal-shaped lug and each adapted to be secured to the die of a clay forming machine and project forwardly therefrom, a pair of curved combined guide and retaining members adapted to be secured to the

die of the machine and project forwardly therefrom and further extending rearwardly in proximity to and to one side of said devices, a slotted reciprocatory facing element supported upon said lugs and interposed between said devices and said members and further projecting in the path of the clay leaving the machine to act upon one face of the clay, said lugs of a length to provide for the mounting thereon of elements of different thicknesses, each of said devices provided at its top with a roller riding against the rear face of said elements and each of said members provided at its top with a roller riding against the front face of said element, and each of said members provided with means for adjustably securing them in position to vary the distance between said members and said devices.

11. A facing mechanism comprising a plurality of spaced combined guide and supporting devices adapted to be secured to the front of a die of a clay forming machine, a pair of spaced combined guide and retaining members adapted to be secured to the front of the die of the clay forming machine and arranged to extend in proximity to, forwardly and to one side of said devices, a reciprocatory facing element interposed between said devices and members and slidably supported on said devices, said element positioned in the path of the clay as it leaves the machine to act on one face of the clay, and means pivotally connected to said element for reciprocating it.

12. A facing mechanism comprising a plurality of spaced combined guide and supporting devices each formed with a forwardly extending lug and each adapted to be secured to the die of a clay forming machine and projecting forwardly therefrom, a pair of spaced combined guide and retaining members adapted to be secured to the die of the machine and projecting forwardly therefrom and further extending in proximity to and to one side of said devices, a slotted reciprocatory facing element slidably supported upon said lug and interposed between said devices and members and further projecting in the path of the clay leaving the machine to act upon one face of the clay, each of said devices provided at its top with a roller mounted on a vertical axis riding against the rear face of said element and each of said members provided with a roller mounted on a vertical axis riding against the outer face of said element.

In testimony whereof we affix our signatures hereto.

OSCAR B. ENEVOLD.  
ERICH H. ARNDT.