

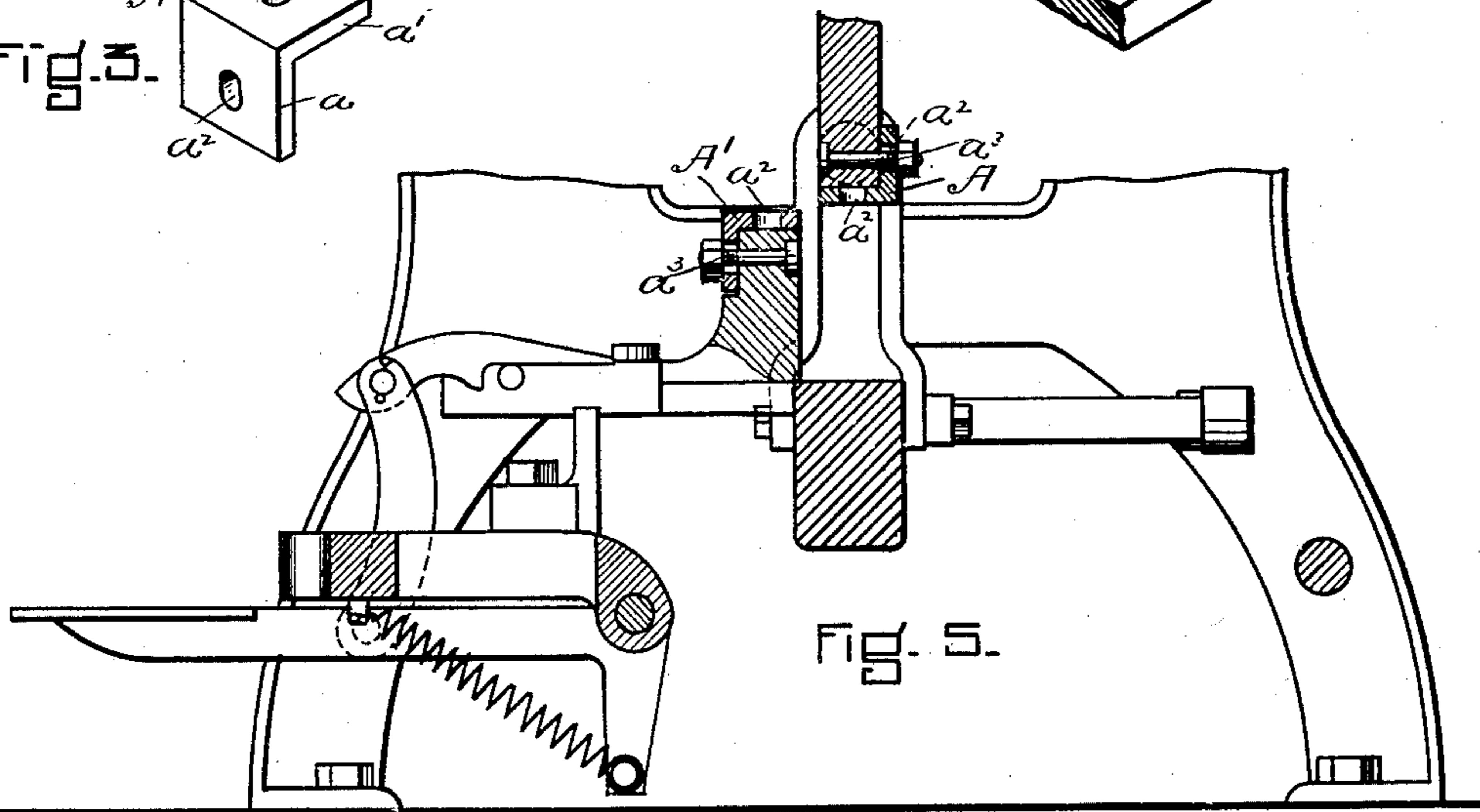
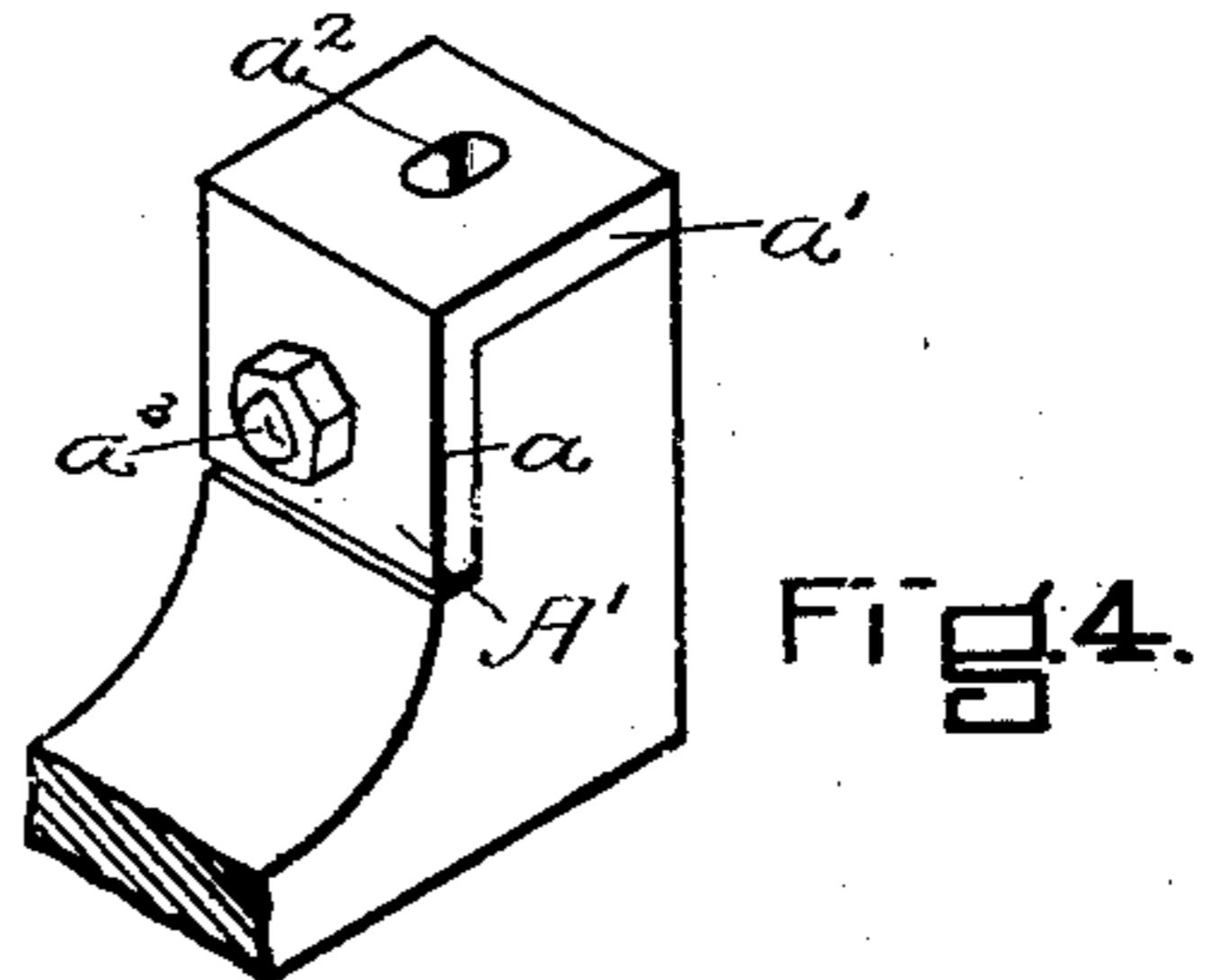
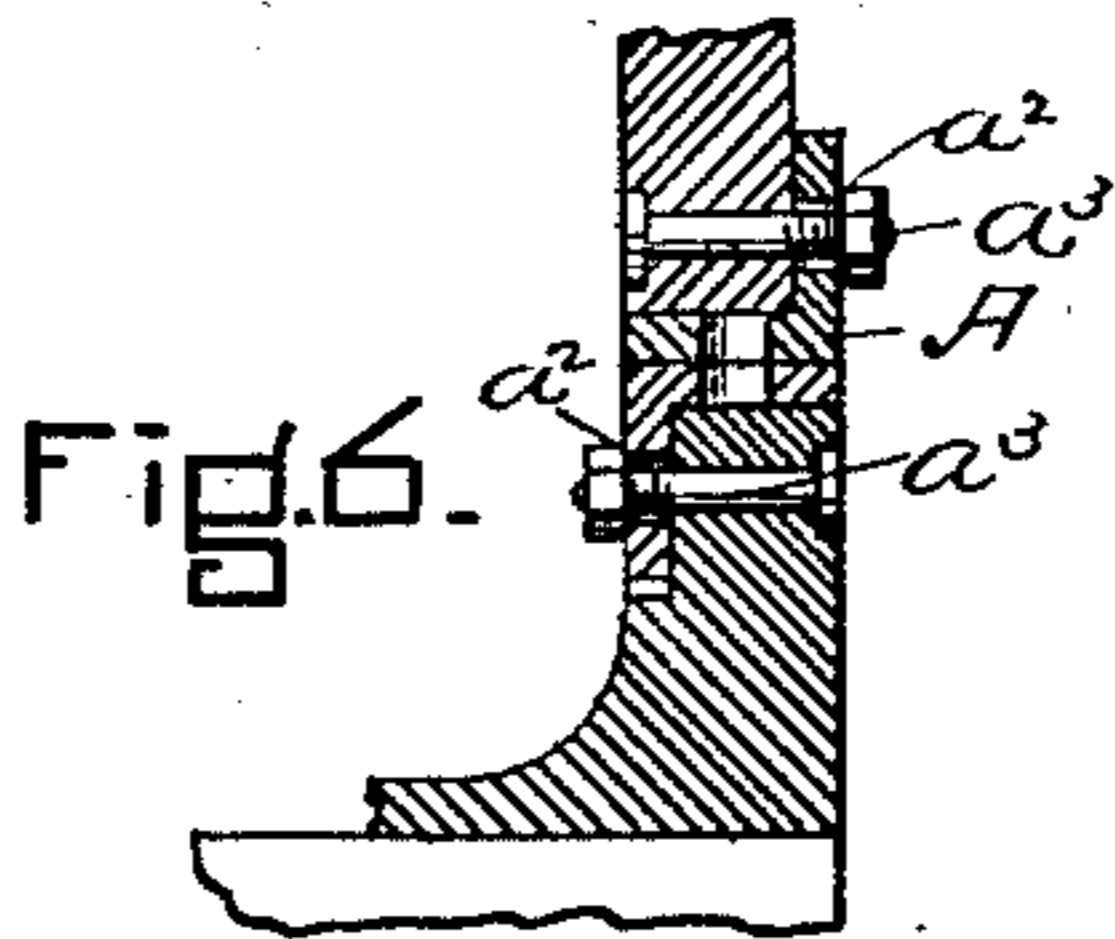
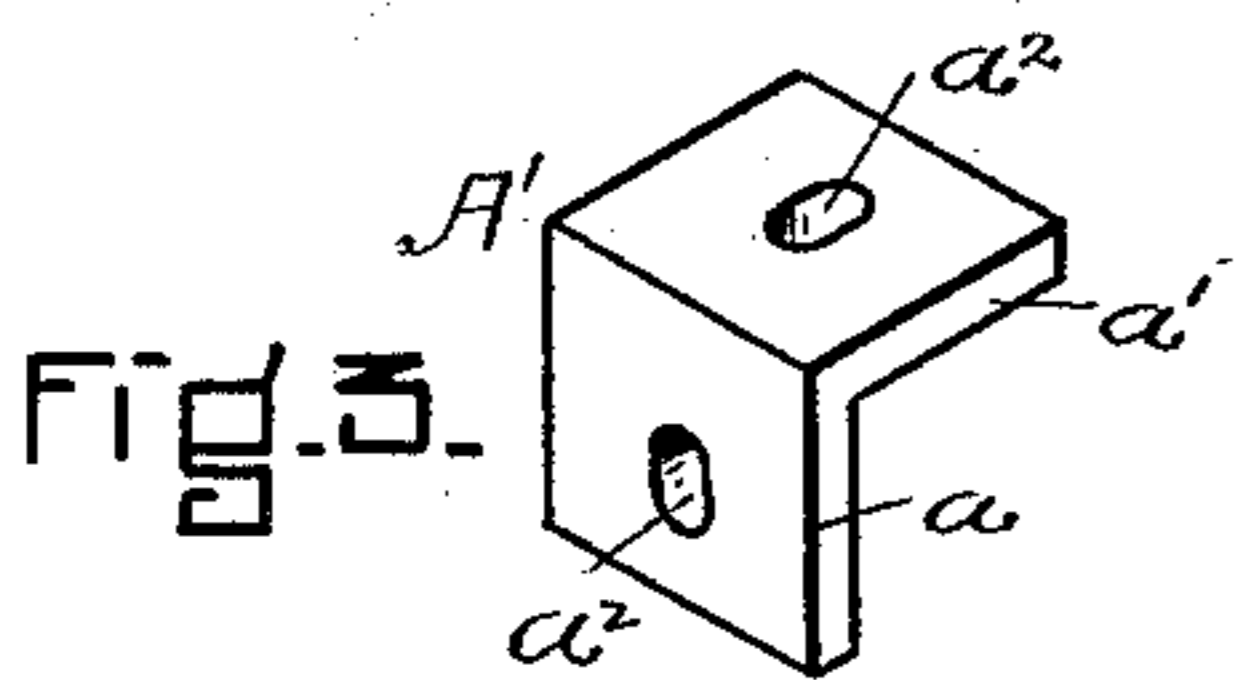
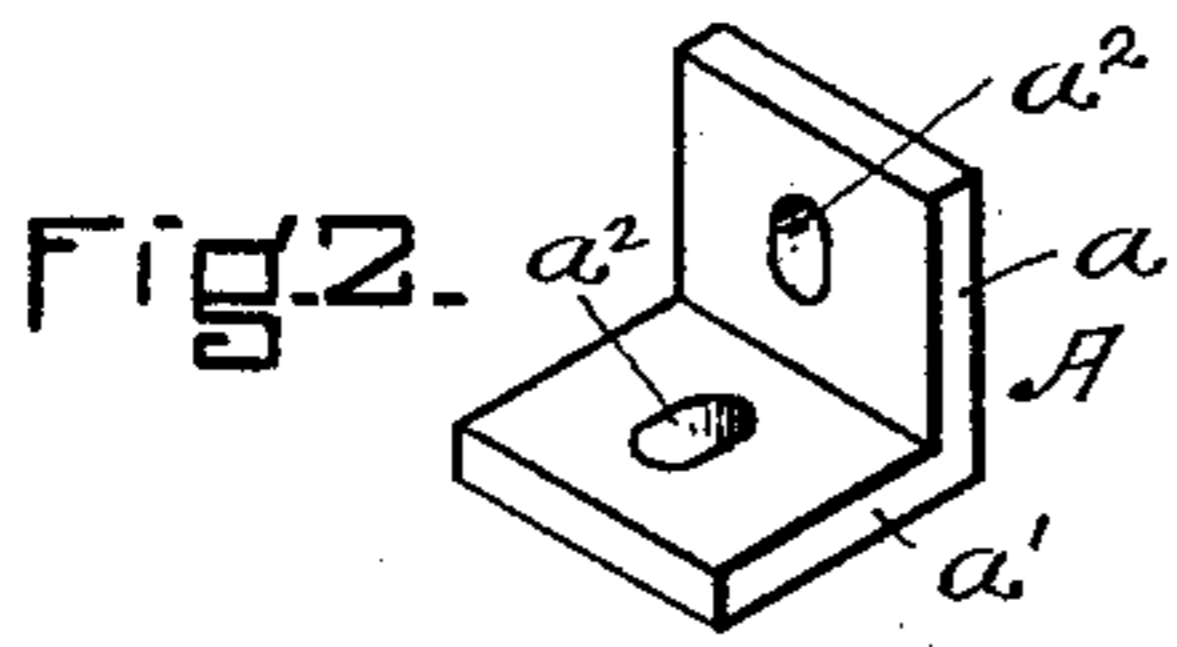
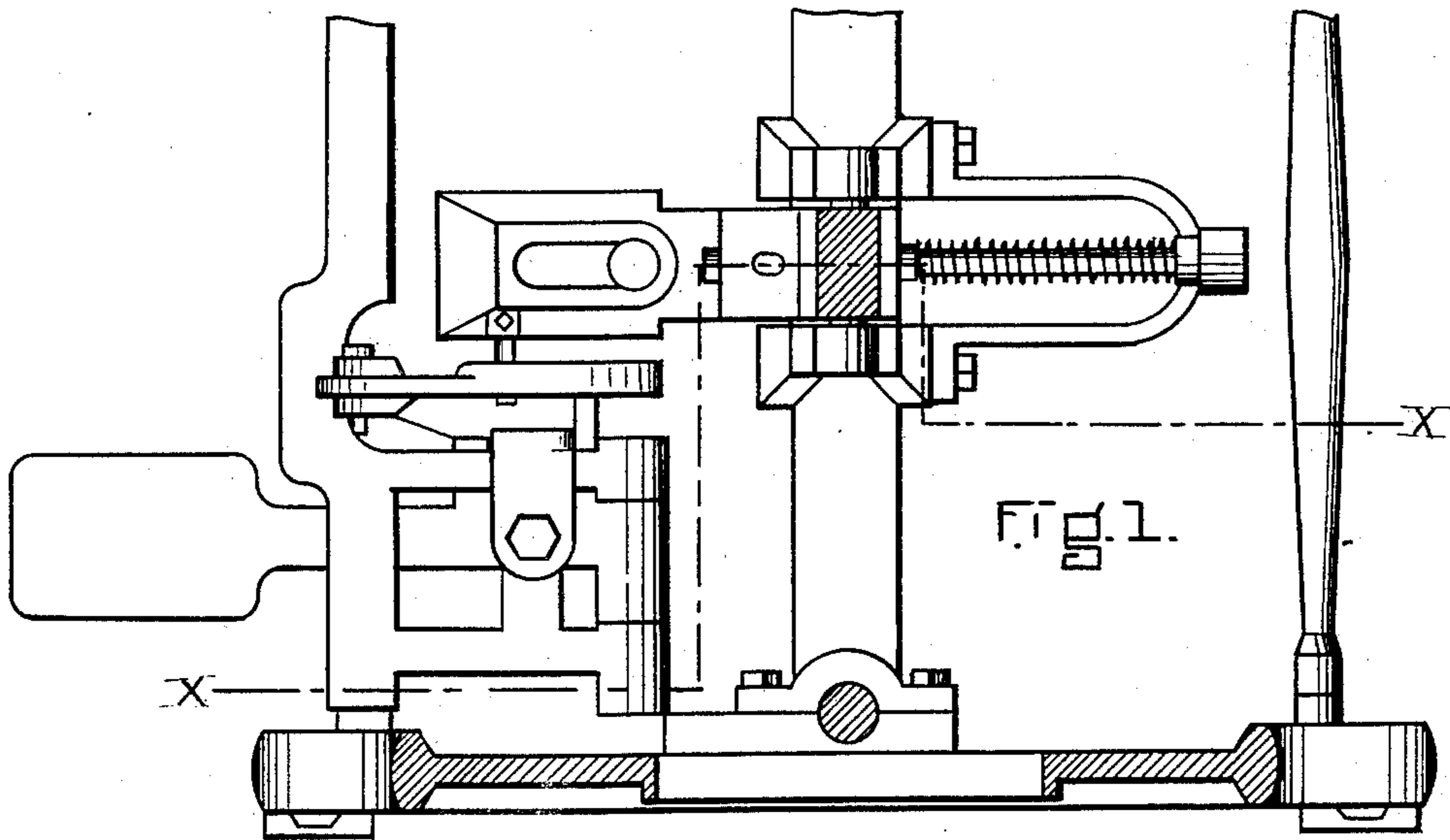
(No Model.)

F. F. RAYMOND, 2d.

HEEL NAILING MACHINE.

No. 345,920.

Patented July 20, 1886.



WITNESSES.

J. M. Dolan  
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# UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

## HEEL-NAILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 345,920, dated July 20, 1886.

Application filed May 12, 1886. Serial No. 201,913. (No model.)

*To all whom it may concern:*

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Heel-Nailing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention is an improvement upon the "National Heel-Nailing Machine," so called; and it relates especially to the tripping mechanism of the machine.

Referring to the drawings, Figure 1 is a view in horizontal section and plan of the lower part of a National heeling-machine. Fig. 2 is a perspective view of an angle-plate in one position. Fig. 3 is a perspective view of an angle-plate in another position. Fig. 4 is a view in perspective of a part of a sliding block with an angle-plate secured thereto. Fig. 5 is a vertical section upon the dotted line of Fig. 1. Fig. 6 is a vertical section showing the end of the pitman and sliding block in contact.

In the National machine this tripping mechanism comprises a sliding block, which is moved by a treadle between a constantly-reciprocating arm or pitman and a cross-head, and when this block is in position between the pitman and the cross-head the cross-head is caused to make a downward and upward movement, reciprocating the upper cross-head carrying the awls, drivers, and spanker. The pitman is made of cast-iron, as is also the sliding block, and the lower surface of the pitman and the upper surface of the edge of the sliding block are liable to become worn by constant use until their surfaces become somewhat inclined to each other, when the sliding block is liable to be forced outward by the pitman, instead of remaining in place after it has been inserted between the pitman and the cross-head. To prevent the parts from getting into this condition, I employ angle plates A A', made of steel or other hard metal, and secured to the block and the lower end of the pitman, so arranged that their faces shall

come in contact when the block is moved in before a reciprocation. These plates are made so as to be interchangeable, and also so as to use both the horizontal and vertical surfaces. This result is obtained by providing each section  $a a'$  of each plate with a hole,  $a^2$ , for the reception of a fastening-bolt,  $a^3$ , which in case of the block sliding passes through a hole formed therein, and through one of the holes in the plate to receive a fastening-nut, as represented in Figs. 4 and 5, and, in case of the pitman, through a hole formed therein and a section of its plate. It will be seen that these plates not only can be interchangeably used in connection with either the pitman or sliding block, but that each plate has two surfaces, which can be so used that when one becomes worn the other may be substituted therefor, and it is also shaped so that it can be secured to either corner of the pitman or block desired.

In order that the plate may always bear upon the surface of the sliding block or against the surface of the pitman, as the case may be, I have made the bolt-holes elongated or in the form of slots, so that the inner surface of the horizontal section of the plate shall always come in contact with the surface of the part to which it is secured.

It will be seen that this device provides a simple and efficient means for protecting the pitman and sliding block from wear, and also enables repairs to be expeditiously and cheaply made.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a heel-nailing machine, the combination of the pitman with the plate  $a a'$ , having one or more holes,  $a^2$ , and the bolt  $a^3$ , substantially as described.

2. In a heel-nailing machine, the combination of the sliding block A' with an angle-plate,  $a a'$ , provided with one or more holes,  $a^2$ , and a bolt, substantially as described.

FREEBORN F. RAYMOND, 2D.

Witnesses:

FRED. B. DOLAN,  
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