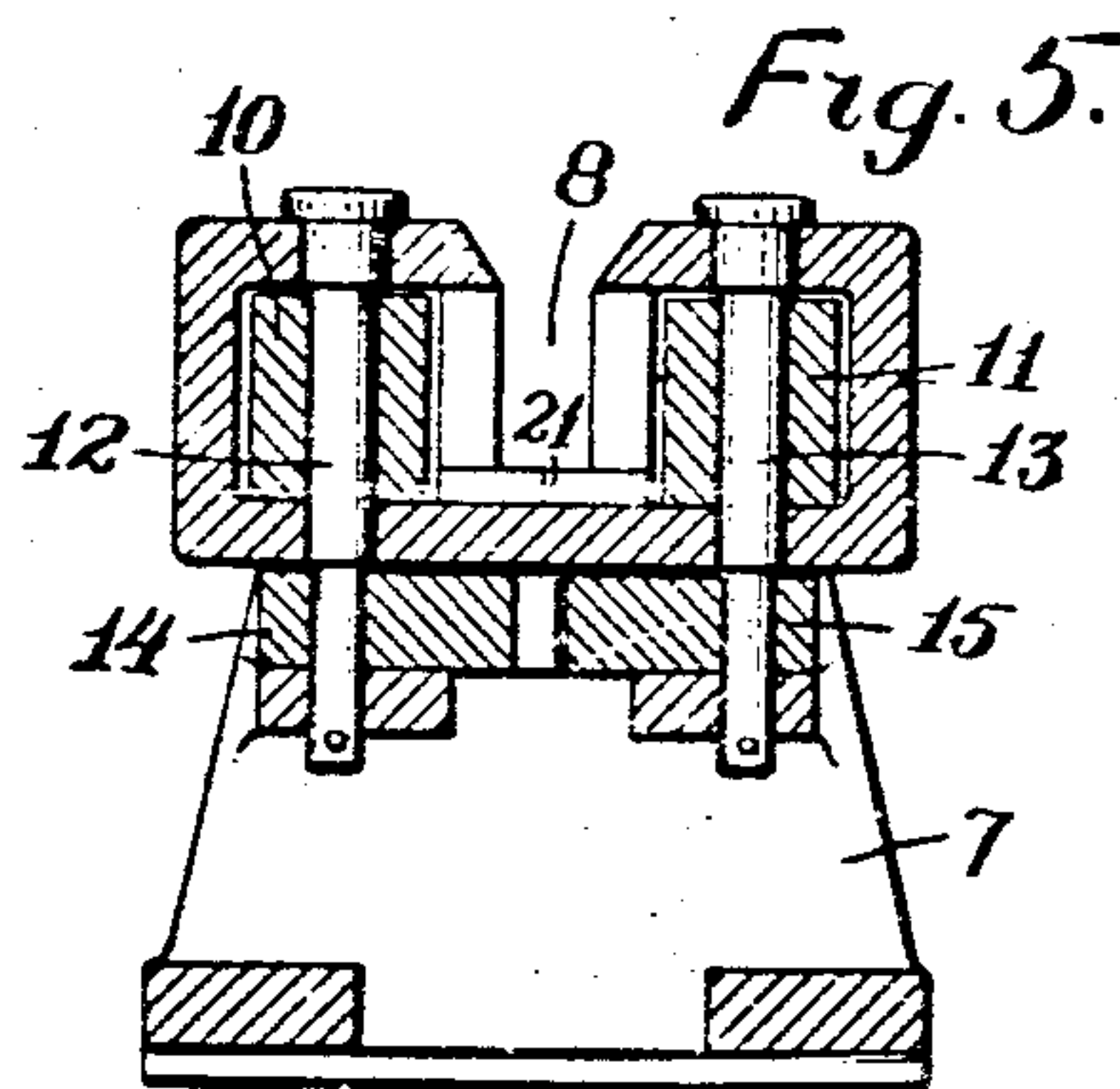
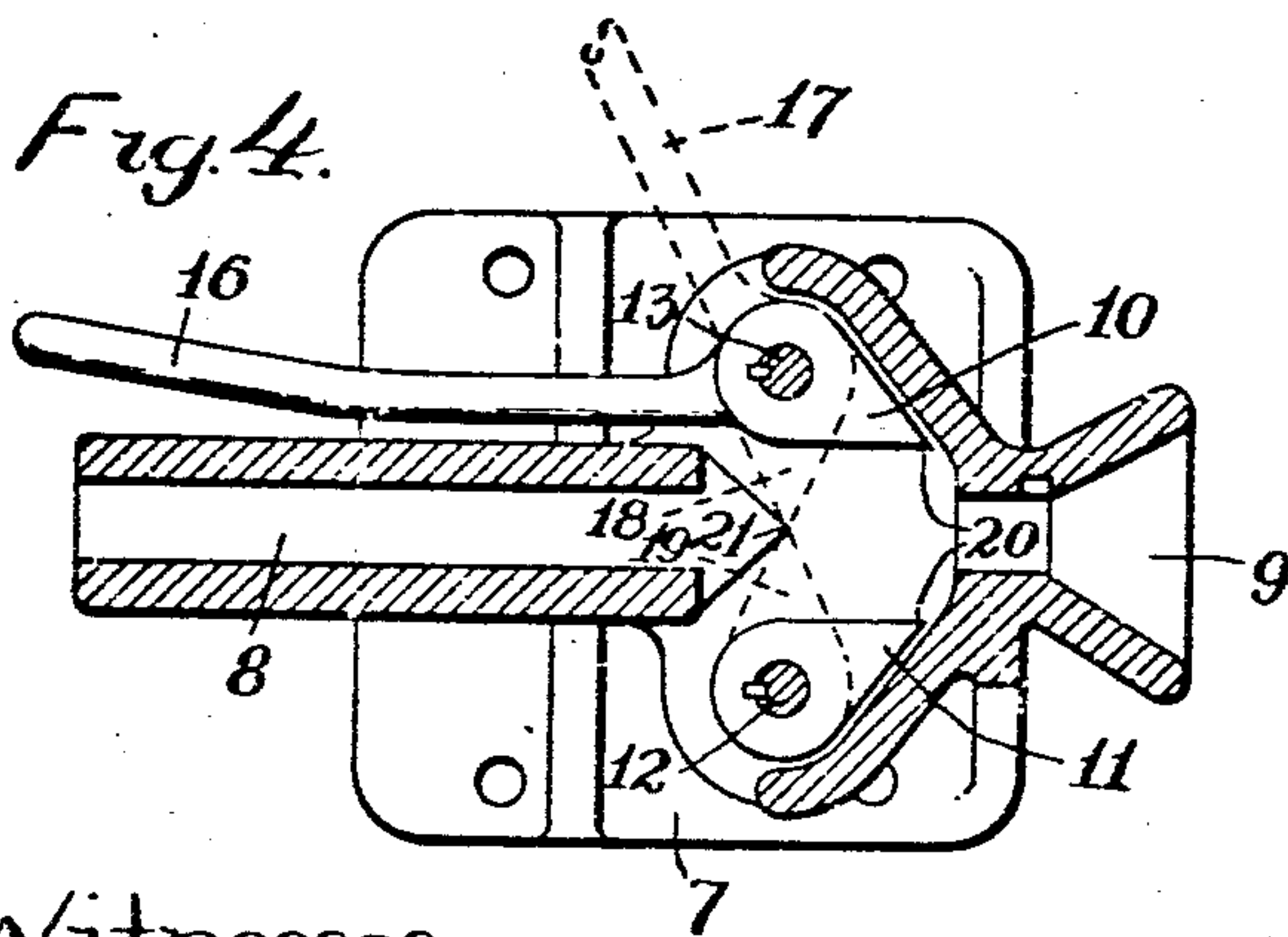
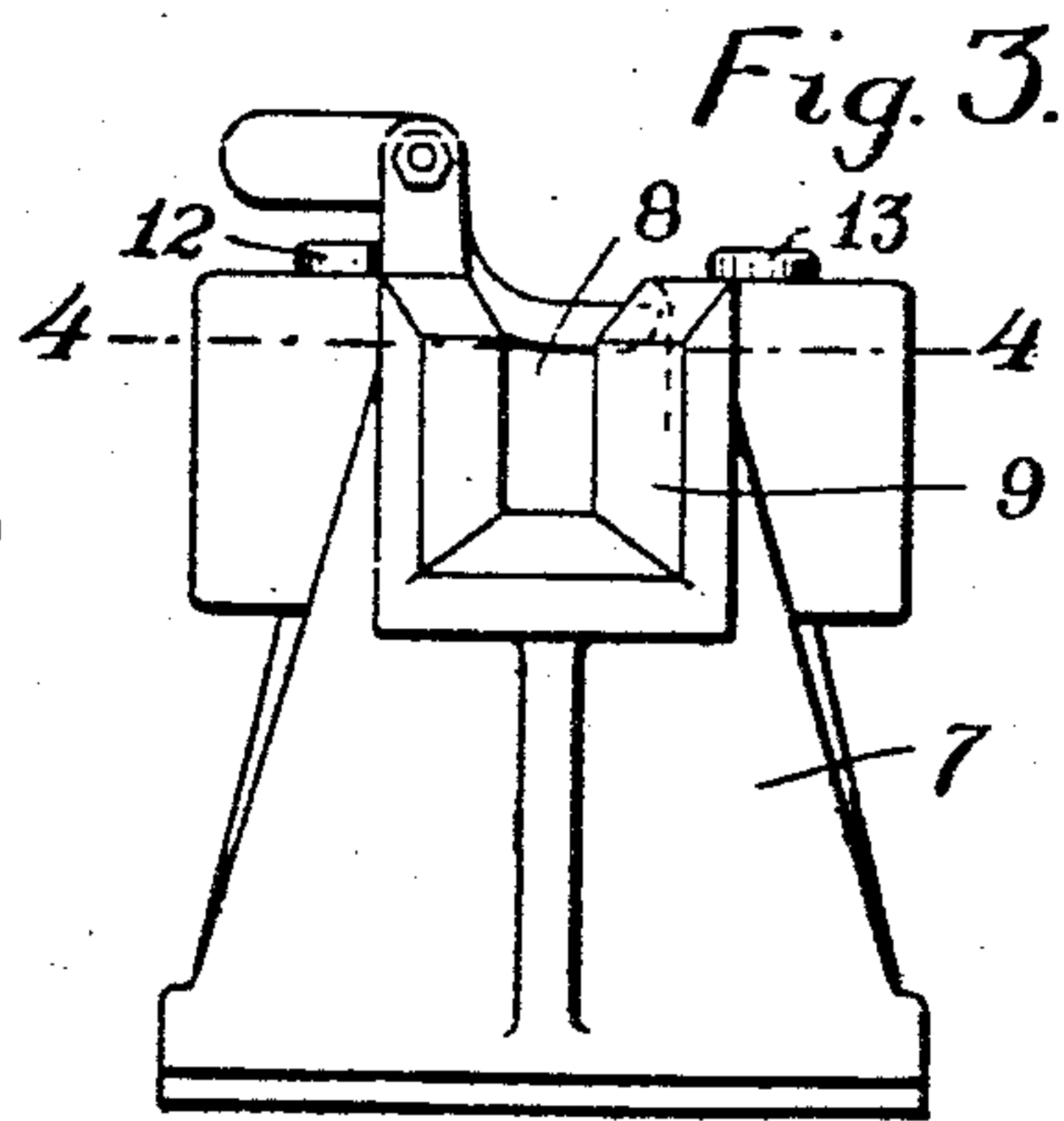
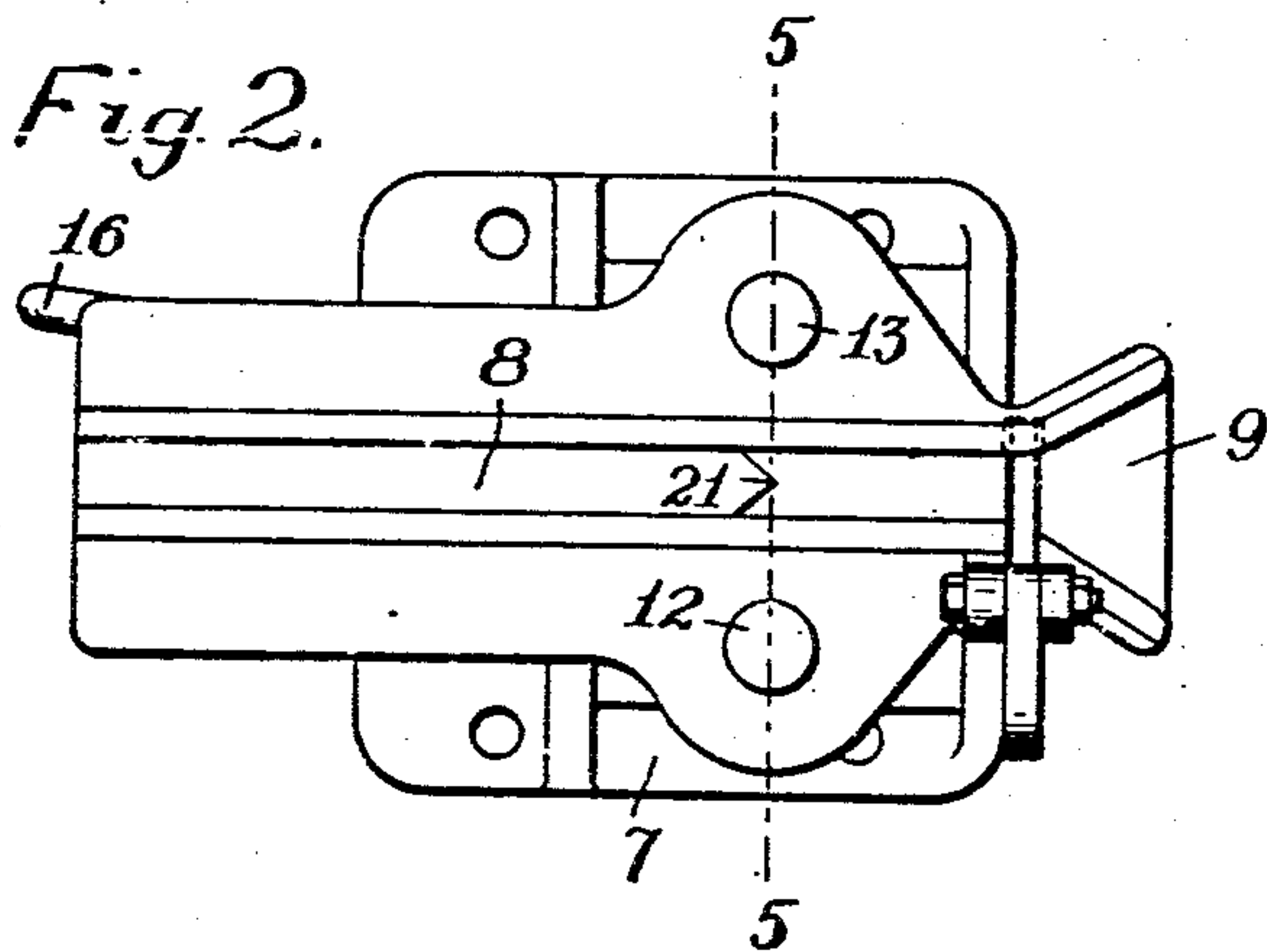
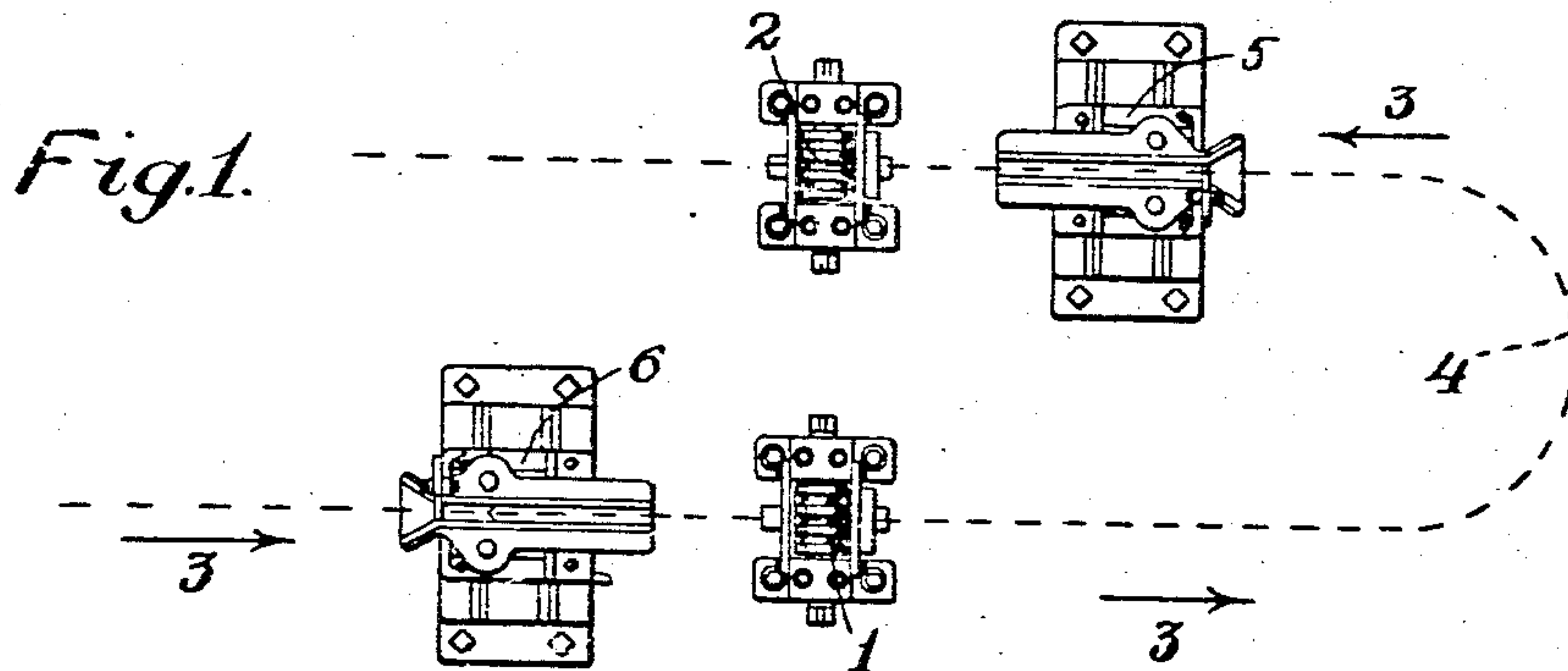


T. M. JEWELL.
CUTTING MECHANISM FOR ROLLING MILLS.
APPLICATION FILED NOV. 2, 1908.

966,557.

Patented Aug. 9, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

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CUTTING MECHANISM FOR ROLLING-MILLS.

966,557.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed November 2, 1908. Serial No. 460,792.

To all whom it may concern:

Be it known that I, THOMAS M. JEWELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Cutting Mechanism for Rolling-Mills, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 represents a diagrammatic plan view of a rolling mill, comprising two pairs of rolls and a cutting mechanism embodying my invention. Figs. 2 and 3 are respectively, plan and end views of the cutting mechanism. Fig. 4 is a plan view shown in section on the plane of the broken line 4—4, Fig. 3. Fig. 5 is a vertical sectional view on the plane of the broken line 5—5, Fig. 2.

Similar reference figures refer to similar parts in the different views.

The object of my present invention is to provide a convenient hand operated cutting mechanism which may be applied to the moving rod or bar of heated metal as it passes through the rolls of the mill, at some convenient point which will enable the operator to instantly sever the bar whenever its forward movement becomes impeded, or whenever it may become necessary for any reason to sever the rod or bar in front of a pair of rolls, and I accomplish this purpose by the construction and arrangement of parts as hereinafter described and pointed out in the annexed claims.

Referring to the accompanying drawings 1 and 2 denote two pairs of rolls of a rolling mill through which a rod or bar passes in the direction of the arrows 3, and substantially in the path of the broken line 4. In front of and adjacent to the rolls 1, 2, I support upon the floor of the mill a cutting mechanism embodying my invention, and represented in Fig. 1 at 5 and 6.

The cutting mechanisms, which in Fig. 1 are duplicates of each other, are represented upon a larger scale in Figs. 2 to 5 inclusive. It comprises a base 7 supported upon the floor of the mill, upon which is mounted a guide trough or channel 8 having preferably a flaring mouth 9 for the reception of the rod. Between the mouth 9 and the guide channel 8 is an enlarged space to receive the cutters 10, 11, which are keyed to spindles 12 and 13. The spindles also carry near their lower ends the segmental

gears 14 and 15, and the cutter 10 is provided with a lever handle 16, in convenient position to be thrown from its position in Figs. 2 and 4 to the position indicated by the broken lines 17, Fig. 4. This angular movement of the lever handle 16 causes a simultaneous rocking movement of the cutters 10, 11, by means of their geared connection 14, 15, in which the cutters are swung from their position shown in Fig. 4 to that indicated by broken lines 18, 19, Fig. 4, in which the cutting edges 20 are brought together against a triangular stop 21.

When the cutting edges 20 have once engaged the rod, the movement of the rod itself will serve to draw the cutting edges together, in the position shown by the broken lines 18 and 19, Fig. 4, and effect a complete severance of the rod.

In operation, an attendant stationed at the end of the cutting mechanisms, such as 5 and 6, keeps watch of the advancing rod and upon the indication of any interruption to its movement, he causes the cutters to be swung and the rod severed.

Inasmuch as the cutting mechanism may be located to receive the rod passing between two sets of rolls, there will be considerable variation, both horizontally and vertically, in the actual path of the rod which will form loops and otherwise diverge from a direct passage from one pair of rolls to the other. The vertical position of the spindles 12 and 13 and the open top of the guide channel 8 are arranged to allow of the reinsertion of the moving metal rod in the guide channel and between the cutters after any such variation.

I claim,

1. In a rolling mill, the combination with a pair of rolls, a cutting mechanism located in the path of the moving metal rod about to enter said rolls, said cutting mechanism comprising a pair of cutters arranged upon either side of the path of the moving rod and having a space between them open from above for the insertion of the moving rod and means for operating said cutting mechanism.

2. In a rolling mill, the combination with a pair of rolls for the reduction of a rod, of a rod cutting mechanism located in the path of the moving rod about to enter said rolls, said cutting mechanism comprising a pair of cutters rotatable about parallel vertical

axes and having a space between them open from above for the insertion of the moving rod, and means for operating said cutting mechanism.

5 3. In a rolling mill, the combination with a pair of rolls, a guide trough located in the path of the moving metal rod about to enter said rolls, said guide trough open at the top to allow the insertion of the moving rod, a
10 cutting mechanism arranged to sever the rod in said guide trough, comprising a pair of cutters having a space between them open from above for the insertion of the moving rod, and means for operating said
15 cutters.

4. In a rolling mill, the combination with

a pair of rolls, a guide trough located in the path of the moving metal rod about to enter said rolls, said guide trough open at the top to allow the insertion of the moving rod, a 20 pair of opposing cutters rotatable around vertical axes and located on opposite sides of said guide trough having a space between them open from above for the insertion of the moving rod, and means for operating 25 said cutters.

Dated this 26th day of October, 1908.

THOMAS M. JEWELL.

Witnesses:

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