

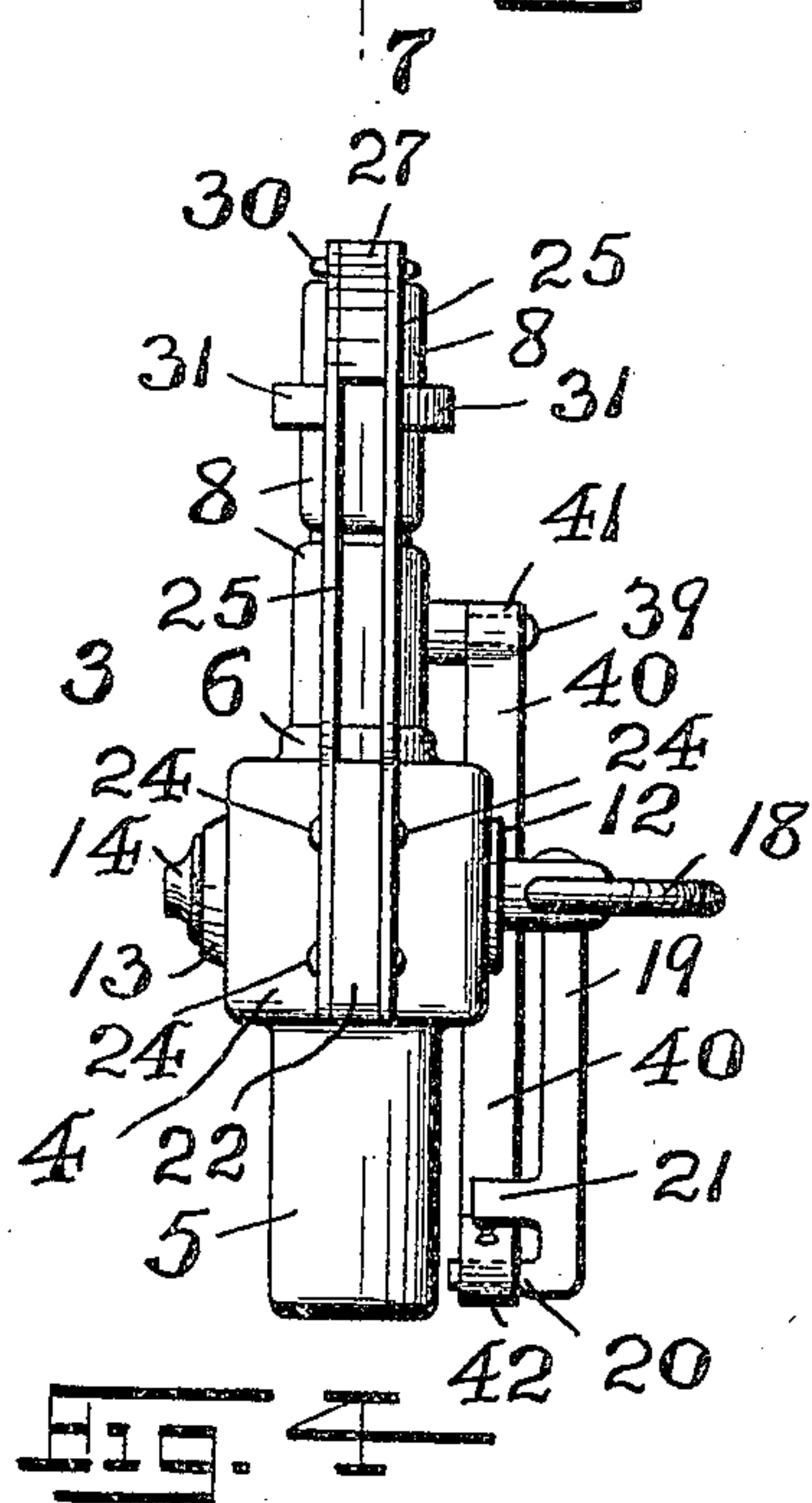
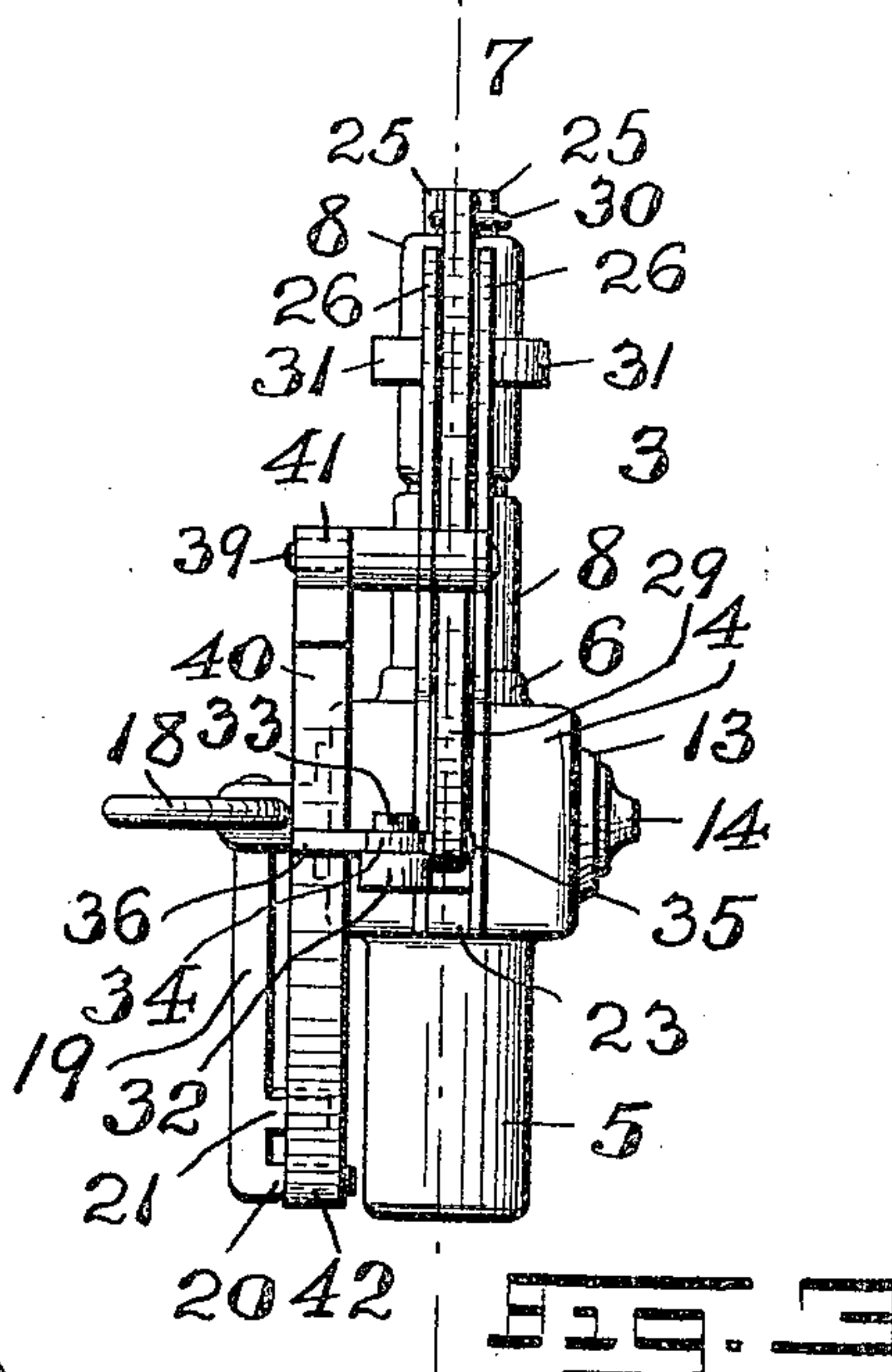
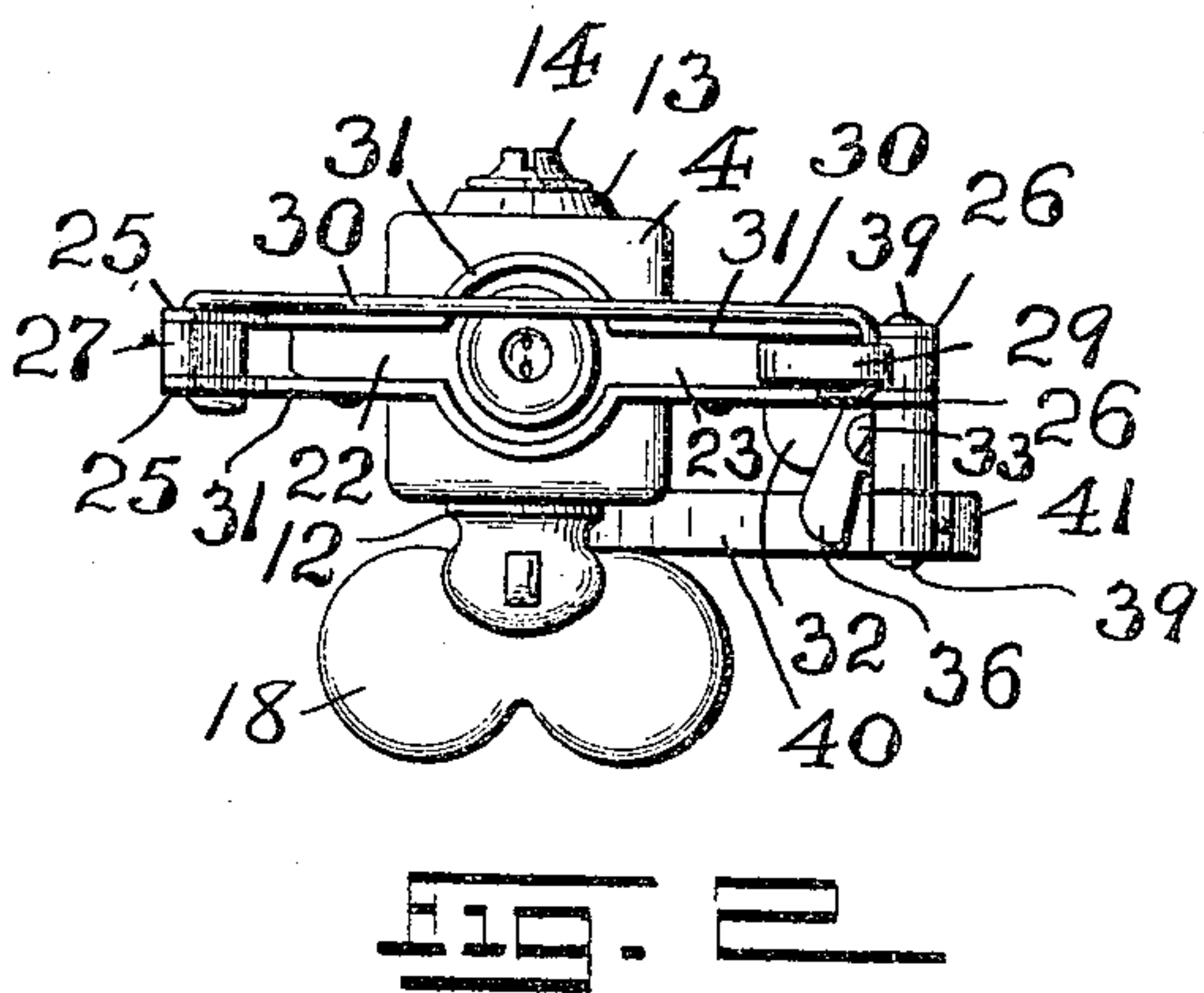
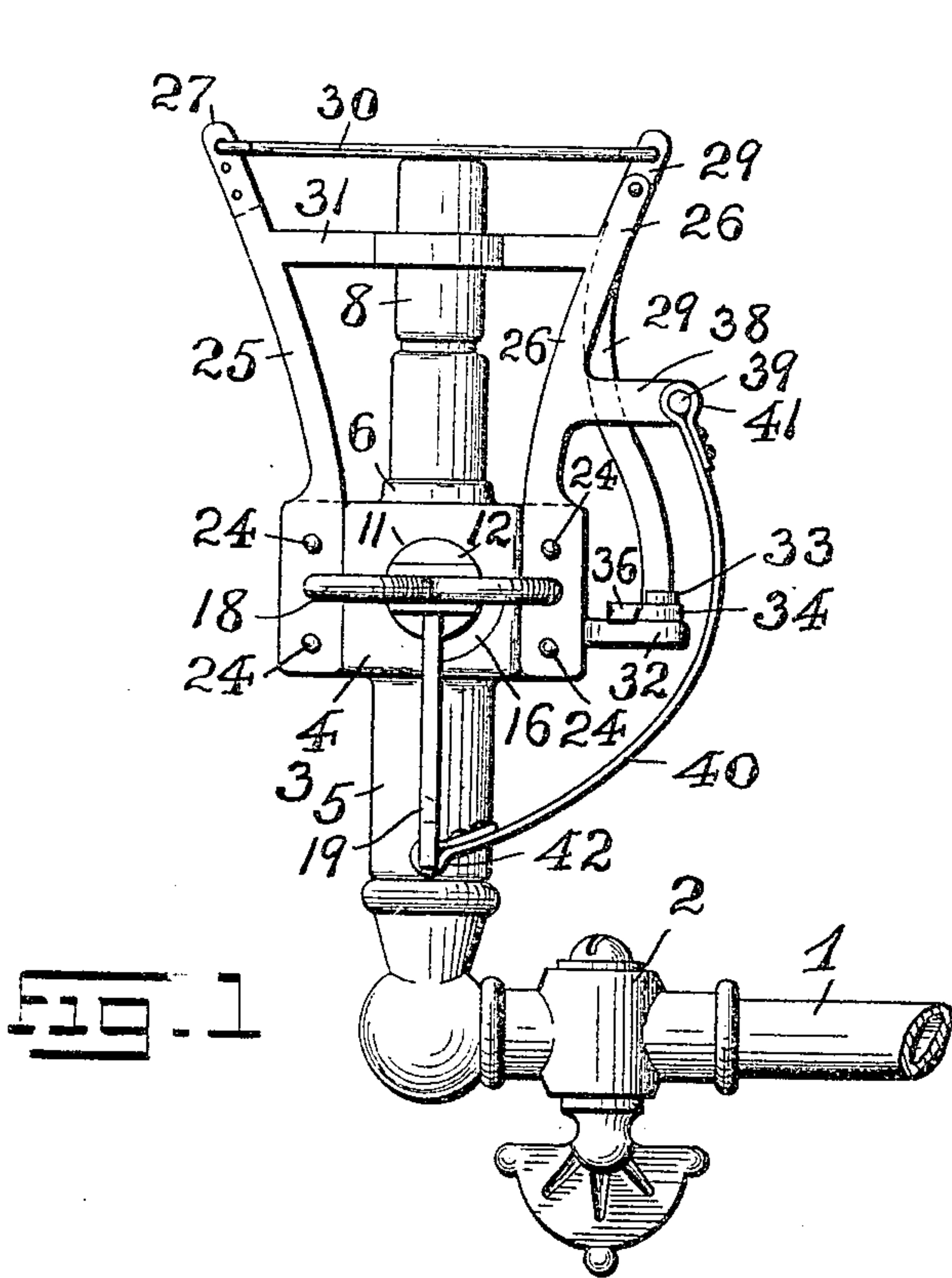
No. 801,241.

PATENTED OCT. 10, 1905.

P. HOCHHEIMER.  
SAFETY DEVICE FOR GAS FIXTURES.

APPLICATION FILED MAR. 10, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

Geo. D. Richards  
H. B. Fraentzel

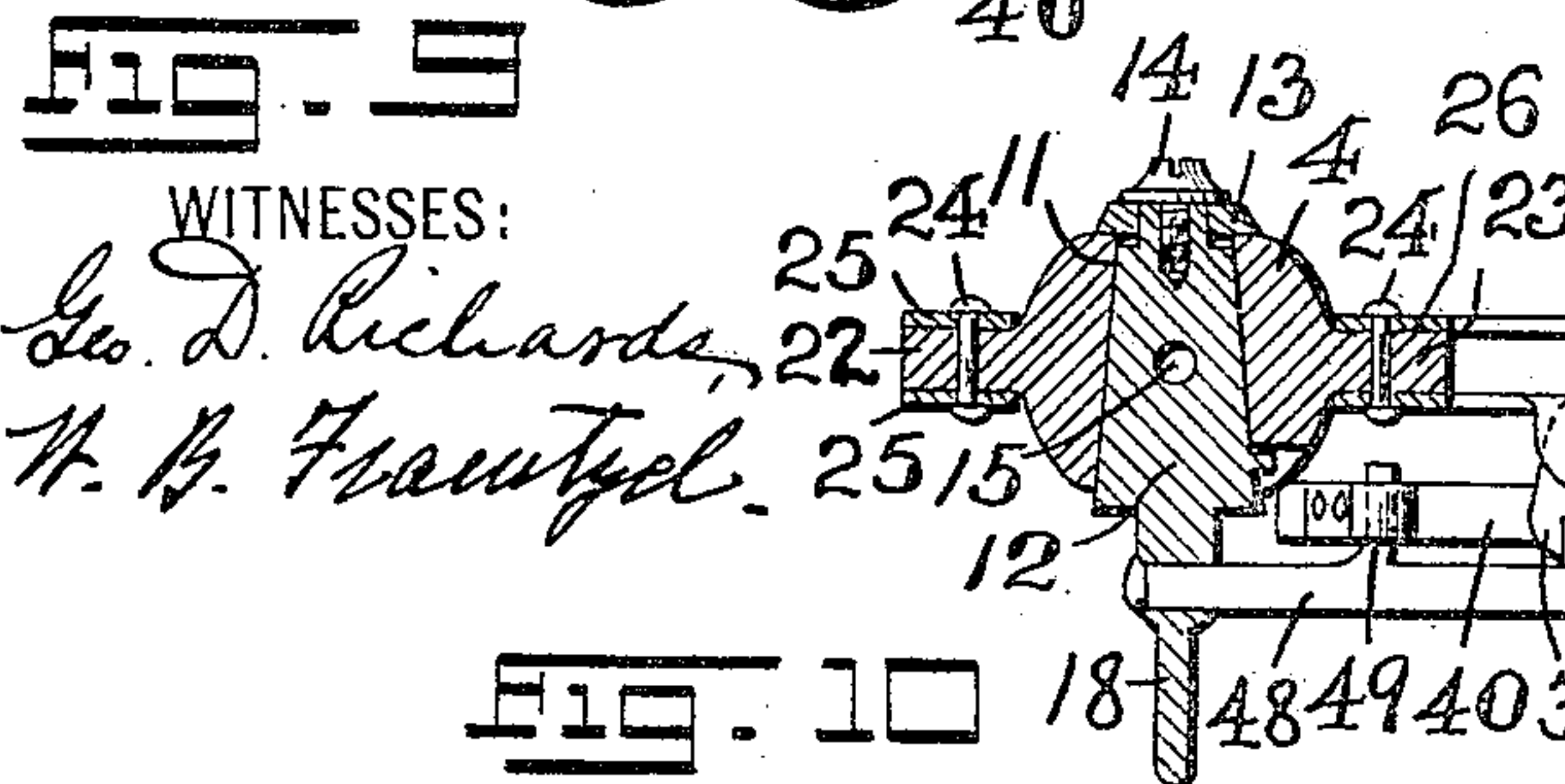
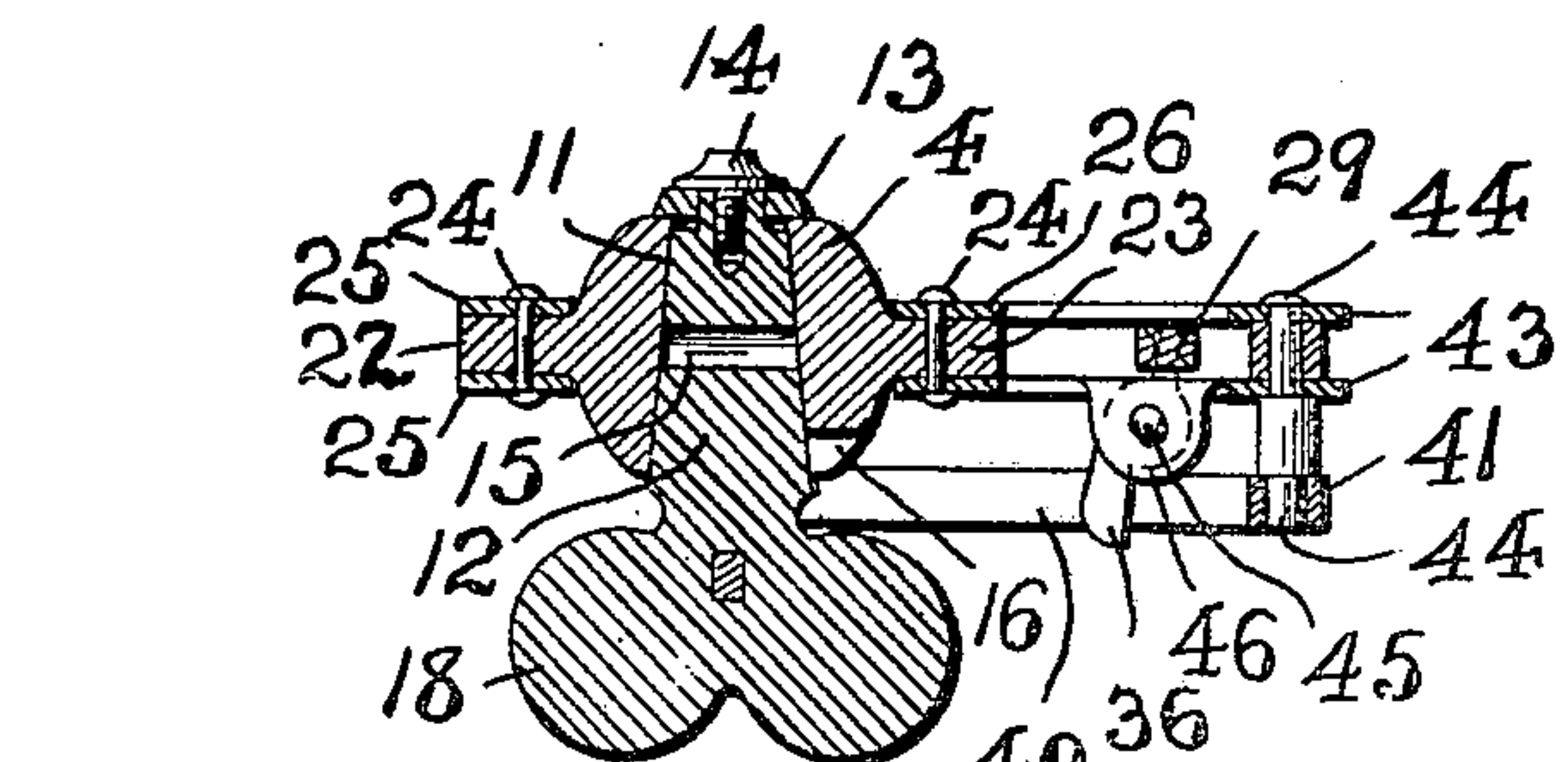
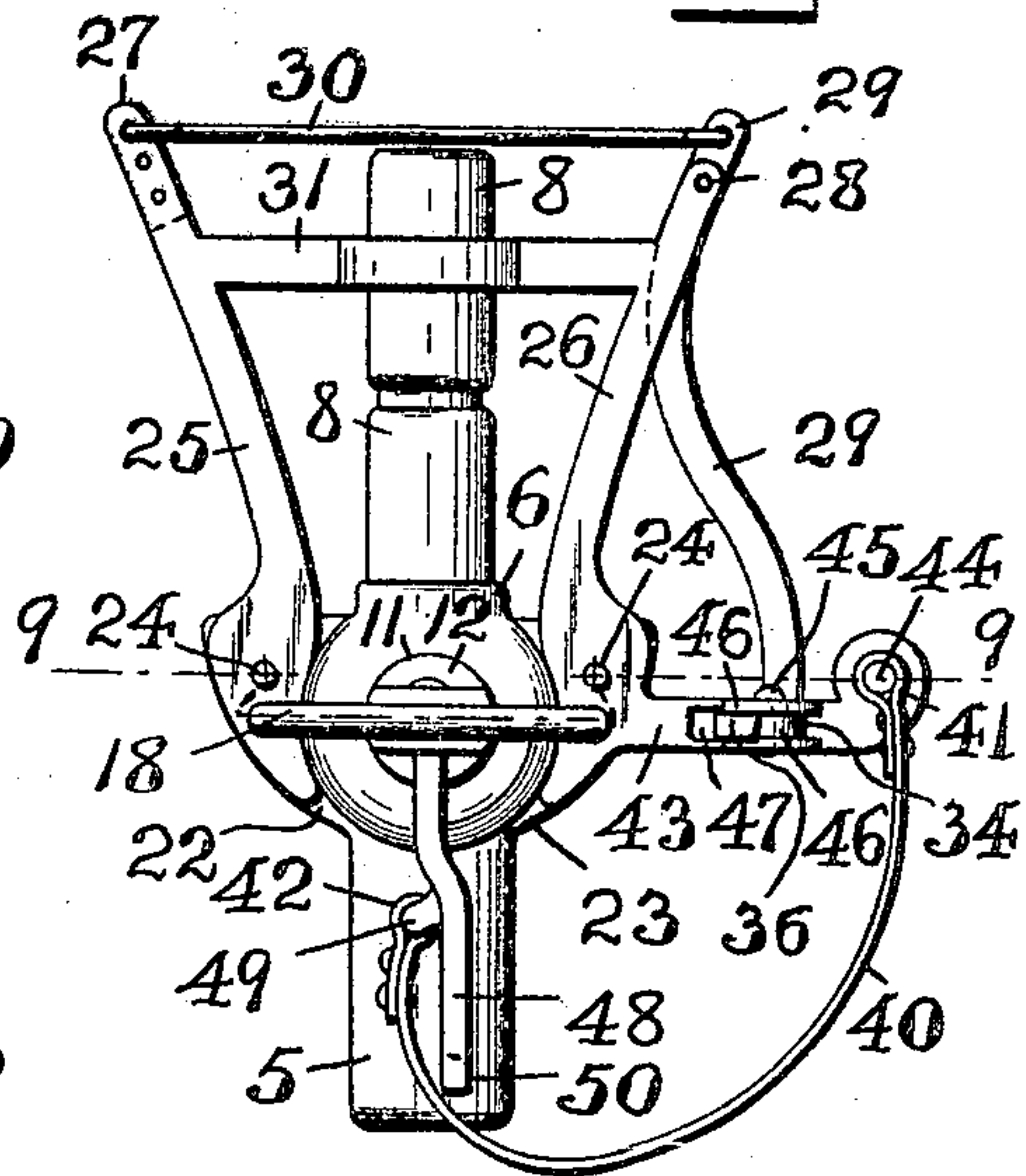
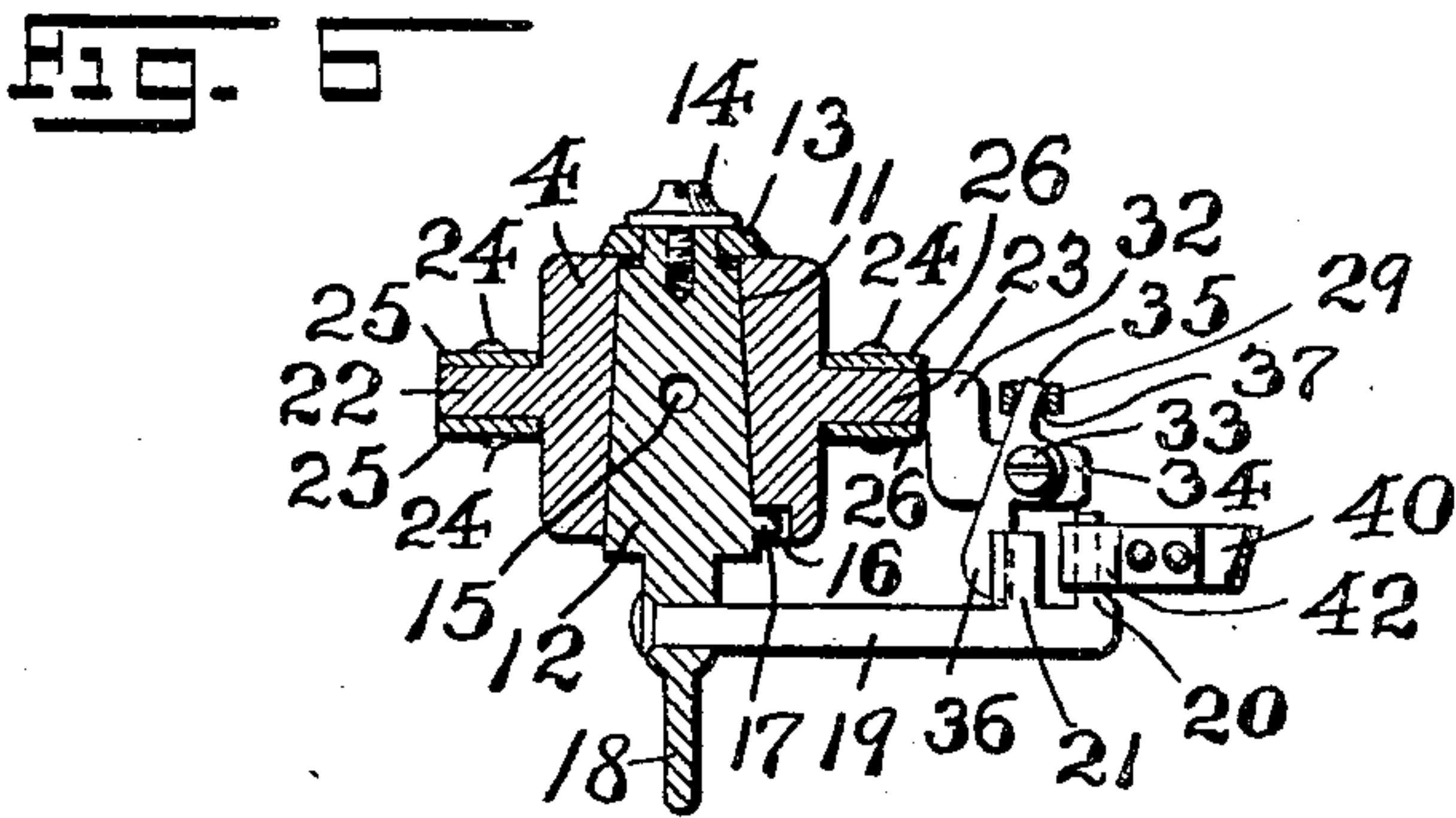
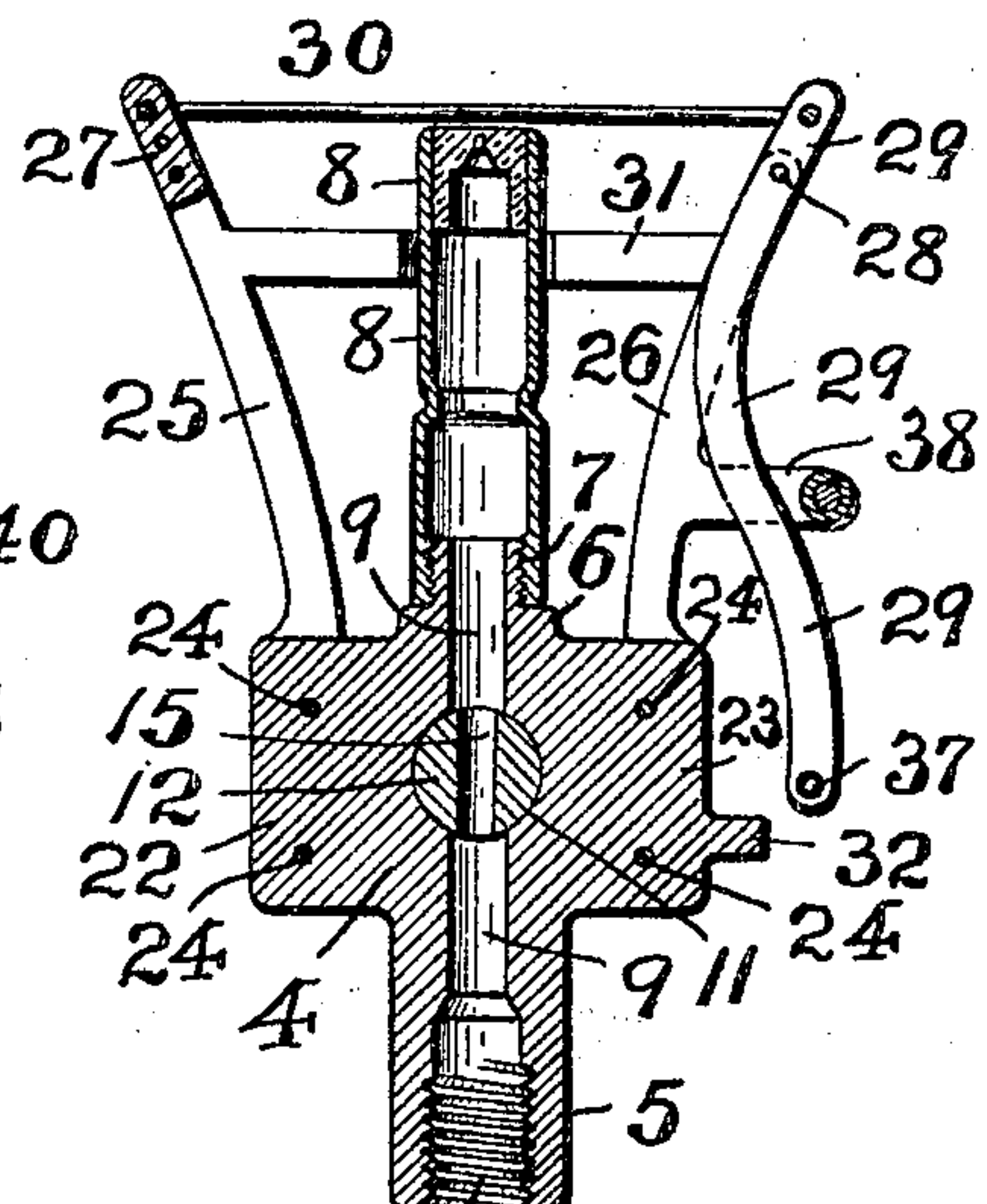
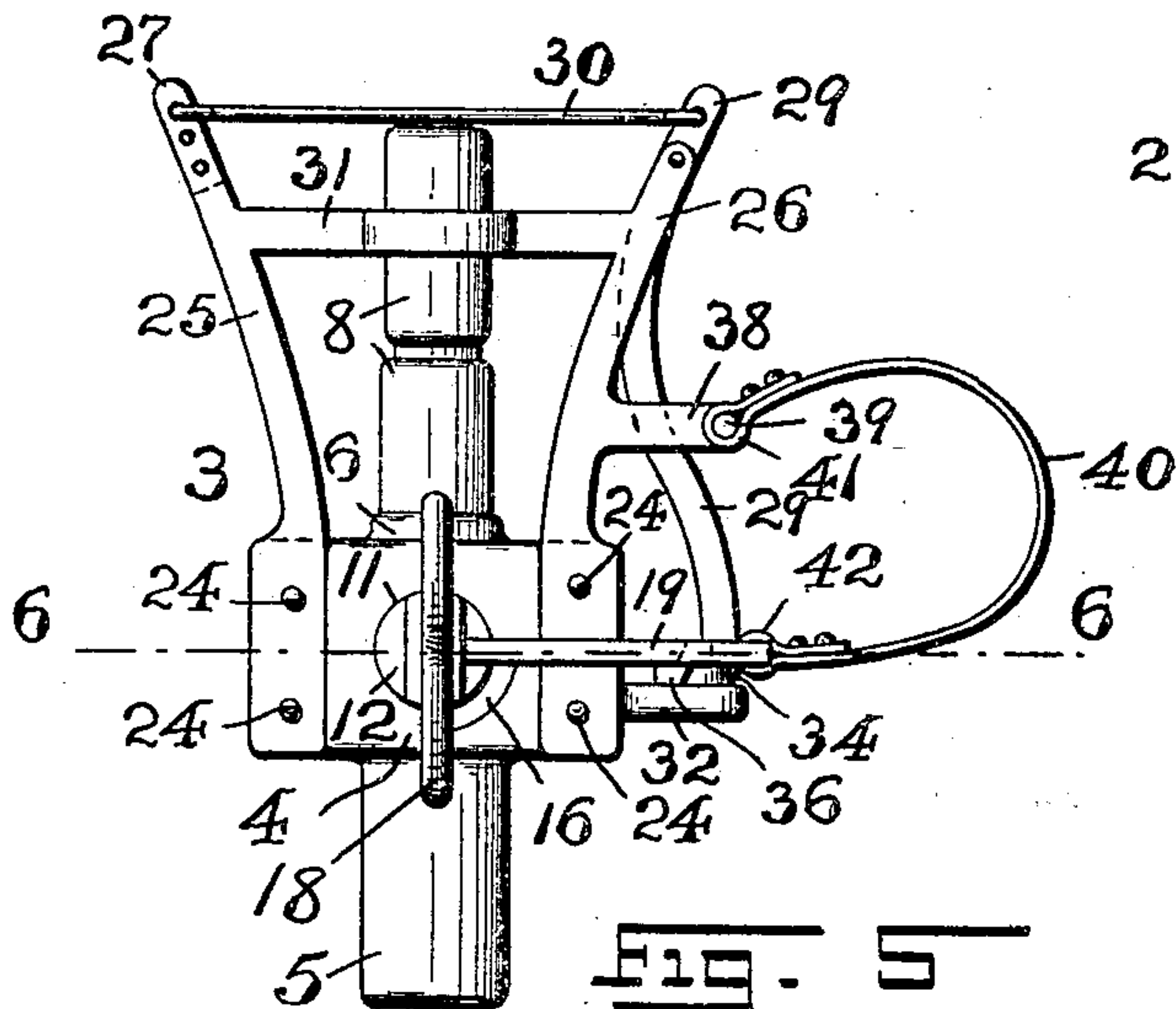
INVENTOR:

Philip Hochheimer,  
BY  
Fred C. Fraentzel,  
ATTORNEY

P. HOCHHEIMER.  
SAFETY DEVICE FOR GAS FIXTURES.

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2 SHEETS—SHEET 2.



WITNESSES:

Geo. D. Richards,  
H. B. Fraentzel.

INVENTOR:

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BY

Frederic Fraentzel  
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# UNITED STATES PATENT OFFICE.

PHILIP HOCHHEIMER, OF NEWARK, NEW JERSEY.

## SAFETY DEVICE FOR GAS-FIXTURES.

No. 801,241.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed March 10, 1904. Serial No. 197,456.

*To all whom it may concern:*

Be it known that I, PHILIP HOCHHEIMER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Safety Devices for Gas-Fix-  
5 tures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled  
10 in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

15 This invention relates to improvements in safety gas-cocks; and the invention has for its primary object to provide a neat and cheaply-constructed safety device or attachment com-  
20 bined with a burner which is of such character that the device acts as an auxiliary cock to the gas-cock of the usual arrangement and construction to automatically shut off and pre-  
25 vent the escape of the gas should for some unforeseen reason or through carelessness the flame at the burner become extinguished while the main cock is left in its open position.

A further object of this invention is to provide a novel construction of safety device or  
30 attachment for the burners of gas-fixtures which when the flame is extinguished acts automatically to close an auxiliary cock or plug between the burner and the main cock in ad-  
35 dition to the closure of said main cock to prevent any possible and accidental escape of gas because of the possibility of having incom-  
pletely turned off the main cock or because the person has blown out the flame.

A still further object of this invention is to provide a gas-cock which is held in its open  
40 position by contact of the gas-flame with a portion of a cock or plug actuating means and closes the auxiliary cock when the flame is extinguished.

The invention consists in the safety device  
45 or attachment for gas-fixtures hereinafter more particularly specified, and, furthermore, this invention consists in the various arrange-  
ments and combinations of devices and parts, as well as in the details of the construction of  
50 the same, all of which will be fully described in the following specification and then finally embodied in the clauses of the claim which are appended to and form an essential part of the said specification.

The invention is clearly illustrated in the 55 accompanying drawings, in which—

Figure 1 is a face view of a safety device or attachment comprising the principles of my present invention and illustrating its ap-  
60 plication to a gas fixture or pipe, which is provided with the ordinary and hereinafter termed "main" gas-cock, the gas-cock being represented in its open relation with the gas-  
65 pipe in which it is arranged, but the parts of the safety device or attachment being repre-  
sented in their normal initial and automati-  
cally-closed relation to prevent the escape of the gas from the burner. Fig. 2 is a top or  
plan view of the safety device, and Figs. 3  
and 4 are the two end views of the same. Fig. 70  
5 is a face view of the safety device with its movable parts in their actuated positions when the gas has been ignited. Fig. 6 is a horizon-  
tal section taken on line 6 6 in said Fig. 5  
75 with certain parts represented in plan or top view, and Fig. 7 is a transverse vertical sec-  
tion taken on line 7 7 in said Fig. 3 of the drawings. Fig. 8 is a face view of a safety  
device or attachment of a slightly-modified  
80 construction, but still embodying the prin-  
ciples of this invention. Fig. 9 is a horizon-  
tal section taken on line 9 9 in said Fig. 8,  
illustrating the cock or plug of the safety  
device in its closed position; and Fig. 10 is a  
similar view of the same parts representing  
85 the cock or plug in its open position.

Similar characters of reference are employed in the said above-described views to indicate corresponding parts.

Referring now to the several figures of the 90 drawings, the reference character 1 indicates any suitable gas-fixture provided with the usual form of main gas cock or plug 2. From the usual screw-threaded portion of the gas-  
95 fixture 1 I have removed the ordinary burner and in its place I have screwed the safety device or attachment 3, embodying the principles of this invention. This device 3, as will be seen from the figures of the drawings, consists, essentially, of a suitably-shaped body 100  
4, provided at its lower end with a hub-shaped portion 5 and upon the top with a projection or extension 6. This extension is preferably provided upon its outer cylindrical surface with a screw-thread 7 for the reception of a 105  
burner 8, as clearly illustrated. A gas duct or passage 9 extends through the said extension 6, the main body 4, and the hub-shaped



portion 5, the lower end portion of said duct 9 being formed with a screw-thread 10, as represented in Fig. 7 of the drawings, for securing the safety device upon the usual screw-threaded end portion of the gas-fixture 1, from which the ordinary burner has been removed, as has been stated. Extending laterally through the body 4 of the safety device 3 is a preferably cone-shaped bearing 11, in which is rotatably arranged a correspondingly-formed cock or plug 12, held therein by means of a washer 13 and screw 14 in the manner of the usual gas-cocks. A duct 15 extends diametrically across said plug 12, which can be brought in alinement with the duct 9 to provide a clear passage-way for the gas to the burner 8 when the gas is to be lighted.

A quadrant-shaped depression 16 or other suitable means is also provided in the side of the body 4, in which extends and is movably arranged therein a lug or projection 17, extending from the cock or plug 12, as illustrated in Fig. 6 of the drawings, and whereby the opening and closing movements of the said plug 12 are limited to the length of the said depression 16 or other similar stopping means that may be employed. The said plug 12 is also provided at its enlarged end portion, which extends from the side of the body 4, with a turning or operating means, as 18, with which is connected an arm or lever 19, provided with lugs or projections 20 and 21, as clearly illustrated in Figs. 3, 4, and 6, and for the purposes to be presently described.

From an inspection of the several figures of the drawings it will be seen that the body 4 of the safety device is also made upon its opposite sides with longitudinally-extending wings or projections 22 and 23, and upon the opposite surfaces of the respective wings or projections 22 and 23 are secured, by means of rivets 24 or in any other suitable manner, upwardly-extending arms or posts 25 and 26, the one pair of said arms or posts 25 having arranged and secured between them at or near their upper ends a block or plate 27, and pivotally secured between the other pair of arms or posts 26 upon a pin 28 is an arm or lever 29 for the purposes to be presently described. The said block or plate 27 and the upper portion of the said pivoted arm or lever 29 are connected by means of an expansion rod or wire 30, which passes in close proximity over the upper end of the burner and preferably to one side of the gas-outlet in said burner, as clearly illustrated in Fig. 2 of the drawings. To provide rigidity of construction, the said arms or posts 25 and 26 are preferably connected by the suitably-shaped cross-pieces 31, as clearly illustrated. Extending from one of the said wings or projections, as 23, is a suitable bracket or support 32, provided with a pivot post or pin 33, on which is movably arranged a dog 34, provided with the end portions 35 and 36. Referring now more par-

ticularly to Figs. 6 and 7, it will be seen that the pivotal arm or lever 29 is provided in its lower end portion with an opening or perforation 37, into which the end portion 35 of the dog 34 extends and is movably arranged therein that the pivotal movement of the said arm or lever 29 will produce a corresponding pivotal movement horizontally of the said dog 34. The said arms or posts 26 are made with suitable fingers 38, provided with a stud or pin 39, upon which is arranged the looped end portion 41 of a flat spring 40, the said spring having its other looped end portion 42 operatively attached to the lug or projection 20 of the arm or lever 19.

Under normal conditions when the gas cock or plug 2 in the fixture 1 is closed and when there is no flame at the burner 8 the spring 40, the arm or lever 29, and the dog 34 are in their normal initial positions, (indicated in Figs. 1 to 4, inclusive,) and the pressure exerted by the spring 40 upon the turning means 18 of the plug 12 causes the gas-passage through the body 4 of the safety device to be closed, and in this relation these parts of the safety device will remain irrespective of the opened or closed position of the main cock 2.

To light the gas at the burner 8, the cock 2 is brought into its open position with relation to the pipe 1 in the usual manner, and the operator then turns the cock or plug 12 from its closed position (indicated in Fig. 1) to its opened position, (represented in Fig. 5,) holding the plug in this last position until the gas has been ignited and the heat from the flame has quickly and sufficiently expanded the bar or wire 30 to move the end portion 36 of the dog 34 by the intermediate action of the arm or lever 29 from the position in Fig. 2 to that represented in Fig. 6, and thereby bringing the said end portion 36 directly beneath the lug or projection 21 of the arm or lever 19 and preventing the return of the plug 12 to its closing position. In this relation these parts will be retained as long as the gas is lighted and burns at said burner 8; but as soon as the flame at said burner 8 is extinguished, whether by closing the main cock 2 in the fixture 1 or whether by accident or otherwise extinguishing the flame, as in the case of ignorance blowing out the light, the bar or wire 30 will soon have sufficiently contracted to cause the lever 29 to produce the disengagement of the portion 36 of the dog 34 from the lug 21 of the arm or lever 19, and the spring 40 then is free to exert its pressure and returns the cock or plug 12 to its normal initial position, whereby the gas-passage 9 through the body 4 is again closed and any possible and detrimental escape of the gas is avoided.

It will thus be clearly seen that I have produced a simply-constructed and effectively-operating safety device for gas-fixtures which is automatic in its operation to shut off the gas, so that there can be no accidental escape



of the gas, nor can the plug be accidentally brought into its open position, as will be clearly evident.

In Figs. 8, 9, and 10 I have illustrated a slightly-modified form of construction of safety device, the same, however, embodying all the principal features of my present invention. In this construction the body 4 of the device is of a slightly-modified form and shape, and the pair of posts or arms 26 instead of being provided with the fingers 38 and pin 39 are made with extensions or arms 43, provided with a pin 44, to which the looped end 41 of the spring 40 is attached. The dog 34 in this case is pivoted upon a pin 45, connected with a pair of ears 46, extending from one of said fingers 43, and the end portion 35 of the dog 34 extends through an opening 47 and is connected with the arm or lever 29 in the manner previously described.

The turning or actuating means 18 of the plug 12 is provided with an arm 48, formed with the lugs or projections 49 and 50. The lower end portion 42 of the spring 40 in this case is attached to the lug or projection 49 of the arm 48 and the parts normally are in the positions indicated in Figs. 8 and 9 of the drawings; but when the plug 12 has been turned and the gas has been lighted then the end portion 36 of the dog 34 is in holding engagement with the said plug or projection 50, as clearly illustrated in Fig. 10.

The workings and operations of the various parts of this form of safety device are the same as those described in connection with the construction illustrated in Figs. 1 to 7, inclusive, and will be clearly understood from an inspection of said Figs. 8, 9, and 10.

Of course I am aware that changes may be made in the arrangements and combinations of the various parts without departing from the scope of my present invention. Hence I do not limit my invention to the exact arrangements and combinations of the parts as described in the foregoing specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what I claim is—

1. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, said body being provided with oppositely-extending wings, and a gas passage and burner, a gas cock or plug rotatively arranged in said body, upwardly-extending carrying-arms secured to said wings, a closing-spring connected with one of said arms and with the gas cock or plug, a lever pivotally connected with the arm which carries said spring, an expansion-rod supported at one end by said lever and at the other end by one of the said carrying-arms, said expansion-rod being in close proximity to said burner, a pivotal holding-dog connected with said device, and a means

of connection between a portion of said lever and said dog for actuating the latter and bringing it in holding engagement with an arm of the gas cock or plug for holding the same in its open position, substantially as and for the purposes set forth.

2. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, an expansion-rod in close proximity to the said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivotal dog connected with said device, and means between the said expansion-rod and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with the said cock or plug to hold said cock or plug in its open position, substantially as and for the purposes set forth.

3. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, an expansion-rod in close proximity to the said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivotal dog connected with said device, means between the said expansion-rod and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with the said cock or plug to hold said cock or plug in its open position when the gas is lighted, and a spring connected with said arm for closing the said cock or plug when the flame is extinguished, substantially as and for the purposes set forth.

4. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, an expansion-rod in close proximity to the said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivotal dog connected with said device, and a lever pivotally connected with said body, a means of connection between the upper portion of said lever and said expansion-rod, and a means of connection between the lower portion of said lever and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with the said cock or plug to hold said cock or plug in its open position, substantially as and for the purposes set forth.

5. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, upwardly-extending posts connected with said body, an expansion-rod connected



with a pair of said posts extending in close proximity across the upper portion of said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivoted dog connected with said device, means between the said expansion-rod and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with said cock or plug to hold said cock or plug in its open position when the gas is lighted, and a spring connected with said arm for closing the said cock or plug when the flame is extinguished, substantially as and for the purposes set forth.

6. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, upwardly-extending posts connected with said body, an expansion-rod connected with a pair of said posts extending in close proximity across the upper portion of said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivoted dog connected with said device, and a lever pivotally connected with another pair of said upwardly-extending posts, a means of connection between the upper portion of said lever and said expansion-rod, and a means of connection between the lower portion of said lever and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with the said cock or plug to hold said cock or plug in its open position, substantially as and for the purposes set forth.

7. A safety device for gas-fixtures comprising a body adapted to be attached to the gas-fixture, and having a gas passage and burner, a gas cock or plug rotatively arranged in said body, upwardly-extending posts connected with said body, an expansion-rod connected with a pair of said posts extending in close proximity across the upper portion of said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger on said arm, a pivoted dog connected with said device, a lever pivotally connected with another pair of said upwardly-extending posts, a means of connection between the upper portion of said lever and said expansion-rod, a means of connection between the lower

portion of said lever and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with the said cock or plug to hold said cock or plug in its open position, when the gas is lighted, and a spring connected with said arm for closing the said cock or plug when the flame is extinguished, substantially as and for the purposes set forth.

8. In a safety device for gas-fixtures, the combination, with a body adapted to be attached to a gas-fixture, said body being provided with a gas passage and a burner, and a rotatively-arranged cock or plug, of an expansion-rod extending in close proximity over the end of said burner and at one side of the opening in said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger in said arm, a pivotal dog connected with said device, and means between the said expansion-rod and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with said cock or plug to hold said cock or plug in its open position, substantially as and for the purposes set forth.

9. In a safety device for gas-fixtures, the combination, with a body adapted to be attached to a gas-fixture, said body being provided with a gas passage and a burner, and a rotatively-arranged cock or plug, of an expansion-rod extending in close proximity over the end of said burner and at one side of the opening in said burner, an arm connected with a portion of said cock or plug, and a laterally-extending finger in said arm, a pivotal dog connected with said device, means between the said expansion-rod and said dog for actuating said dog and bringing it in separable holding engagement with said finger of the arm connected with said cock or plug to hold said cock or plug in its open position when the gas is lighted, and a spring connected with said arm for closing the said cock or plug when the flame is extinguished, substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 8th day of March, 1904.

PHILIP HOCHHEIMER.

Witnesses:

FREDK. C. FRAENTZEL,  
GEO. D. RICHARDS.