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Patented July 12, 1910.

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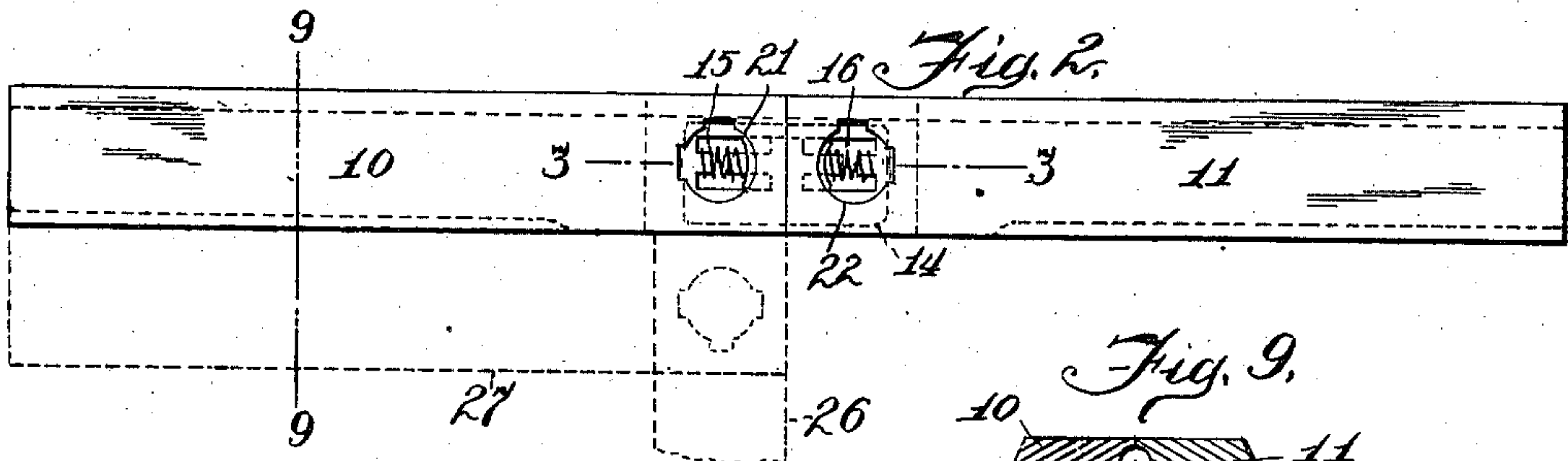


Fig. 9.

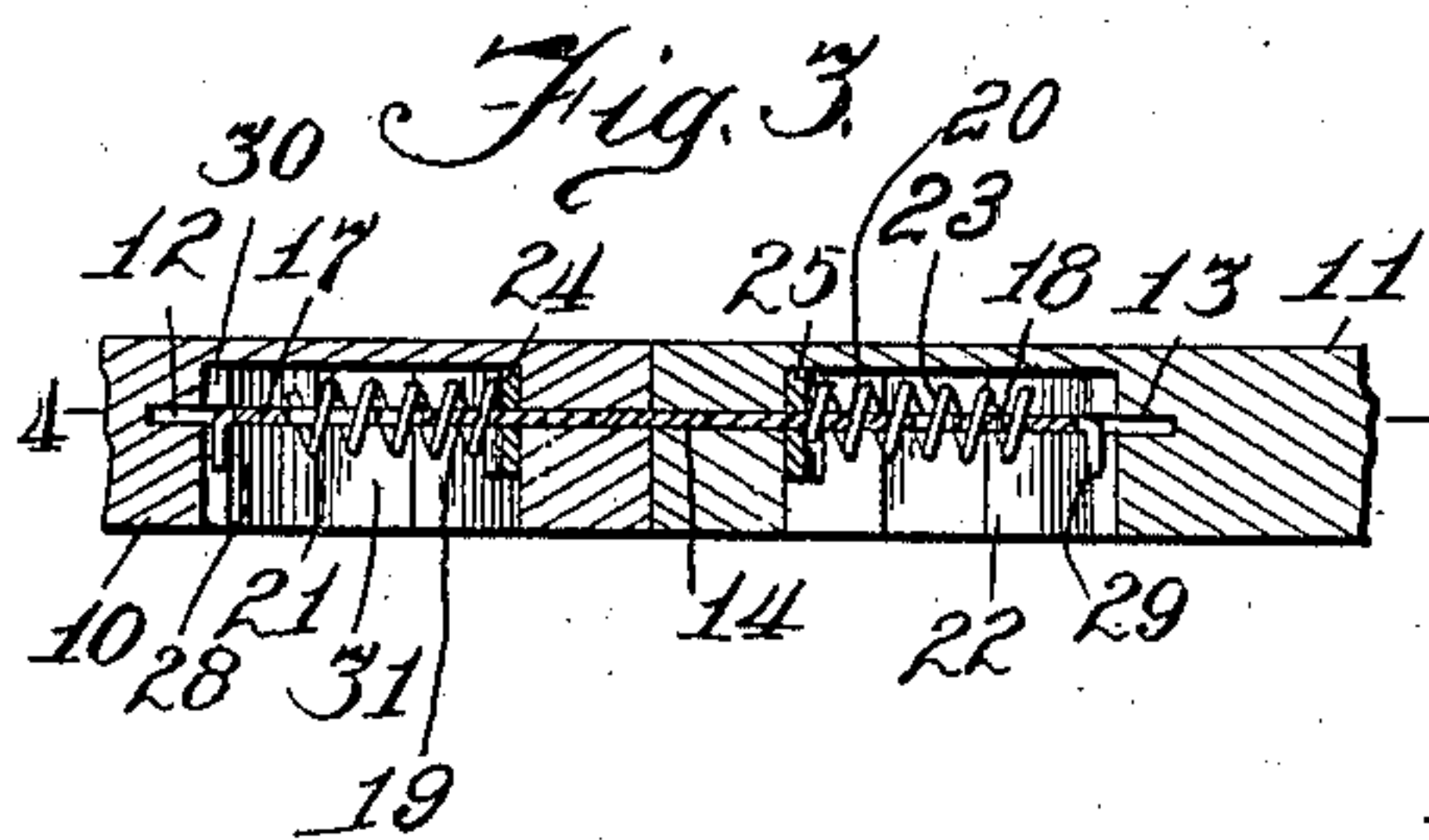


Fig. 5. 33

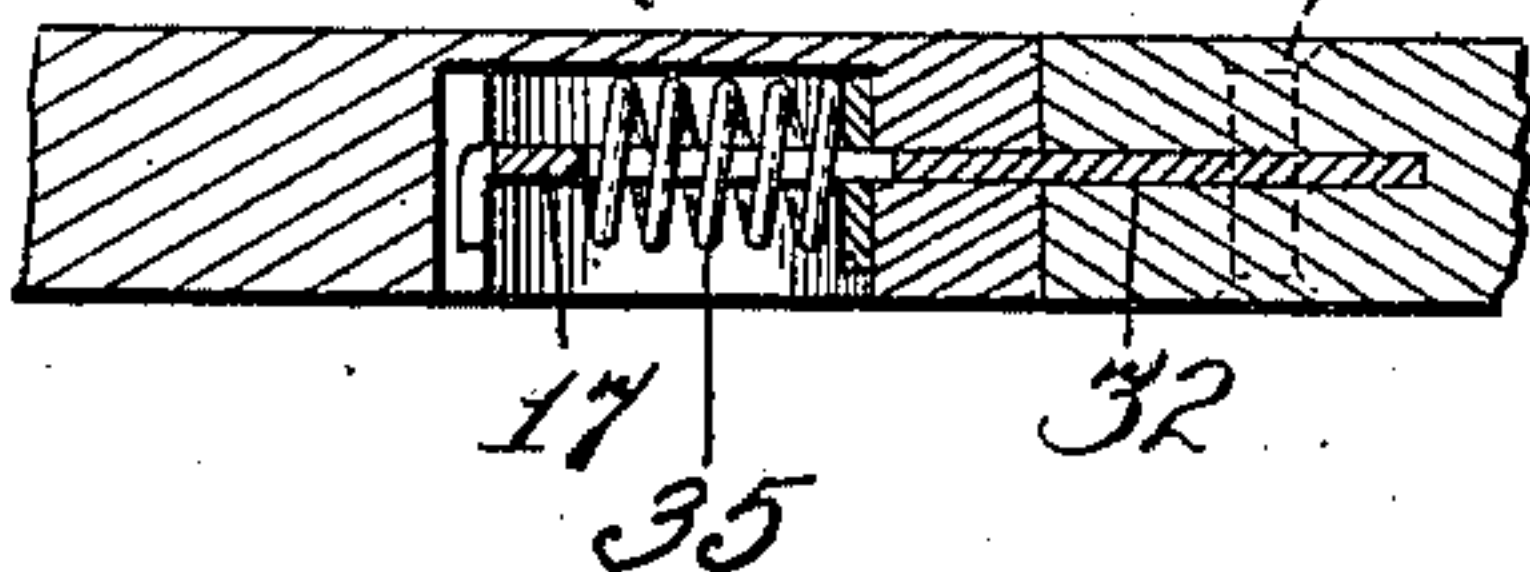
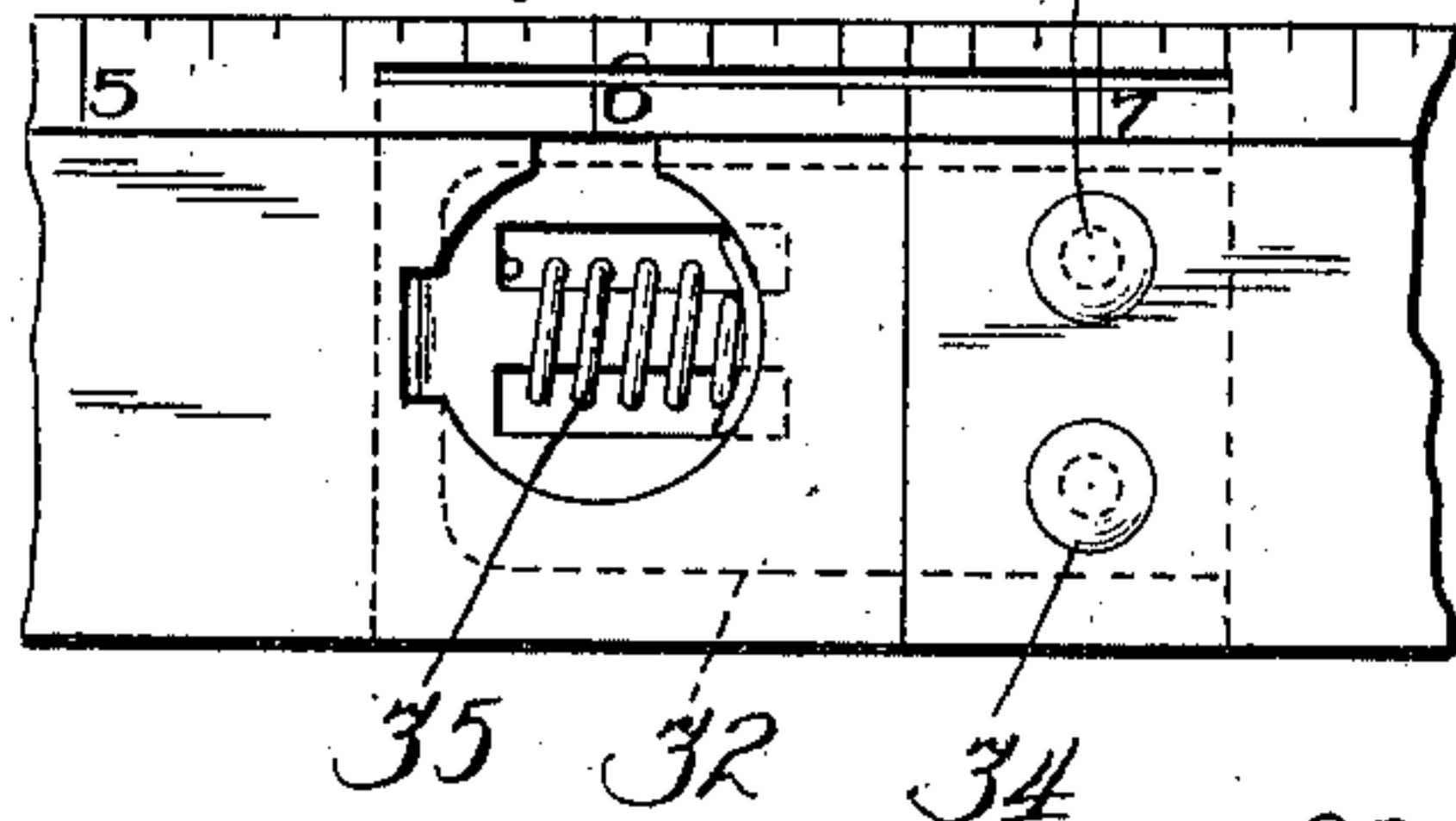


Fig. 6. 33



15. 24 Fig. 4.

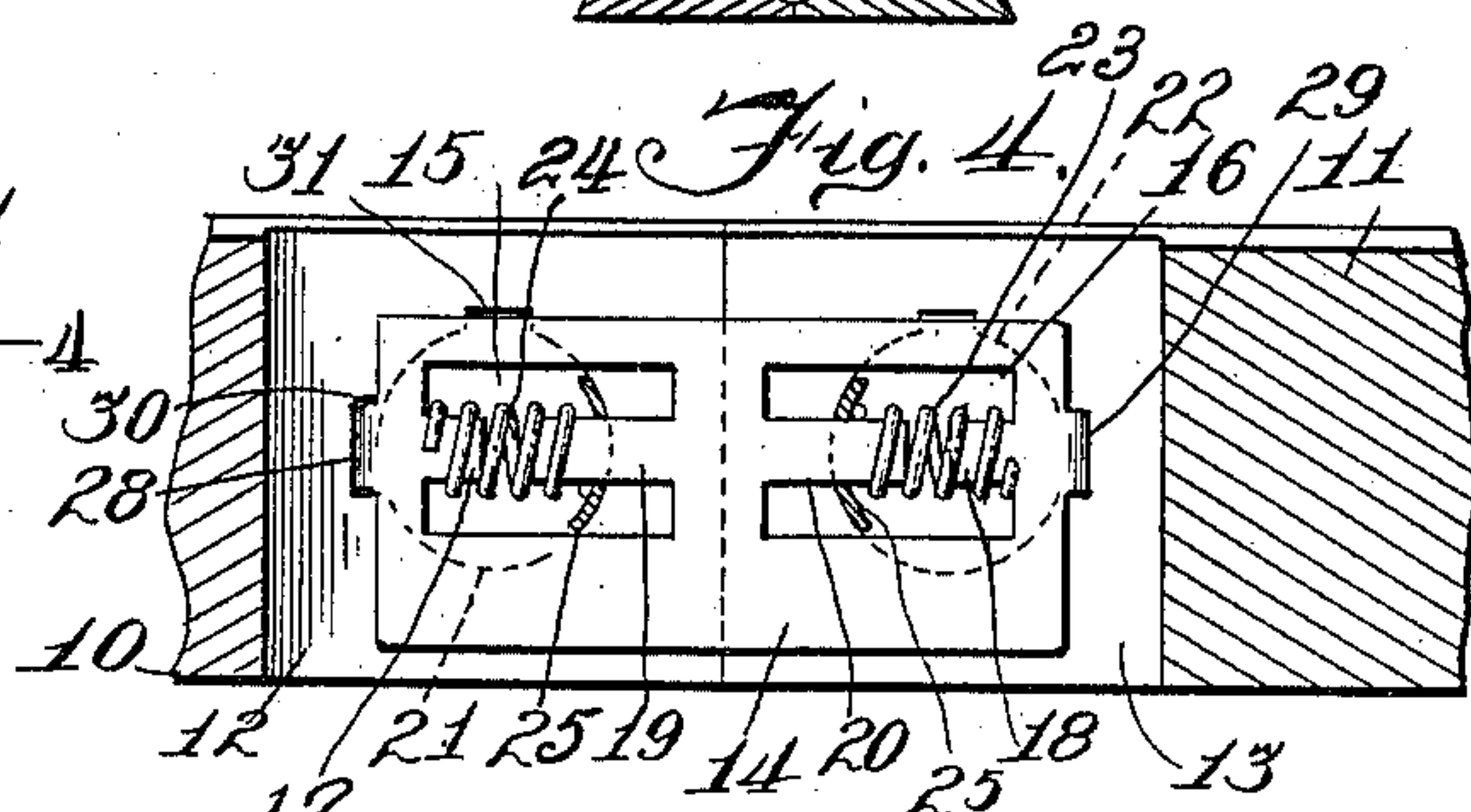


Fig. 1.

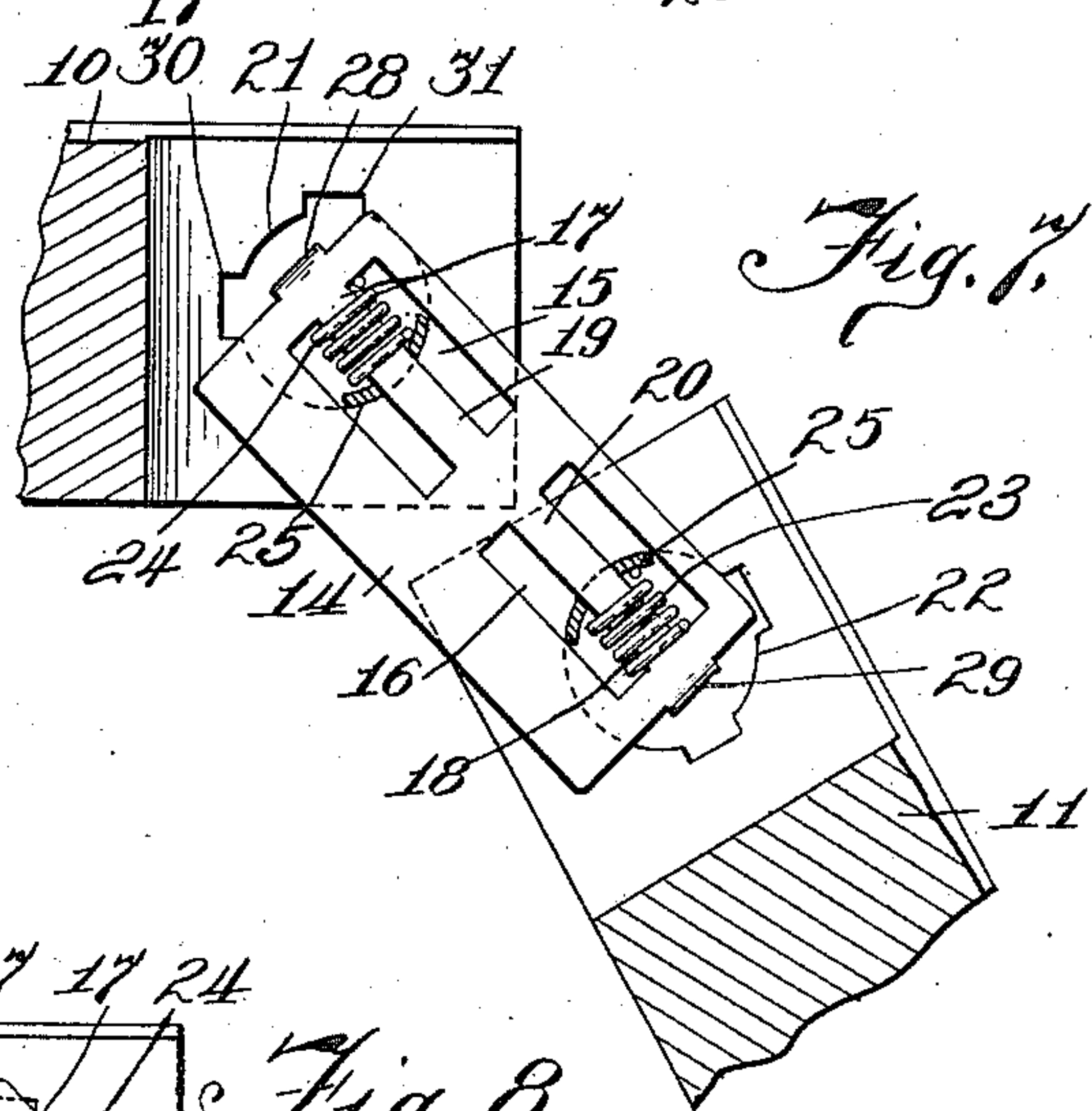
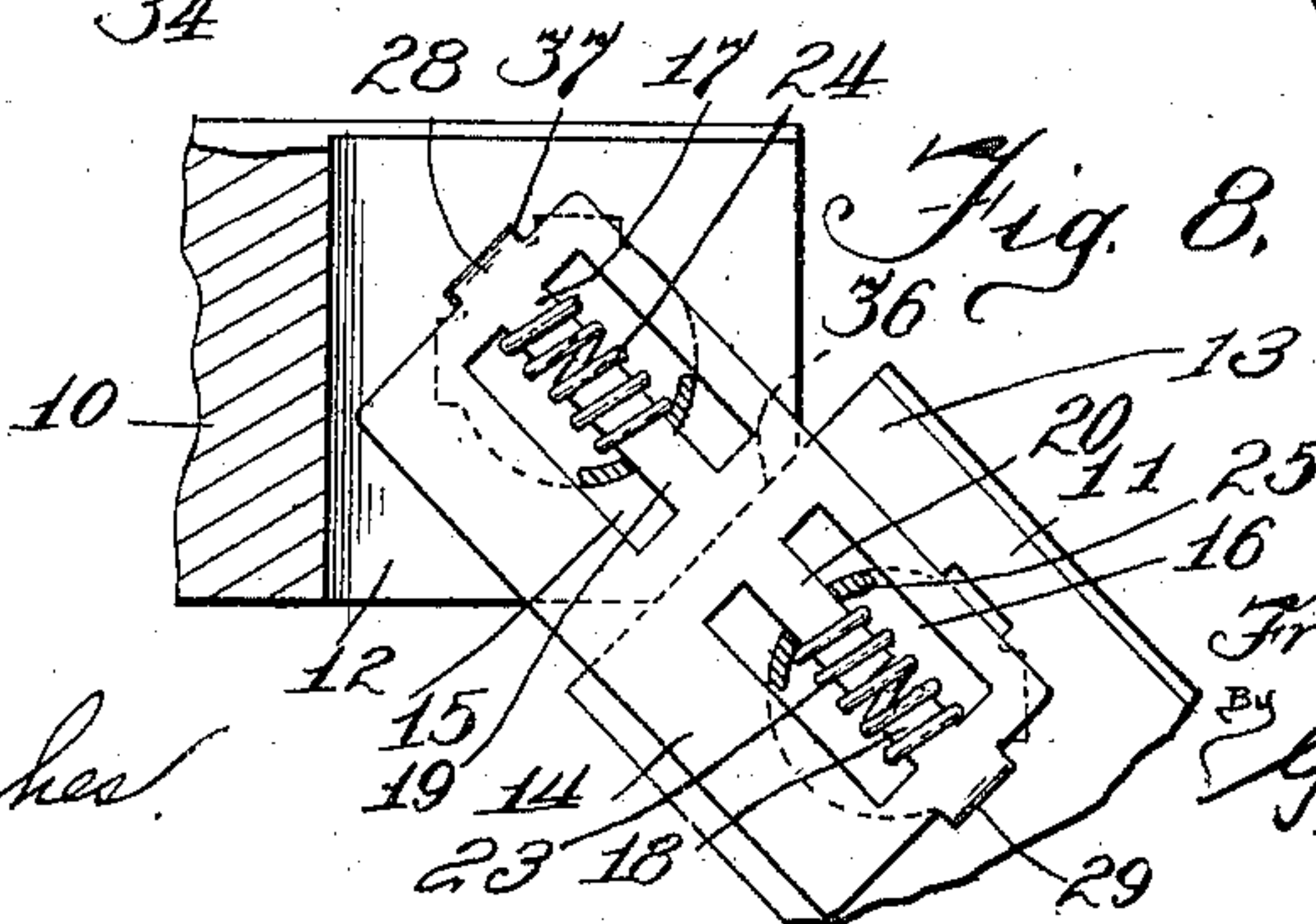


Fig. 8.



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# UNITED STATES PATENT OFFICE.

FRANCIS WALTER ALTPETER, OF CHICAGO, ILLINOIS.

DRAFTSMAN'S RULE.

963,737.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed September 11, 1909. Serial No. 517,297.

*To all whom it may concern:*

Be it known that I, FRANCIS WALTER ALTPETER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Draftsmen's Rules; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and the numerals of reference marked thereon, which form a part of this specification.

The invention relates to folding rules for draftsmen's use, its object being to provide a simple, inexpensive yet efficient device of this kind, comprising a plurality of sections which may be arranged in alinement, or brought into angular relation, or folded to lie side by side, the joint uniting adjacent sections comprising springs which hold the two sections in the positions to which they are adjusted.

The invention consists of a device such as is hereinafter described and which is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of the rule in its extended form. Fig. 2 is a bottom plan view of the same, some of the parts being omitted, and different positions to which the rule may be adjusted being indicated by dotted lines. Fig. 3 is a detail section on the line 3—3 of Fig. 2. Fig. 4 is a detail plan section on the line 4—4 of Fig. 3. Fig. 5 is a detail central longitudinal section through the joint, showing a modified form of construction. Fig. 6 is a detail bottom plan view showing the construction illustrated in Fig. 5. Fig. 7 is a detail plan section illustrating the movement of the ruler sections. Fig. 8 is a similar view showing a modified form of the construction, and Fig. 9 is a detail section on the line 9—9 of Fig. 2.

The rule comprises, as illustrated, a pair of sections 10, 11, each having one of its edges beveled and marked with a graduated scale. Adjacent ends of the ruler sections are longitudinally slotted, the slots entering through the edges as shown at 12, 13, and within the slots thus formed there is housed a hinge-plate 14 provided adjacent each of its ends with longitudinal apertures 15, 16, and with tongues 17, 18 projecting into the apertures from the inner ends. The ruler

sections are recessed from their lower faces, adjacent their meeting ends as shown at 21, 22, such recesses being circular in form and extending nearly through the ruler sections. Within these recesses 21, 22 are housed expansible, helical springs 23, 24, each of said springs being mounted upon one of the pair of tongues as 17, 19 or 18, 20 of the hinge-plate 14 and reacting between the end wall of the apertures of the plate and a wear-plate 25, fitted upon the tongues 19, or 20 and bearing against the walls of the apertures 21, 22. The tension of the spring 23, 24 is such that when the ruler sections are in alinement, as shown at Figs. 1 and 2, they are firmly drawn together, but by the application of force, separating the ruler sections, these springs may be compressed to permit the members to be brought into angular relation, as is indicated by the dotted lines at 26, or brought into parallel relation as indicated by dotted lines at 27, Fig. 2. When in either of these positions, the tension of the spring draws them together with sufficient force to hold them against relative movement.

The hinge-plate 14 is provided at each of its ends with studs, as shown at 28, 29, and the walls of the recesses 20, 21 are apertured, as shown at 30, 31, to receive these studs when the ruler sections are in alinement or in angular relation.

In the modification illustrated in Figs. 5 and 6, the hinge-plate 32 is fixed to one of the ruler sections as by rivets 33, 34, and is secured to the other ruler section by means of a spring 35 in the same manner as both ends are secured in the construction previously described.

In the construction as illustrated in Fig. 8, one of the ruler sections, as 10, may have one of its corners cut away, as shown at 36, at an angle of 45° to its edges, thereby permitting the other ruler section 11 to be shifted to an intermediate position of 45°. A recess 37 in the walls of the spring-receiving recesses is located for receiving the lug 28 when the ruler sections are brought to this intermediate position.

I claim as my invention:

1. In a draftsman's ruler, in combination, two ruler sections, such sections being slotted from their adjacent ends and each having a lateral recess opening to its slot, a hinge-plate housed within the slots, and a compression spring housed within each recess



and re-acting longitudinally upon the plate and against the wall of the recess.

2. In a draftsman's ruler, in combination, two ruler sections, such sections being slotted from their adjacent ends and one thereof having a lateral recess opening to its slot, a hinge-plate housed within the slots, a compression spring located within the recess and re-acting longitudinally upon the plate and against the wall of the recess, and means for attaching the hinge-plate to the other ruler section.

3. In a draftsman's ruler, in combination, two ruler sections, such sections being slotted from their adjacent ends and one thereof having a lateral recess opening to its slot, a hinge-plate housed within the slots, a compression spring located within the recess and re-acting longitudinally upon the plate and against the wall of the recess, a lug projecting from the corresponding end of the hinge-plate, pockets in the walls of the re-

cess for engagement by the lug when the spring is expanded, and means for securing the hinge-plate to the other ruler section.

4. In a draftsman's ruler, in combination, two ruler sections having squared ends slotted from their adjacent ends, one of each ruler ends being mitered, a recess in one of the ruler sections and opening to its slot, such recess having a plurality of pockets in its wall, a hinge-plate housed within the slots of the two sections, a compression spring within the recess and reacting longitudinally upon the hinge-plate and against a wall of the recess, a lug projecting from the end of the hinge-plate and adapted to engage the pockets in the wall of the recess, and means for attaching the hinge-plate to the other ruler section.

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Witnesses:

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