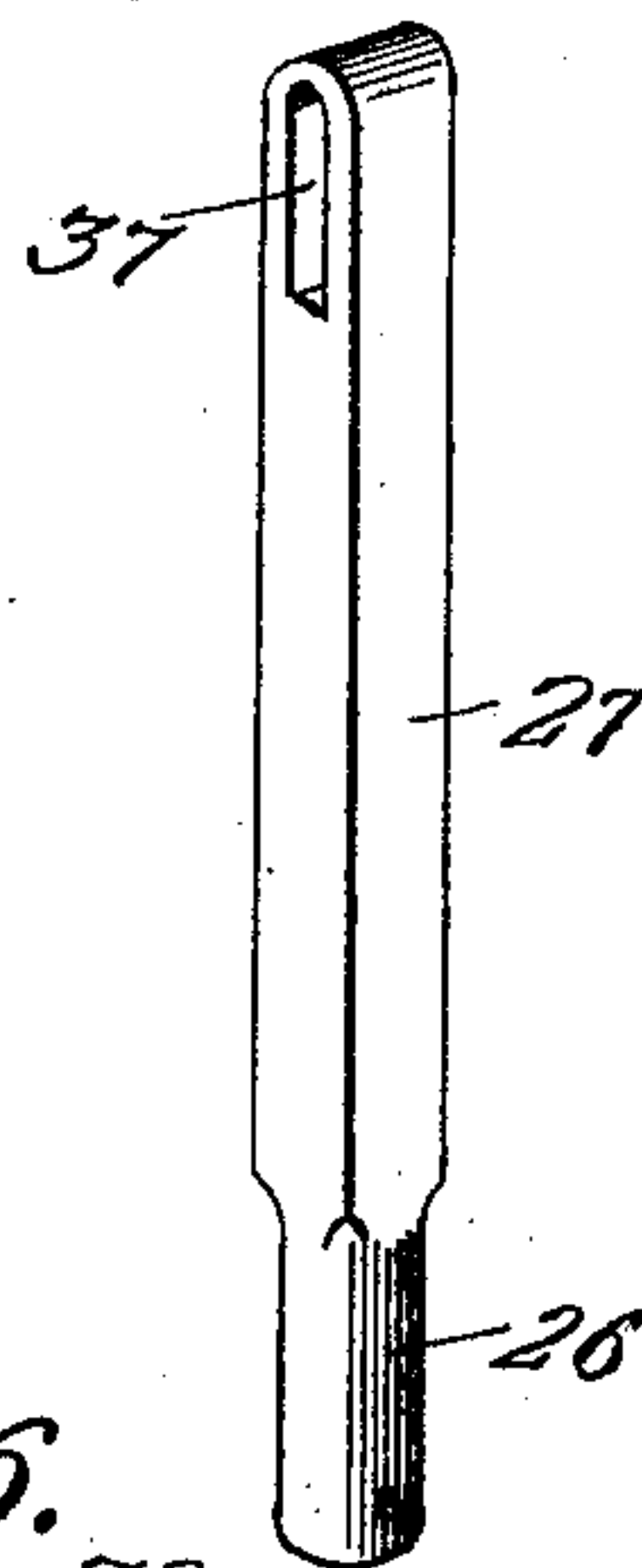
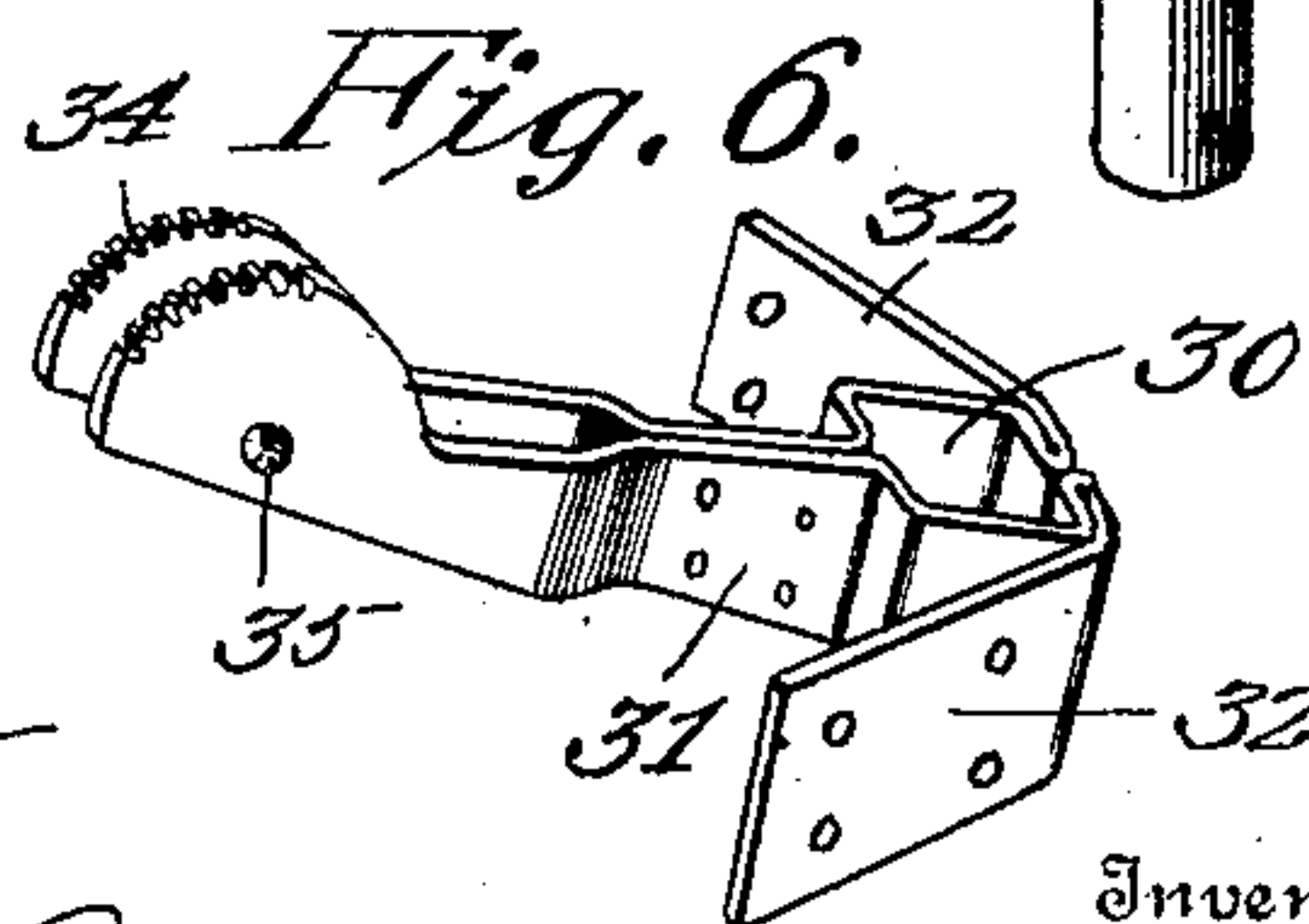
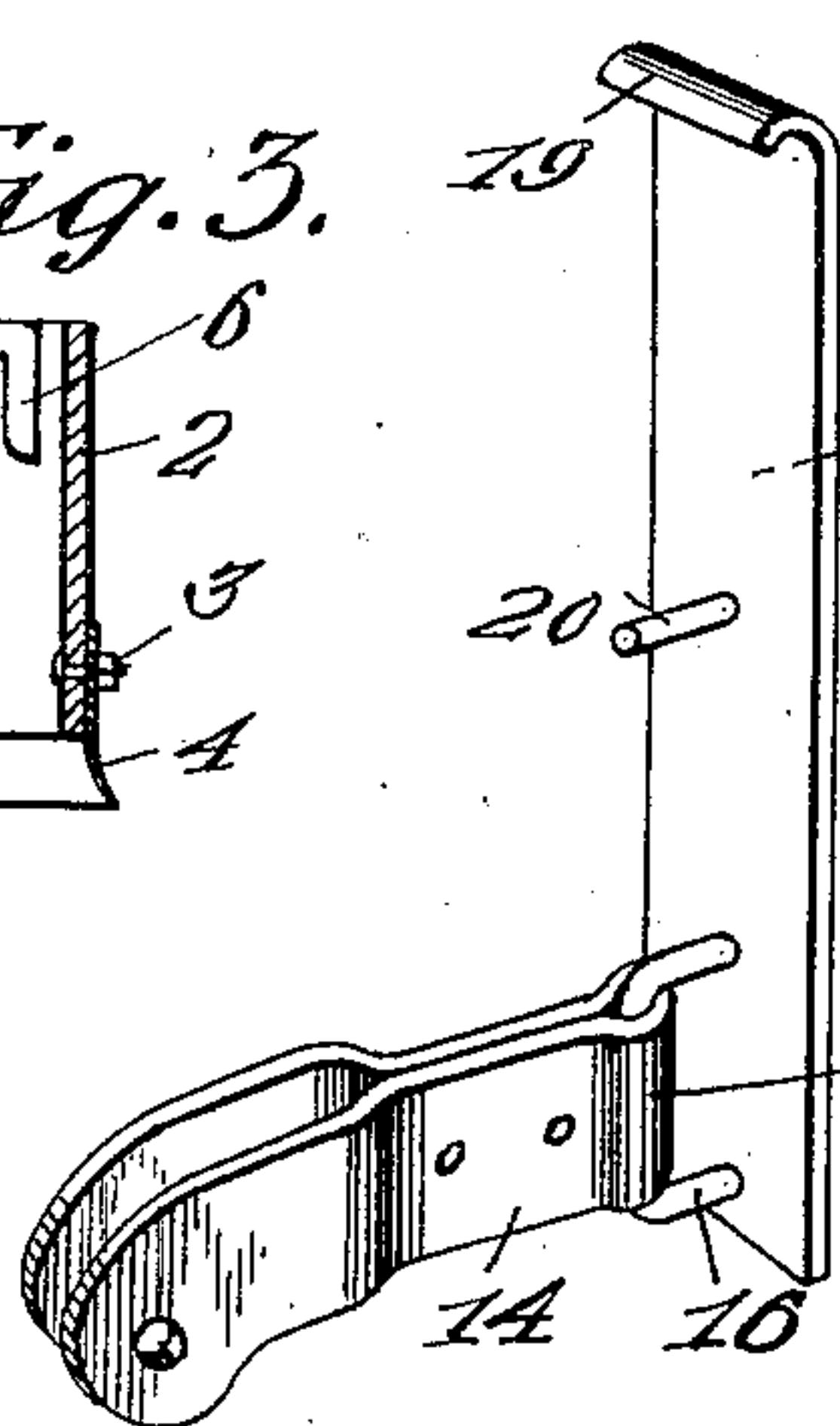
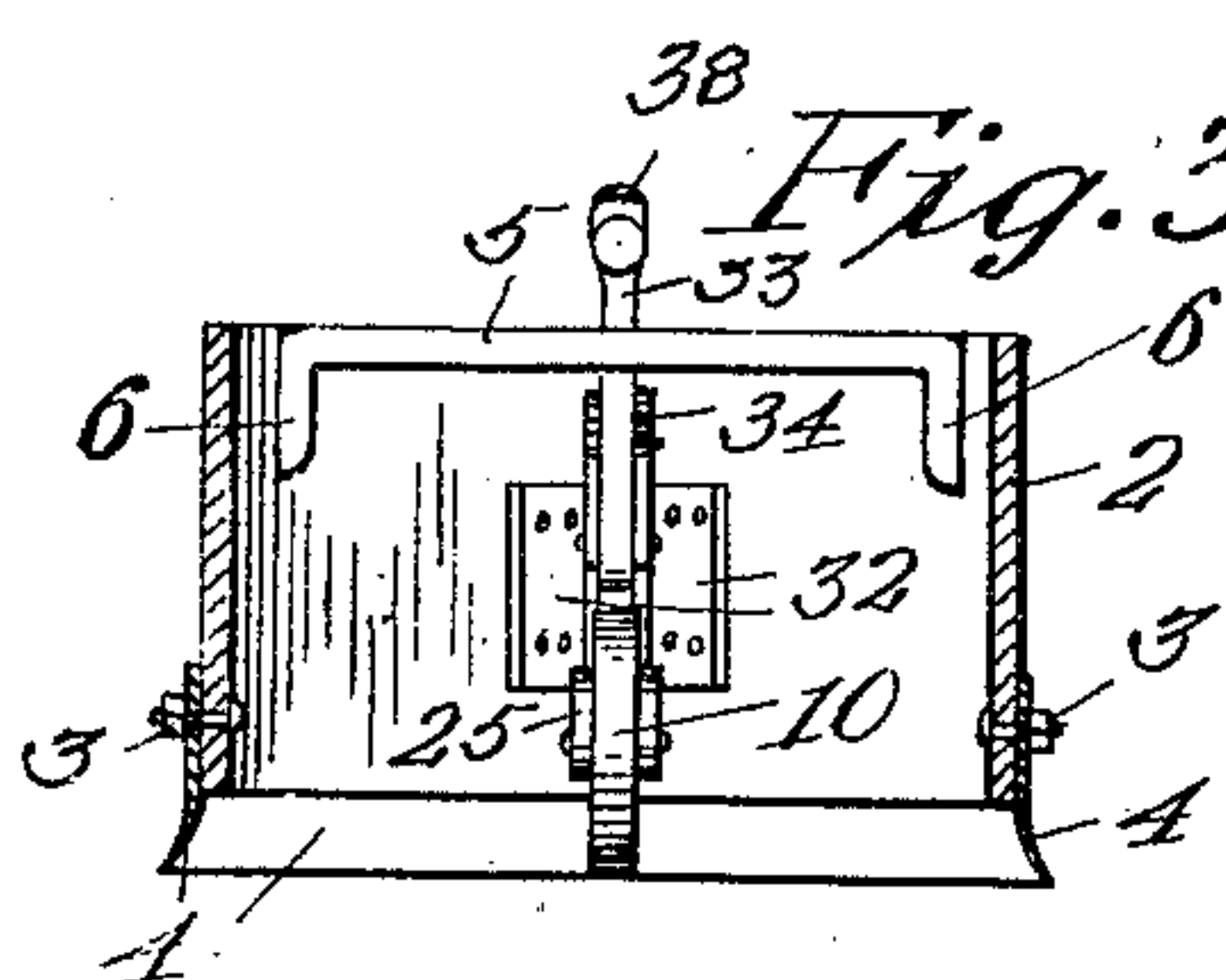
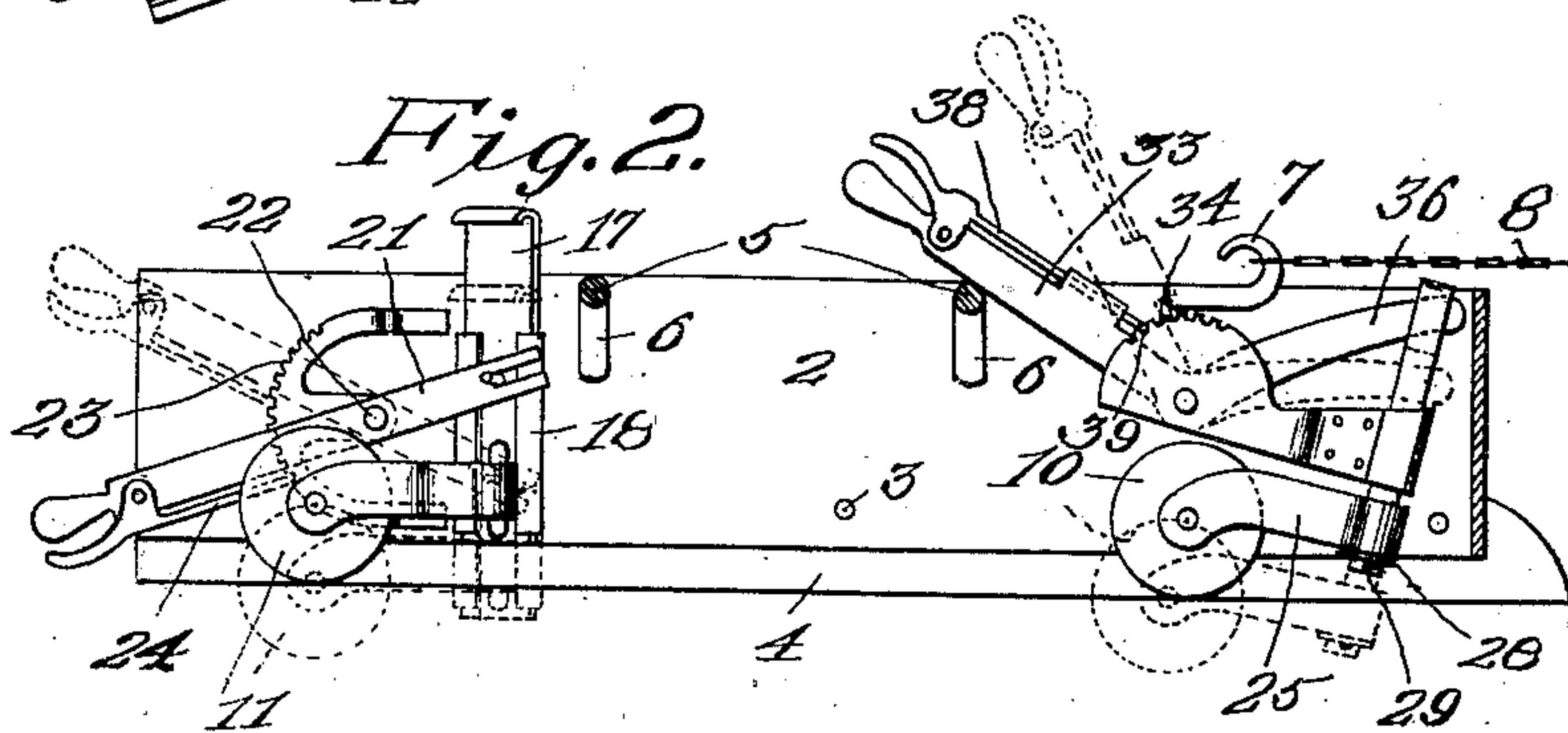
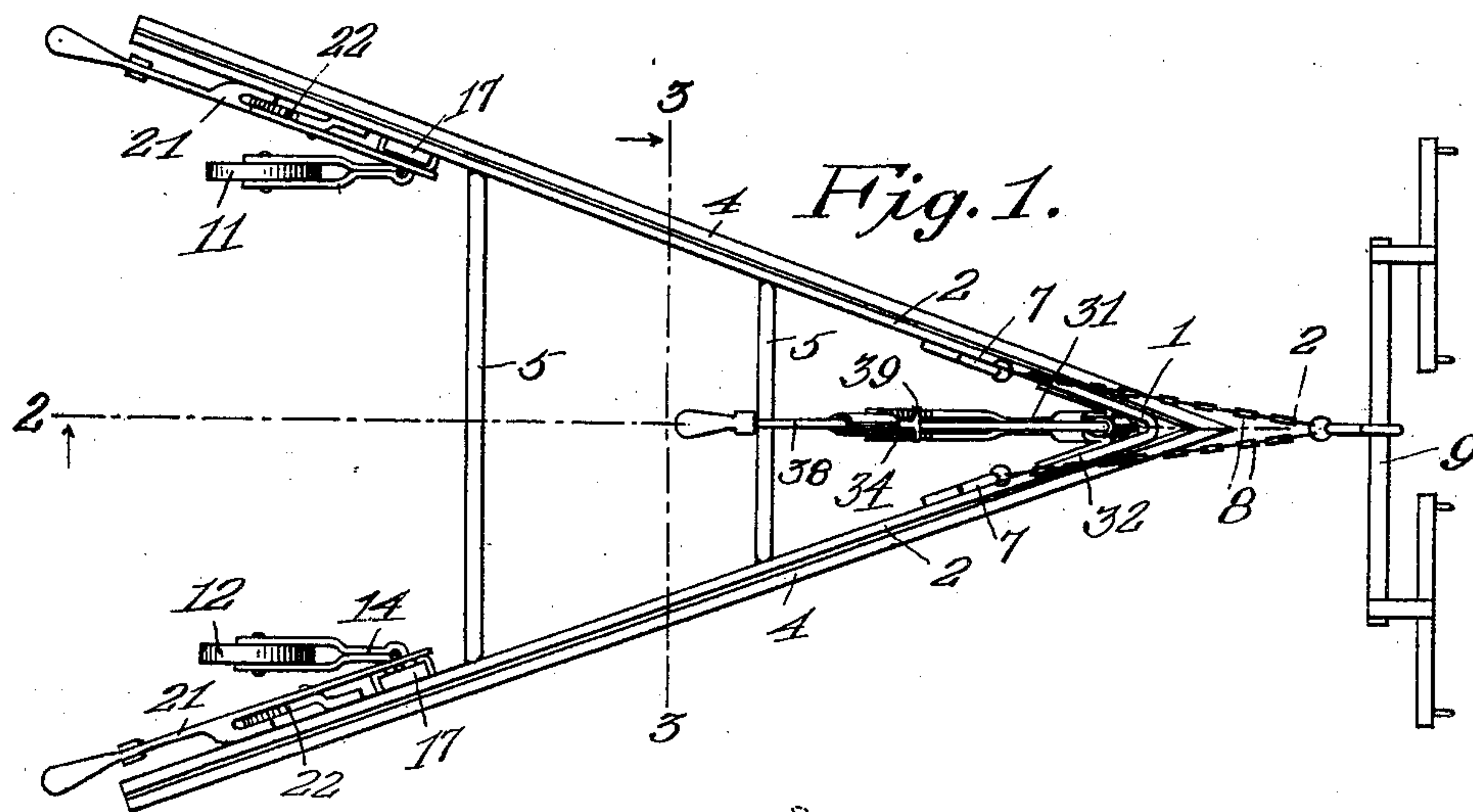


ROAD SCRAPER.

924,810.

Patented June 15, 1909.



Witnesses

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JOHN ABRAHAM MILLER, OF ROSEBUD, MISSOURI.

ROAD-SCRAPER.

No. 924,810.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed January 9, 1909. Serial No. 471,470.

To all whom it may concern:

Be it known that I, JOHN A. MILLER, a citizen of the United States, residing at Rosebud, in the county of Gasconade and State of Missouri, have invented certain new and useful Improvements in Road-Scrapers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in road scrapers for leveling and grading roads.

The object of the invention is to provide a simple, strong and durable device of this character having wheels with improved mounting and adjusting devices, whereby the scraper blades may be lifted entirely off of the surface of the road or either one or the other of the two converging scraper blades may be inclined downwardly to a greater or less extent to properly grade the road.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the improved road scraper or grader; Fig. 2 is a vertical longitudinal section taken on the plane indicated by the line 2—2 in Fig. 1; Fig. 3 is a vertical transverse section taken on the plane indicated by the line 3—3 in Fig. 1; Fig. 4 is a detail perspective of one of the slidable standards and the caster wheel hanger which it carries; Fig. 5 is a detail perspective of the slidable standard at the front of the machine; and Fig. 6 is a detail perspective of the brake member which forms a guide for the front standard and a support for its adjusting lever.

The invention comprises a V-shaped body formed, preferably, by bending a heavy metal plate or sheet upon itself at its center, as shown at 1, to provide diverging side members or plates 2. Upon the lower edges of the side plates 2 are detachably secured, by bolts 3 or similar fastenings, scraper blades 4 which have outwardly turned and sharpened bottom edges disposed beneath the planes of the bottom edges of the side plates 2. One or more transversely extending brace bars 5 are arranged between the upper portions of the side plates 2 and have downwardly bent ends 6 suitably secured to said side plates. Suitably connected to the

upper edges of the front portions of the side plates 2 are hooks 7, to receive chains 8, which latter are connected to a double tree 9 or any other suitable connection for draft animals.

When it is desired to throw the dirt from the center toward either side of the road the chains 8 are connected to both of the hooks 7, as shown more clearly in Fig. 1, but when it is desired to have the device throw the dirt to only one side of the road, both chains are engaged with the same hook, as will be readily understood.

For the purpose of adjusting the scraper blades toward and from the surface of the road and allowing one to incline downwardly or drop lower than the other, three caster wheels 10, 11, 12 are provided, the wheel 10 being arranged at the front of the machine and between the converging front ends of the side plates 2 while the other two wheels are arranged at opposite points upon the inner faces of the side plates adjacent their rear ends. The caster wheels 11, 12 are similarly constructed and mounted, each consisting of a wheel or roller journaled in a horizontally swinging hanger 14 formed by a metal strap bent upon itself, as clearly shown in Fig. 4 of the drawings.

The eye 15 at the forward end of the hanger strap 14 swings upon a U-shaped bracket 16 provided on the lower end of a vertically adjustable standard 17. The latter is in the form of a rectangular metal bar having its opposite side edges slidably arranged in undercut guide strips 18 suitably secured upon the inner face of one of the side plates 2. The upper end of the standard 17 is bent to provide a handle 19 and projecting from its intermediate portion is a pin 20 to enter a notch or slot in one end of a lever 21. The latter is pivoted intermediate its ends at 22 concentric with a segmental locking rack 23 formed upon a bracket plate suitably secured to the inner face of one of the side plates 2. The rear end of the lever 21 is provided with a handle and carries a hand retracted locking pawl 24 to co-act with the rack 23. By means of the two levers 21 the two standards 17 may be adjusted vertically to position the caster wheels 11, 12 according to the work which the machine is to perform. The caster wheel 10 is similarly mounted in a swinging hanger 25 arranged upon a cylindrical portion 26 at the lower end of a standard 27, the eye of

said hanger 25 being retained upon the pivot 26 by a washer 28 and a split pin 29.

The standard 27 is preferably in the form of a square bar and is mounted for sliding movement in a square guide 30. The latter is preferably formed, as shown in Fig. 6, by bending two metal plates or straps and bringing their intermediate portions 31 together and uniting them by rivets or bolts and by bending their forward ends angularly to provide attaching flanges 32 which are bolted or riveted to the inner faces of the converging side plates 2. The rear ends of the straps or blades which form the guide 30 are spaced apart to receive a lever 33 between them and they are also so shaped as to form opposing segmental racks 34. The lever 33 is in the form of a bell crank pivoted at its angle at 35 between and concentric with the ends of the straps forming the segmental racks 34.

The curved forward arm 36 of the lever or bell crank 33 has a loose connection with the standard 27 by projecting into a vertical slot 37 formed in the upper end of the latter. The other arm of the lever 33 is shaped to provide a handle and carries a slidably mounted, hand retracted pawl 38, the lower end of which has a T-shaped head 39 to engage both of the segmental rack plates 34.

From the foregoing description taken in connection with the accompanying drawings, it is thought that the construction, operation and advantages of the invention will be readily understood. It will be seen that when all three of the wheels are lowered so that they project beneath the scraper blades 4 the machine will run upon said wheels and may be readily transported over a road without operating upon the same. By adjusting the several caster wheels independently, either side of the machine may be caused to drop lower than the other to effect the proper grading of the road, or either the front or the rear end of the machine may be inclined with respect to the horizontal. This arrangement and mounting of the caster wheels is exceedingly advantageous since it enables a road to be effectively graded or

leveled by one trip of the machine over the same.

The construction of the several parts of the machine renders it exceedingly strong and durable and at the same time comparatively inexpensive and also permits it to be quickly and easily adjusted while it is at rest or in operation.

Having thus described the invention what is claimed is:

1. A road scraper comprising forwardly converging scraper blades, a vertically adjustable caster wheel at the front ends of said blades, vertical guides upon the rear portions of said blades, standards slidable in said guides, U-shaped loops upon said standards, horizontally swinging hangers upon said loops, caster wheels journaled in said hangers, pins upon said standards, levers slotted to receive said pins and means for securing said levers in adjusted positions.

2. A road scraper comprising forwardly converging scraper blades, vertically adjustable caster wheels at the rear ends of said blades, a combined guide and support between the converging forward ends of said blades, and consisting of two straps united intermediate their ends and bent to provide a guide, the forward ends of said straps being bent to provide angularly disposed attaching flanges secured to said blades, the rear ends of said straps being spaced apart and formed with opposing segmental racks, a bell crank pivoted at its angle between the spaced rear ends of said straps, a slidable pawl upon the bell crank having a T-shaped head to engage said racks, a slidable standard in said guide and having a slotted upper end to receive the forward arm of said bell crank, a hanger mounted for swinging movement on the lower end of the standard and a caster wheel journaled in said hanger.

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

JOHN ABRAHAM MILLER.

Witnesses:

H. W. HEIDBRINK,
W. F. PARDE.