

No. 639,804.

Patented Dec. 26, 1899.

F. WYGAL.
BICYCLE SUPPORT.

(Application filed Oct. 10, 1899.)

(No Model.)

Fig. 1.

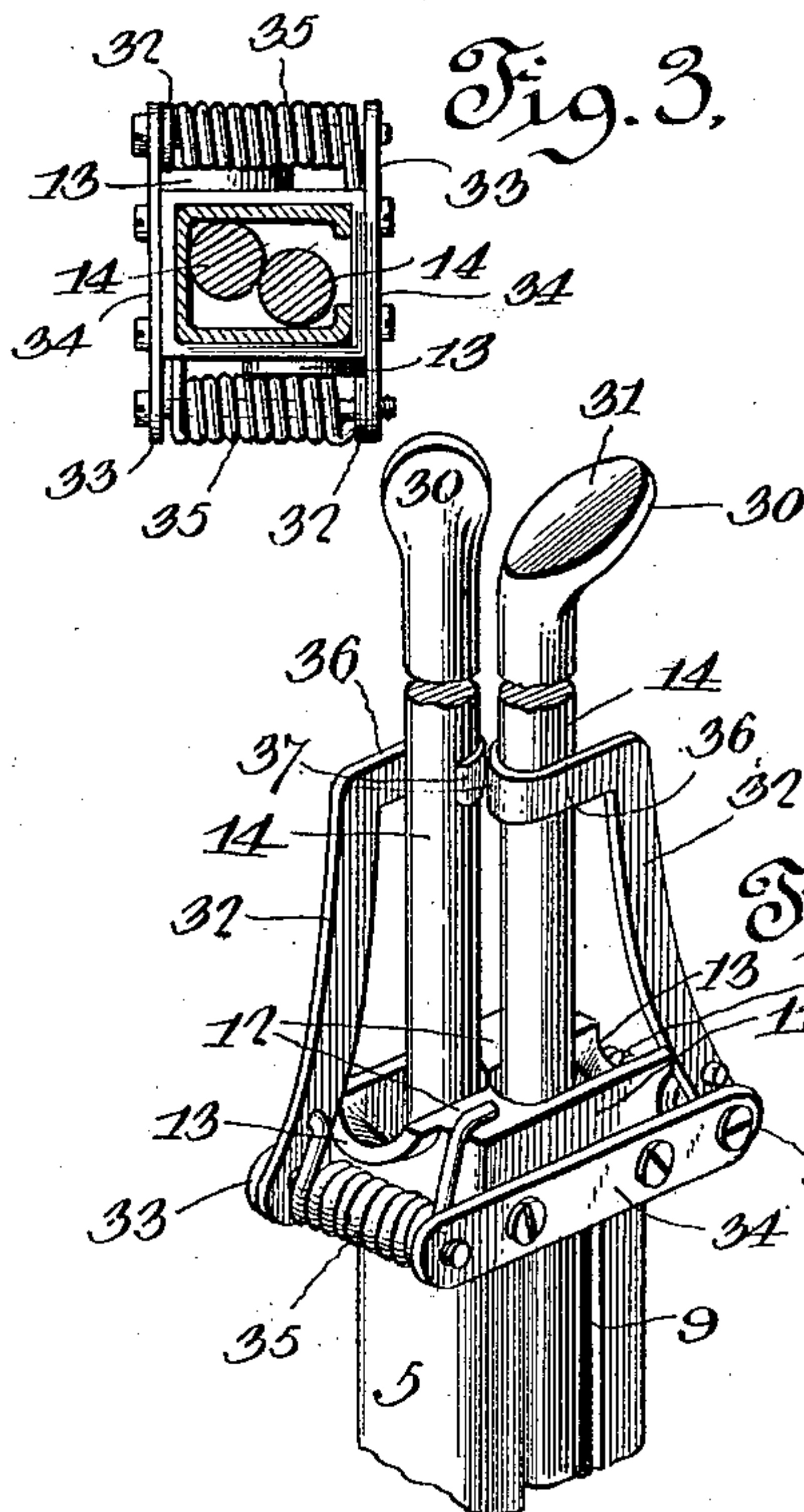
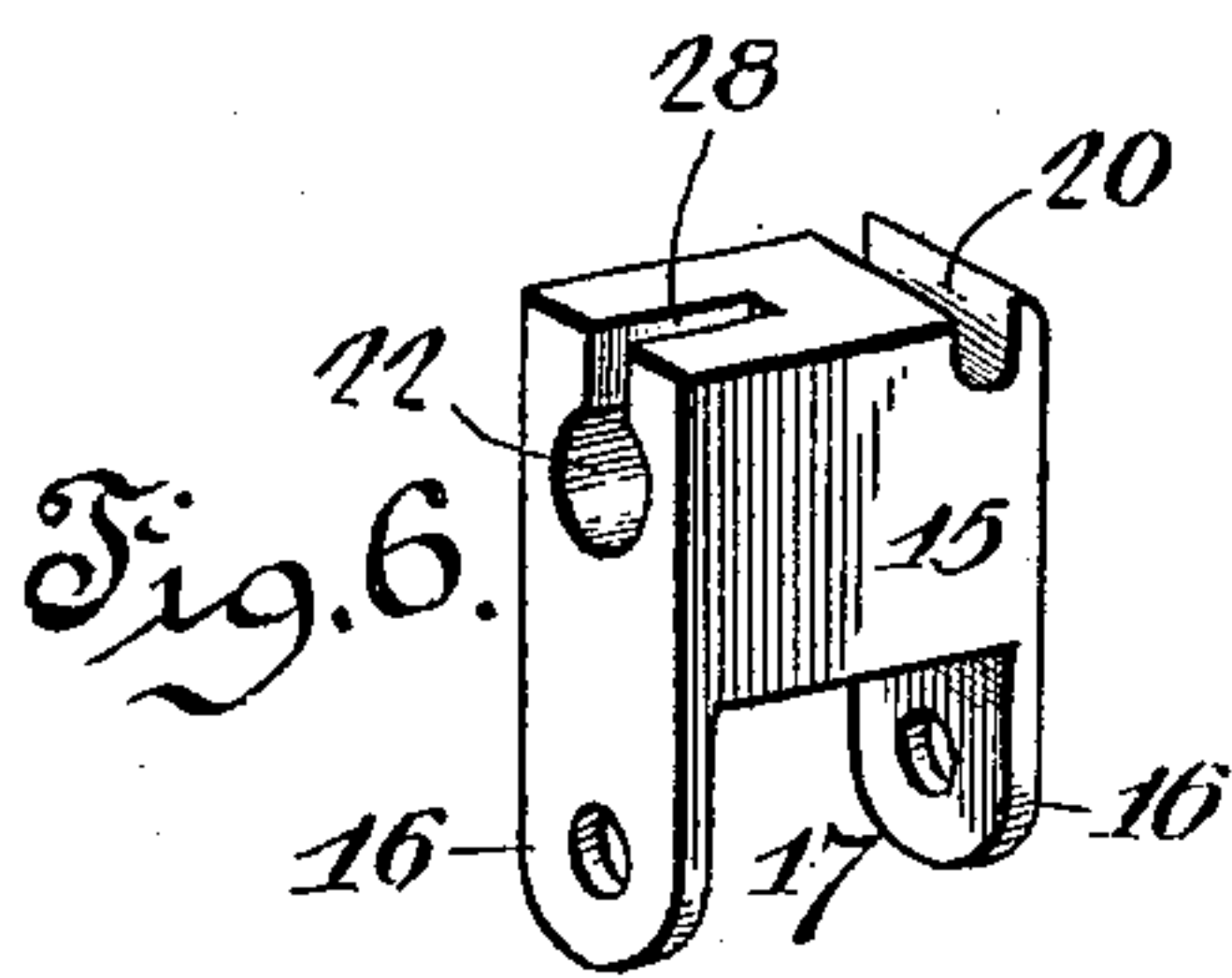
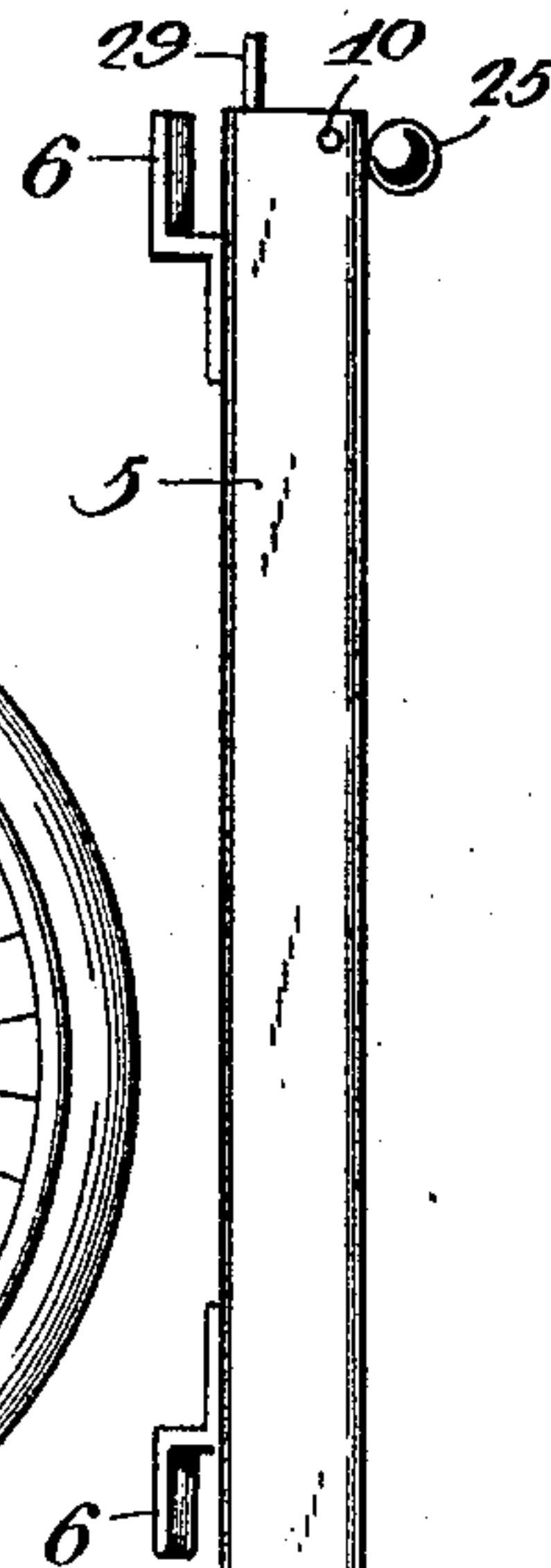
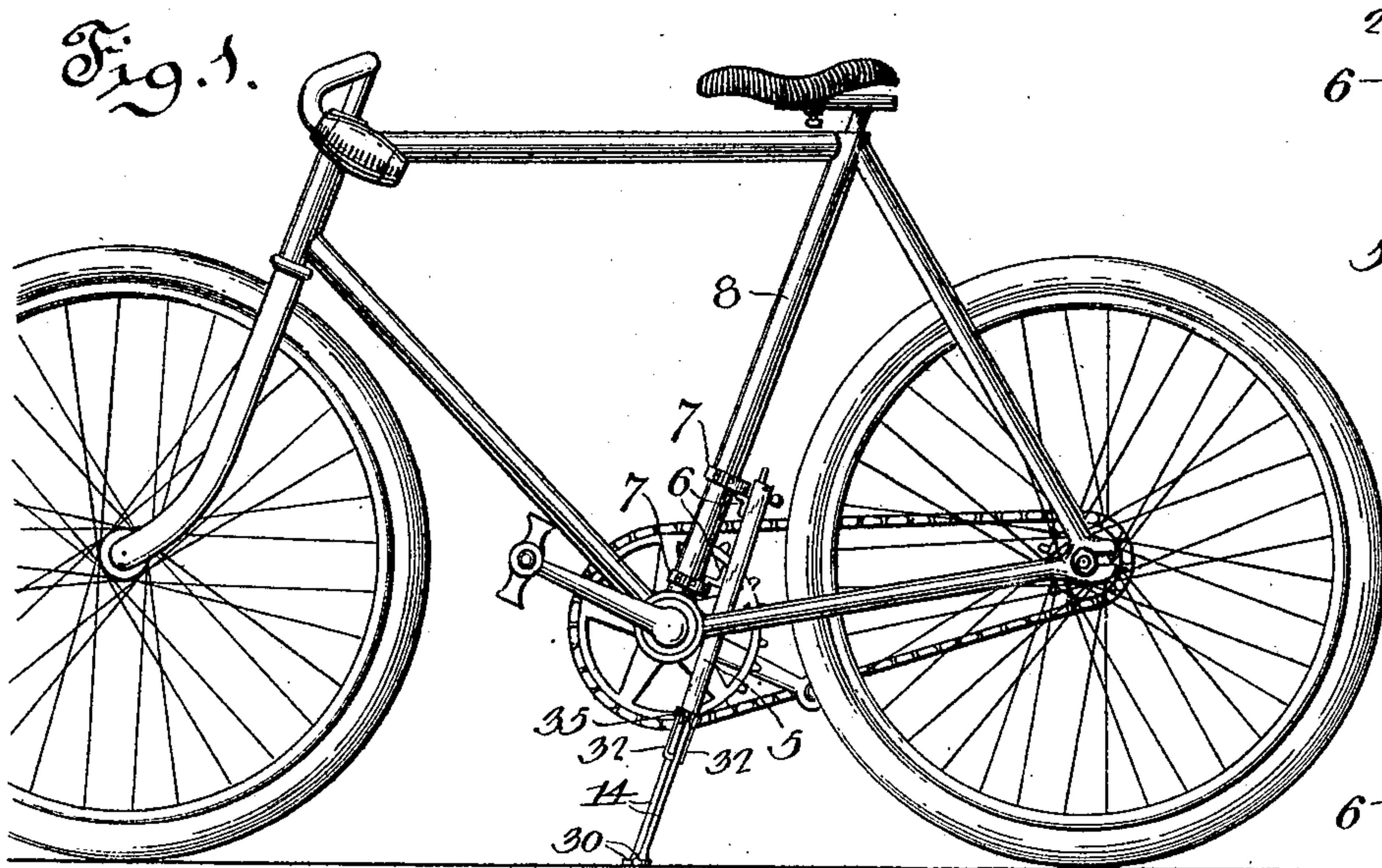
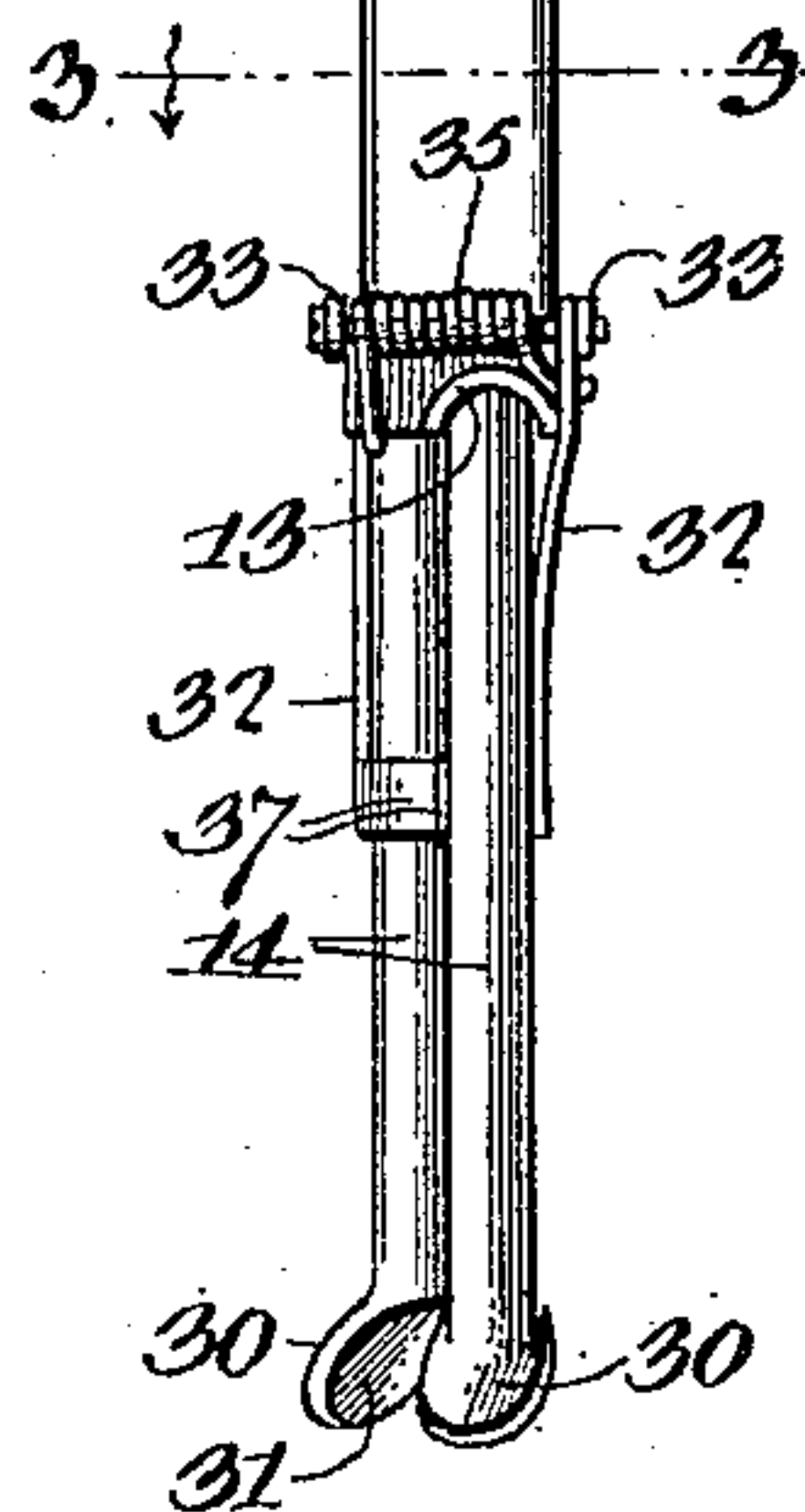


Fig. 5.



Witnesses
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By his Attorneys.

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UNITED STATES PATENT OFFICE.

FRANK WYGAL, OF SPRINGFIELD, MISSOURI, ASSIGNOR OF ONE-HALF TO
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BICYCLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 639,804, dated December 26, 1899.

Application filed October 10, 1899. Serial No. 733,204. (No model.)

To all whom it may concern:

Be it known that I, FRANK WYGAL, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented a new and useful Bicycle-Support, of which the following is a specification.

This invention relates to certain new and useful improvements in bicycle-supports of that class which are attached to the frame of a bicycle and carried therewith and adapted to be folded when not in use, and has for its object to provide a device of this character having a simple construction and effective operation and adapted to be quickly and easily thrown into operative position and permit a rider to leave the bicycle in an erect position without leaning it against a curb, tree, or any other rigid support and wherein the parts have an automatic operation to spread the supporting-legs.

The invention consists in the construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is an elevation of a portion of a bicycle, showing the improved support connected thereto and in operative position. Fig. 2 is an elevation of the supporting attachment, showing the legs folded therein. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a detail sectional view of the upper portion of the support, showing the lock for the legs and the manner of pivoting the latter to the slide. Fig. 5 is a detail perspective view, in inverted position, of the lower end of the support with the legs broken through and showing the means for automatically opening the legs when the slide reaches a predetermined lower position. Fig. 6 is a detail perspective view of the slide.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 5 designates the casing of the improved support, which is preferably rectangular in cross-section to steady the movement and efficiently guide the parts mounted therein and has on the front side thereof a

pair of oppositely-directed angular arms 6 to fit and be held by clamps 7 on the frame-tube 8 of the machine directly in rear of the crank-hanger. The rear side of the casing 5 is longitudinally slotted, as at 9, Figs. 4 and 5, and across the upper end of said casing, adjacent said rear slotted side, a transverse pin 10 is fixed. The lower end of the slot in the rear side of the tube is provided by a surrounding angular collar 11, which is formed with diagonally-disposed inwardly-extending bearing projections 12 and similarly-arranged guard-lips 13 of semicircular form and forming stops for the legs 14, which will presently be described.

Within the casing 5 a slide 15 is movably mounted and comprises a pair of lower ears 16, disposed on opposite sides of a seat 17, in which the upper ends of the legs 14 are pivotally held by a screw or analogous pin 18, extending through the said ears and the upper ends of the legs. To make a flush fitting with the slide, the upper ends of the legs 14 are recessed, as at 19, to receive the ears 16. In pivotally connecting the upper ends of the legs 14 to the slide 15 the screw or pin 18 is eccentrically passed through the upper end of one leg, so as to dispose the legs diagonally of the casing 5, as clearly shown by Figs. 3 and 5, and cause said legs to have a bearing or pressure against the inner edges of the projections 12, which are concaved for this purpose. This diagonal arrangement of the legs is intended to facilitate their opening movement when they are arranged to support the bicycle and in the position shown in Fig. 1. The upper end of the slide 15, adjacent the rear edge, is formed with a transverse slot 20 to give a seat to the pin 10 when the said slide is pushed up in its highest position, as clearly shown in Fig. 4, and prevent movement of the said slide beyond a predetermined point, and also assist in the operation of a spring-actuated catch-bolt 21, movable in a bolt-slot 22 in a plane at right angles to the slot 20 and below the same. The catch-bolt has a stem 23 secured to the rear end thereof, which is freely movable in an aperture 24 in the direction of the bolt-slot 22 below the slot 20. The stem 23 is projected beyond the rear side

of the casing 5 and supplied with a knob or other device 25 for drawing the catch-bolt rearward against the resistance of a spring 26, bearing against the same and the inner terminating-wall of the said bolt-slot 22. The catch-bolt 21 is adapted to be shot into an opening 27 in the front side of the casing 5 at the top. A vertical slot 28 is cut through the top of the front portion of the slide and communicates with the bolt-slot 22, and movable in this slot 28 is an upstanding grip 29, which is fastened to the catch-bolt 21 and adapts the latter to be operated either from the rear or above. It will be seen that a firm securement for the slide 15 is provided through the medium of the catch-bolt 21, and the legs are prevented from working loose and slipping down in the casing 5 when the said catch-bolt is in locked position. In releasing the legs the stem 23 is drawn rearwardly by the knob 25 or the bolt and stem moved in the same direction by engagement with the grip 29, and in the movement of the slide in the casing the catch-bolt will be held open by striking against the front closed side of said casing. As soon, however, as the slide reaches the upper limit of its movement the catch-bolt 21 is shot into the opening 27 and the said slide locked against movement.

The lower ends of the legs 14 have oppositely-inclined feet 30, with lower flat bearing-surfaces 31 arranged at such an angle that when the legs are spread apart said surfaces will be brought squarely on the ground, pavement, or other place. The automatic operation of the legs 14 is carried on through the medium of oppositely-positioned reversely-arranged spreading-arms 32, which are pivotally mounted in reverse positions at opposite ends of the collar 11 on pivot pins or screws 33, having bearing or support in the opposite extended ends of plates 34 of elongated form, securely fixed on the said collar. The screws or pins 33 are surrounded by repellent springs 35, which have one terminal in each instance bearing upon the projection 12 and the opposite terminal connected to the arm 32. These springs 35 operate to throw the arms 32 outwardly, and the lower terminals of said arms have angular extensions 36, projected inwardly and formed into hooks 37, which embrace the legs 14. As soon as the slide 15 reaches the lower limit of its movement the seat 17 will stand opposite the inner extremities of the guards 13 and the pivoted ends of the legs will be cleared for movement. Therefore in view of the fact that the outward tendency of the arms 32 is continually exerted on the legs 14 through the tension of the springs 35 the said legs 14 will be immediately thrown out and held spread apart when an engagement has been established between the feet 30 and the surface on which the bicycle is adapted to be rested and supported. The position of the support, together with the equal projection of the legs

14 on opposite sides, affords a stable means of holding the bicycle in upright position. When it is desired to return the legs into the casing, they are grasped and drawn against the resistance of the arms 32 and moved simultaneously upwardly into the casing by the slide, and when the latter reaches its highest position, as shown in Fig. 4, the catch-bolt 21 will hold the legs indrawn in locked position. When the legs are open, the guards 13 provide a firm resistance to the bearing-pressure of the legs thereon, and said legs will always be held regularly in a predetermined manner within the casing by making the latter angular and the slide 15 of the same form.

It will be observed that the improved support is composed of a comparatively small number of simple parts which are of a strong nature and will resist breakage. The attachment of the support to the bicycle-frame can be readily obtained, and to suit different heights and forms of frame the length of the casing as well as the legs might be varied. Other changes in the form, proportion, and minor details might be made to substitute that shown and described without in the least departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a bicycle-support the combination of an angular casing, an angular slide movably mounted in said casing, a pair of legs pivotally connected to said slide, and arms pivotally connected to the lower end of the casing in fixed position and independent of the slide and engaging the said legs, said arms having a normal outward position.

2. In a bicycle-support, the combination of an angular casing, an angular slide movably mounted in said casing, a pair of legs pivotally connected to said slide, means independent of the slide for automatically throwing the legs open when extended from the casing, and a spring-actuated catch-bolt mounted in the upper part of the slide and adapted to hold the legs indrawn into the said casing.

3. In a bicycle-support, the combination of a casing, a slide movably mounted in said casing, legs pivotally connected at their upper ends to the lower portion of the slide, a fixed collar surrounding the casing at the lower end and having reversely-arranged guard-lips at opposite sides out of alignment and adapted to receive the legs when spread apart and outwardly-movable arms independent of the slide and pivoted in reverse positions on the collar and engaging the said legs.

4. In a bicycle-support, the combination of a casing having a cross-pin at the upper end thereof, a slide movable in the said casing and having a seat in its lower end, a sliding catch-bolt in the upper portion and a transverse slot to engage the said cross-pin, legs pivotally mounted in the seat of the slide and adapted to be freely moved outward from the

casing when the catch-bolt in the slide is released, and oppositely-positioned spring-actuated opening arms pivoted to the lower extremity of the casing independent of the slide
5 and engaging the said legs at points below the lower terminal of the casing.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

FRANK WYGAL.

Witnesses:

T. C. OPDYCHE,
A. DERMUTH.