C. E. GLENN.

ADJUSTABLE STEERING COLUMN FOR AUTOMOBILES AND THE LIKE.

APPLICATION FILED APR. 1, 1914.

1,158,202.

Patented Oct. 26, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

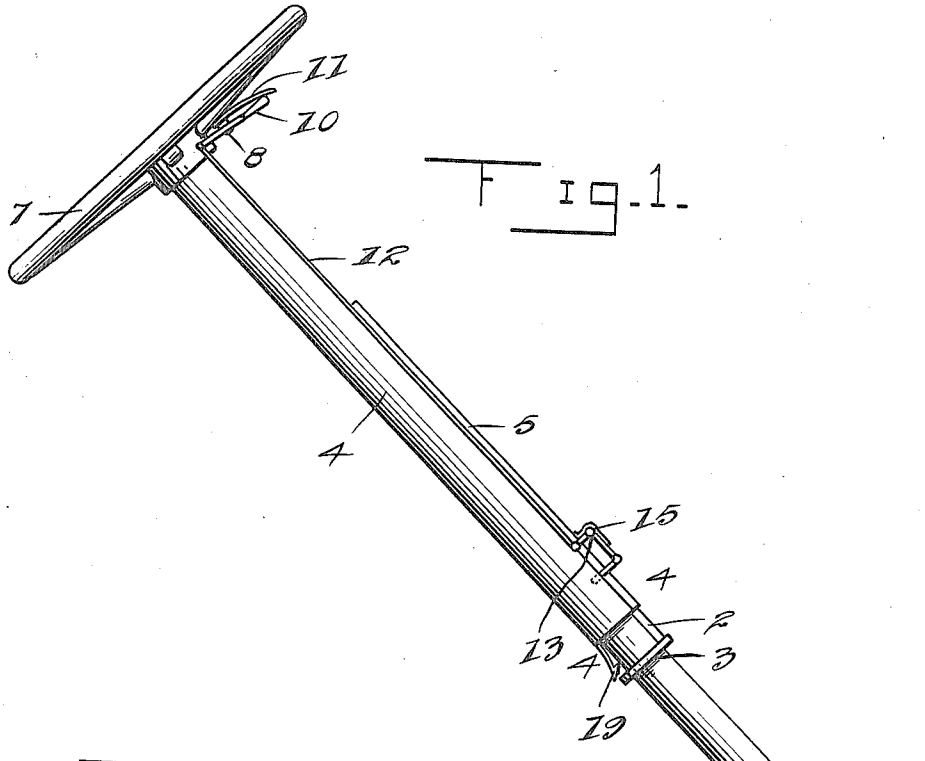
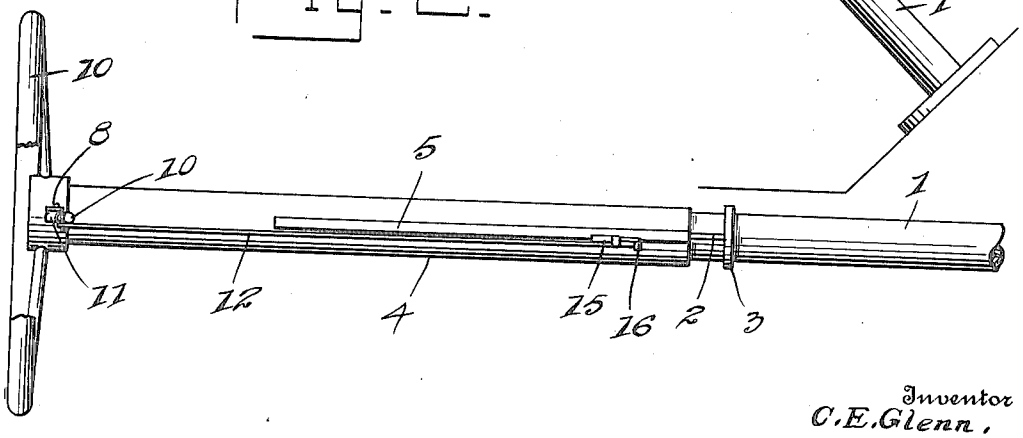


Fig. 2.



Witnesses

C. P. Beall

C. M. Newton

Inventor

C. E. Glenn,

By A. Randolph Jr.

Attorney

C. E. GLENN.

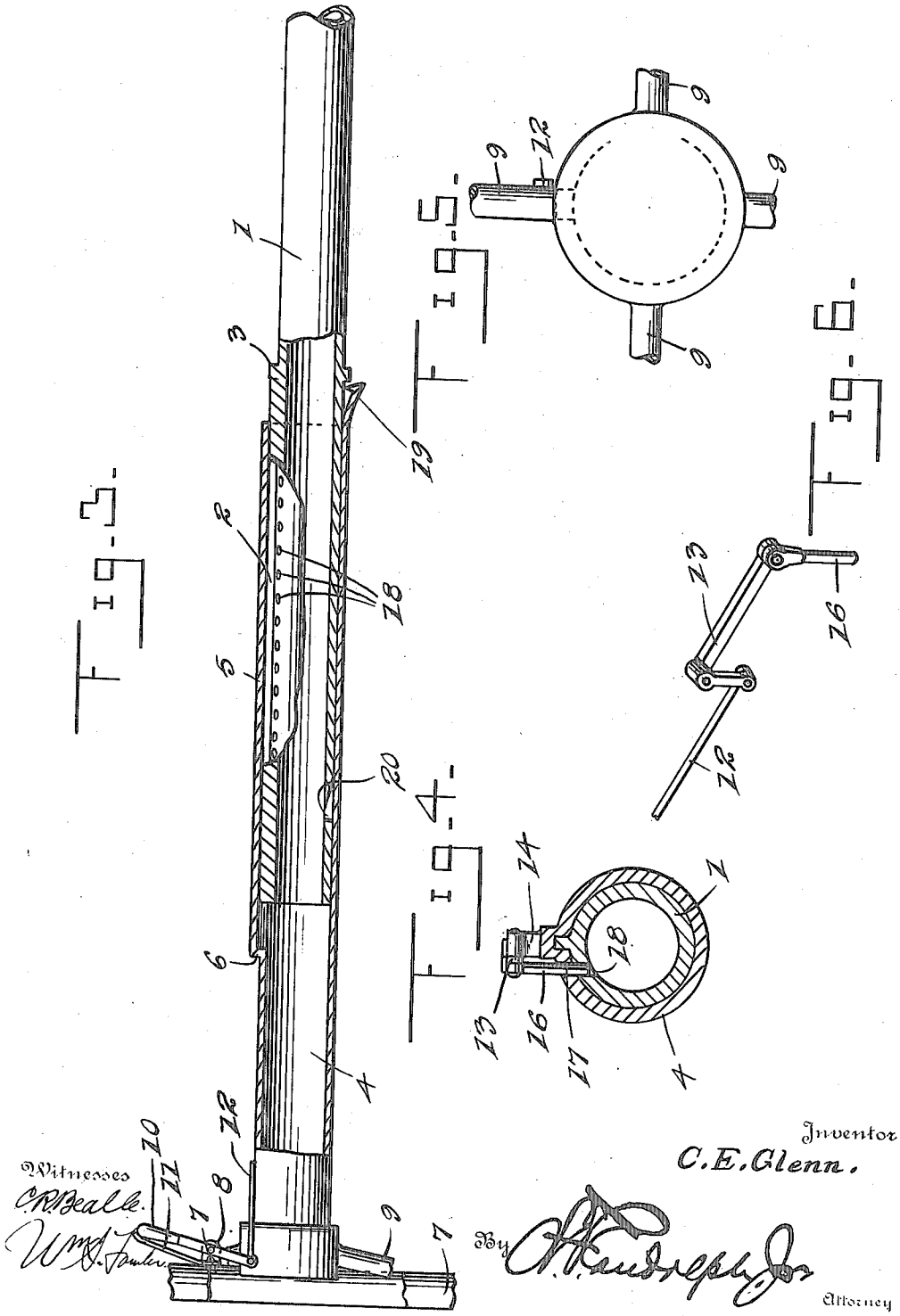
ADJUSTABLE STEERING COLUMN FOR AUTOMOBILES AND THE LIKE.

APPLICATION FILED APR. 1, 1914.

1,158,202.

Patented Oct. 26, 1915.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

CHAMBERS E. GLENN, OF TERRA ALTA, WEST VIRGINIA.

ADJUSTABLE STEERING-COLUMN FOR AUTOMOBILES AND THE LIKE.

1,158,202. Specification of Letters Patent. Patented Oct. 26, 1915.

Application filed April 1, 1914. Serial No. 828,853.

To all whom it may concern:

Be it known that I, CHAMBERS E. GLENN, citizen of the United States, residing at Terra Alta, in the county of Preston and State of West Virginia, have invented certain new and useful Improvements in Adjustable Steering-Columns for Automobiles and the like, of which the following is a specification.

This invention comprehends certain new and useful improvements in adjustable columns and has for its primary object to provide a device of this character which will be of extremely simple construction and operation and which may be readily adjusted in length and secured in adjusted position.

Another object is to provide a device of this character which may be formed in sections telescopically connected and in which the parts for locking the sections in adjusted relative position will be of extremely simple construction and operation and will serve to securely lock the sections against independent movement.

Another object is to provide a securing column of this character which may be readily adjusted for large and small apparatus and for the purpose of readily getting in and out of the automobile, as will be readily understood.

A still further object of this invention is to generally improve and simplify the construction and operation of devices of this character and increase the efficiency thereof without increasing the cost of the same.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is an elevational view of the device with the upper section secured in its lowermost position, Fig. 2 is a plan view thereof, Fig. 3 is a longitudinal section with parts in elevation, Fig. 4 is a detail cross sectional view on the line 4—4 of Fig. 1, looking in the direction indicated by the arrow, Fig. 5 is an end elevation of the wheel, with a portion thereof broken away, showing the manner in which the releasing lever is mounted upon said wheel, and Fig. 6 is a detail perspective view of the locking pin and bell crank, with the operating rod connected to the latter.

Referring in detail to the drawings by numerals, 1 designates the lower section of my steering stem which has a longitudinal rib 2 formed thereon and a stop flange 3 at the lower end of said rib. The rib 2 extends through the upper end of the section 1 and to prevent rotation of the upper section 4 upon said lower section 1, said upper section 4 being provided with a grooved longitudinal offset portion 5 to receive the rib 2, the shoulder 6 formed at the upper end of said grooved longitudinal portion 5 coöperating with the stop flange 3 to limit longitudinal movement in one direction of the upper stem section 4 upon the lower stem section 1, as will be readily understood.

A steering wheel 7 is mounted upon the upper extremity of the upper section 4 of my telescopical steering stem, and pivoted in the ears 8 projecting from the lower face of one of the spokes 9 of the steering wheel 7, is a lever 10, which has a leaf spring 11 secured thereto by one end, while its opposite end rests against said lever 10, said leaf spring 11 being bored intermediate its ends and having its central portion bearing against the spoke 9 by which the ears 8 are carried, to resiliently retain the lever 10 in normal position. Pivoted to one end of the lever 10, is one end of the operating or releasing rod 12, which has its opposite end connected to one arm of a bell crank 13 which is pivoted in a suitable bracket 14 mounted upon the upper stem section 4, adjacent the lower end thereof. When the lever 10 is in normal position, the bell crank 13 is also in normal position and is resiliently retained against movement, by means of the curved leaf spring 15 secured to the upper stem section 4 and supporting bracket 14, by one end, and having its opposite end engaged with the free arm of the bell crank 13, the central portion of said leaf spring 15 being curved around the pivoted portion of said bell crank 13. When the lever 10 and bell crank 13 are in their normal position, the locking pin 16 carried by the free arm of the bell crank 13, is engaged through the openings 17 provided therefor in the upper stem section 4 and in one of the locking

openings 18 in the lower stem section 1 securely lock said stem sections 4 and 1 against independent longitudinal movement.

When it is desired to move the upper stem section 4 longitudinally upon the lower stem section 1, it is simply necessary to press the free end of the lever 10 against the spoke 9 of the steering wheel 7 and thereby compel the rod 12 to move toward the lower end of said stem section 4 and swing the bell crank 13 upon the supporting bracket 14 to withdraw the locking pin 16 from engagement with the opening 18 and as soon as the upper section 4 has been moved to the desired position upon the lower section 1, the lever 10 may be released, thereby permitting the springs 11 and 15 to act to return the parts to normal position, forcing the locking pin 16 into engagement with the proper opening 18, and thereby locking the upper section 4 against further movement.

Movement of the upper section 4 toward the upper end of the lower section 1 is limited and disengagement of the two sections prevented by means of the spring latch member 19 projecting from the lower end of the upper section 4 and having an enlarged and parted free end for automatic engagement in the stop opening 20 in the lower section 1, adjacent the upper end thereof, as the upper section 4 is drawn toward said upper end of the lower section 1. The opening 20 is of such form, and the latch member 19 of such shape that the latter will be readily disengaged from the opening 20 as the upper section 4 is again forced toward the lower end of the lower section 1. It will be impossible, however, for the latch member 19 to move upwardly on the lower section 1 above the stop opening 20, as said latch member 19 must engage in said openings as it comes opposite the same.

From the foregoing it will be readily apparent that my telescopic steering stem may be readily adjusted in length to suit large or small apparatus and also for the purpose of moving the steering wheel 7 and the upper portion of the steering stem out of the way when leaving or entering the machine and then bringing said steering wheel to proper position and locking the stem sections against independent longitudinal movement while the device is in use. It will also be evident that by forming the steering stem in this manner, proper operation of the steering stem and steering wheel will not in the least be interfered with and the steering stem may be readily and cheaply manufactured and installed upon cars now in use, and should any of the parts become worn or broken, they may be readily replaced at a small cost.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

What is claimed is:—

An adjustable steering column comprising a lower hollow stem having a plurality of openings arranged longitudinally therein, said stem having a longitudinal extending rib thereon, an upper stem section slidably mounted upon the lower stem, said upper stem section being provided with a grooved longitudinal offset portion adapted to slidably engage the rib of the lower stem section, a bell crank lever, a locking pin pivoted to said bell crank lever and extending through said upper stem section, supporting means for said bell crank lever, said locking pin normally engaging one of the said openings of the lower hollow stem, a releasing rod connected with said bell crank, a releasing lever connected with said releasing rod, means for resiliently retaining said releasing lever in an inoperative position.

In testimony whereof I affix my signature in presence of two witnesses.

CHAMBERS E. GLENN.

Witnesses:
E. T. CHRYSTAL,
C. E. TRIMBLY.