No. 859,883. PATENTED JULY 9, 1907.

N. W. HOSKINS.

MACHINE FOR MAKING CONCRETE POSTS.

APPLICATION FILED NOV. 8, 1906.

2 SHEETS—SHEET 1.

FIG. 1.

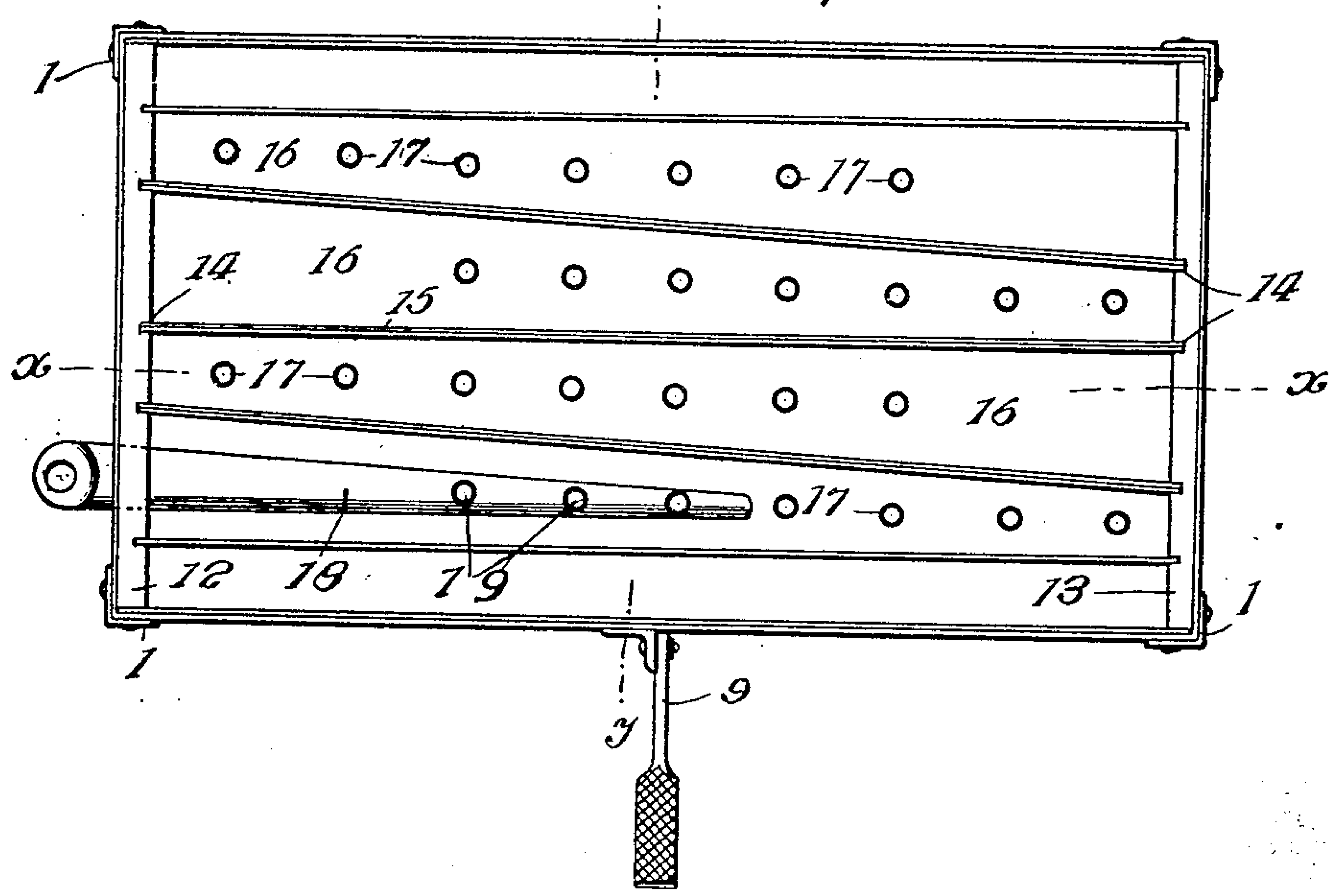
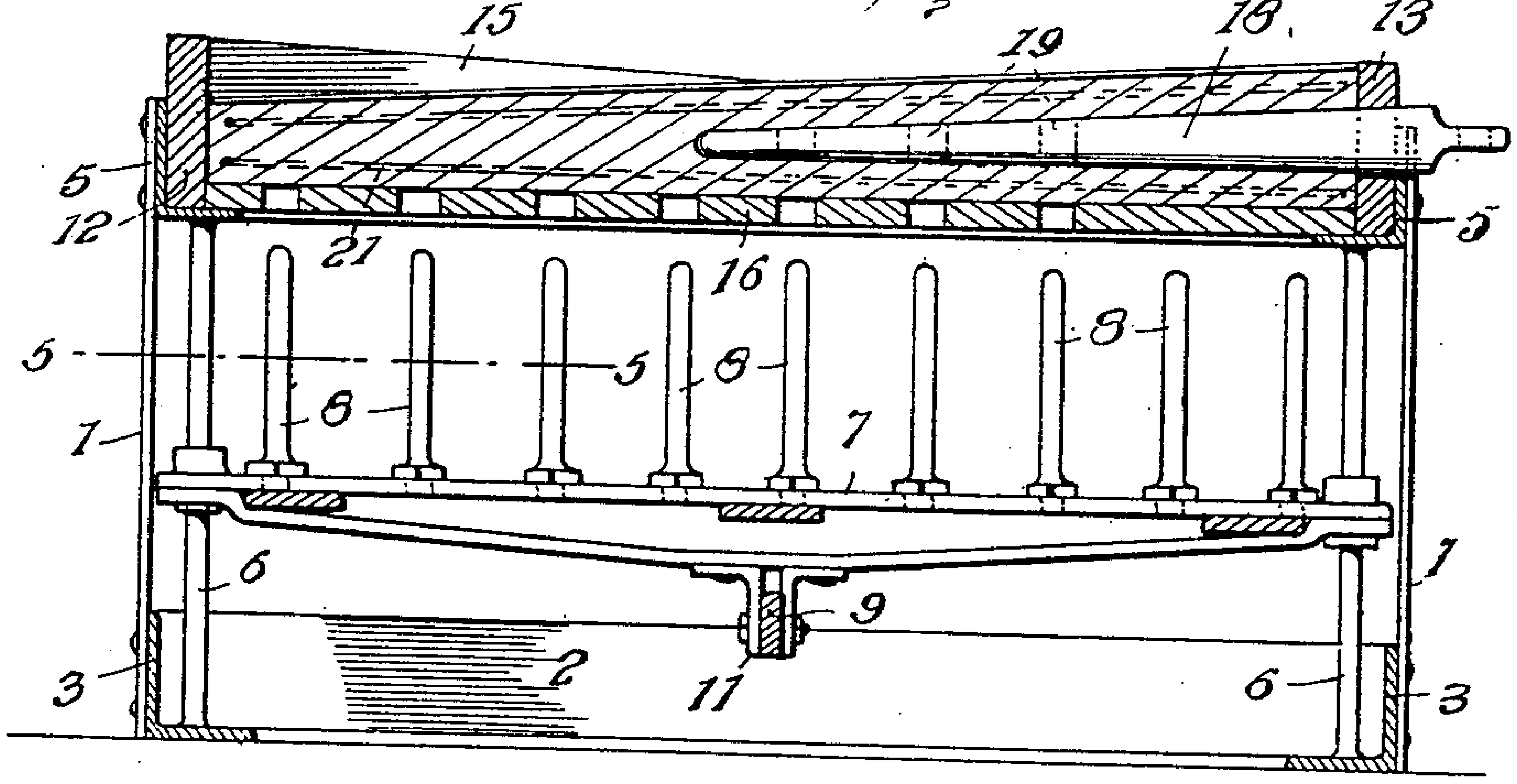


FIG. 2.



Witnesses

[illegible]

W. N. Woodson

Inventor

Nathaniel W. Hoskins,

By [illegible] Lacey,

Attorneys

No. 859,883. PATENTED JULY 9, 1907.

N. W. HOSKINS.

MACHINE FOR MAKING CONCRETE POSTS.

APPLICATION FILED NOV. 8, 1906.

2 SHEETS—SHEET 2.

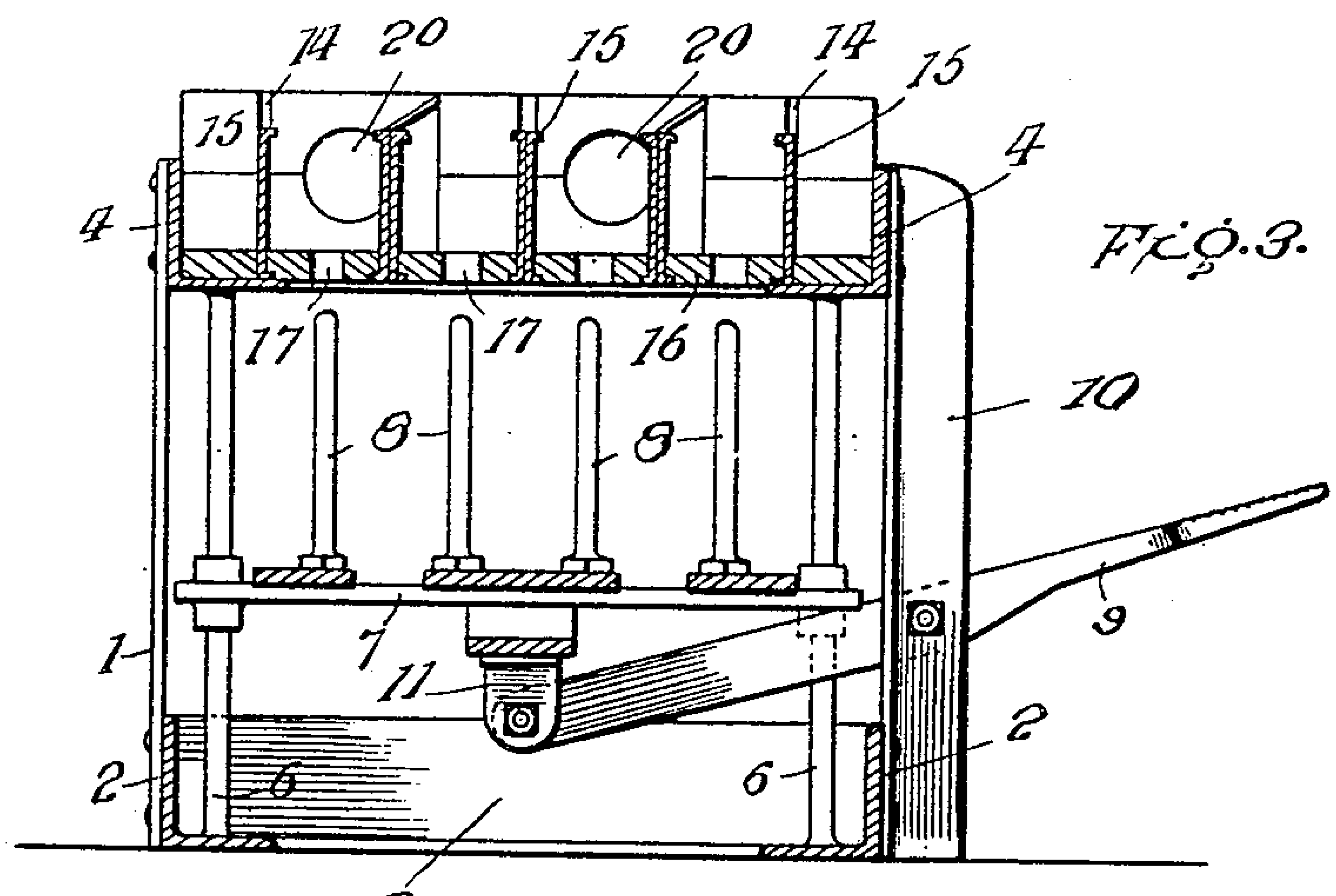


Fig. 3.

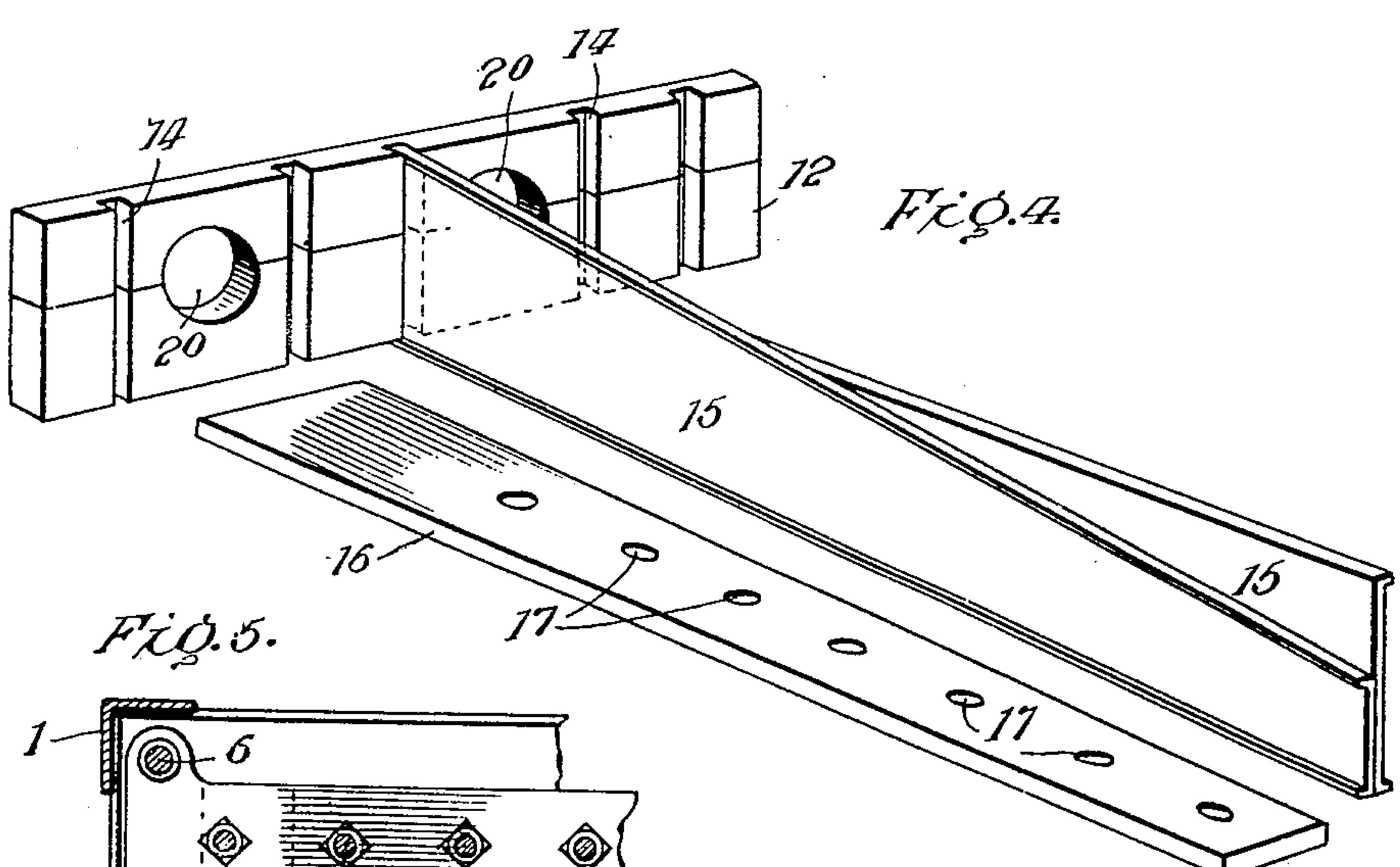
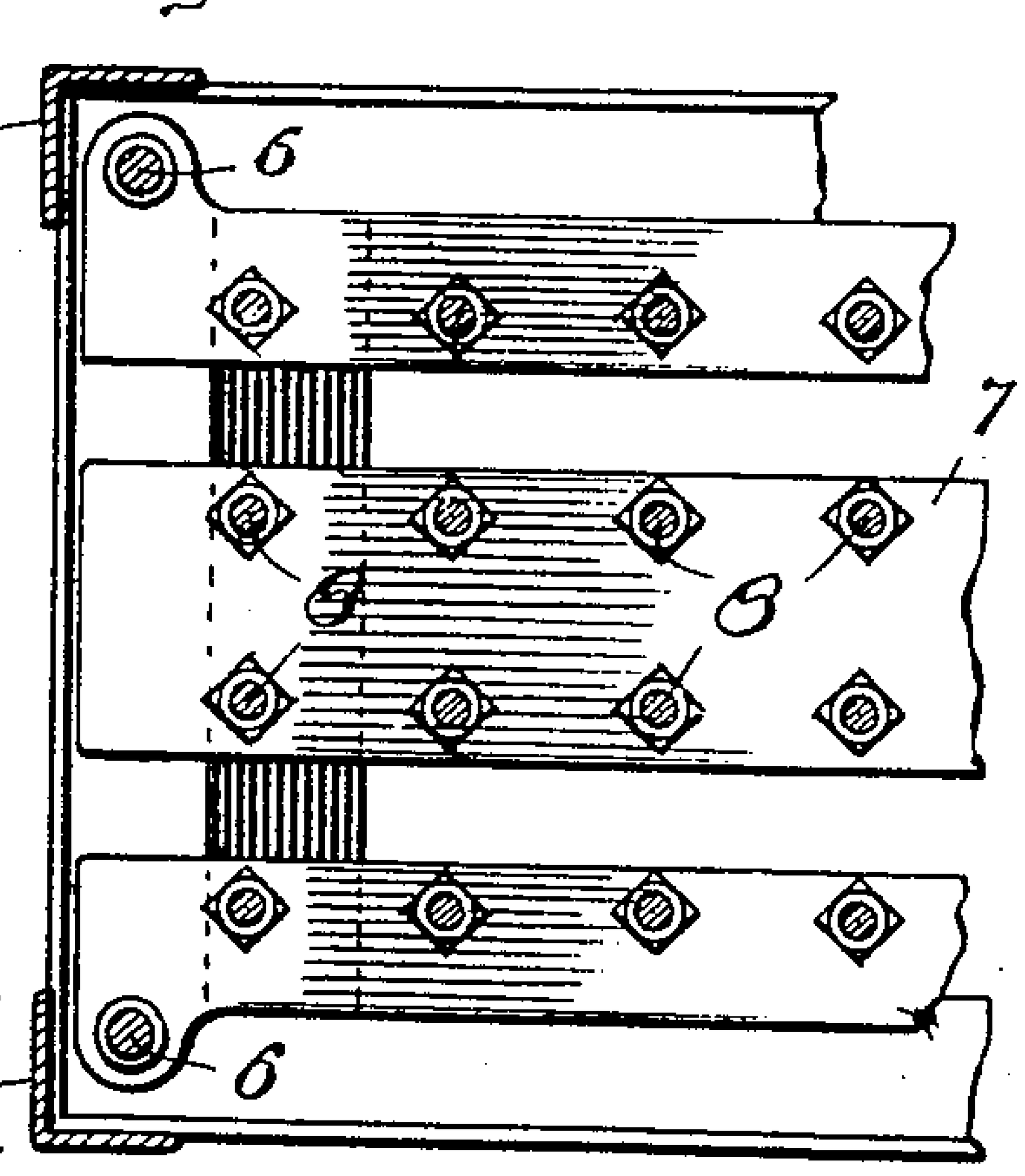


Fig. 4.

Fig. 5.



Witnesses:
[signature]
[signature]

Nathaniel W. Hoskins, Inventor

By [signature] Attorneys

UNITED STATES PATENT OFFICE.

NATHANIEL W. HOSKINS, OF ALMOND, WISCONSIN, ASSIGNOR OF ONE-HALF TO WILLIAM H. RICE, OF PLAINFIELD, WISCONSIN.

MACHINE FOR MAKING CONCRETE POSTS.

No. 859,883. Specification of Letters Patent. Patented July 9, 1907.

Application filed November 8, 1906. Serial No. 342,573.

To all whom it may concern:

Be it known that I, NATHANIEL W. HOSKINS, a citizen of the United States, residing at Almond, in the county of Portage and State of Wisconsin, have invented certain new and useful Improvements in Machines for Making Concrete Posts, of which the following is a specification.

This invention aims to provide a machine of novel structure for molding posts such as are designed for supporting fence wires or which may be used for hitching horses thereto or for other purpose for which posts are employed.

The invention aims to devise a framework of peculiar formation and mold elements adapted to be supported by the framework and removable to admit of carrying the posts from the machine after being formed and sufficiently set to permit of handling so as to allow of further use of the machine.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a top plan view of a machine for molding posts embodying the invention. Fig. 2 is a vertical section of the machine on the line *x*—*x* of Fig. 1. Fig. 3 is a transverse section of the machine on the line *y*—*y* of Fig. 1. Fig. 4 is a detail perspective view of a portion of the series mold, showing an end piece, a bottom and adjacent side pieces. Fig. 5 is a plan section on the line 5—5 of Fig. 2 of an end portion of the machine.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The frame of the machine comprises corner posts 1, which are formed preferably of angle iron. Longitudinal bars 2 connect the lower ends of the posts 1 upon the same side and transverse bars 3 connect the lower ends of corner posts at the same end of the machine. Longitudinal bars 4 connect the upper ends of the corner posts at the same side of the machine and are arranged parallel with the lower longitudinal bars 2. Bars 5 connect the upper portion of the corner posts at the same end of the machine and are arranged parallel with the lower transverse bars 3. The several transverse and longitudinal bars are formed of angle iron, each having one wing extending vertically and the other wing arranged horizontally. The several bars and posts are bolted or otherwise connected at their meeting ends so as to provide a substantial structure. Guide rods 6 are arrranged near the four corners of the framework and extend parallel with the respective corner posts and are supported at their ends in the horizontal wings of the respective upper and lower frame bars. A rack 7 is mounted to move vertically upon the guide rods 6 and is provided with rows of pins 8 which are adapted to form openings in the fence posts to receive the fastening means by which the wires are connected thereto. The rack 7 may be of any construction and is composed of longitudinal and transverse bars, the latter serving to connect the longitudinal bars which receive and support the pins 8. For operating the rack, a lever 9 is provided and is fulcrumed to a vertical bar 10 secured at its ends to upper and lower longitudinal bars upon the same side of the machine. The inner end of the operating lever 9 has pivotal connection with a hanger 11 projected from the rack 7.

The vertical wings or flanges of the upper longitudinal and transverse bars form guards to confine the mold elements, whereas the horizontal wings or flanges constitute supports for said mold elements. It is proposed to construct the machine to admit of forming a number of posts at one time, hence the provision of a plurality of mold cavities to receive the concrete, beton or like plastic material generally employed in the formation of concrete or like posts. The mold elements include end pieces 12 and 13. These end pieces may be formed of a single part or comprise separable sections, the latter construction being preferred since it admits of placing core pieces in position and readily removing the same, said core pieces enabling the lower portion of the post to be made hollow. Cuts or grooves 14 are formed in one side of the end piece and receive the terminal portions of longitudinal plates 15 which form sides of the molds. The longitudinal plates 15 are flanged along their longitudinal edges to stiffen and strengthen the same as well as to provide a support for the bottom plates 16, thereby preventing springing of the latter during the tamping process or the formation of the posts. The mold cavities taper throughout their length conformable to the taper of the posts and in order to economize space and enable the sides of one mold to mutually support sides of the other mold, the mold cavities have an alternate and opposite relation, that is, the wider end of one mold is opposite to the smaller end of the adjacent mold and so on throughout the series. The longitudinal plates 15 have their ends readily insertible in the cuts or grooves 14 of the end pieces and two longitudinal plates are provided for each set of cuts or grooves, one plate having its wide end facing in one direction and the adjacent plate having its wide end facing in the opposite direction. The plates forming opposite sides of the same mold have their wide ends pointing in the same direction, thereby enabling the upper edges to be used as guides when striking the molds in the finishing of the posts. The

bottom plates 16 taper throughout their length and are supported upon the inwardly extended flanges of the plates forming the sides of the respective molds. The bottom plates are provided with a row of openings 17 corresponding to the rows of pins 8 which are adapted to pass therethrough.

A core 18 is provided for each mold and tapers throughout its length and is provided with openings 19 corresponding in position to the pins 8 to admit of the latter passing therethrough after being pressed upward through the openings 17 in the bottom plates. The cores 18, as well as the bottom plates 16, may be constructed of metal or wood as found most advantageous and practical. The larger ends of the cores 18 are adapted to be fitted in the notches 20 formed in the meeting edges of the sections comprising the end pieces 12 and 13.

In accordance with this invention, after the several parts comprising the mold elements have been placed in position, the concrete, beton or like material is filled in the mold cavities to about one-third the depth thereof, after which the cores 18 are placed in position, together with strengthening members 21 of hair pin shape. The mold is filled to the depth of another third when a second strengthening member 21 is placed in each mold, after which the molds are filled to the upper edge of their respective sides. It is to be understood that the material is thoroughly tamped or packed to insure the formation of a solid and substantial post. After the molds have been filled and struck off even with their upper edges, the posts are permitted to harden and when sufficiently set to admit of handling, they are removed from the machine upon the bottom plates 16 and transported to a suitable and convenient place and allowed to harden and dry. Other bottom plates are placed in position and the machine arranged for forming other posts. Upon pressing downward upon the outer end of the operating lever 9, the rack 7 is moved upward carrying the pins 8 with it and projecting the same across the respective molds with the result that openings are formed transversely in the posts corresponding to the position of the pins 8. The pins are extended across the molds prior to placing the concrete or other material therein. If the posts are not to be provided with transverse openings, the openings in the bottom plates may be covered or said bottom plates may be replaced by imperforate plates and the pins are not elevated. The strengthening members 21 are preferably of hair pin form, each consisting of a length of twisted wire doubled upon itself and when the strengthening members are properly placed, an element thereof occupies a corner portion of the post when completed. The cores 18 may be removed from the posts after after the same have set sufficiently to permit of their handling, or they may remain in place until the posts have thoroughly set and hardened. It is preferred, however, to remove the cores at the earliest moment possible, thereby facilitating the drying and hardening of the posts, as will be readily understood.

Having thus described the invention, what is claimed as new is:

A machine for forming posts of concrete or like material, comprising a framework, a mold supported thereby and embodying end pieces and longitudinal plates and a bottom plate formed with openings, one of said end pieces being formed with an opening, said latter opening being adapted to receive a core, the core extending through said last named opening and formed with openings adapted to register with the openings in the bottom plate, a rack mounted to move in the framework, toward and from the bottom plate, means for moving said rack, and pins mounted on said rack in registry with the openings in the bottom plate, sundry of said pins being adapted to extend through the openings in the core, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NATHANIEL W. HOSKINS. [L. S.]

Witnesses:
BUCHANAN JOHNSON,
ELLA MULLEN.