

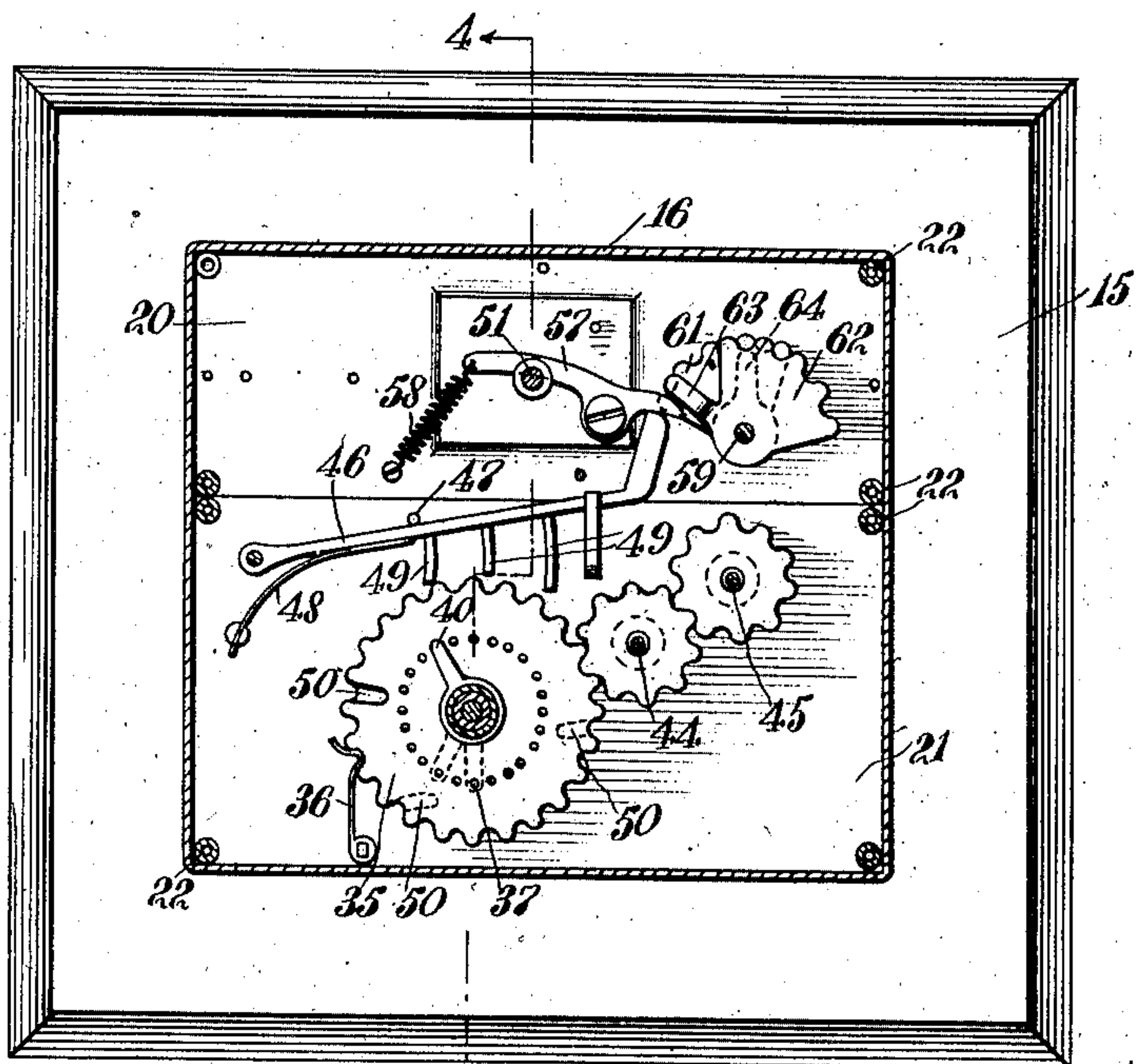
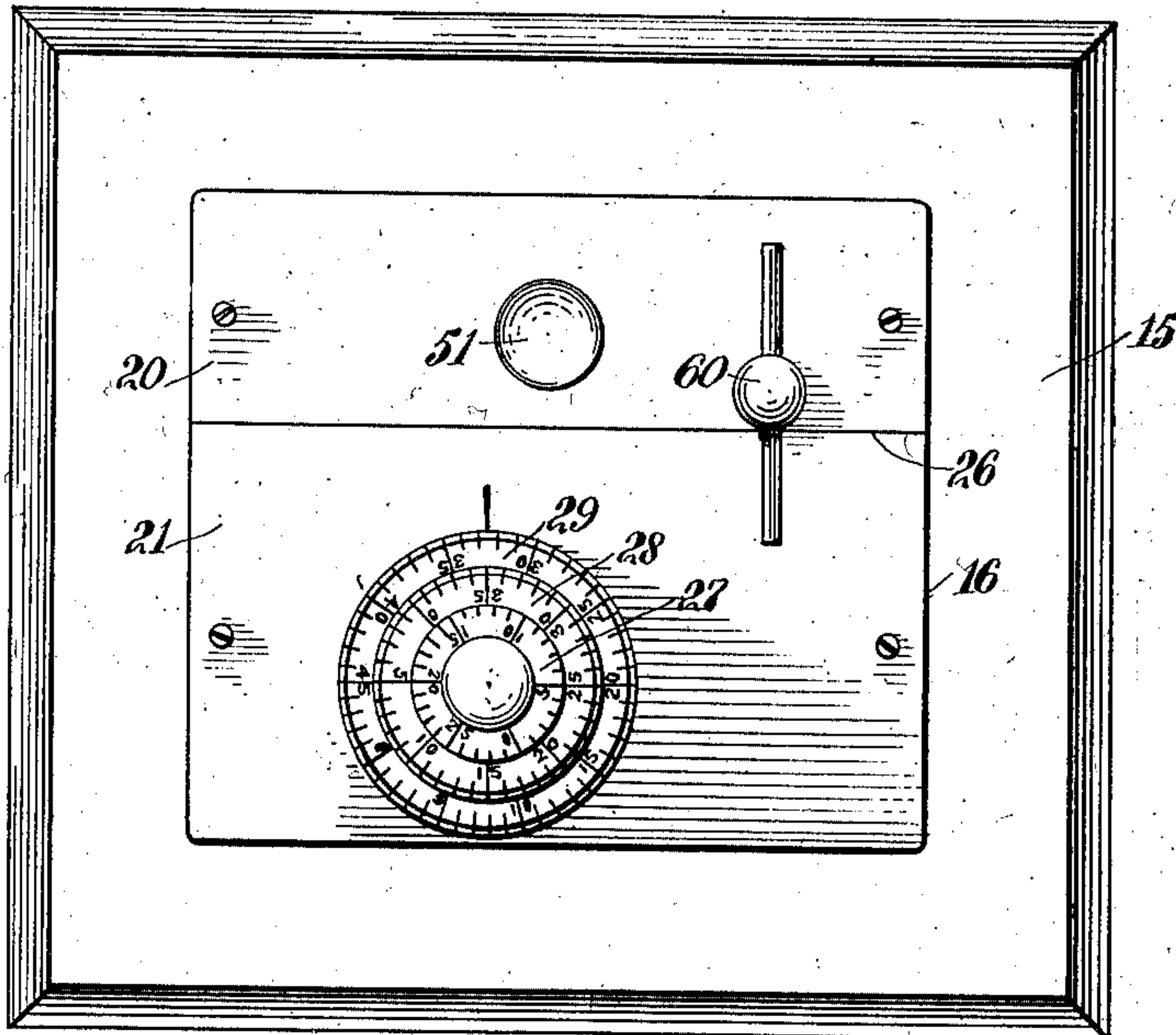
G. & F. DEEG,
ATTACHMENT FOR CONTROLLING THE FUEL SUPPLY OF INTERNAL COMBUSTION ENGINES.
APPLICATION FILED SEPT. 21, 1909.

963.526.

Patented July 5, 1910.

3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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Fig. 2.

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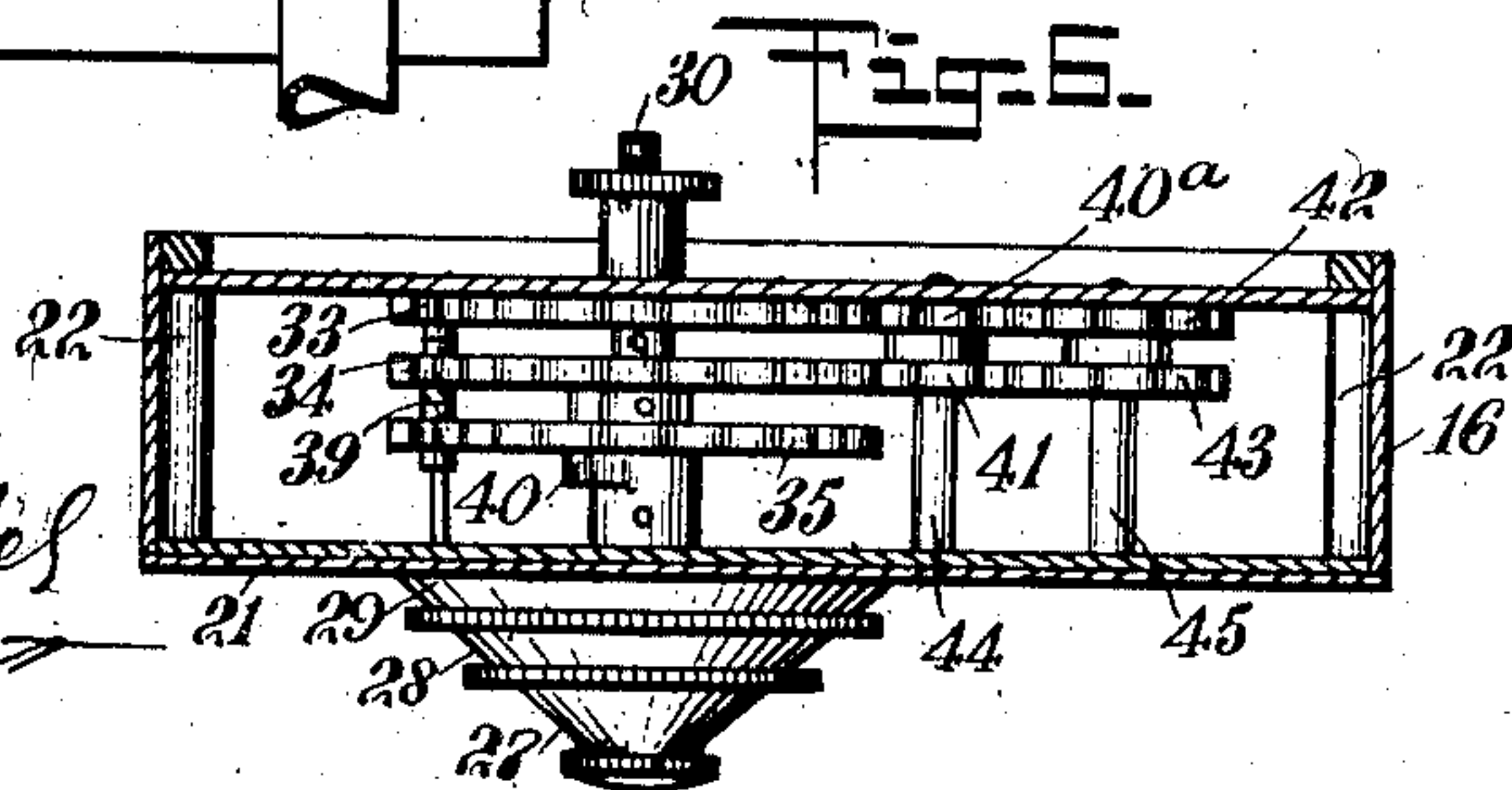
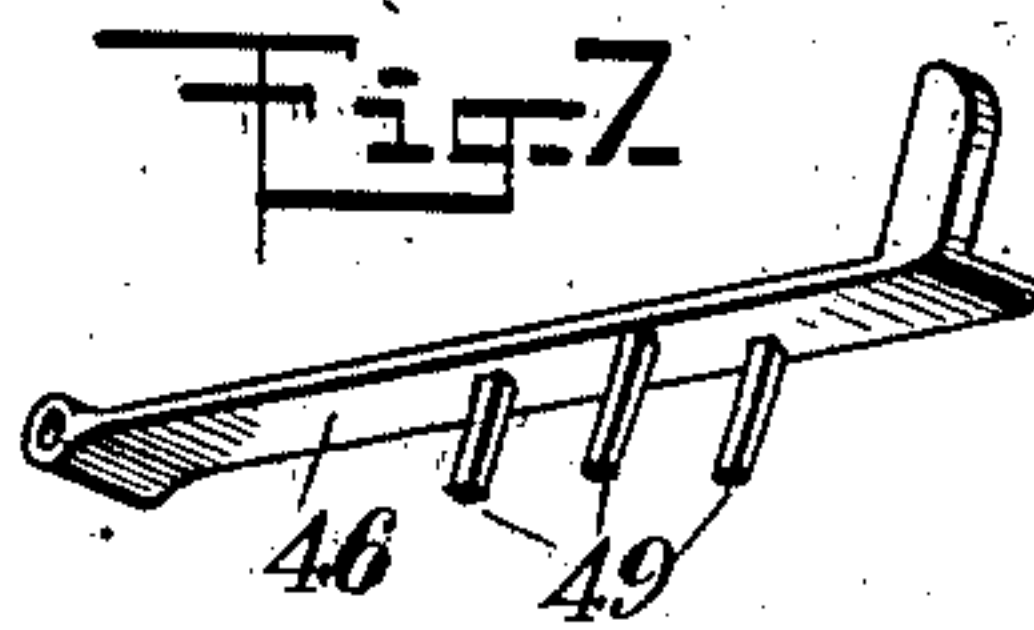
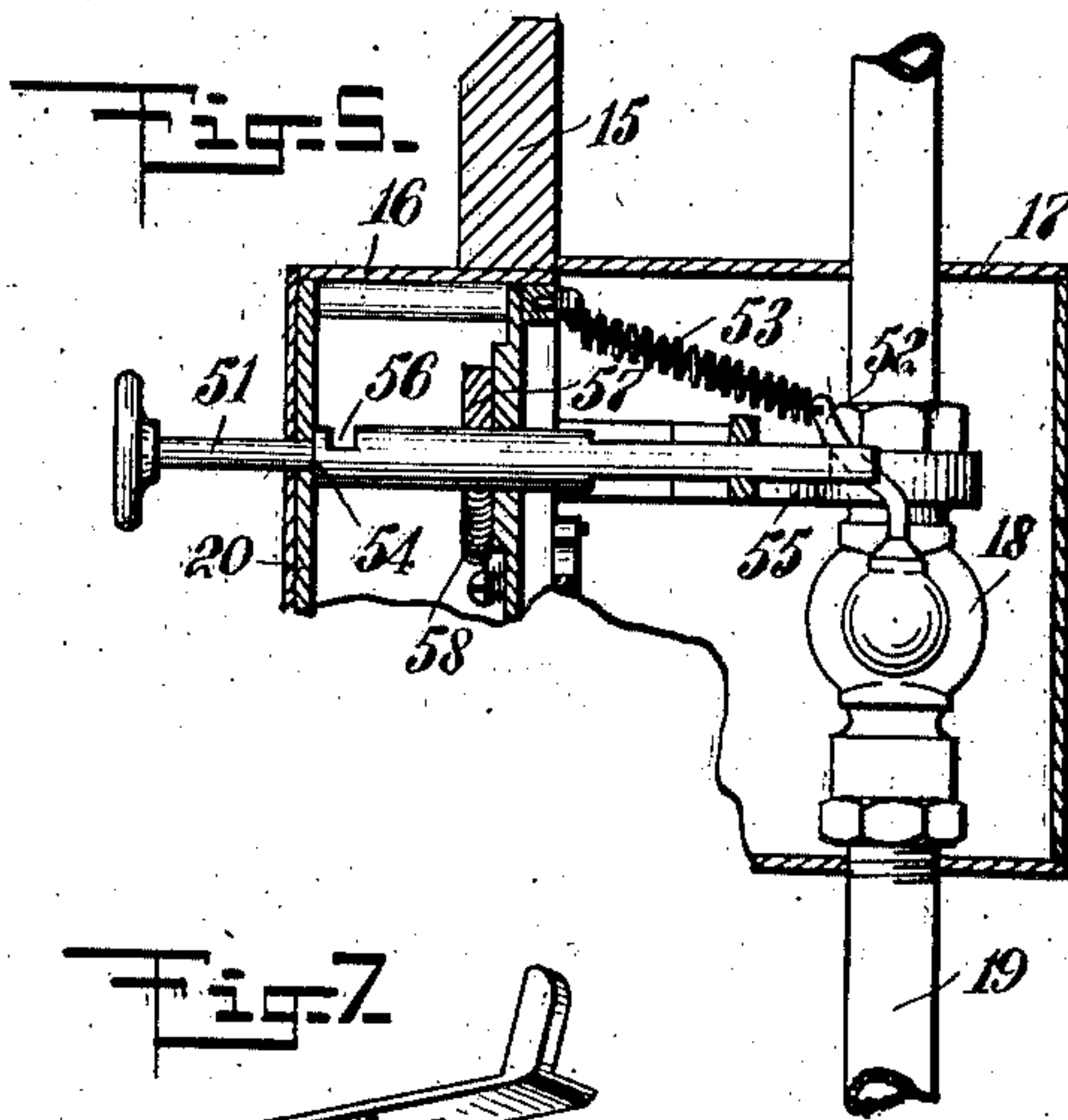
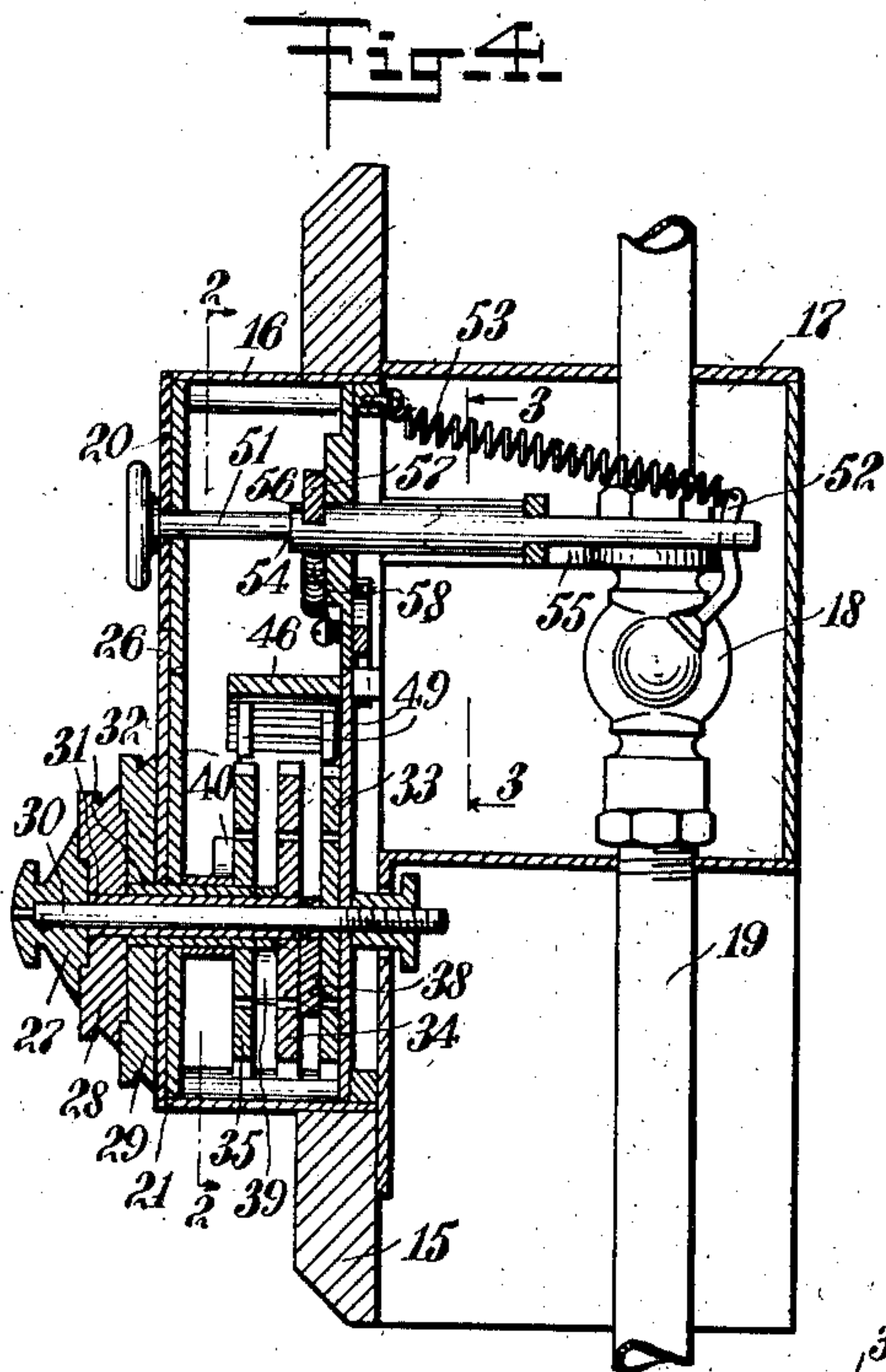
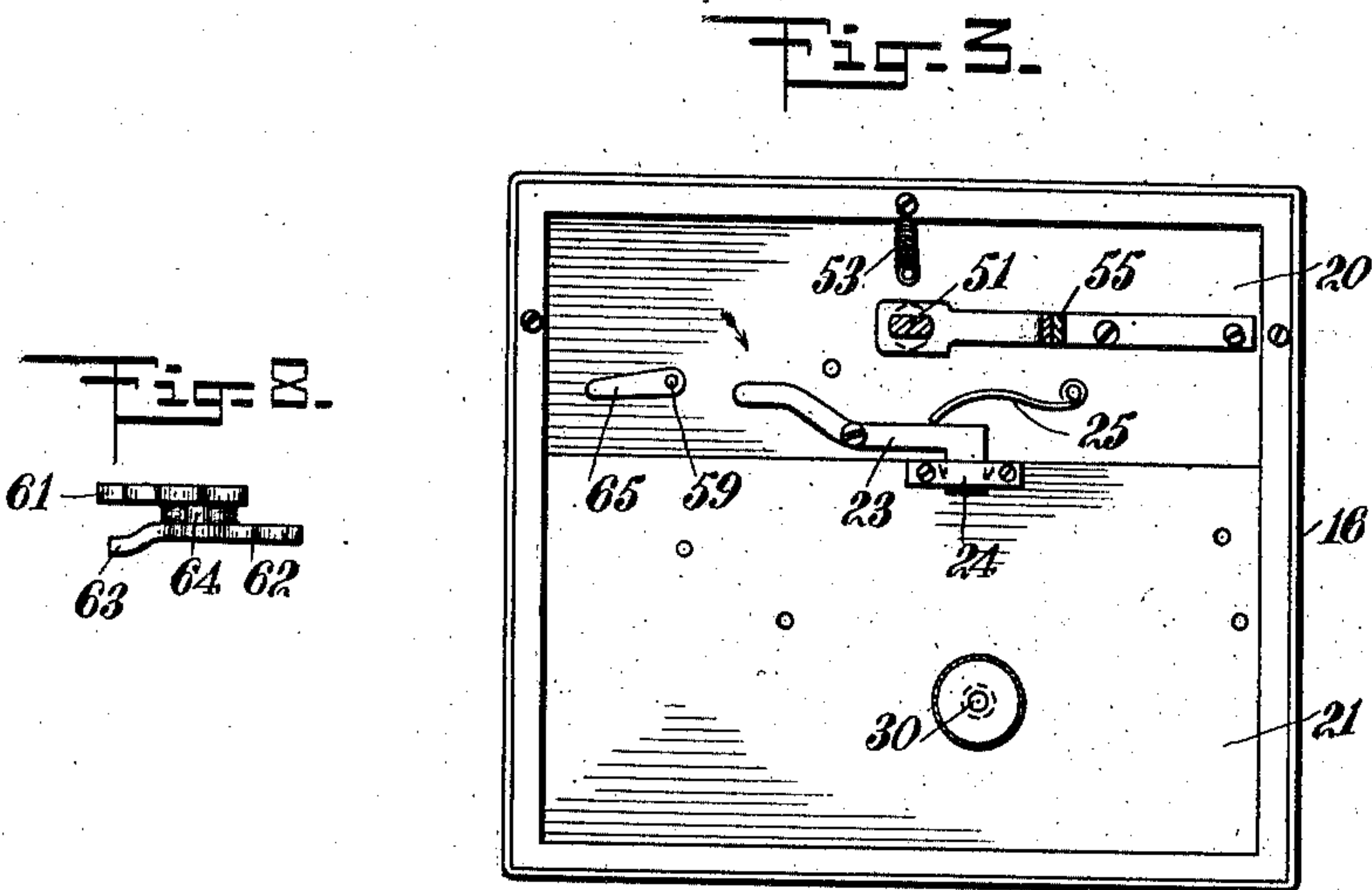
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig-9.

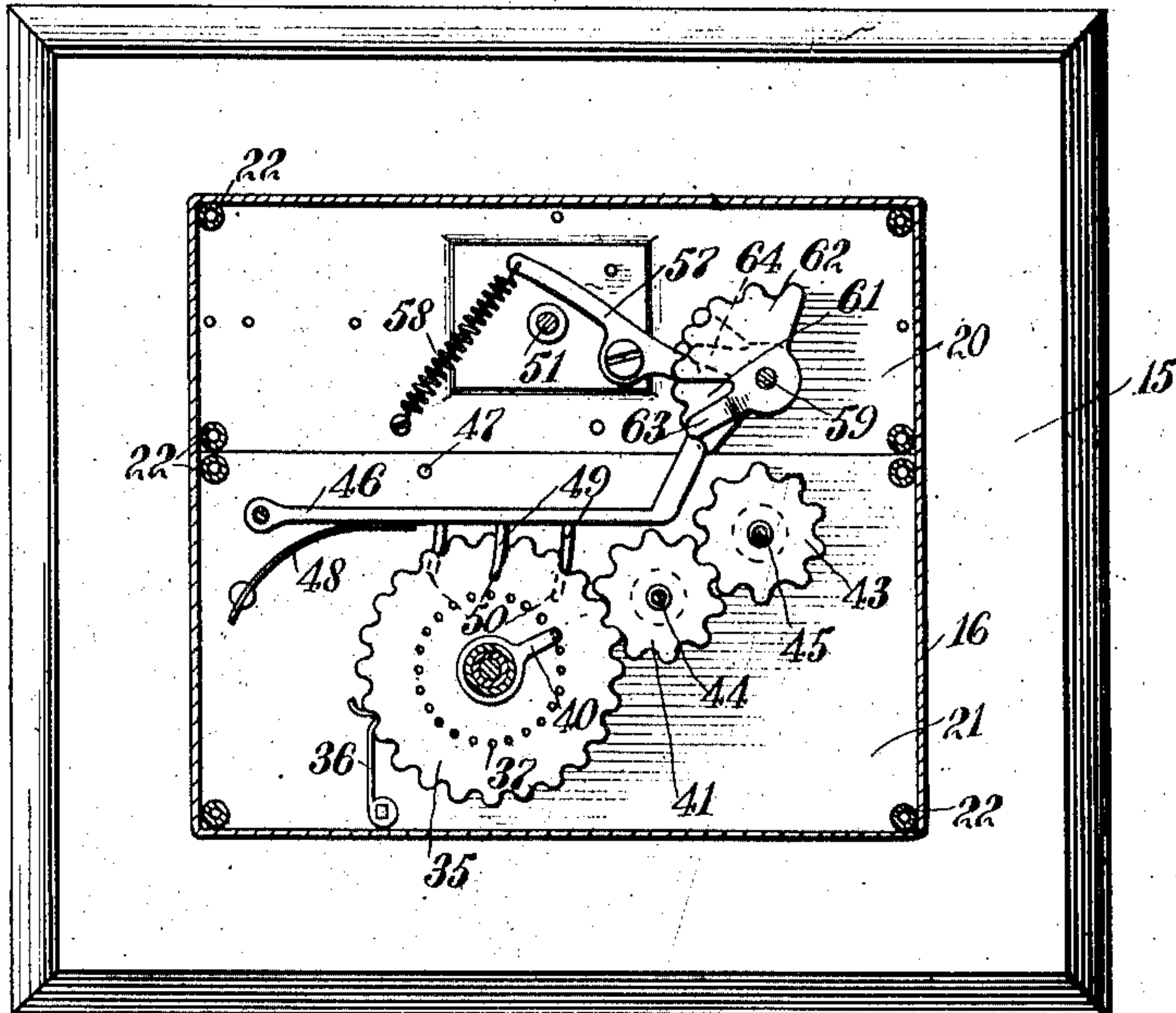
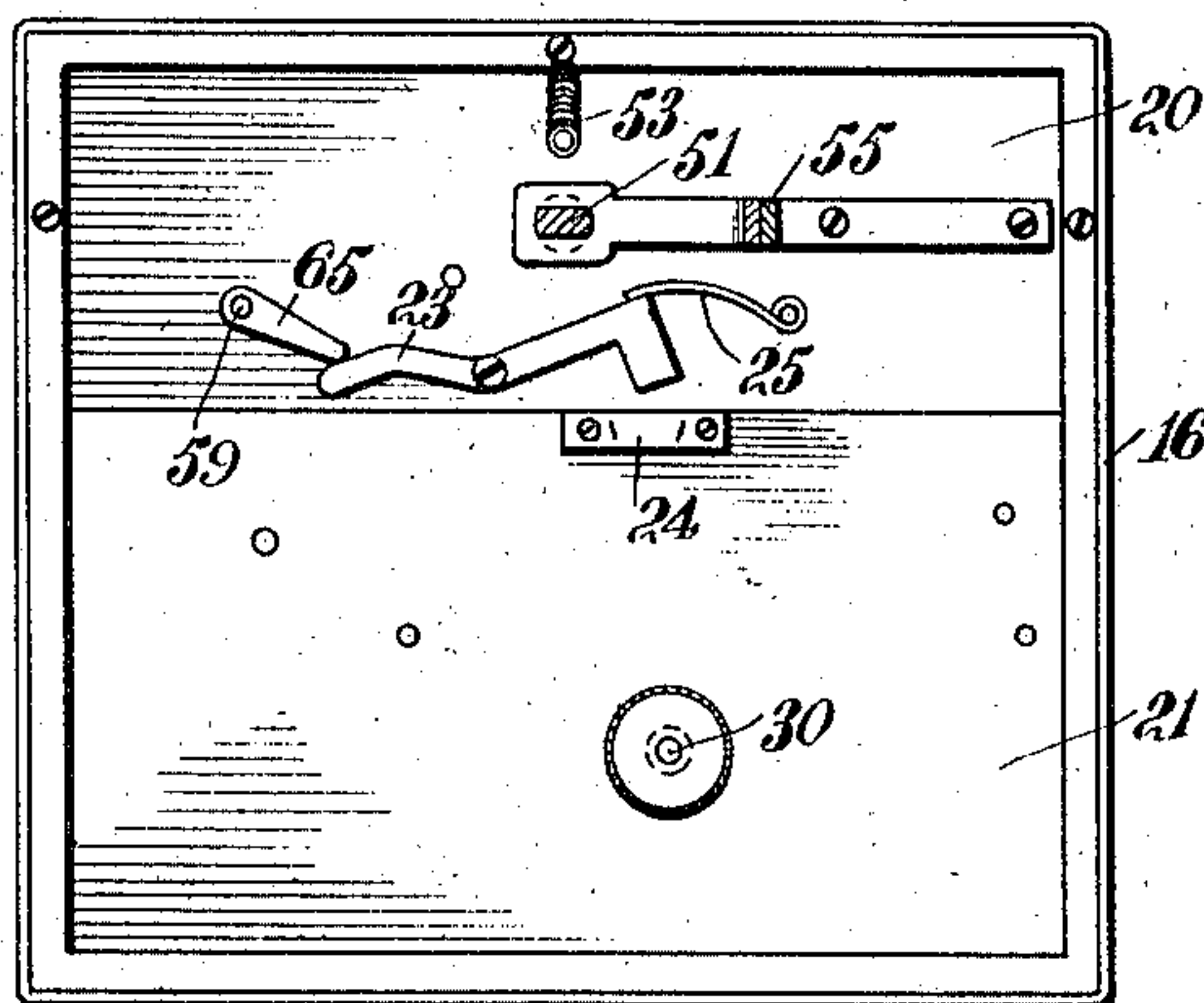


Fig-10.



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UNITED STATES PATENT OFFICE.

GUSTAV DEEG AND FRANK DEEG, OF NEW YORK, N. Y.

ATTACHMENT FOR CONTROLLING THE FUEL-SUPPLY OF INTERNAL-COMBUSTION ENGINES.

963,526.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed September 21, 1909. Serial No. 518,791.

To all whom it may concern:

Be it known that we, GUSTAV DEEG and FRANK DEEG, citizens of the United States, and residents of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Attachment for Controlling the Fuel-Supply of Internal-Combustion Engines, of which the following is a full, clear, and exact description.

The invention has in view a mechanism for controlling the valve of a conduit, more especially the valve of the gasoline supply pipe leading to an internal combustion engine, particularly when the engine is used as a propelling engine of an automobile or motor-boat. Pleasure conveyances of this character are frequently taken out of their places of storage by parties in whose care they are placed, without the knowledge or consent of the owner, resulting disastrously at times to both property and life. We aim to overcome this abuse by an attachment which incloses the controlling valve of the gasoline or other fuel supply, and is provided with a combination lock mechanism by which the operation of the valve exterior of the casing is controlled.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front face view of the attachment as preferably constructed; Fig. 2 is a section on the line 2—2 of Fig. 4; Fig. 3 is a section on the line 3—3 of Fig. 4, showing the lock removed from the supporting frame; Fig. 4 is a section on the line 4—4 of Fig. 2; Fig. 5 is a fragmentary section similar to Fig. 4, showing the controlling valve of the gasoline supply open; Fig. 6 is a sectional plan of the lower portion of the lock; Fig. 7 is a perspective view of the lock-bolt; Fig. 8 is an edge view of a device for disengaging the locking lever from the valve-operating member and breaking the lock combination; Fig. 9 is a sectional view similar to Fig. 2, showing the position of the parts at the instant the valve-operating member is released; and Fig. 10 is a view similar to Fig. 3, showing the position of certain of the parts when the two sections of the lock are unlocked.

A frame 15 has an opening in its face receiving a combination lock 16 and is provided with a housing or casing 17 at its upper rear portion. In this box is arranged a controlling valve 18 in the length of a conduit or pipe 19, generally forming the gasoline supply pipe for an internal combustion engine. The casing of the lock 16 is made of two separable sections 20 and 21 respectively, the front and rear walls of each section being secured together in spaced relation by studs 22 arranged at the corners, with the upper section of the casing secured to permanently remain in the peripheral portion of the casing, and the lower section of the casing removable from the peripheral portion, and locked when assembled therewith, by a latch-lever 23 engaging in a keeper 24, the latch-lever being fulcrumed on the inner wall of the section 20 of the casing and normally forced toward the keeper by a spring 25, and the keeper secured to the inner wall of the lock casing section 21. The front walls of the lock casing sections are rabbeted at the edges to provide a lapped joint 26 between them and provide portions respectively fitting within the periphery of the casing and abutting against the outer edge thereof, as shown in Fig. 4, the rabbeted edges of the front wall in the embodiment of the invention shown, being produced by constructing the said wall of two plates secured flat together, with the outer plate extending slightly beyond the edge of the inner plate. A series of graduated index wheels 27, 28 and 29 are respectively fixed to a spindle 30, sleeve 31 and sleeve 32, the sleeves being journaled one upon the other, as is usual in a combination lock mechanism, with the spindle 30 journaled in the rear wall and the sleeve 32 journaled in the front wall of the section 21 of the lock casing. Respectively journaled on the spindle and the two sleeves at the inside of the lock casing are pinions 33, 34 and 35, the pinions being normally held against accidental displacement by spring pawls 36, and having a series of holes or depressions 37 corresponding to the graduations of the index wheels and concentrically arranged about the spindle 30 and sleeves 31 and 32. Any one of the holes or depressions of the wheels is adapted to be respectively engaged by arms 38, 39 and 40, respectively fixed to

the spindle 30, sleeve 31 and sleeve 32, this construction adapting the combination of the lock to be changed. As shown in Fig. 6, the pinions 33 and 34 are in mesh with pinions 40^a and 41, which in turn mesh with similar pinions 42 and 43, the pinions 40^a and 42 being revoluble independently of the pinions 41 and 43, with the pinions 40^a and 41 journaled on a pin 44, and the pinions 42 and 43 journaled on a pin 45.

A bolt or arm 46 is fulcrumed between the front and rear walls of the lower section of the lock casing and is normally forced upwardly against a stop-pin 47 by a spring 48. The free end of the bolt, as shown in Figs. 2 and 7, is upwardly offset, and along the under side of the bolt, pins 49 are arranged in the planes of the respective pinions 33, 34 and 35, and are adapted to pass within relatively deeper cut teeth 50 of the pinions when the bolt is depressed.

Slidable through the rear and front walls of the upper section of the lock casing is a push-bar 51 having an operating head or button at its outer end and extending to operatively engage with the controlling arm 52 of the valve 18, this arm being normally forced in a direction to open the valve, by a spring 53. The push-bar is limited in its outward movement by a shoulder 54 arranged to contact with the outer wall of the lock casing, the bar being guided both in the front and rear walls of the casing and in the arm of a bracket 55 supporting the valve from the lock, that portion of the bar passing through the said arm, as best shown in Fig. 3, being of angular cross-section in order to prevent the bar from turning. The push-bar adjacent to its shoulder 54 is provided with a notch 56 adapted to be engaged by a locking lever 57 when the bar is forced to its innermost position to close the valve 18, this engagement of the locking lever being automatically effected by a spring 58.

In the front and rear walls of the upper section of the lock casing is journaled a shaft or pintle 59 having an operating handle 60 at the front of the lock, and, further having the device shown in Fig. 8, rigidly applied thereto, said device consisting of segmental gears 61 and 62 respectively, and fingers 63 and 64, all of which are rigid with each other, with the gear 61 arranged slightly in advance of the gear 62 and the fingers 63 and 64 respectively arranged to strike the offset end of the bolt 46 and one arm of the locking lever 57, the finger 63 striking the bolt at the same time or slightly before the contact of the finger 64 with the lever. The pintle 59 further carries at the outside of the inner wall of the lock casing, an arm 65 arranged to strike the outer arm of the locking lever 23 after the segmental gears 61 and 62 have passed into

and out of mesh with the gears 42 and 43 respectively, and withdraw the head of the lever from the keeper 24.

Assuming the several parts of the locking mechanism to be in the position shown in Fig. 4, in which the gasoline supply to the engine is shut off by the valve 18, any one knowing the combination of the lock can, by the operation of the index wheels, bring the deep teeth of the pinions opposite the respective pins 49, at which time the bolt may be depressed by the finger 63 upon the revolution of the handle 60 in the proper direction. This movement of the handle by reason of the engagement of the finger 64 with the lever 57, releases the latter from the push-bar, which, together with the operating arm 52 of the valve 18, is instantly forced outwardly to the position shown in Fig. 5, opening the gasoline supply to the engine. On the continued revolution of the handle 60, the segmental gears are brought into mesh with the trains of pinions in successive order thus breaking the combination. Just after the segmental gears have passed from engagement with the pinions, the arm 65 retracts the locking lever 23 and permits of the lower section of the lock being withdrawn for the purpose of changing the combination, or inspection. If the lower section of the lock is not removed, the continued revolution of the handle 60 causes the arm to slide over the locking lever 23, at which time this lever is returned into the keeper 24 by the spring 25. When the finger 63 again reaches the bolt 46, the latter prevents the further revolution of the handle 60 on account of the breaking of the combination by the segmental gears. When the automobile or boat is brought back to the garage or boat-house, the gasoline supply is cut off and the push-bar locked by pressing the latter to the position shown in Fig. 4, at which time the locking lever 57 reengages in the notch 56.

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

1. The combination of a conduit having a controlling valve, a housing inclosing the valve, an operating member for the valve, operable from the outside of the housing, a locking device arranged to automatically engage with the said member and lock it against movement when the member is in one position, and a lock controlling the release of said device.

2. The combination of a gasoline supply conduit having a controlling valve, a casing inclosing the valve, means normally tending to open the valve, an operating member operable from the outside of the casing to close the valve against the tension of said means, means to lock the member when the valve is closed, and a combination

lock controlling the operation of the last mentioned means.

3. The combination of a gasoline supply conduit having a controlling valve, a casing inclosing the valve, means normally tending to open the valve, a push-bar operable from the outside of the casing to close the valve against the tension of said means, means to lock the push-bar when the valve is closed, and means to release the last mentioned means from the push-bar, operable from the outside of the casing.

4. The combination of a gasoline conduit having a controlling valve, a casing inclosing the valve, means to close the valve, operable at the outside of the casing, a combination lock mechanism, means to lock the valve-operating means when the valve is closed, and means to release the last mentioned means, operable from the outside of the casing and locked by the combination lock mechanism, having means to break the combination of said mechanism after the valve-operating means is released.

5. The combination of a conduit having a controlling valve, a push-bar for closing the valve, a spring normally tending to open the valve and force the push-bar in one direction, a locking device arranged to lock the push-bar against movement when the latter is moved to a prescribed position against the tension of the spring, and a combination lock mechanism controlling the release of the said device.

6. The combination of a casing, a conduit having a controlling valve arranged within the casing, a combination lock, an operating member for the valve, operable at the outside of the casing, means to lock the said member, and a device operable from the outside of the casing, the operation of which is controlled by the lock, and having means to release the locking means from said member.

7. The combination of a conduit having a controlling valve, means normally tending to close the valve, a push-bar to open the valve against the tension of the said means, a locking lever to engage the push-bar when the valve is closed, and a lock controlling the operation of the lever.

8. The combination of a conduit having a controlling valve, an operating member for the valve, means to lock the operating

member when the valve is closed, a combination lock constructed of separable sections, means to lock the two sections of the lock together, and revoluble means carried by the lock and controlled in its operation thereby, having means to respectively disengage the locking means of the valve-operating member and unlock the two sections of the lock in successive order.

9. The combination of a conduit having a controlling valve, a push-bar to close the valve, means normally tending to open the valve, means to lock the push-bar against the tension of said means, a revoluble device to release the last mentioned means, and a combination lock mechanism controlling the operation of said device.

10. The combination of a conduit having a controlling valve, a spring normally tending to open the valve, a push-bar to close the valve against the tension of the spring, a locking lever pivotally supported to swing crosswise of the push-bar and lock it against movement when the valve is closed, a combination lock mechanism having a depressible bolt, and a revoluble device having means to respectively engage the bolt and locking lever.

11. The combination of a conduit having a controlling valve, a combination lock, an operating member for the valve, operable at the outside of the lock, means to lock the said member, and means to release the locking means, operable from the outside of the lock and controllable thereby, and having means to break the combination of the lock when the said locking means is released.

12. A combination lock having a pinion to break the combination thereof, a conduit having a controlling valve, an operating member for the valve, means to lock said member, and revoluble means to release the last mentioned means, controlled by the combination lock and having a segmental gear adapted to mesh with the said pinion in the revolution of the releasing means.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GUSTAV DEEG.
FRANK DEEG.

Witnesses:

J. G. HARRIS,
EDMUND DODGE.