

No. 614,782.

Patented Nov. 22, 1898.

C. M. BARNARD.
BOX FOR NAIL DRIVING MACHINES.

(No Model.)

(Application filed Sept. 7, 1897.)

Fig. I.

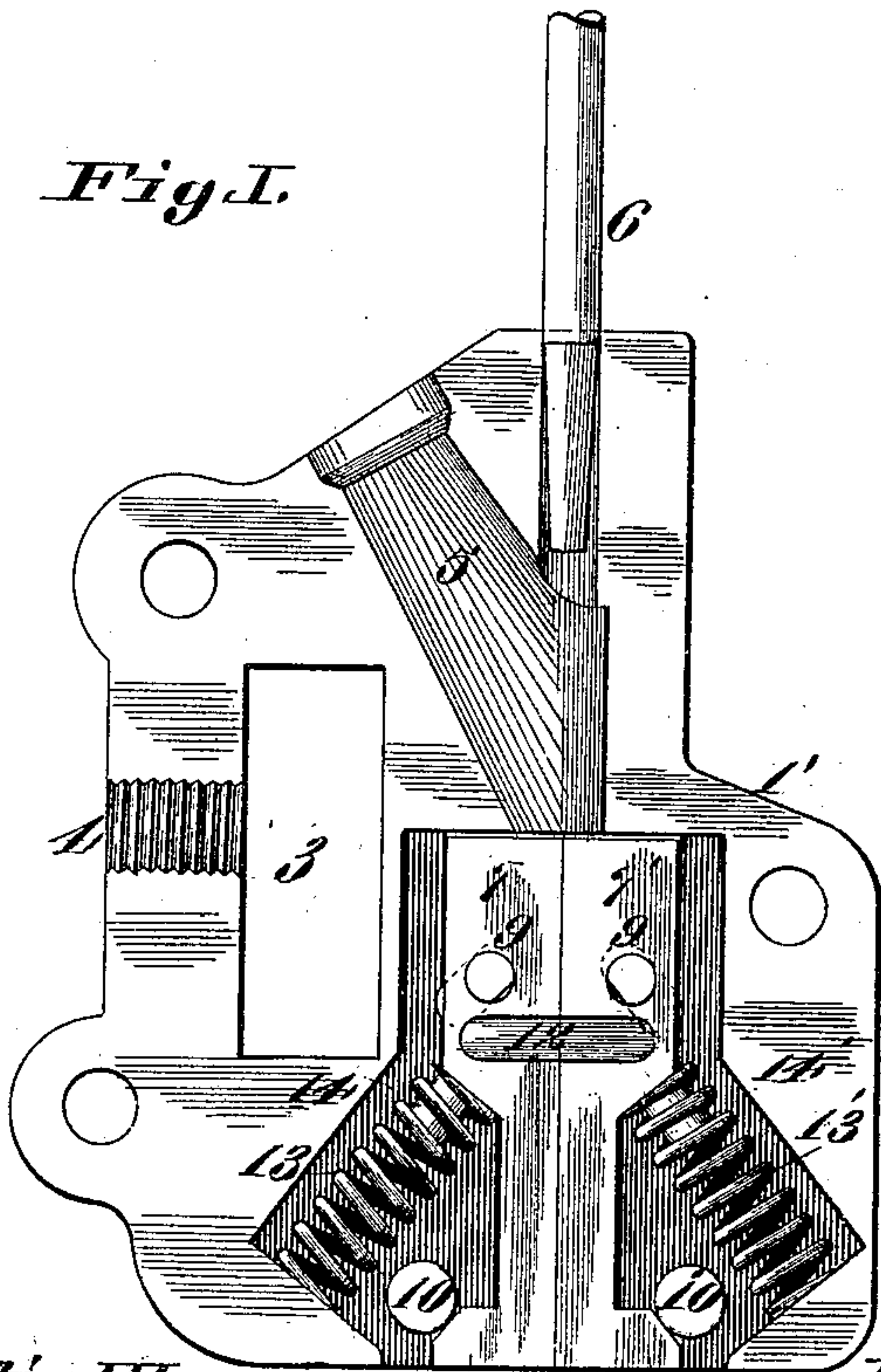


Fig. II.

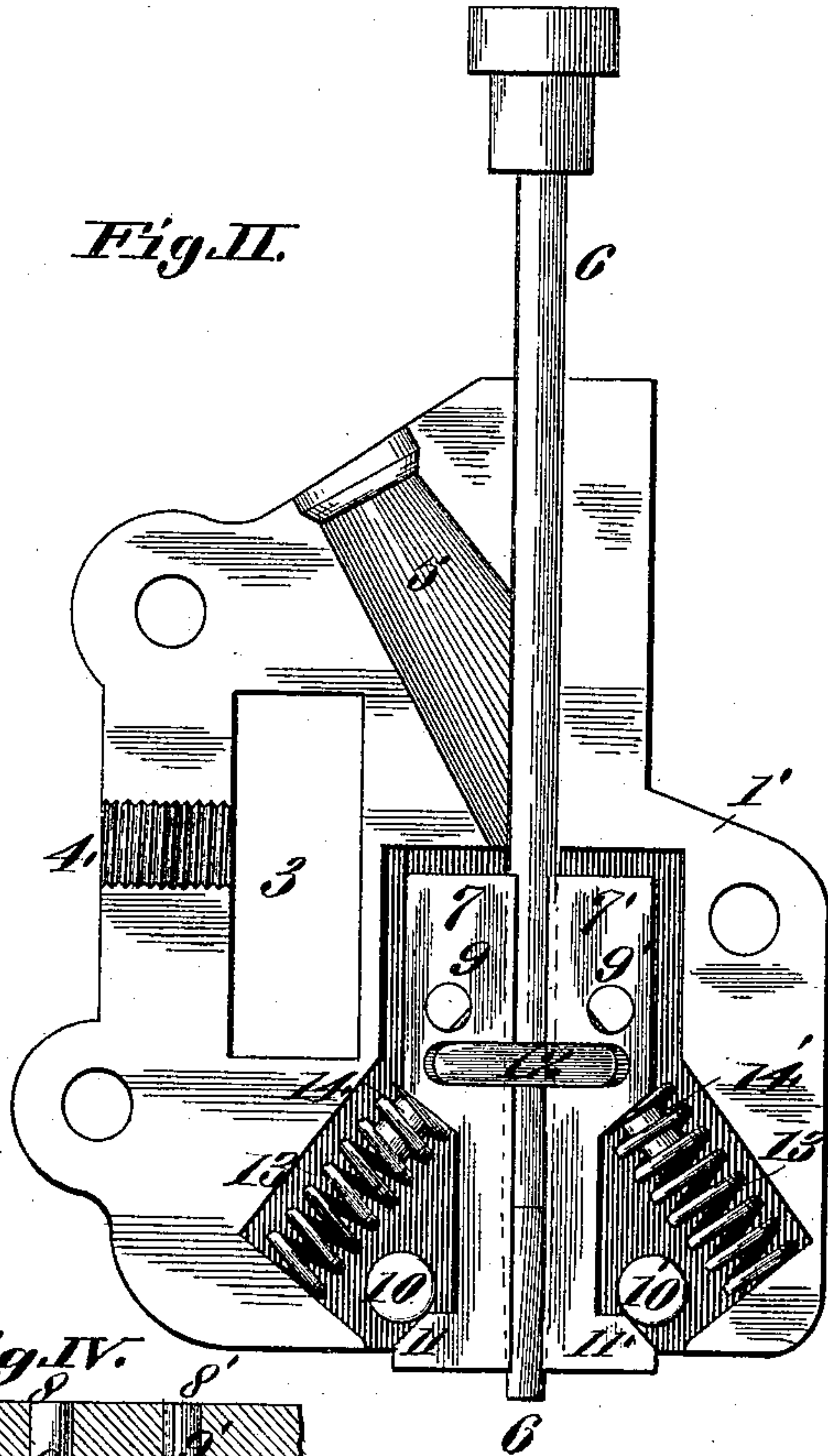


Fig. III.

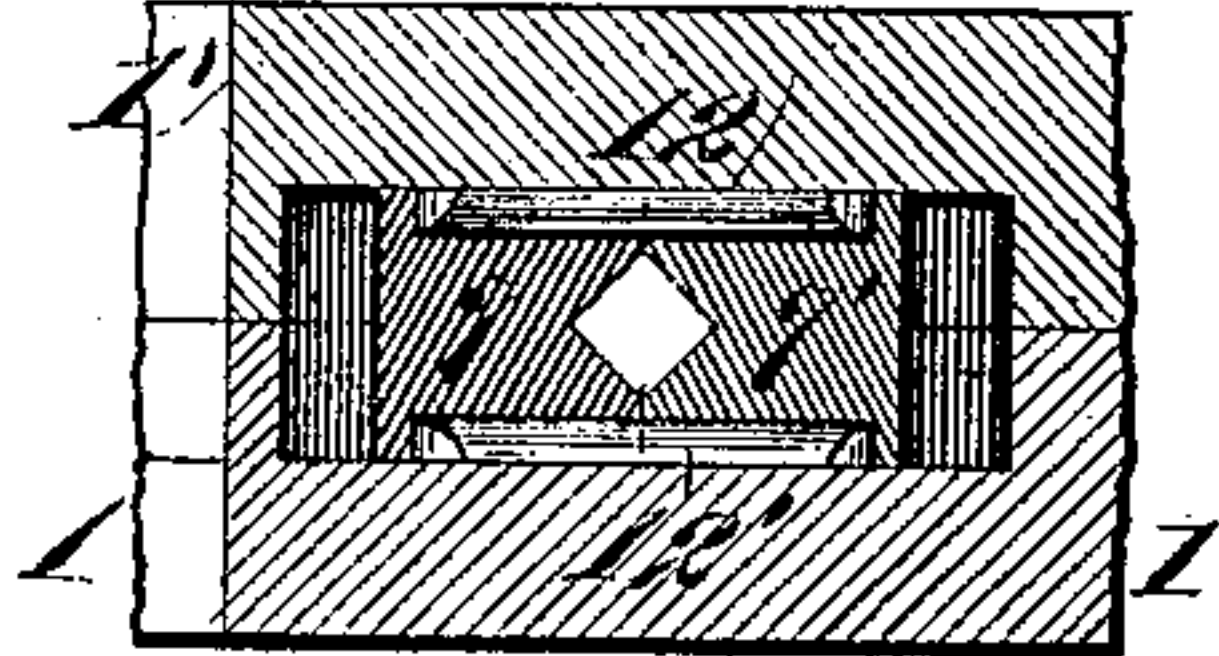


Fig. IV.

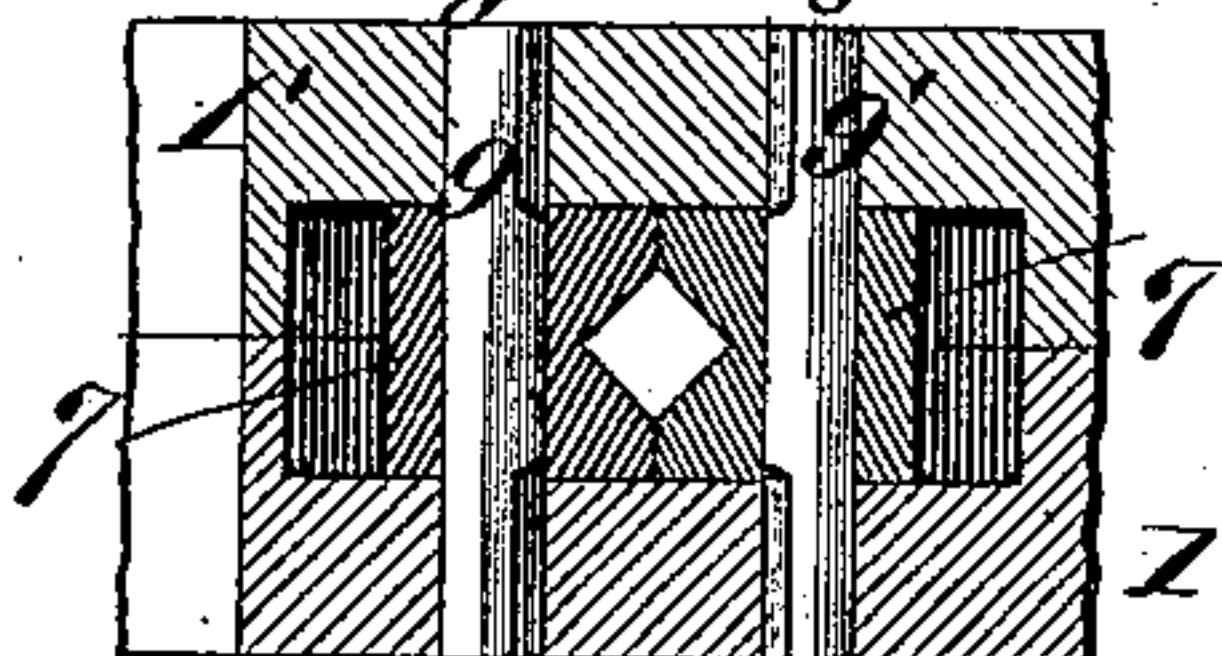


Fig. V.

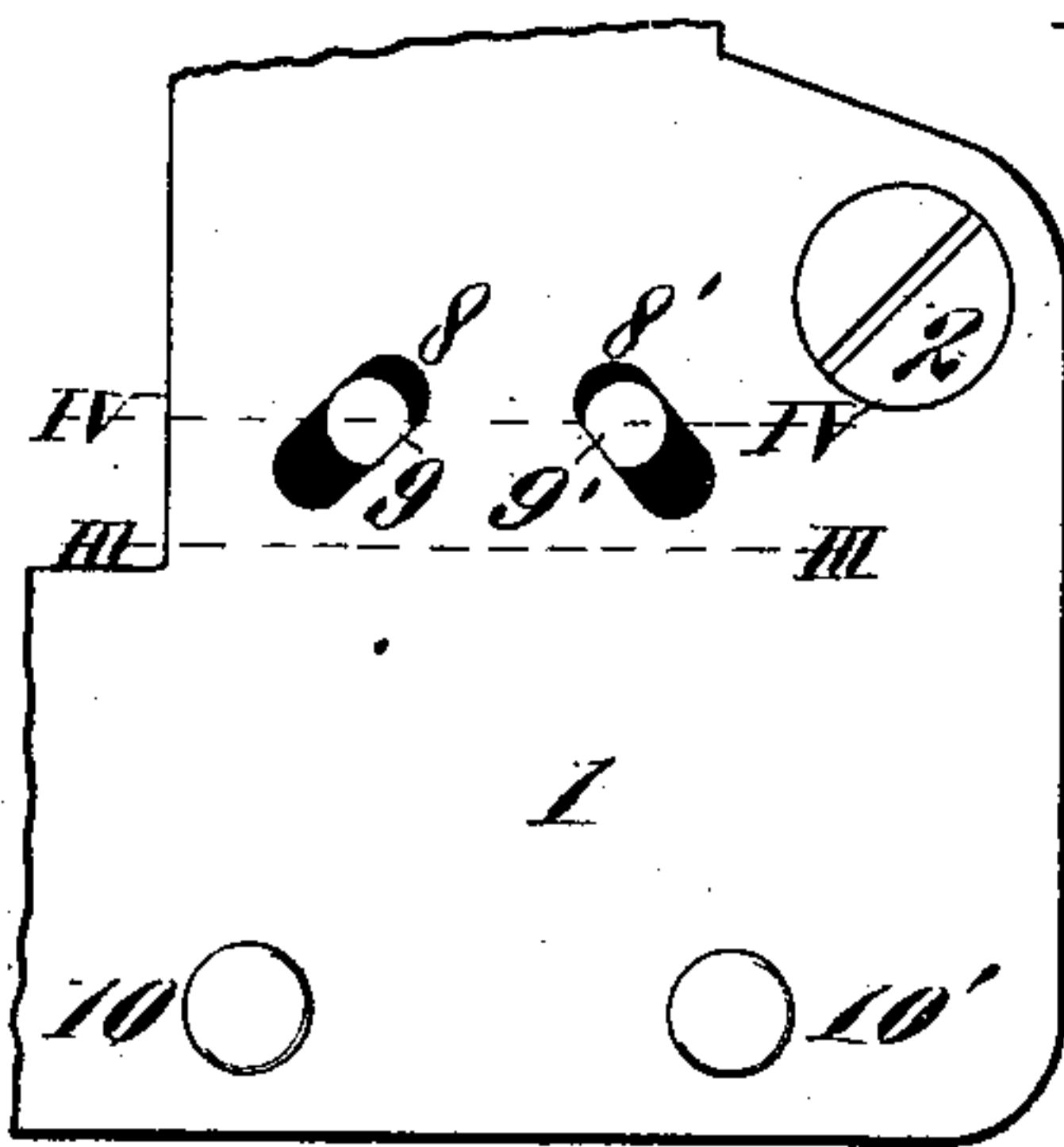


Fig. VI.

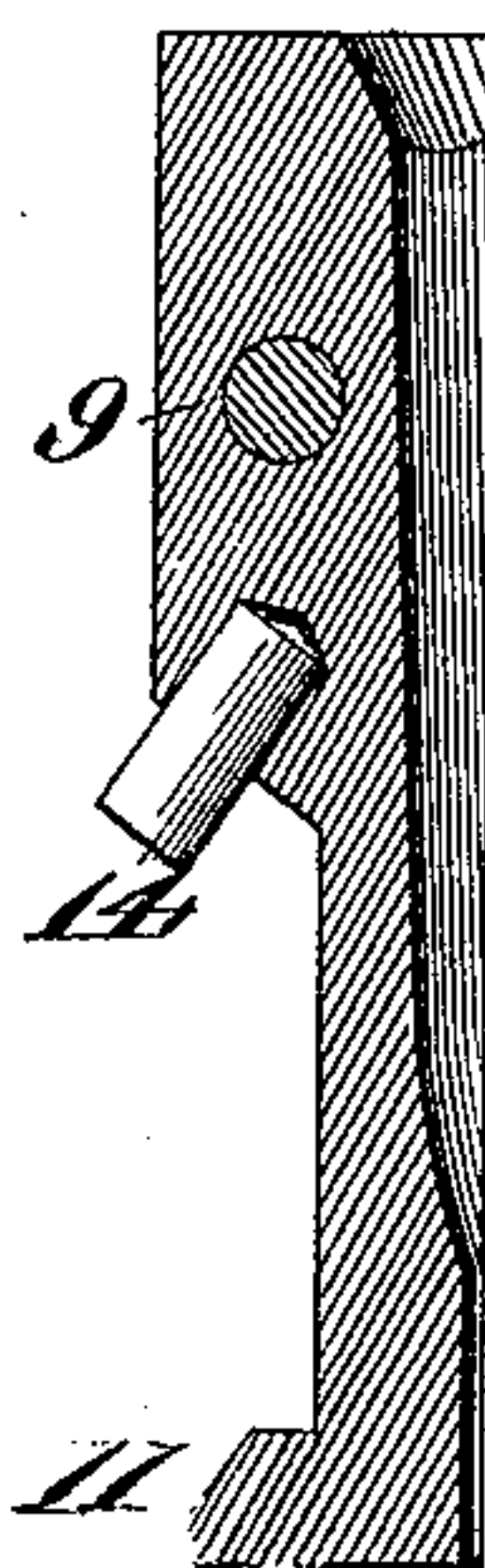
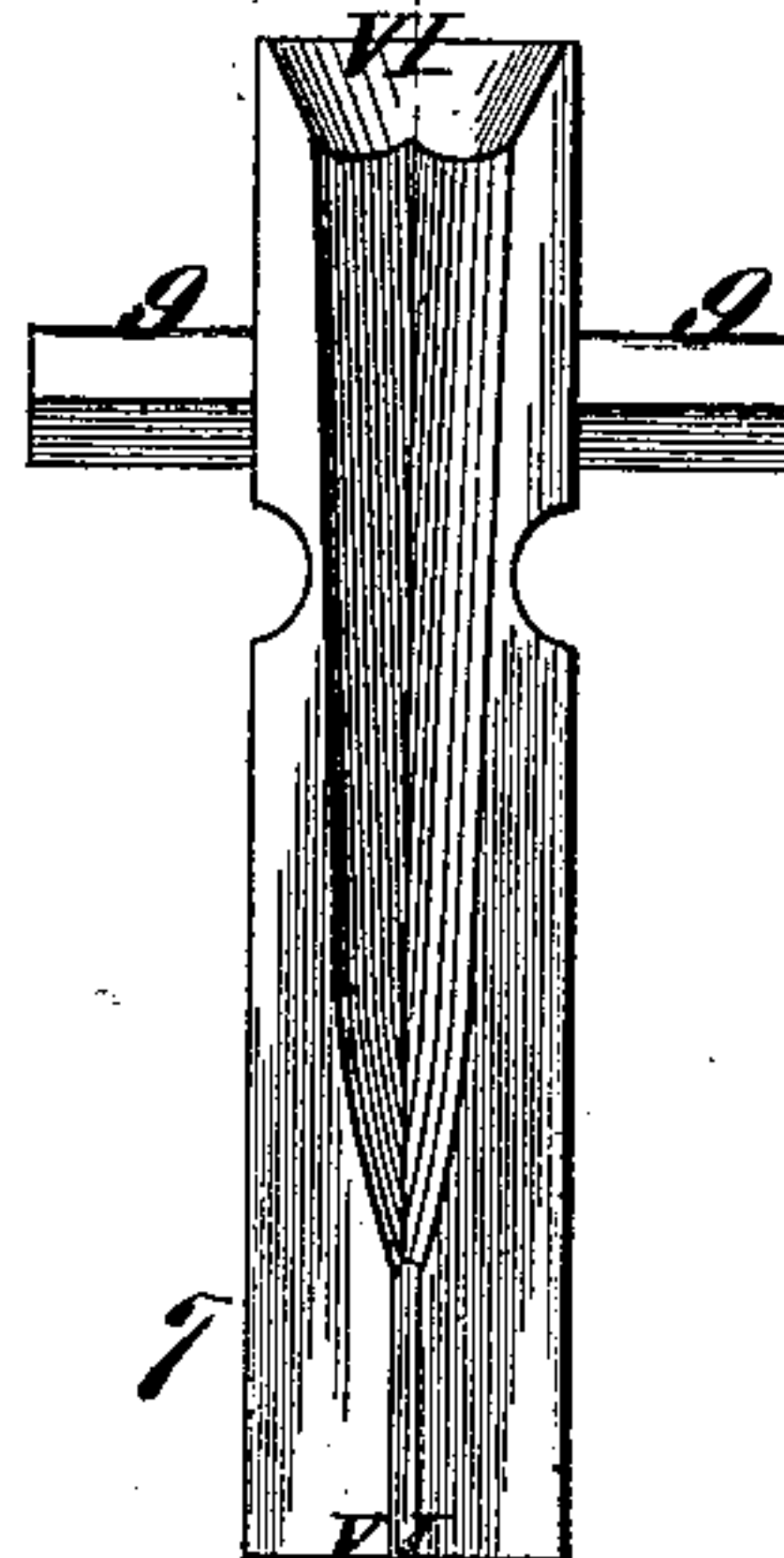


Fig. VII.



Attest,

E. S. Knight
Stanley Stoner

Inventor:
Charles M. Barnard

By Wright & Burt attys

UNITED STATES PATENT OFFICE.

CHARLES M. BARNARD, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH
TO HENRY GAUS, OF SAME PLACE.

BOX FOR NAIL-DRIVING MACHINES.

SPECIFICATION forming part of Letters Patent No. 614,782, dated November 22, 1898.

Application filed September 7, 1897. Serial No. 650,835. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. BARNARD, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have
5 invented a certain new and useful Improvement in Boxes for Nail-Driving Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this
10 specification.

It is the object of my invention to provide a box for nail-driving machines in which the nail is held firmly in a fixed position between jaws at a pressure which remains uniform.
15 It is adapted to be used upon the ordinary forms of nail-driving machines, to which several of the boxes are attached in order that a series of nails may be driven at a time.

Referring to the drawings forming a part
20 of this specification, Figure I illustrates an interior side view of one-half of the box, showing the jaws closed. Fig. II is a view similar to that shown in Fig. I, excepting that the jaws which hold the nail are forced open by
25 the insertion of the plunger. Fig. III is a detail view taken along the line III III of Fig. V. Fig. IV is a detail view taken along the line IV IV of Fig. V. Fig. V is an enlarged side view of a portion of the outside of the
30 box. Fig. VI is a vertical section of one of the jaws, taken along the line VI VI of Fig. VII. Fig. VII is a vertical view of the front of one of the jaws.

1 and 1' are the sides of the box.
35 2 is one of the screws by means of which the two sides 1 and 1' are held together.

3 is an opening by means of which a series of boxes are placed on a bar placed there-through, held in position by means of a set-
40 screw inserted in the threaded hole 4.

5 is the feed-passage through which the nails are introduced.

6 is a plunger which drives the nails by means of power applied to the top thereof.

45 7 and 7' are the jaws, provided with open inner faces adapted to close against each other in line with the plunger 6. The open inner jaw-faces form a passage-way that is funnel-shaped at the top and straight for a
50 distance at the bottom. The funnel-shaped

passage-way in the jaws is square in cross-section, as shown in Figs. III and IV.

The sides 1 and 1' are provided with oblique slots 8 and 8', in which pins 9 and 9', secured to the jaws 7 and 7', are adapted to ride. 55 These pins govern the upper portion of the jaws. Pins 10 and 10', secured to the sides 1 and 1' at the lower portion of the jaws, guide the said lower portion by means of the projections 11 and 11', having inclined edges
60 adapted to ride against said pins as the nail is driven through the jaws. 12 and 12' are guiding cross-bars fitting in recesses in the sides of the jaws 7 and 7' and regulate the movement of the jaws to cause them to travel
65 together and to prevent either jaw from moving faster than the other jaw.

13 and 13' are stout coil-springs, one end of each of which rests on an inclined shoulder in inclined receiving-chambers of the box
70 and the other ends of which bear against inclined shoulders of the jaws, being held in place by the inclined pins 14 and 14'. These springs are placed at an angle of approximately forty-five degrees, so that their pressure is exerted against the jaws at such angle
75 instead of directly against them, as heretofore has been the case. If there is a tendency for one spring to exert more force than the other, it is equalized by the ability of the
80 jaws to ride against the pins, and yet one jaw cannot get beyond the other by reason of the guiding cross-bars 12 and 12'.

The operation of the device is as follows:
The end of a nail dropped in through the
85 feed-passage 5 rests on the lower portion of the opening between the jaws 7 and 7'. The plunger 6 is then driven against the head thereof, which action forces the jaws open. The pressure of the springs 13 and 13' keeps
90 the nail firmly clamped and prevents the same bending. These springs being placed obliquely and the guide-pins 9, 9', 10, and 10' permitting the opening of the jaws allows a nail of any size being used in the box. The
95 guiding cross-bars 12 and 12', moreover, prevent one jaw riding faster than the other. Hence an equal pressure and uniform position of the nail is maintained. The advantage in having the opening between the jaws approxi- 100

mately square lies in the fact that the head of an inserted nail will adjust itself to the taper and the square sides will then bind the same firmly. This is not accomplished by a circular opening.

I claim as my invention—

1. A box for nail-driving machines comprising spring-receiving chambers, a pair of jaws having inclined shoulders, and located in the box, and inclined springs located in the chambers and bearing against the inclined shoulders of the jaws to keep the latter normally closed; substantially as described.

2. A box for nail-driving machines comprising spring-receiving chambers, and guiding cross-bars, a pair of jaws having inclined shoulders, and located in the box, and inclined springs located in the chambers and bearing against the inclined shoulders of the jaws to keep the latter normally closed; substantially as described.

3. A box for nail-driving machines comprising sides having inclined slots, spring-receiving chambers, and guiding cross-bars, a pair of jaws having inclined shoulders, projections having inclined faces, and a tapering square

opening between them, lower pins secured to the box and adapted to act as guides for the projections, upper pins on the jaws adapted to slide in the inclined slots, and inclined springs located in the chambers, and bearing against the inclined shoulders of the jaws to keep the latter normally closed; substantially as described.

4. A box for nail-driving machines comprising sides having inclined slots, a feed-passage, spring-receiving chambers, and guiding cross-bars, a pair of jaws having inclined shoulders and projections having inclined faces, the pins secured to the jaws and working in the slots, the pins on which the inclined faces bear, the inclined pins projecting from the inclined shoulders, and the inclined springs located in the chambers surrounding the inclined pins and bearing against the inclined shoulders of the jaws to keep the latter normally closed; substantially as described.

CHARLES M. BARNARD.

In presence of—

E. S. KNIGHT,
STANLEY STONER.