

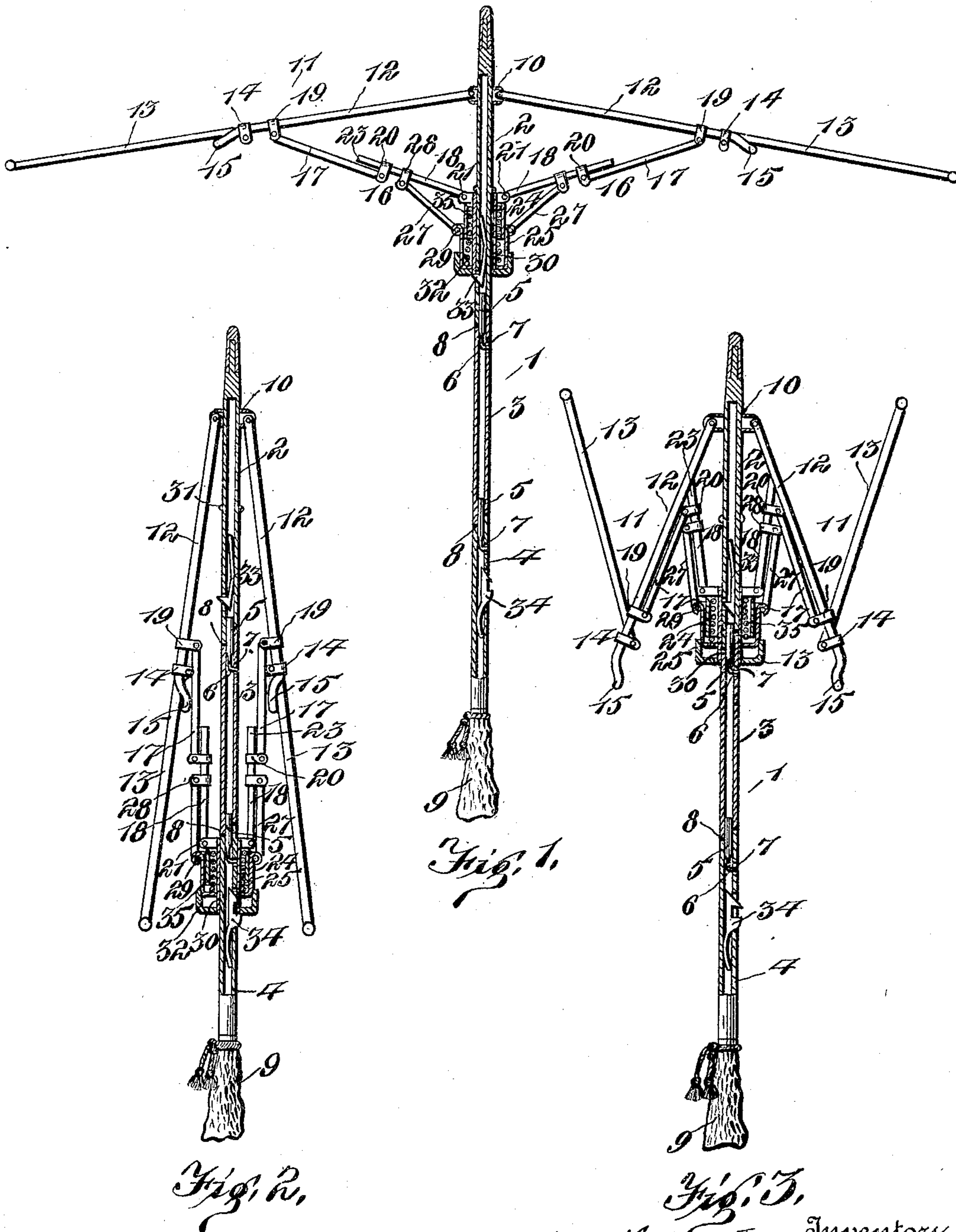
No. 820,245.

PATENTED MAY 8, 1906.

N. I. & S. L. NEWLIN.
FOLDING UMBRELLA.

APPLICATION FILED AUG. 17, 1905.

3 SHEETS—SHEET 1.



Witnesses
Forrest G. Smith
C. H. Griesbauer

Fig. 1.
Fig. 2.
Fig. 3.
Inventors
Nathan Innis Newlin
Stranda Le Newlin
by *A. B. Wilson*
Attorney

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Fig. 4.

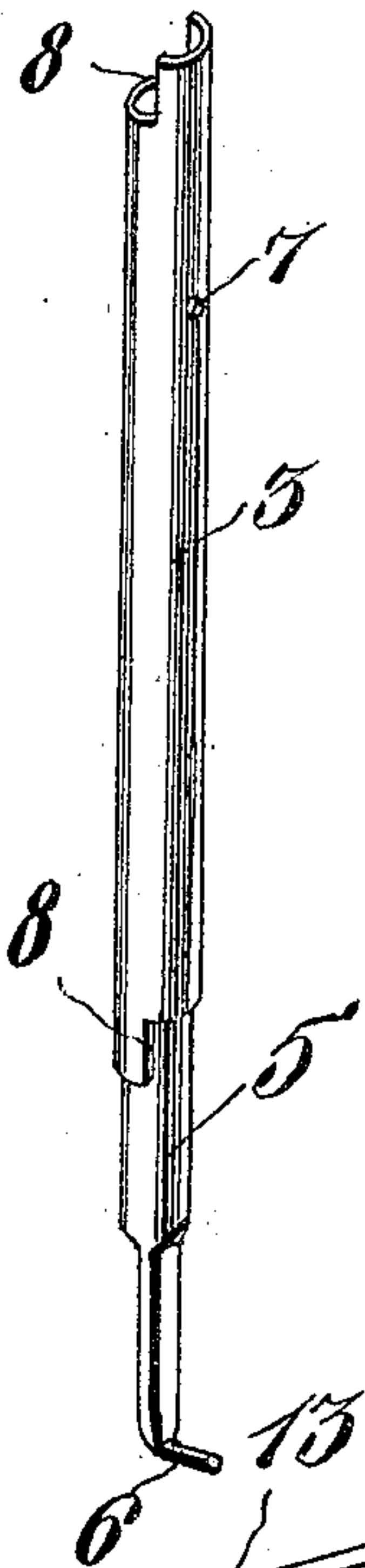


Fig. 5.

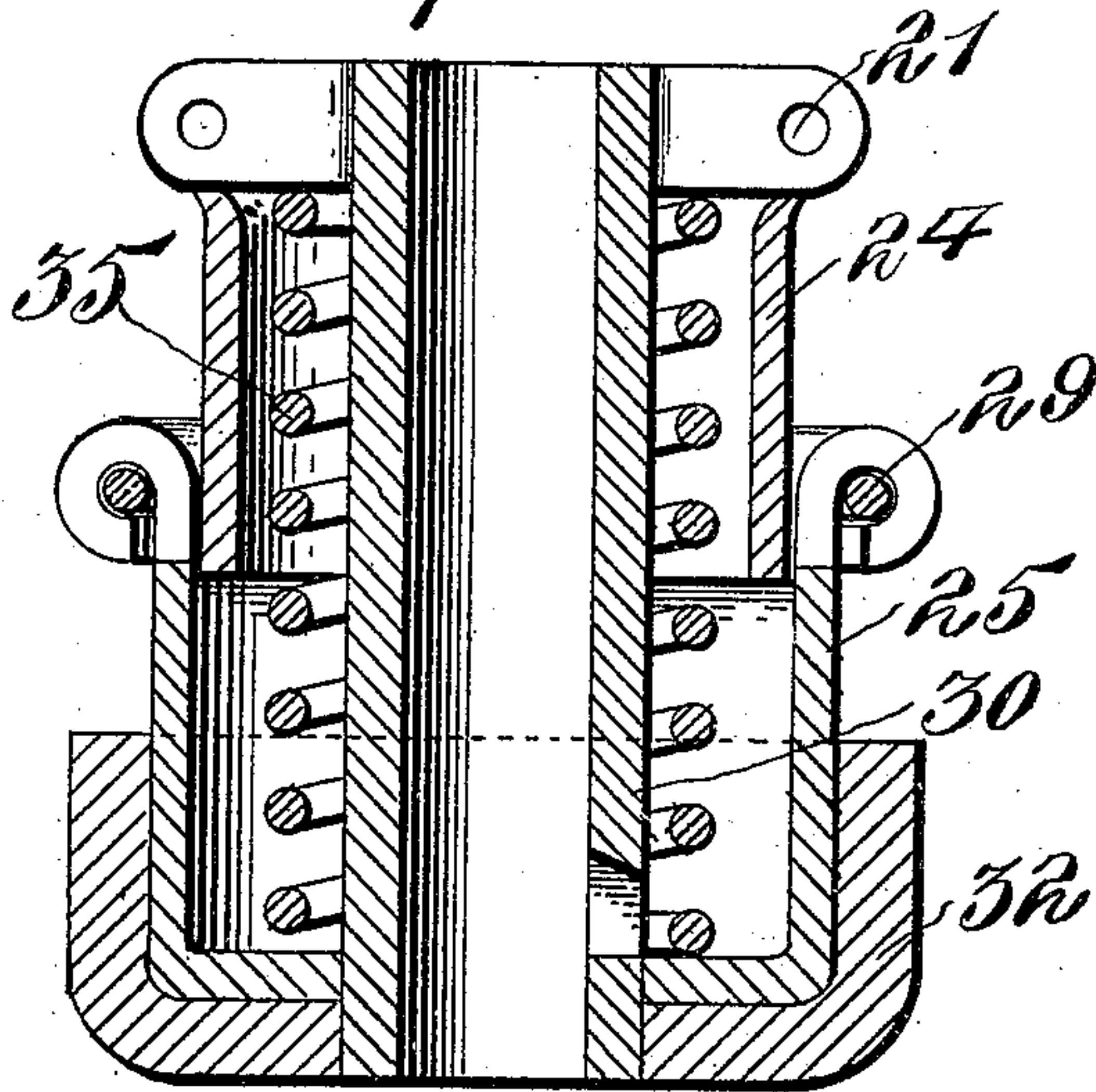


Fig. 6.

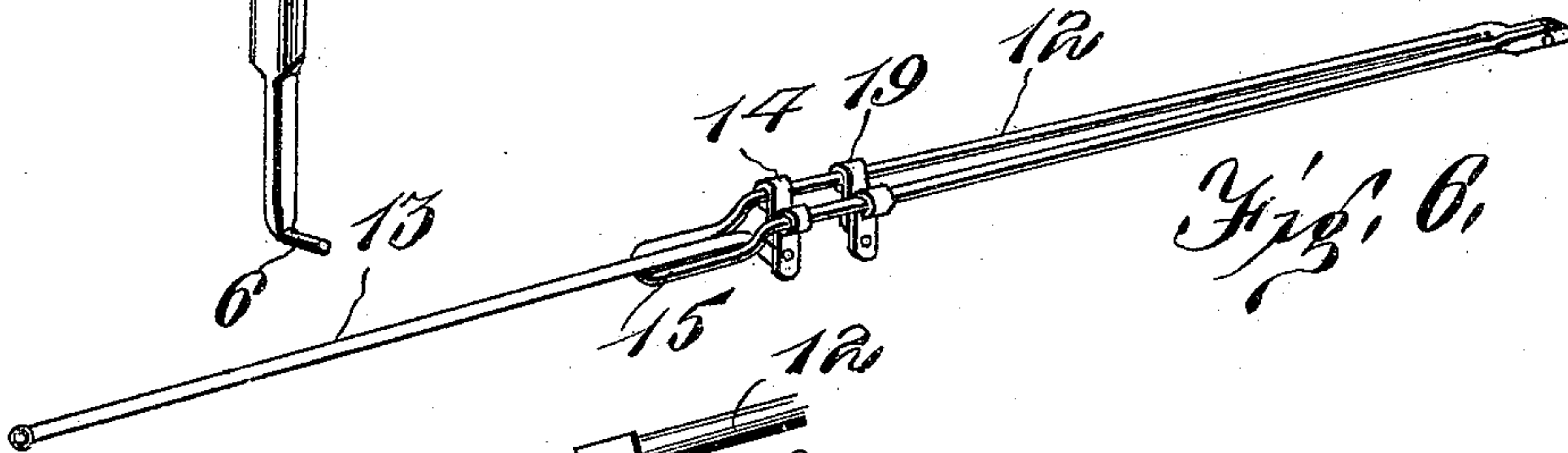


Fig. 7.

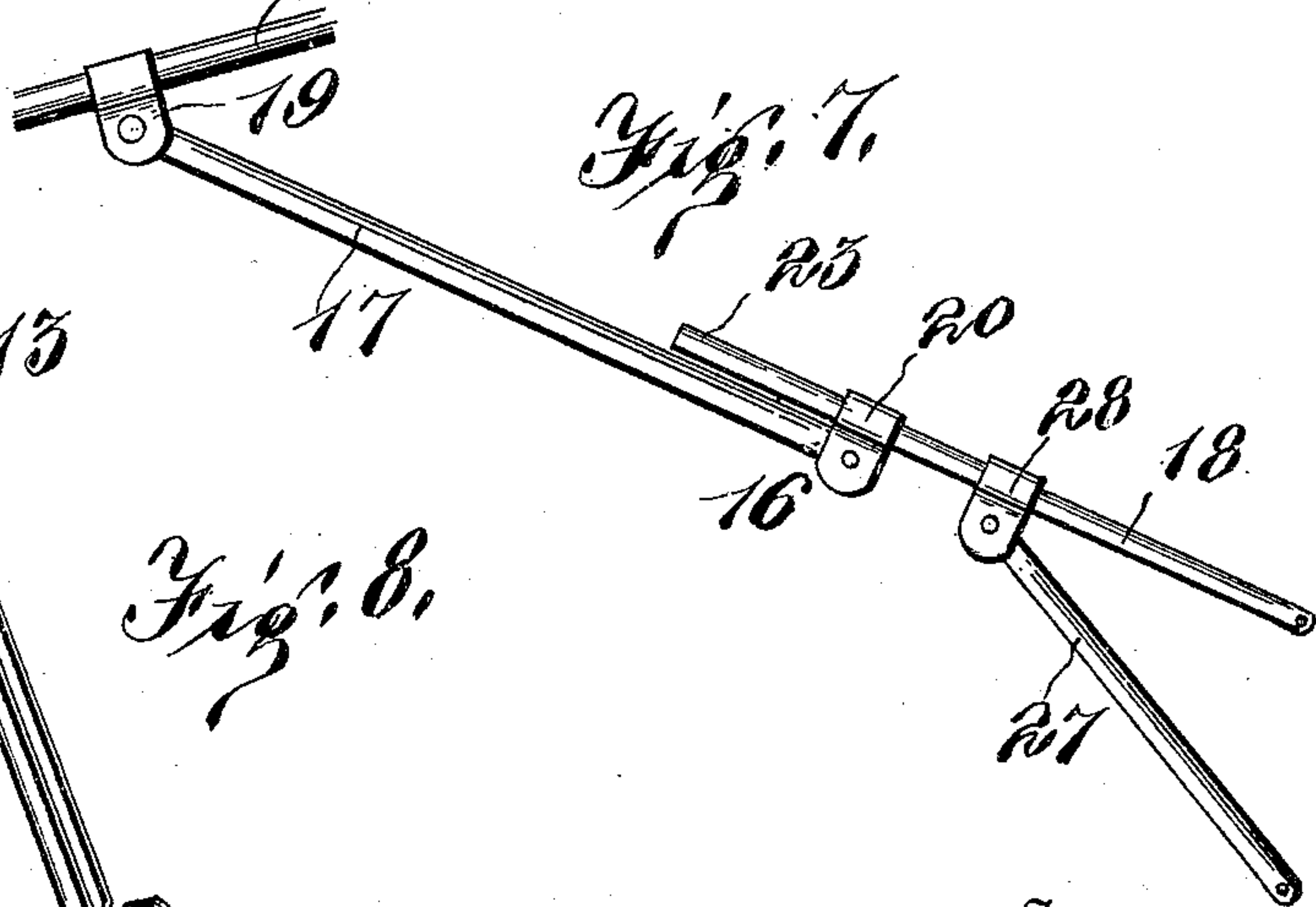
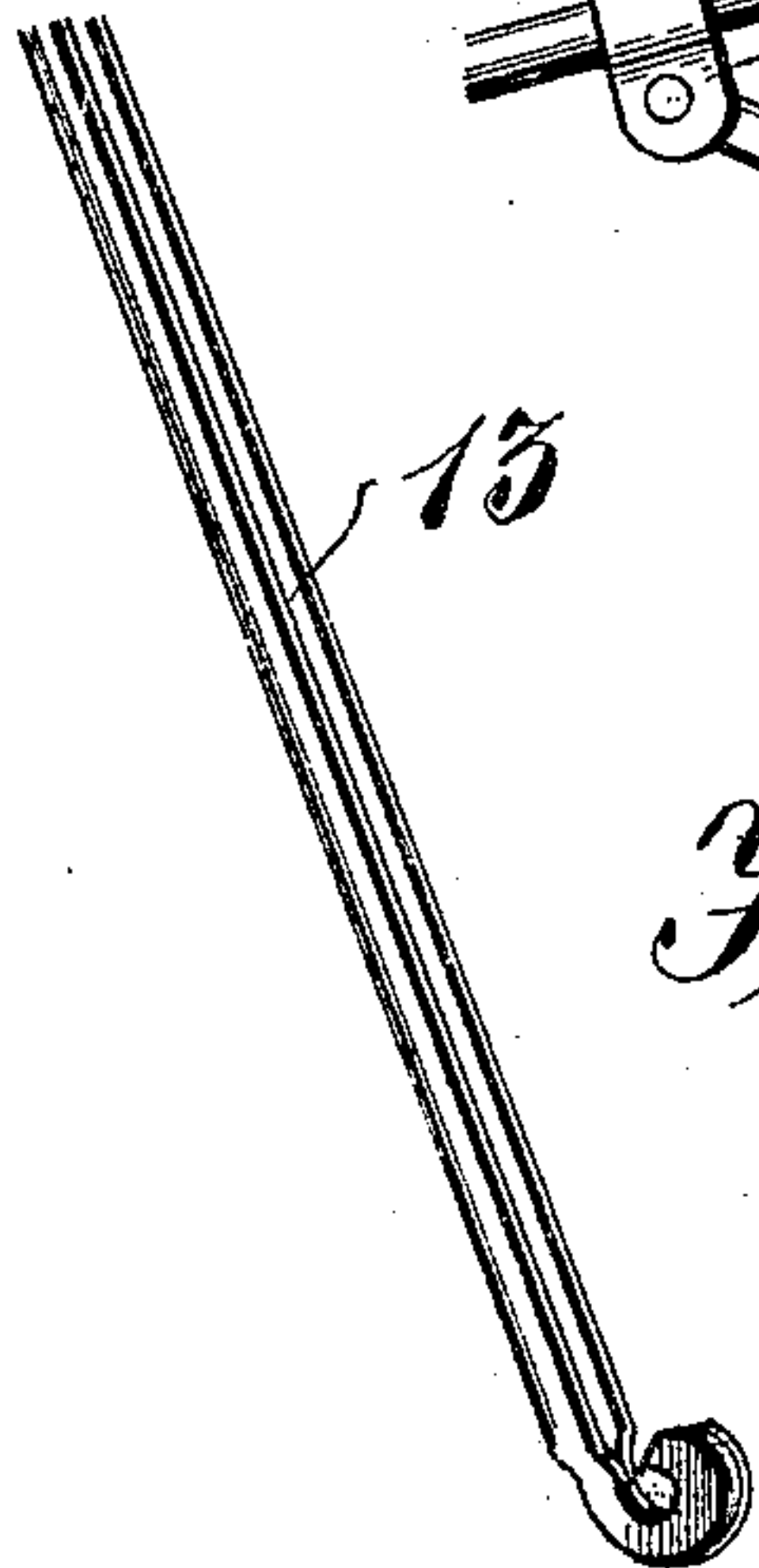


Fig. 8.



Witnesses

Forrest Smith,
C. H. Griesbauer.

Inventors
Nathan Innis Newlin
Szranda Lie Newlin
by *A. B. Wilson*
Attorney

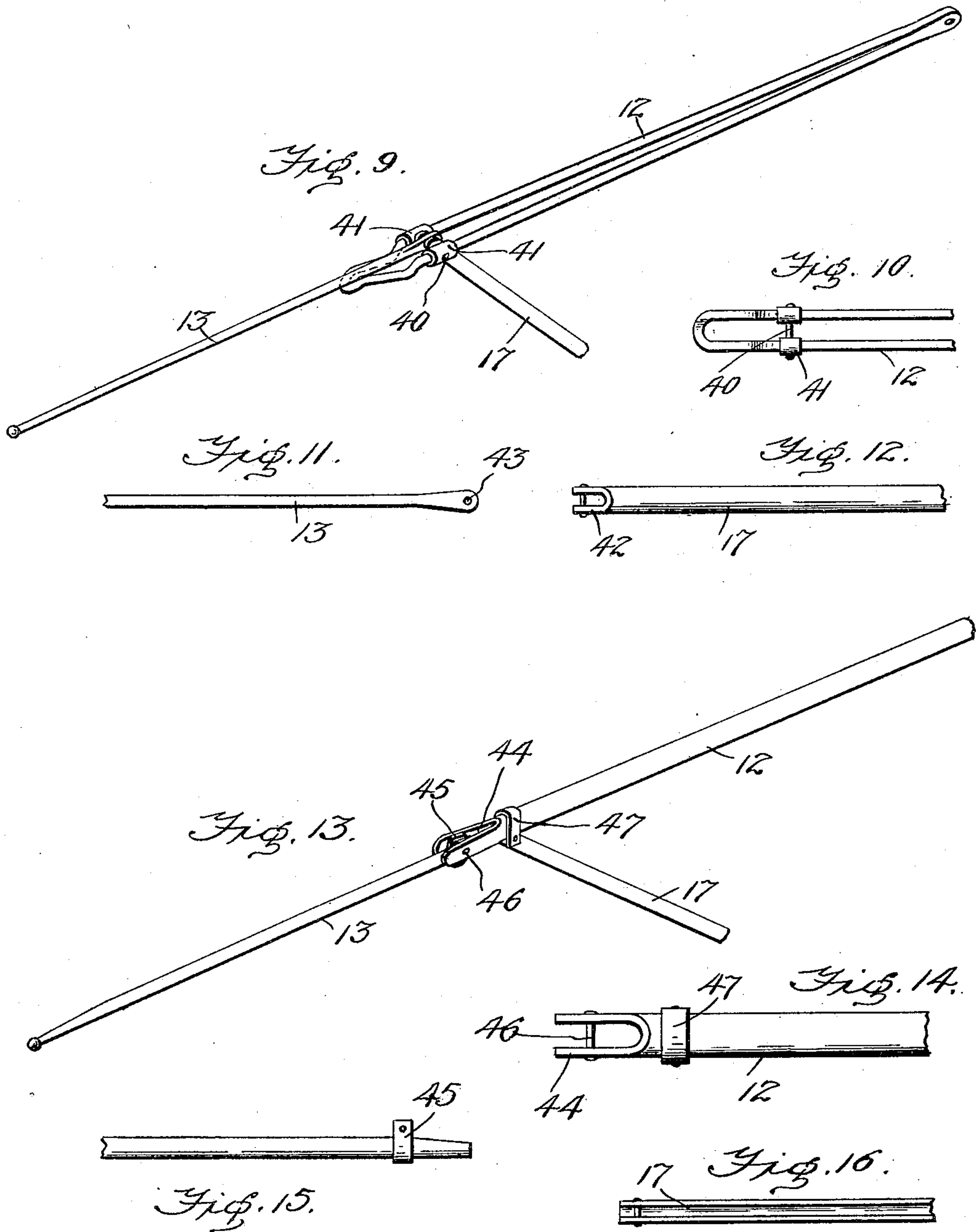
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3 SHEETS—SHEET 3.



Witnesses
J. H. Griesbauer, Jr.
P. H. Griesbauer.

Inventors
Nathan Innis Newlin and
Stranda Ie Newlin
by *A. B. Wilson*
Attorney

UNITED STATES PATENT OFFICE.

NATHAN I. NEWLIN, OF INDIANAPOLIS, AND STRANDA L. NEWLIN, OF
ROCKVILLE, INDIANA.

FOLDING UMBRELLA.

No. 820,245.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed August 17, 1905. Serial No. 274,590.

To all whom it may concern:

Be it known that we, NATHAN INNIS NEWLIN, residing at Indianapolis, county of Marion, and STRANDA L. NEWLIN, residing at Rockville, in the county of Parke, State of Indiana, citizens of the United States, have invented certain new and useful Improvements in Folding Umbrellas; and we 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.

Our invention relates to improvements in umbrellas, and more particularly to one which may be completely folded when not in use to permit it to be placed in a small satchel or traveling-case.

The object of the invention is to improve and simplify the construction of umbrellas of this character, and thereby render the same more convenient and durable in use and less expensive to manufacture.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a sectional view through the frame of a folding umbrella constructed in accordance with our invention, the same being in its open position. Fig. 2 is a similar view of the umbrella-frame, showing it in its closed position. Fig. 3 is a similar view showing the umbrella-frame partially folded. Fig. 4 is a perspective view of the intermediate section of the rod or handle of the umbrella. Fig. 5 is a detail sectional view, on an enlarged scale, through the runner. Fig. 6 is a perspective view of one of the ribs. Fig. 7 is a detail view, on an enlarged scale, of one of the sectional rib-braces. Fig. 8 is a detail view, on an enlarged scale, of a modified form of the outer section of one of the folding ribs. Fig. 9 is a perspective view of a modified form of pivotal connection for the two members of the rib and the rib-brace. Figs. 10, 11, and 12 are detail views of these parts separated. Fig. 13 is a perspective view of still another form of connection for these parts, and Figs. 14, 15, and 16 are detail views of the parts shown in Fig. 13.

Referring to the drawings by numeral, 1

denotes the umbrella-rod, which is, as shown, composed of three detachably-connected sections 2, 3, and 4. These sections are tubular in form and are detachably connected by providing in the lower ends of the sections 2 and 3 plugs 5, which are formed at their outer ends with spring-catches 6, adapted to enter apertures 7, formed in the sections 3 and 4, as clearly shown in Fig. 1 of the drawings. The sections of the rod are prevented from turning or twisting upon each other by cutting away portions of their abutting ends, as shown at 8, so that said sections are interlocked with each other. The section 4 is formed or provided at its outer end with an umbrella-handle 9, and the opposite end section 2 has secured adjacent to its end a head 10, to which the umbrella-ribs 11 are pivotally connected in the usual manner.

The ribs 11 are foldable, as shown in Fig. 3 of the drawings, each being preferably composed of inner and outer sections 12 and 13, which are pivotally connected. The outer section 13 of each rib is pivoted between the ends of a clip 14, which is suitably secured adjacent to the outer end of the inner section 12. The said outer section 13 when in its open or unfolded position is adapted to be supported by the bent outer end 15 of one of the inner sections 12. The sections 12 and 13 of the ribs are preferably constructed in the usual manner of channel-steel, as shown in Figs. 1 and 6 of the drawings, and, if desired, the outer sections 13 may be constructed as shown in Fig. 8 of the drawings.

The ribs 11 are supported in their open position and are moved to their closed or open position by sectional braces 16, which are folded as shown in Fig. 3 of the drawings. Each of said rib-braces 16 consists of an outer section 17 and an inner section 18. The outer section has its outer end pivoted between the ends of a clip 19, secured upon the inner rib-section 12, adjacent to its outer end, and the inner end of said section 17 is similarly pivoted between the ends of a clip 20, which is secured adjacent to the outer end of the inner brace-section 18. The inner end of the latter is pivoted, as shown at 21, to the upper section of a runner 22, which is adapted to slide upon the rod 1. The sections 17 and 18 of the ribs 16 are preferably constructed of channel or U-shaped rods and are so pivoted that their open edges are lower-

most. The extreme outer ends 23 of the inner sections 18 of the braces project beyond the pivot-clip 20 and engage the outer sections 17, so that said sections are thereby
5 braced, as will be readily seen upon reference to Fig. 1 of the drawings.

The runner 22 comprises two sleeves 24 and 25, the latter of which telescope within the former and carries the braces 16. The
10 lower outer sleeve 25 is connected at its upper end by a series of links or brace-rods 27 to the inner sections 18 of the braces 16. These links 27 have their outer ends pivoted between clips 28, secured upon the brace-
15 sections 18, and their inner ends are pivoted, as shown at 29, to the sleeve 25. The sleeves 24 and 25 are slidable upon and surround an inner sleeve 30, which in turn surrounds and slides upon the runner 1, the upper move-
20 ment of the same being limited by a cross-pin 31, as shown in Fig. 1 of the drawings. Upon the lower end of the sleeve 30 of the runner is secured a cap 32, which forms a finger-piece to permit the runner to be readily
25 raised or lowered. Said cap is adapted to be engaged by the usual spring-catch 33, provided in the upper section 2 of the rod for the purpose of holding the umbrella-frame in its open position, and it is also adapted to be
30 engaged with the usual spring-catch 34, provided in the handle 4 of the rod for the purpose of holding the umbrella in its closed position, as shown in Fig. 2 of the drawings. Surrounding the inner sleeve 30, between the
35 sleeve 24, which is fixed to the upper end of the latter, and the lower sleeve 25, which slides upon the same, is a coil-spring 35, which forces the said sleeve 25 away from the sleeve 24 and will draw the links or brace-
40 rods 27 downwardly and hold the sections 17 and 18 of the rib-braces 16 in their extended position, as shown in Fig. 1 of the drawings.

The construction, operation, and advantages of the invention will be readily understood from the foregoing description, taken
45 in connection with the accompanying drawings. It will be seen that when the umbrella is in its open position, as shown in Fig. 1, the sectional braces 16 will hold the ribs 11 in
50 their open position and that the outer sections 13 of said ribs will be held extended by the tension of the covering, (not shown,) which is attached to the ribs in the usual manner. When it is desired to close the um-
55 brella, the spring-catch 33 is pressed inwardly to disengage the runner 22 and the latter is moved downwardly and engaged with the spring-catch 34, as shown in Fig. 2 of the drawings. When it is desired to fold
60 the umbrella, the same is held in an inverted position or with the top of the umbrella lowermost and the runner is moved upwardly a short distance to permit the outer sections 13 of the ribs to fold downwardly and out-
65 wardly upon the inner sections 12. The

links or brace-rods 27 are then pressed toward the inner section 18 of the rib-braces 16, and the latter are folded upon themselves, as clearly shown in Fig. 3 of the drawings. The
70 sections 2, 3, and 4 of the rod 1 may then be disconnected by pressing the spring-catches 6 to disengage them from the apertures 7, so that said sections may be separated.

In Figs. 9 to 12, inclusive, of the drawings we have shown a slightly-modified form of
75 sectional rib in which the two sections 12 and 13 of the rib and the outer section 17 of its brace are all connected to one pivot 40. It will be seen that this pivot passes through clips 41 upon the inner section 12 of the rib,
80 through apertures in the bifurcated end 42 of the brace-section 17, and through an aperture 43 in the outer section 13 of the rib. The end 42 of the brace-section 17 is bifurcated or slotted, as shown, so as to receive the outer
85 rib-section 13 within it and permit the same to fold, as will be readily understood.

In Figs. 13 to 16, inclusive, we have shown still another form of connection between the parts 12, 13, and 17. The inner rib-section
90 12, as here shown, is in the form of a channel-steel bar, which has its end slotted or bifurcated, as shown at 44, to receive the end of the outer rib-section 13, which latter carries a clip 45, which is pivoted upon a pin 46 be-
95 tween the slotted or bifurcated end 44 of said rib-section 12, the slot in the latter permitting the section 13 to swing or fold, as will be readily understood. Upon the rib-section
100 12, adjacent to the slot 44, is a clip 47, to which the brace-section 17 is pivoted, as shown.

While we have shown and described the preferred embodiment of our invention, we do not wish to be limited to the precise construction
105 herein set forth, since various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention. 110

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. An umbrella comprising a rod, ribs mounted thereon, a runner slidable upon said
115 rod and comprising telescoping sleeves, a spring for forcing said sleeves apart, folding rib-braces, each comprising outer and inner pivotally-connected sections, said outer sections being pivoted to said ribs and said inner
120 sections to one of the sleeves of said runner, and brace-bars pivotally connected to said inner sections and to the other sleeve of said runner, substantially as described.

2. A folding umbrella comprising a rod
125 composed of detachably-connected sections, folding sectional ribs mounted upon said rod, a runner slidably mounted upon said rod and comprising an inner sleeve and an outer slid-
130 able sleeve, a coil-spring disposed between

5 said sleeves, folding braces pivotally connected to said inner sleeve and to said ribs and links pivotally connected to said folding braces and to said sliding sleeve, substantially as described.

10 3. In a folding umbrella, the combination with a rod and ribs connected thereto, of a runner slidably engaged with said rod and consisting of an inner sleeve, an upper sleeve fixed to said inner one, an outer sliding sleeve adapted to telescope said upper sleeve and a cap upon the lower end of said inner sleeve, rib-braces each consisting of an outer section and an inner section, said outer brace-section being pivoted to said ribs and adjacent to the outer ends of said inner brace-sections, said inner brace-sections being pivotally connected at their inner ends to the said inner sleeve and having their outer ends adapted to engage said outer brace-sections, links pivotally connecting said inner brace-sections with said sliding sleeve and a coil-spring disposed within said upper and outer sleeves, substantially as described.

25 4. In an umbrella, the combination of a

rod, a rib pivotally connected thereto, a runner on the rod and having a spring-pressed slidable member movable toward and from the upper end of the runner, a brace comprising an outer and an inner section pivotally connected together, the outer end of the outer brace-section being pivotally connected to the rib and the inner end of the inner brace-section being pivotally connected to the runner, and a brace-link having its outer end pivotally connected to the inner brace-section and its inner end pivotally connected to the spring-pressed slidable member of the runner, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

NATHAN I. NEWLIN.
STRANDA L. NEWLIN.

Witnesses as to Nathan I. Newlin:

GEORGE HOLGATE,
J. D. DAVIDSON.

Witnesses as to Stranda L. Newlin:

JAS. C. BUCHANAN,
JESSIE BEADLE.