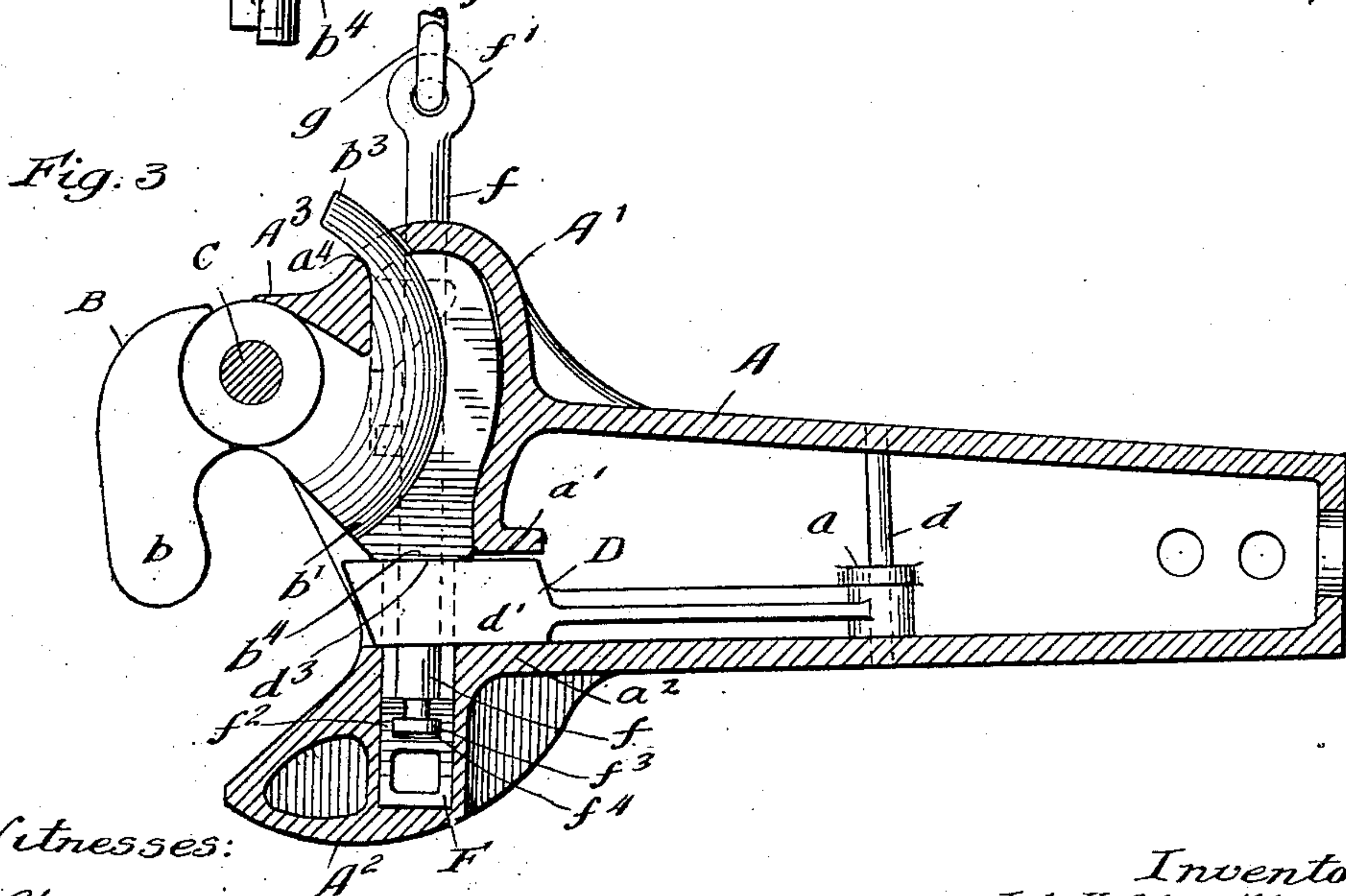
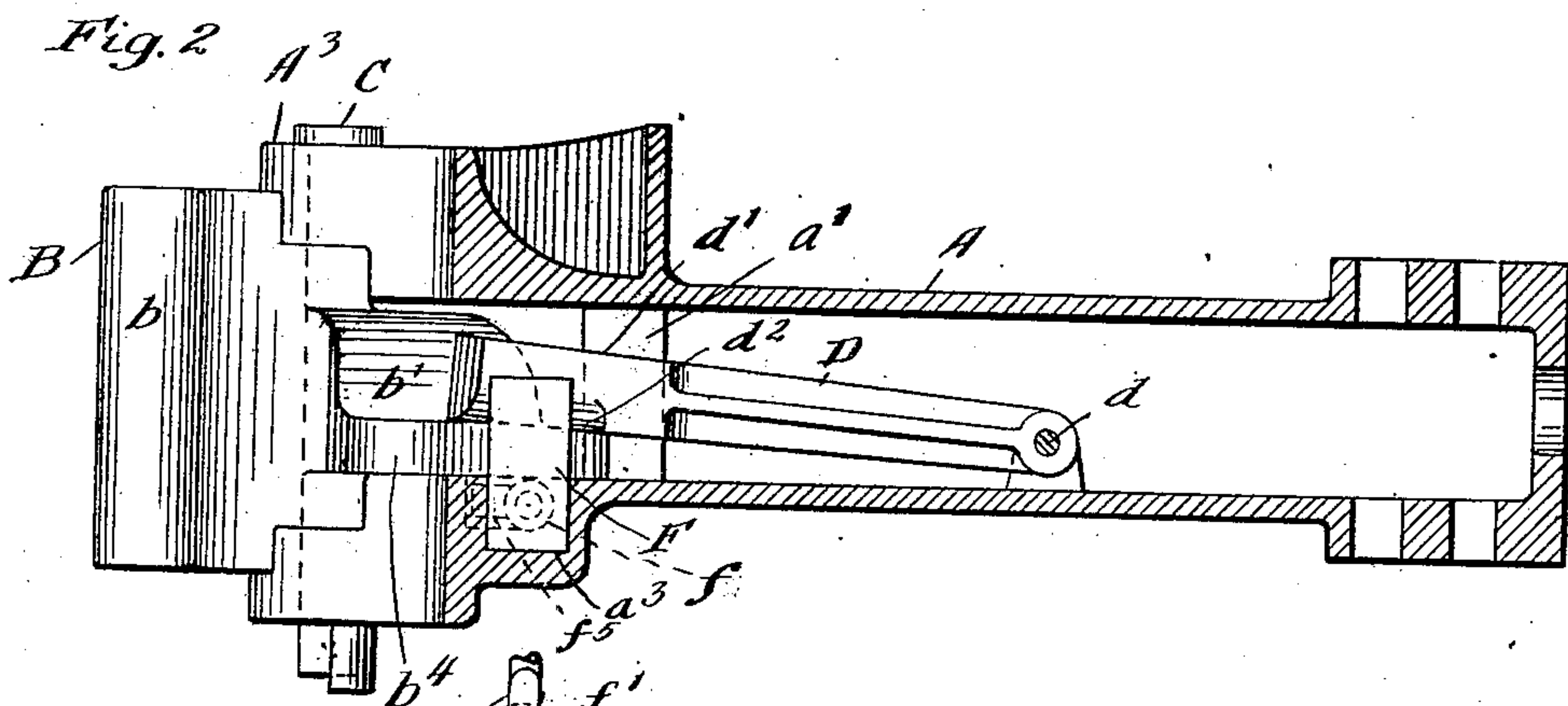
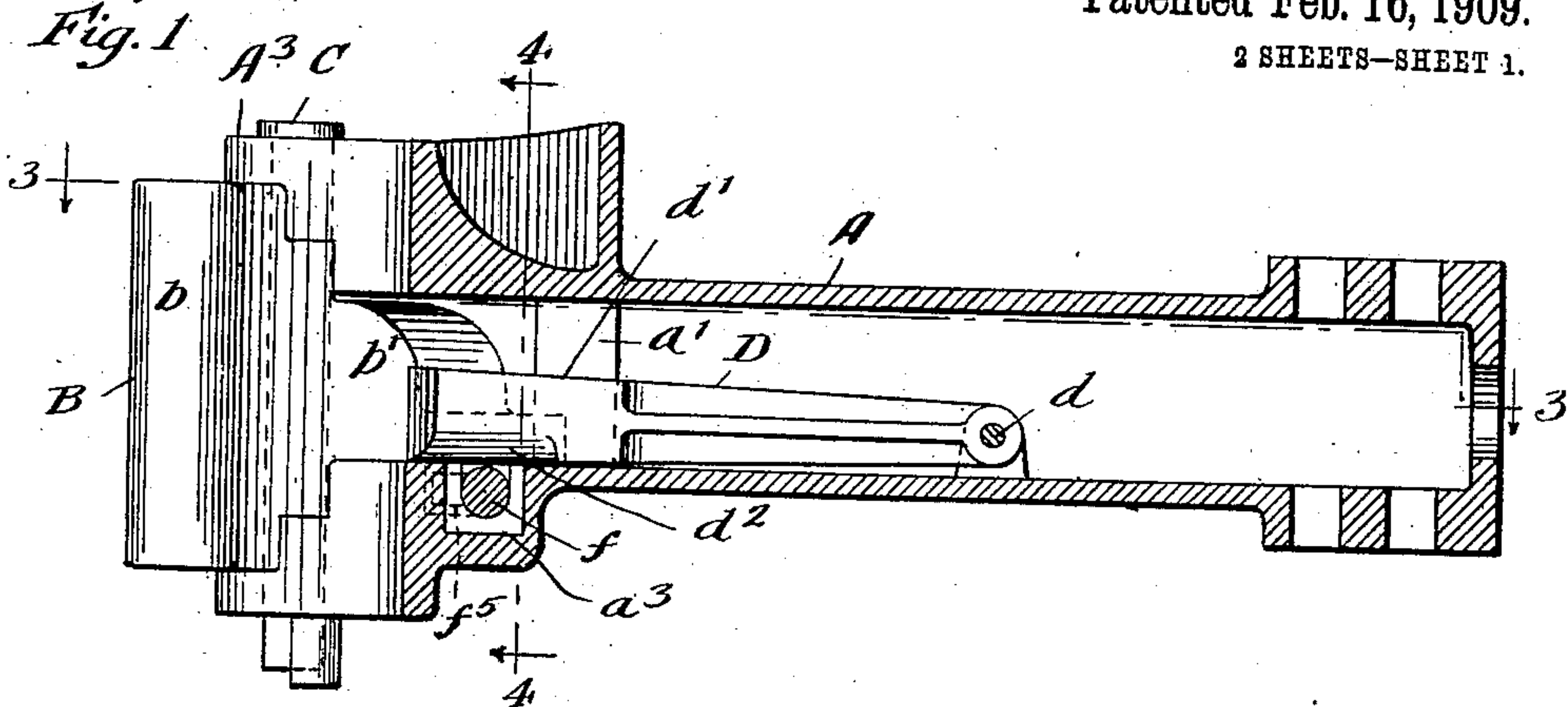


APPLICATION FILED JUNE 26, 1907.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 1.



Witnesses:

Wm. Geiger
Attest, Monday,

Inventor:

Job H Stricklan

By Munday, Everts, Adcock & Clarke

Attorneys

J. H. STRICKLAN.
CAR COUPLING.
APPLICATION FILED JUNE 26, 1907.

912,436.

Fig. 4

Patented Feb. 16, 1909.

2 SHEETS—SHEET 2.

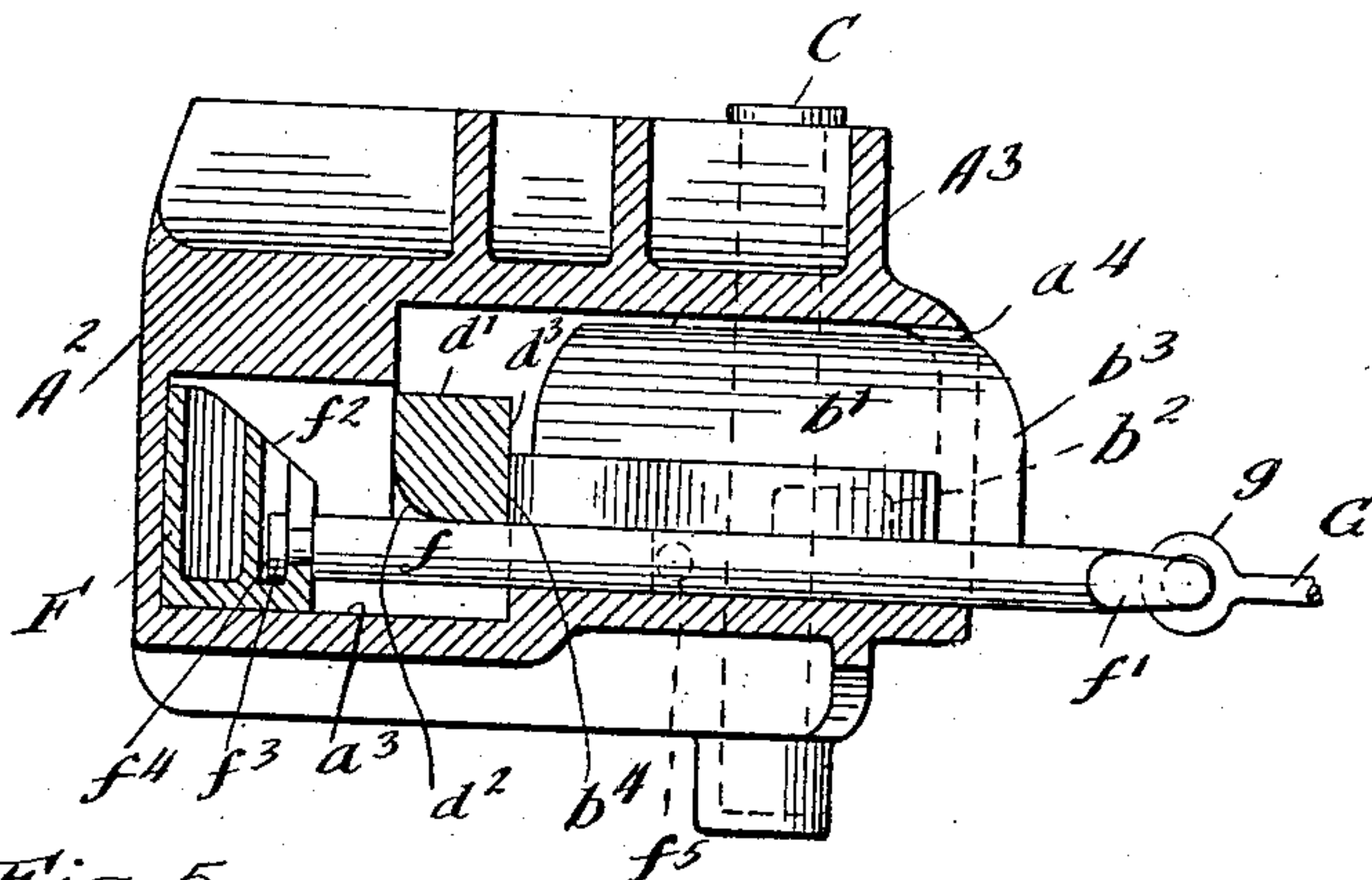


Fig. 5

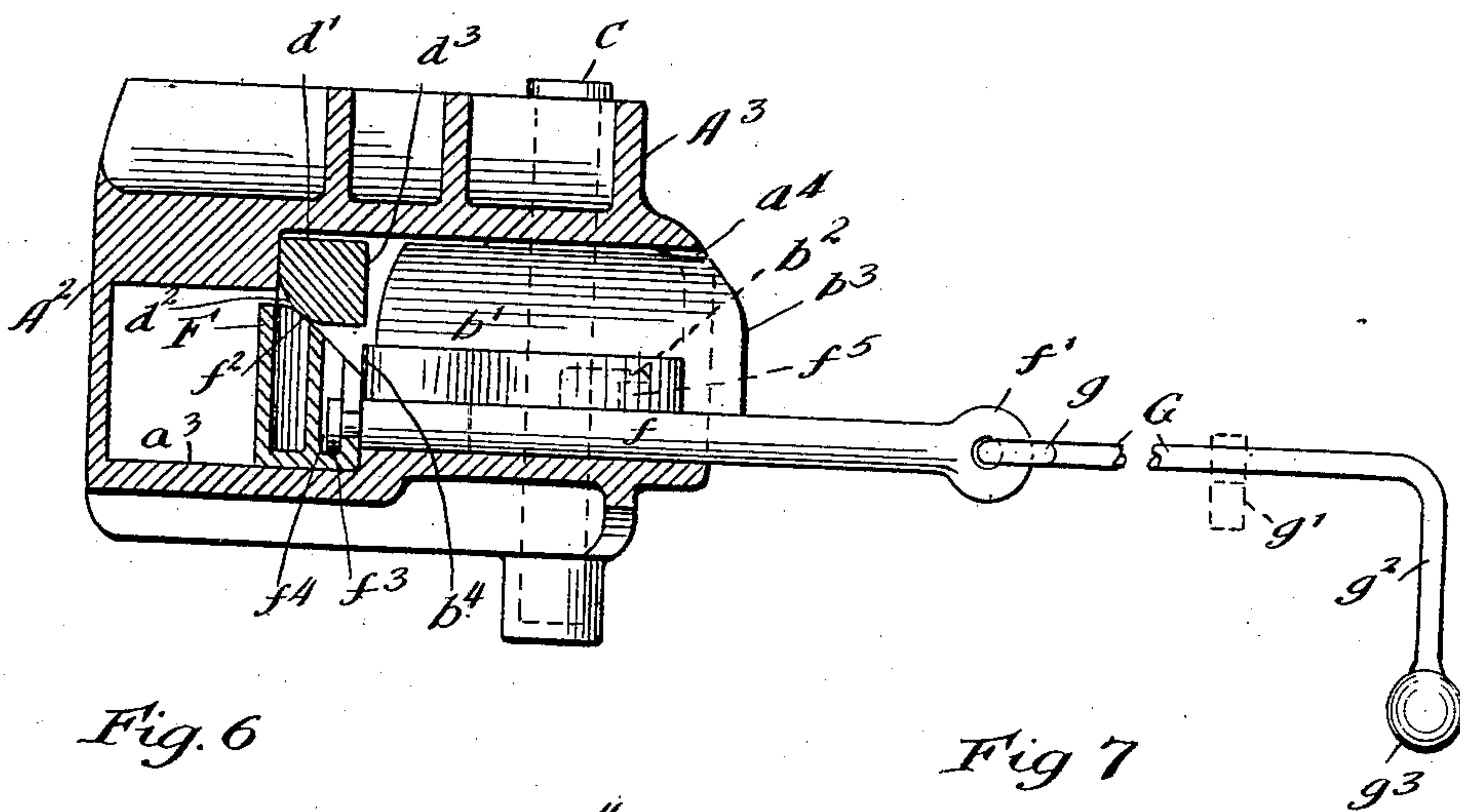
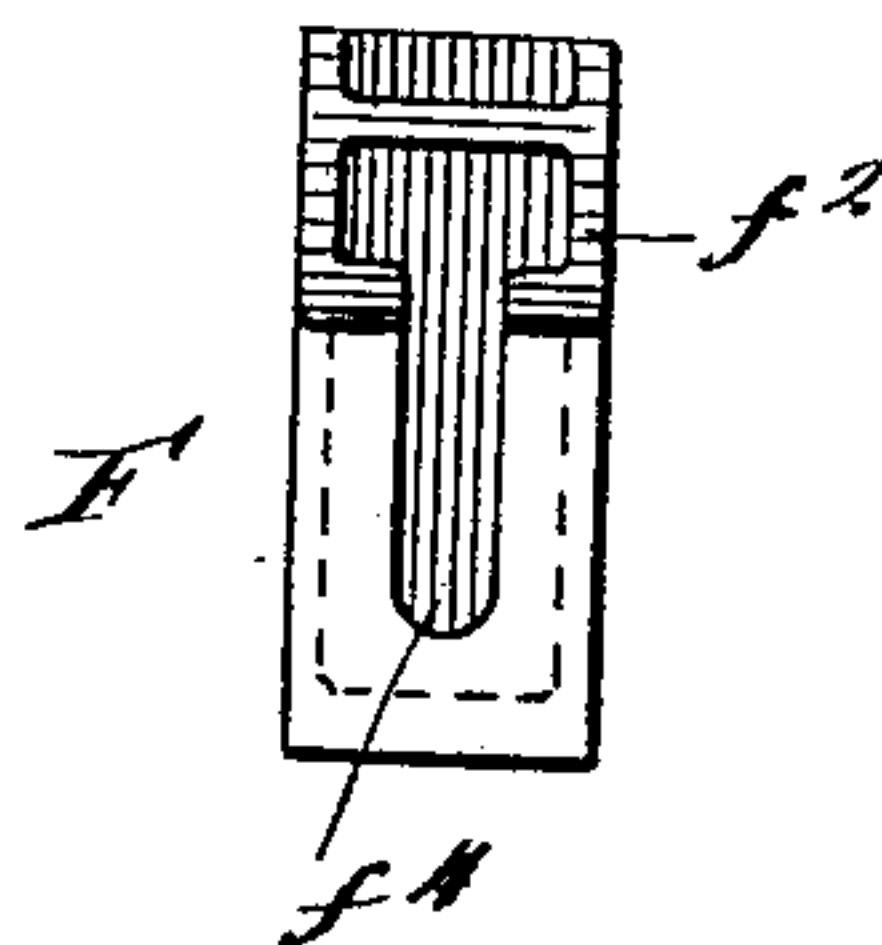
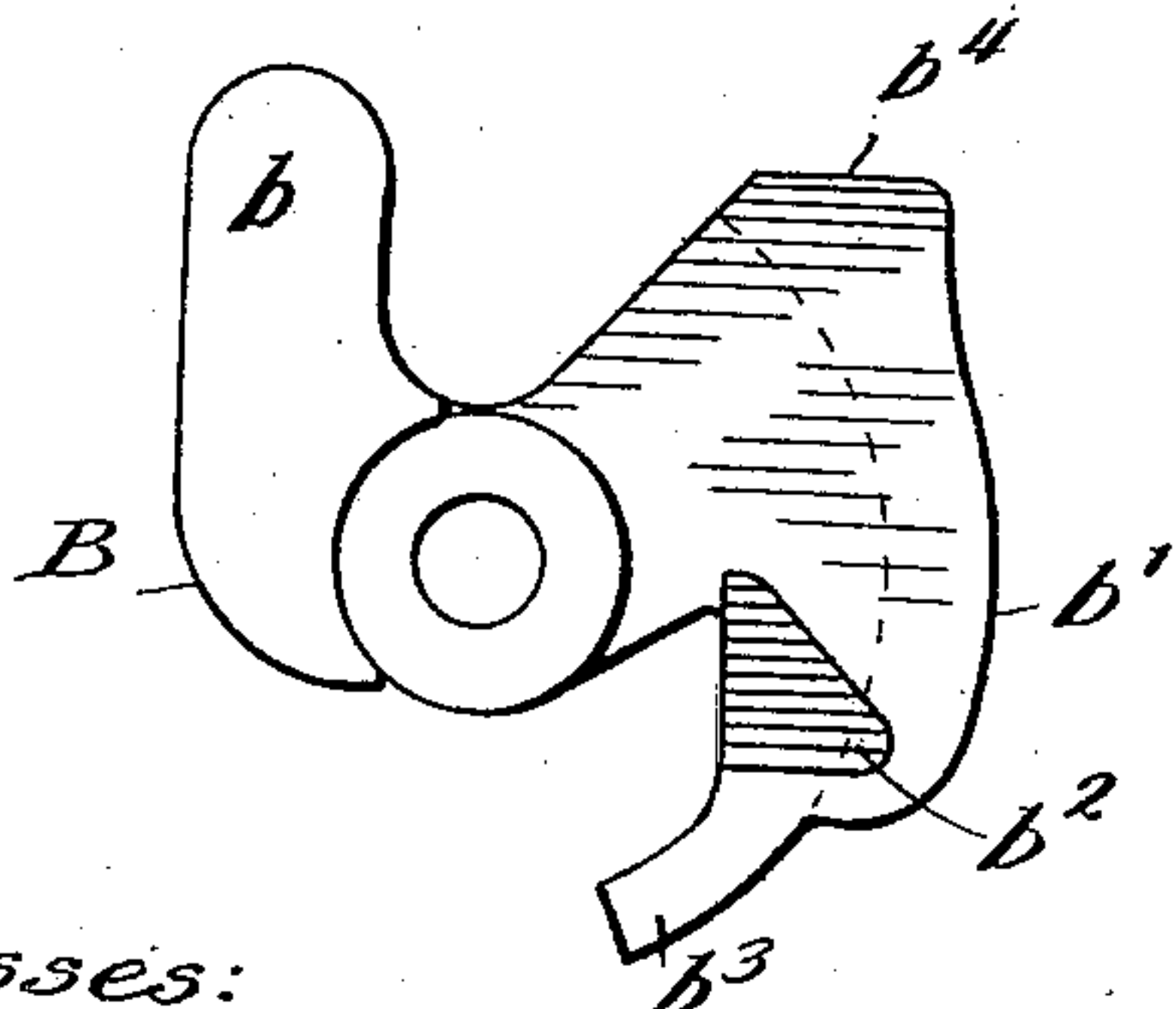


Fig. 6

Fig. 7



Witnesses:

Wm. Geiger
A. M. Munday,

Inventor:
Job H. Stricklan

By Munday, Evans, Adcock & Clarke

Attorneys

UNITED STATES PATENT OFFICE.

JOB H. STRICKLAN, OF COFFEYVILLE, KANSAS, ASSIGNOR OF ONE-HALF TO CHARLES H. FERRY, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

No. 912,436.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed June 26, 1907. Serial No. 380,861.

To all whom it may concern:

Be it known that I, JOB H. STRICKLAN, a citizen of the United States, residing in Coffeyville, in the county of Montgomery and State of Kansas, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to improvements in car couplers of the Master Car Builders' type, having the customary forked draw-head and pivoted knuckle, and wherein a horizontally extending locking-bar is mounted in the chamber of the draw-bar.

The object of my invention is to provide a car coupler of this general type with means for operating the longitudinally extending locking-bar from the side instead of from the top as heretofore, and at the same time enable the locking-bar lifting device to serve as a lock-set for holding the locking-bar in position for uncoupling, so that after the lock is once raised and set for uncoupling, if it is again desired to lower the lock into coupled position, this may be readily done by simply moving the lifting device from the side of the car to its normal position, thus avoiding entirely the necessity of getting under the car to dislodge the lock from its lock-set position, as is the case with most couplers now in use.

A further object is to provide the side operated lifting device with means for throwing the knuckle open, and also closing it.

My invention consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and by which these objects or results are accomplished. That is to say, it consists in connection with the draw-bar, draw-head, pivoted knuckle and longitudinally disposed locking-bar preferably pivotally connected to the draw-bar at its rear end, in a transversely movable lifter slide mounted in a suitable transverse way in the draw-head having a cam or incline on its upper face adapted to engage the front end or head of the locking-bar to lift the same into position to permit the knuckle to swing open, the lifter slide also serving to hold the lock in its raised or lock-set position so that the knuckle can subsequently swing open when the cars are subsequently separated, thus dispensing with the necessity

of providing the lock or draw-head with lock-set ledges, shoulders or trigger-acting devices, as has heretofore been customary. The transversely movable lifter slide, or its stem, which is preferably made in a separate piece from the slide and detachably and rotatably connected therewith, is also provided with a knuckle throwing pin or projection adapted to engage the tail of the knuckle to throw the knuckle open and also to close the same. The laterally extending stem of the slide is rotatably connected with the slide so that its knuckle throwing projection may be turned down out of the way when the lock lifter slide is moved to lift the lock and so that it may be then turned upward into engagement with the knuckle tail when it is desired to move the slide in the opposite direction to throw the knuckle open.

Other features of my invention are more particularly pointed out in the claims.

In the drawings, Figure 1 is a longitudinal vertical section of a car coupler embodying my invention showing the knuckle closed. Fig. 2 is a similar view showing the knuckle open. Fig. 3 is a horizontal section on the broken line 3—3 of Fig. 1. Fig. 4 is a vertical cross section on line 4—4 of Fig. 1. Fig. 5 is a similar view showing the parts in a different position. Fig. 6 is a bottom plan view of the knuckle and Fig. 7 is a detail face view of the transversely movable lock lifter slide.

In the drawing, A represents the draw-bar and A¹ the draw-head integral therewith, having the customary guard-arm A² and pivot arm A³.

B is the knuckle having the customary front arm or nose *b* and rear arm or tail *b*¹, and pivotally connected to the draw-head by the pivot pin C.

D is the longitudinally disposed locking-bar mounted in the chamber of the draw-bar, and preferably pivotally connected at its rear end thereto by a pivot or pin *d* extending through the lug *a* with which the draw-bar is provided. The draw-head is furnished with integral upright guides *a*¹ *a*² engaging the head *d*¹ of the locking bar to hold it firmly in position and guide it in its up and down movements.

F is the transversely movable lifter slide reciprocating in a suitable transverse way *a*³ in the draw-head and having a rotatable

stem f extending laterally through the draw-head and provided with an eye f^1 on its outer end. The transversely movable lifter-slide F is furnished with a cam or incline f^2 on its upper face adapted to engage the head d^1 of the locking bar D and raise the same into its uppermost or unlocked position when the lifter slide is moved under the locking bar. The head of the locking bar is preferably also provided with a cooperating inclined face d^2 .

The transversely movable lifter slide is preferably detachably as well as rotatably connected to its stem f , this being preferably done by providing the stem with a grooved end or head f^3 and the slide F with a cooperating dovetail slot or socket f^4 open at the upper end thereof so that after the slide and its stem are inserted in the draw-head, the stem may be coupled to or slipped into place in the slide. To enable the side or laterally extending stem f of the lifter slide F to serve also as the means for closing and throwing the knuckle open, I provide it with a knuckle throwing pin or projection f^5 preferably in line with the eye f^1 , and which when turned upward engages the tail of the knuckle so that the stem of the slide will operate to throw the knuckle open when it is pushed inward. The tail or rear arm b^1 of the knuckle is preferably provided with a slot or recess b^2 to receive the knuckle throwing pin or projection on the stem of the lifter slide. The tail of the knuckle is preferably furnished with a hook or extension b^3 projecting through an opening a^4 in the draw-head and which extension serves to prevent the knuckle throwing projection on the stem of the lifter slide from getting into improper position or behind the tail of the knuckle.

G is a side pull-rod having an eye g at its inner end connecting with the eye f^1 of the lifter slide stem f and rotatably and slidably secured to the car by suitable brackets or bearings g^1 . This side pull-rod at its outer end is furnished with a bent arm or handle g^2 and with a knob g^3 , the weight of which serves to hold the lifter slide stem f turned into its normal position or with its knuckle throwing pin or projection f^5 horizontal. When it is desired to throw the knuckle open, the pull-rod G is given a quarter turn, thus giving the lifter slide stem f a quarter turn, so that its knuckle throwing projection or pin f^5 projects upward into proper position for engagement with the knuckle tail.

The head d of the locking bar D is furnished with an upright locking face d^3 which engages the flat upright locking face b^4 of the knuckle tail b^1 to hold the knuckle in its locked or closed position.

When the knuckle swings open, the front end of the locking bar rests upon the knuckle

tail and is set or supported thereby in position for coupling. When the stem of the transversely movable lock lifter slide F is pulled outward, the slide F passes under and raises the lock and also sets or supports it into raised position ready for uncoupling. After the lock has been thus once lifted, if it is desired to again lock the knuckle closed, all that is necessary is to push the lifter slide inward by operation of the side pull-rod G and stem f when the lock will again drop to place. The lifter slide stem f and its pin or projection f^5 fitting in the slot b^2 of the knuckle tail serves not only as a means for automatically opening the knuckle but also to close the same from the side of the car when the knuckle happens to be open, and it is desired for any purpose to close the same without going under or between the cars.

In the claims, by the phrase "lifter slide stem being rotatably connected to the lifter slide", I wish to be understood as meaning that the stem is so connected to the lifter slide as to be capable of rotation in respect thereto. And by the phrase "rotatably and detachably connected" in reference to said stem I wish to be understood as meaning that it is so connected to the lifter slide as to be capable of rotation in respect thereto and of detachment therefrom.

I claim:—

1. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head and means for causing the lifter to raise the lock as it is moved under the lock, substantially as specified.

2. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, said lifter slide having a cam or incline on its upper face, substantially as specified.

3. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, said lifter slide serving also as a lock-set when moved under the lock to support the locking-bar in position for uncoupling, substantially as specified.

4. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having

means for raising the locking-bar and a stem extending laterally through the draw-head, the stem of the lifter slide having a knuckle throwing projection engaging the tail of the knuckle to throw the knuckle open and to close the knuckle, substantially as specified.

5. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, said lifter slide having a cam or incline on its upper face, the stem of the lifter slide having a knuckle throwing projection engaging the tail of the knuckle to throw the knuckle open and to close the knuckle, substantially as specified.

6. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, said lifter slide serving also as a lock-set when moved under the lock to support the locking-bar in position for uncoupling, the stem of the lifter slide having a knuckle throwing projection engaging the tail of the knuckle to both open and close the knuckle, substantially as specified.

7. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, the stem of the lifter slide having a knuckle throwing projection engaging the tail of the knuckle to throw the knuckle open, said lifter slide stem being rotatably connected to the lifter slide, substantially as specified.

8. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head, the stem of the lifter slide having a knuckle throwing projection engaging the tail of the knuckle to throw the knuckle open, said lifter slide stem being rotatably connected to the lifter slide, and the knuckle tail having a slot or recess to receive the knuckle throwing projection on said stem, substantially as specified.

9. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar and a transversely reciprocating lifter slide having a stem extending laterally through the draw-head and rotatably connected with the lifter slide, and a side pull-rod connected to

said lifter stem and having an arm operating to hold said stem turned into its normal position, substantially as specified.

10. In a car coupler, the combination with the draw-bar and draw-head, having a transversely slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide having an incline engaging the lock to raise the same, and a stem rotatably and detachably connected thereto and extending laterally through the draw-head to operate said lifter slide from the side, substantially as specified.

11. In a car coupler, the combination with the draw-bar and draw-head, having a transversely slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide having an incline engaging the lock to raise the same and a stem extending laterally through the draw-head to operate said lifter slide from the side, said lifter slide when moved under the lock serving also as a lock-set, said stem carrying an arm adapted to be moved into engagement with the knuckle to throw the knuckle open, substantially as specified.

12. In a car coupler, the combination with the draw-bar and draw-head, having a transversely slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide having an incline engaging the lock to raise the same and a stem extending laterally through the draw-head to operate said lifter slide from the side, said stem being rotatably and detachably connected to said lifter slide and carrying an arm adapted to engage the knuckle to close the same, substantially as specified.

13. In a car coupler, the combination with the draw-bar and draw-head, having a transversely slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide having an incline engaging the lock to raise the same and a stem extending laterally through the draw-head to operate said lifter slide from the side, said stem being rotatably and detachably connected to said lifter slide, said rotatable stem having a knuckle throwing projection adapted to engage, when turned upright, the knuckle tail to both open and close the knuckle, substantially as specified.

14. In a car coupler, the combination with the draw-bar and draw-head, having a transversely slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide hav-

ing an incline engaging the lock to raise the same and a stem extending laterally through the draw-head to operate said lifter slide from the side, said stem being rotatably and detachably connected to said lifter slide, said rotatable stem having a knuckle throwing projection adapted to engage, when turned upright, the knuckle tail, and said knuckle tail having a recess to receive said knuckle throwing projection on the lifter stem and causing the knuckle to be either opened or closed by said stem, substantially as specified.

15. In a car coupler, the combination with the draw-bar and draw-head, having a transverse slideway therein to receive a transversely movable lock lifter slide, of a pivoted knuckle, a vertically movable lock, a transversely reciprocating lock lifter slide having an incline engaging the lock to raise the same and a stem extending laterally through the draw-head to operate said lifter slide from the side, said stem being rotatably and detachably connected to said lifter slide, said rotatable stem having a knuckle throwing projection adapted to engage, when turned upright, the knuckle, said knuckle tail having a recess to receive said knuckle throwing projection on the lifter stem and a side pull-rod connected with said lifter stem and having an arm or handle adapted to hold the lifter stem in its normal position with its knuckle throwing projection out of engagement with the knuckle tail, substantially as specified.

16. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar, a movable lock lifter device adapted to be moved under the locking bar to raise the same and a stem extending laterally through the draw-head to operate the lock lifter from the side said stem being provided with means to engage the knuckle to close the same, substantially as specified.

17. In a car coupler, the combination with the draw-bar and draw-head, of a pivoted

knuckle, a longitudinally extending locking-bar in the chamber of the draw-bar, a movable lock lifter device adapted to be moved under the locking bar to raise the same and a stem extending laterally through the draw-head to operate the lock lifter from the side, said lock lifter being also adapted when moved under the lock to set or support the lock for uncoupling, and said stem having means for engaging the knuckle to close it, substantially as specified.

18. In a car coupler, the combination with a draw-head, knuckle, and lock, of a movable lock lifter having a stem so connected therewith as to be capable of movement in respect thereto, and extending laterally through the draw-head, and provided with an arm adapted to engage the knuckle to close the knuckle by movement of said stem, substantially as specified.

19. A car coupling comprising a draw head, a coupling hook, a locking dog for holding the coupling hook in coupled position, an operating bar movable longitudinally and having means for unlocking the dog, and means for detachably interlocking with the coupling hook, whereby it may open and close the coupling hook when moved in opposite directions and may move out of engagement with the hook at the end of its outward movement, substantially as set forth.

20. A car coupling, comprising a draw head, a coupling hook having a rearwardly projecting tongue, a locking dog therefor, and an operating bar having means for unlocking the locking dog, and also having means detachably interlocking with the tongue of the coupling hook, whereby the operating bar may positively operate the coupling hook to coupled and uncoupled position, and may move out of engagement therewith at the end of its outward movement.

JOB H. STRICKLAN.

Witnesses:

H. M. MUNDAY,
PEARL ABRAMS.