

No. 776,528.

PATENTED DEC. 6, 1904.

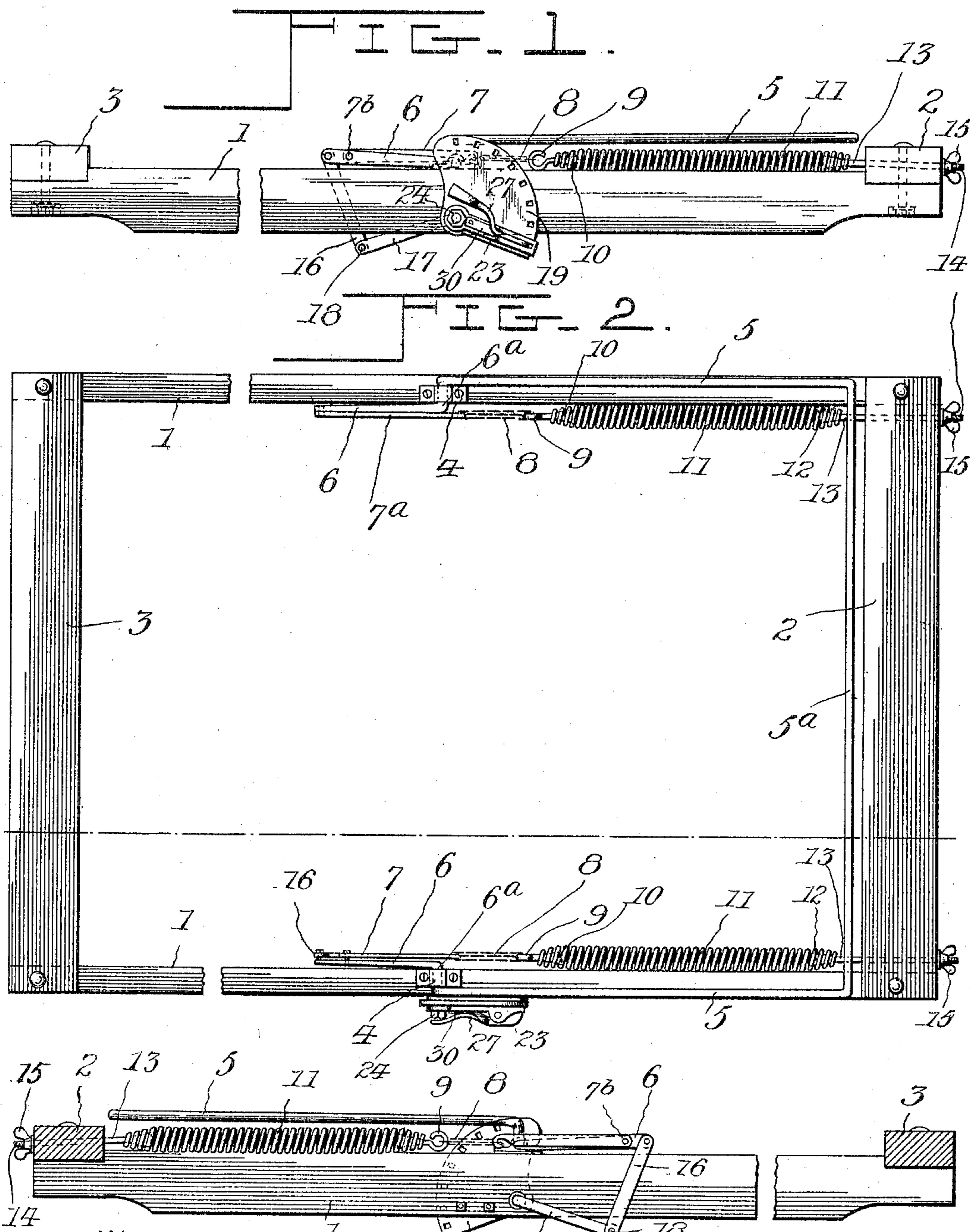
E. MICHAUD.

BED.

APPLICATION FILED APR. 29, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

J. Ed. Page

Frederick H. Gibbs

FIG. 3

By

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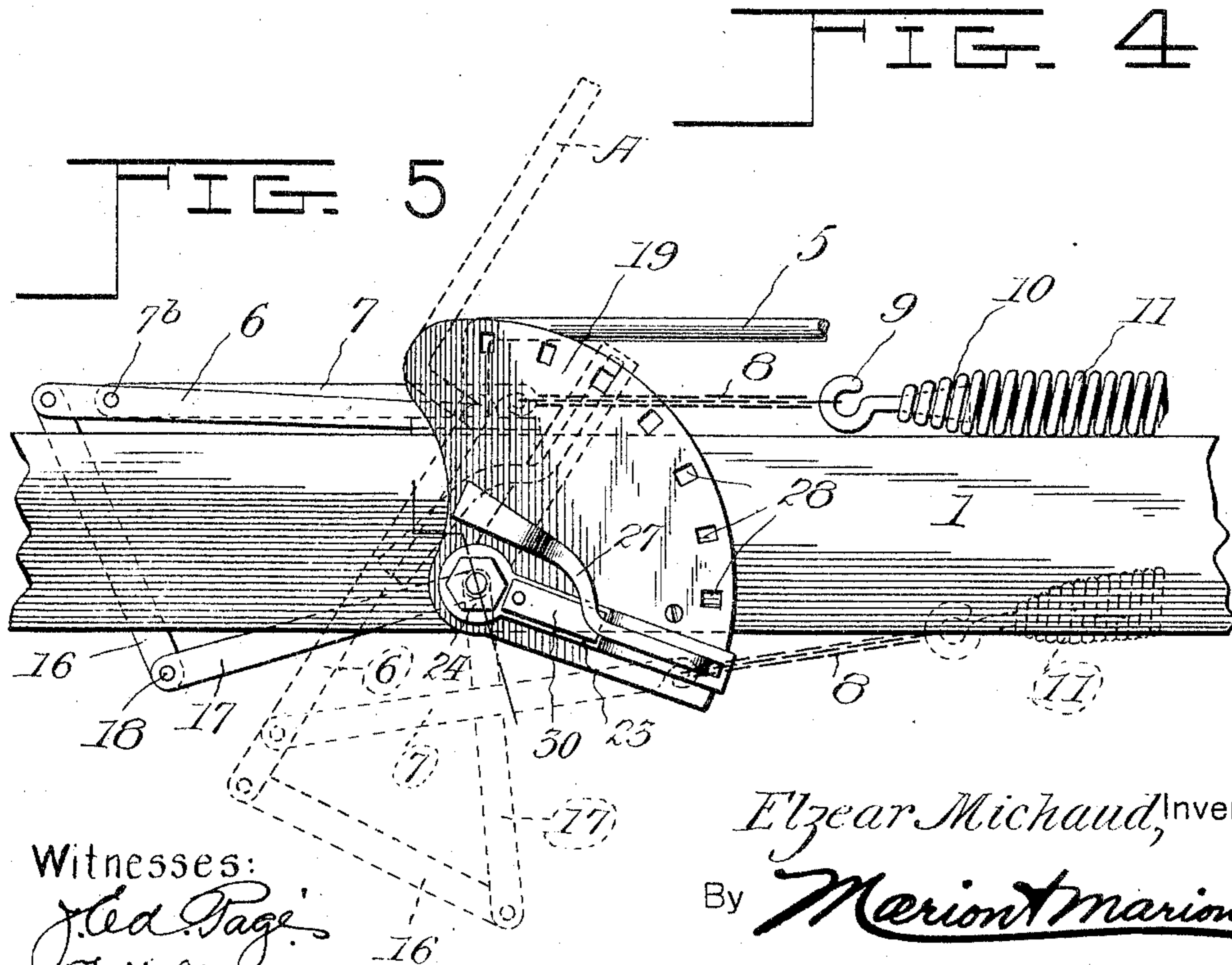
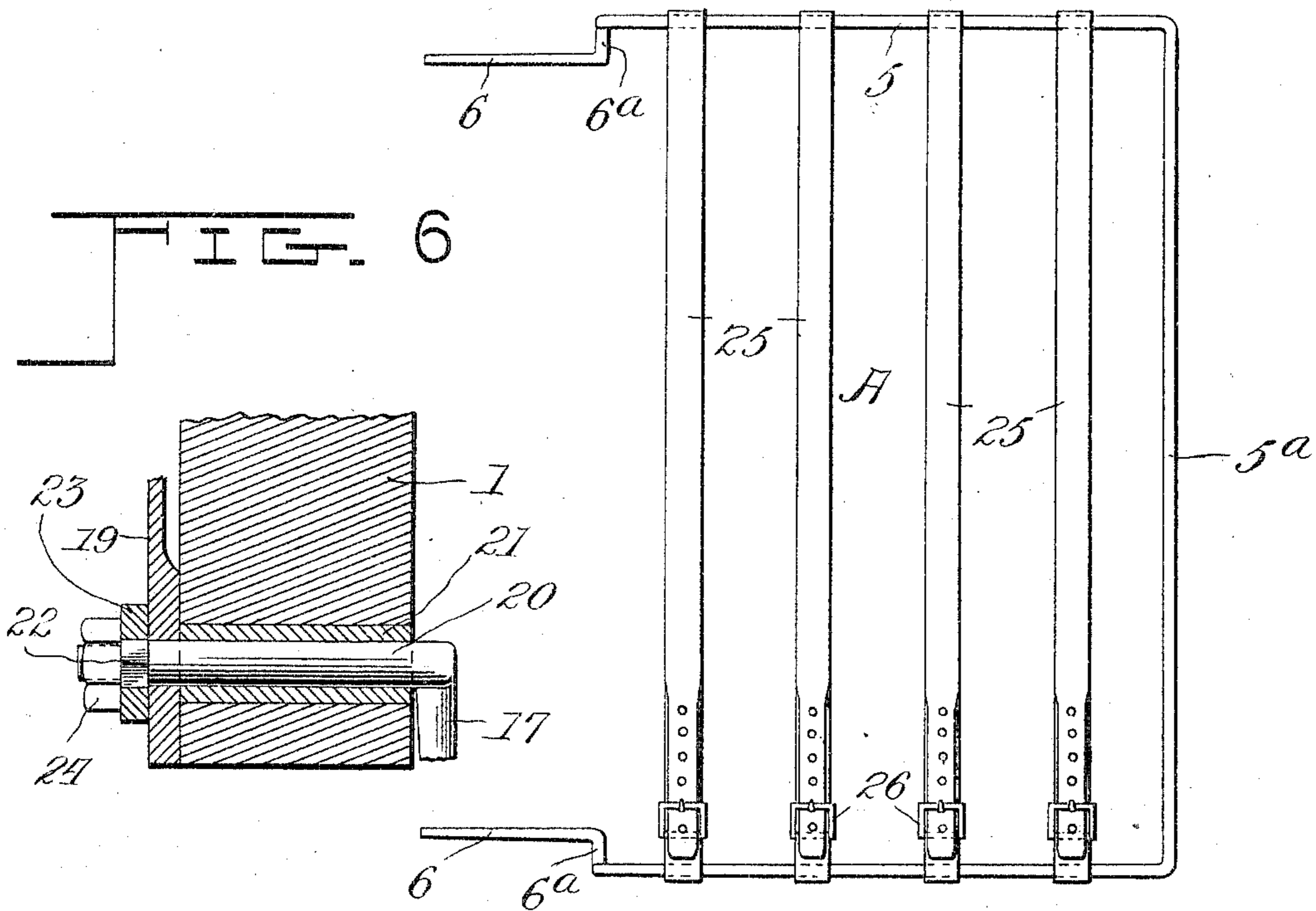
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Witnesses:

J. E. Page
J. H. Gibbs

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UNITED STATES PATENT OFFICE.

ELZEAR MICHAUD, OF MONTREAL SOUTH, CANADA, ASSIGNOR, BY
DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO JAMES
JOSEPH MURPHY AND TIMOTHY J. DONOGHUE, OF MONTREAL,
CANADA.

BED.

SPECIFICATION forming part of Letters Patent No. 776,528, dated December 6, 1904.

Application filed April 29, 1904. Serial No. 205,473. (No model.)

To all whom it may concern:

Be it known that I, ELZEAR MICHAUD, a subject of the King of Great Britain, residing at Montreal South, in the county of Chambly, Province of Quebec, Canada, have invented certain new and useful Improvements in Beds; and I do hereby declare that the following is 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.

This invention relates to new and useful improvements in beds, especially of that class which are used in hospitals and similar places; and it consists in certain features of novelty in the detail construction and arrangement thereof, whereby an improved head-supporting section is provided which may be connected with an ordinary bed-frame of the class used in hospitals or with any bed-frame desired, whereby a section adapted for use as a head and back rest may be connected therewith and adjusted within predetermined limits and positively supported in such position without the possibility of accidental displacement.

The object of the invention is to produce a device of this character which will be simple in construction and which may be readily operated by an unskilled person to shift the position of the occupant of the bed without danger of disarranging the coöperating parts of the structure.

In the annexed drawings similar characters of reference indicate corresponding parts in all the views where used, in which—

Figure 1 is a broken side elevational view of a bed equipped with my improved device. Fig. 2 is a plan view, partly broken away. Fig. 3 is a longitudinal sectional view on line 3 3 of Fig. 2 looking in the direction indicated by the arrow. Fig. 4 is a detached detail view illustrating the preferred form of head and back rest. Fig. 5 is an enlarged broken detached view showing the coöperative relation of the head-frame-actuating means in full lines when the head-rest is in a recumbent position and in dotted lines when the head-rest is in an elevated

position, and Fig. 6 is a detached fragmentary view taken on line 6 6 of Fig. 5.

Referring to the parts, 1 indicates the side sills of the bed, 2 the head-sill, and 3 the foot-sill.

4 represents clips or bearings secured upon the upper edges of the side sills.

5 and 5^a are respectively the side and end members comprising the supporting-frame for the head-rest.

6 6 are extensions of the members 5, which are connected therewith by the intervening transversely-projecting connecting portion 6^a, whereby the cross-piece 5^a, side members 5, journal 6^a, and projections 6 therebeyond are formed, preferably, of one integral member, which may be of wrought-iron, steel, or any equivalent or suitable material adapted for the purpose. The journals 6^a are supported in the clips or journal-boxes 4, so that the head-rest frame comprising the members 5 and 5^a is pivotally supported thereby. Connected with the extension 6 are links 7 and 7^a, the link 7^a being pivoted, preferably, near the extremity of its companion extension 6, while the link 7 is pivoted intermediate the ends of its companion section 6. Connected with the links 7 and 7^a are cables, chains, or any other suitable connecting means 8, and upon said connecting means 8 are secured hooks 9, which hooks are provided with the frusto-conical extensions 10, which project into and are connected with the longitudinally-extended springs 11, the said springs extending thence nearly to the head-sill 2, where said springs are also connected with frusto-conical extensions 12 on the take-up rods 13, which rods are provided with screw-threaded ends 14, upon which are provided thumb-pieces 15, whereby the tension of the springs 11 may be adjusted as may be found desirable. Connected with one of the extensions 6 is a link 16, which extends downwardly and preferably below the said sill 2, as shown in Figs. 1, 3, and 5 in full lines, the said link 16 being pivotally connected with an extension-link 17 by means of the pivot 18 and the said link 17 being project-

ed through the side sill 1 and extending therebeyond through the plate 19.

The portion of the link 17 which extends through the side sill 1 is preferably rounded, as shown in Fig. 6 at 20, thereby forming a journal upon which said link 17 is rotatable, said journal being seated in a bushing or journal-bearing 21 set into the side sill 1, said journal-bearing being of some friction-reducing material well known in the art. Beyond the side sill 1 the journal 20 is provided with a non-circular portion 22, which may be, if desired, of rectangular shape, and upon this non-circular portion is secured a locking-arm 23, the said locking-arm being held in position by means of the nut 24, as shown in Figs. 1, 2, 5, and 6.

The head-rest section (generally designated by reference-letter A) is preferably provided with transversely-extended straps 25, provided with take-up means, as the buckles 26, whereby the tension of said transverse members may be adjusted to suit the proper requirements at any predetermined time.

The locking-arm 23 is provided with a pivoted lever 27, which lever has upon its outer end any suitable projection or stud which is adapted to engage with openings 28, formed in the plate 19, so that as the arm 23 moves over the face of said plate 19 it may be locked in position thereupon by causing the said projections or studs to engage with the openings 28 in said plate. The lever 27 is normally sustained in position for such engagement by means of the flat spring or its equivalent 30. (Shown in Fig. 2.)

The link 7 being connected with the extension 6 in the manner indicated, it will be evident that the tension of the spring 11 tends normally to hold the head-rest section in a position parallel or approximately parallel with the side sill 1, as shown in Figs. 1 and 3; but when the head-rest is elevated to the position shown in dotted lines in Fig. 5 it will be evident that said link 7 will have a tendency to project the head-rest in a direction toward the foot of the bed, rocking the same upon its journal 6^a. To prevent excessive thrust of the head-rest under the influence of said springs, the plate 19 is preferably provided with a number of openings 28, so that the locking-arm 23 riding thereover will cause the locking extension of the lever 27 to engage with said openings, and thereby restrain the head-rest A in its movement upon its pivots. The degree of the thrust of said head-rest is regulated by the operator, who should be prepared to relieve the locking-arm 23 when the head-rest has assumed the angle of inclination desired.

The operation of the device will be manifest from the drawings and from the above description of parts. When it is desired to raise the head-rest, the lever 27 is released from engagement with the lower opening 28 and

the head-rest slightly raised, so as to cause the pivot 7^b of the link 7 to pass below the plane of the journal 6^a, whereupon it will be evident that the tension of the spring 11 will cause progressive movement of the head-rest toward the vertical position, which movement may be stopped at any point by merely releasing the lever 27 and permitting the extension thereon to engage with the openings 28.

As the weight of persons who may use a bed of this character varies greatly, it is evident that some means should be devised for increasing and decreasing the tension of the springs 11. The rods 13 and the thumb-piece 15 are admirably adapted for that purpose, whereby a shifting of the said thumb-nut 15 longitudinally of said rod 13 will increase or diminish the tension of said springs.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifications as are included within the scope of the following claims or of mechanical equivalents to the structures set forth.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a bed having side rails and end rails, a pivoted head-rest having extensions projecting beyond the pivotal parts thereof, links and springs connected with said extensions and with an end rail, a locking-plate on a side rail, a plurality of links connected with an extension of the head-rest, a journal and a non-circular portion on one of said links, and a locking member on said non-circular portion.

2. In a bed of the class described having side and end rails, a head-rest pivotally attached to the said side rails and having extensions projecting beyond the pivotal parts thereof, links and springs connected with said extensions and with an end rail of the bed, a plurality of links connected with an extension of the head-rest, a journal and a non-circular portion on one of the said links, a locking-plate having locking recesses or openings therein mounted upon a side rail of the bed, a locking-arm mounted on said non-circular portion, a lever pivotally attached to the said locking-arm and having one end projecting therethrough in line with the said locking recesses or openings, and means for normally keeping an end of the said lever in engagement with the said locking recesses or openings, substantially as described.

3. In a bed of the class described having side and end rails, a head-rest pivotally attached to the side rails and having extensions projecting beyond the pivotal parts thereof, links and springs connected with said exten-

sions and with an end rail of the bed, a plurality of links connected with an extension of the head-rest, a journal and non-circular portion on one of the said links, a locking-plate
5 having locking recesses or openings therein and attached to the side rail of the bed, a locking-arm mounted on said non-circular portion, a lever pivotally attached to said locking-arm and having one end projecting therethrough
10 in line with the said locking recesses or openings, and a flat spring attached to the said

arm and adapted to engage with the said lever to keep the same normally in engagement with the said locking recesses or openings, substantially as described. 15

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ELZEAR MICHAUD.

Witnesses:

FREDERICK H. GIBBS,
JAMES J. MURPHY.