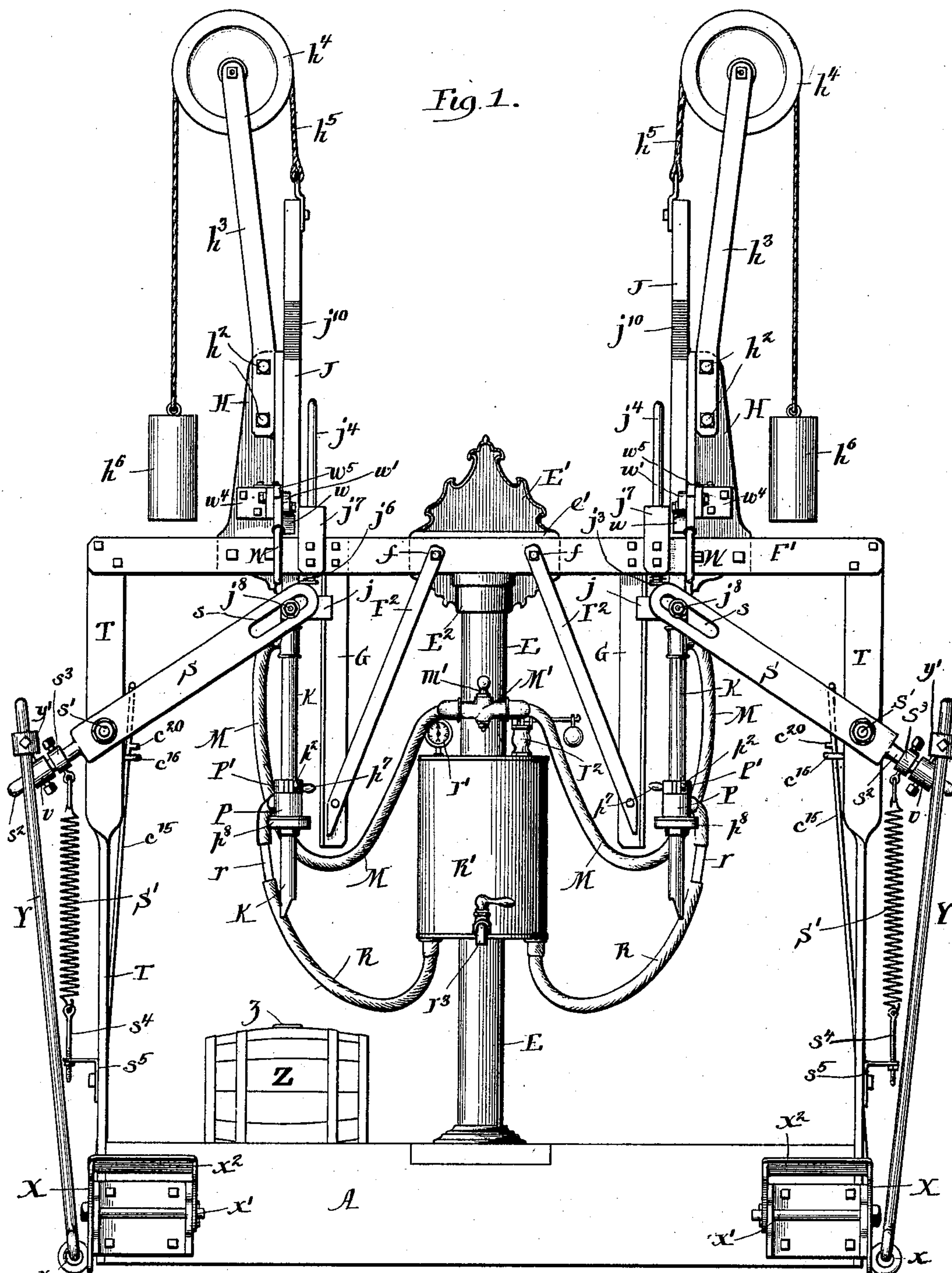


5 Sheets—Sheet 1.

No. 594,204.

Patented Nov. 23, 1897.



Witnesses:
Fred Gulack
Alberta Adamick

Inventor:
C. Haefner
By Ben Fisher
Attorneys.

(No Model.)

5 Sheets—Sheet 2.

C. HAEFNER.
APPARATUS FOR FILLING BARRELS.

No. 594,204.

Patented Nov. 23, 1897.

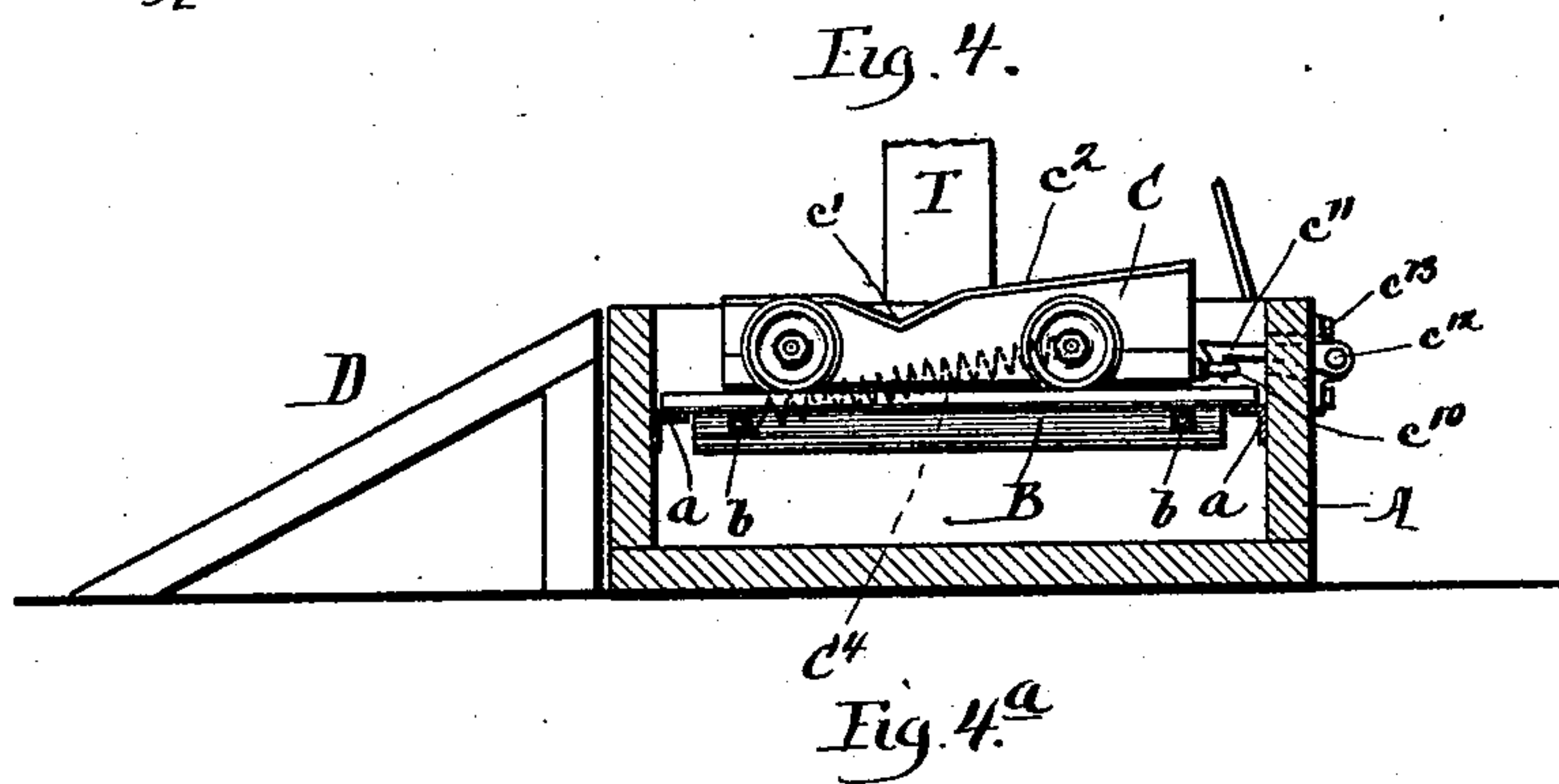
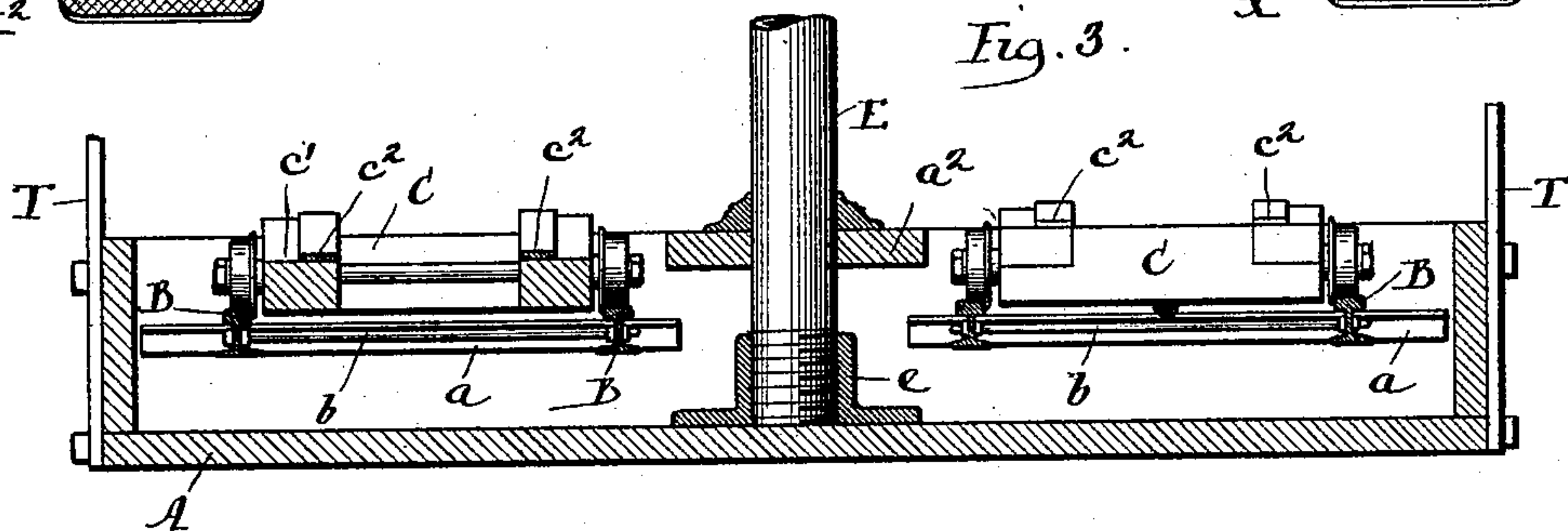
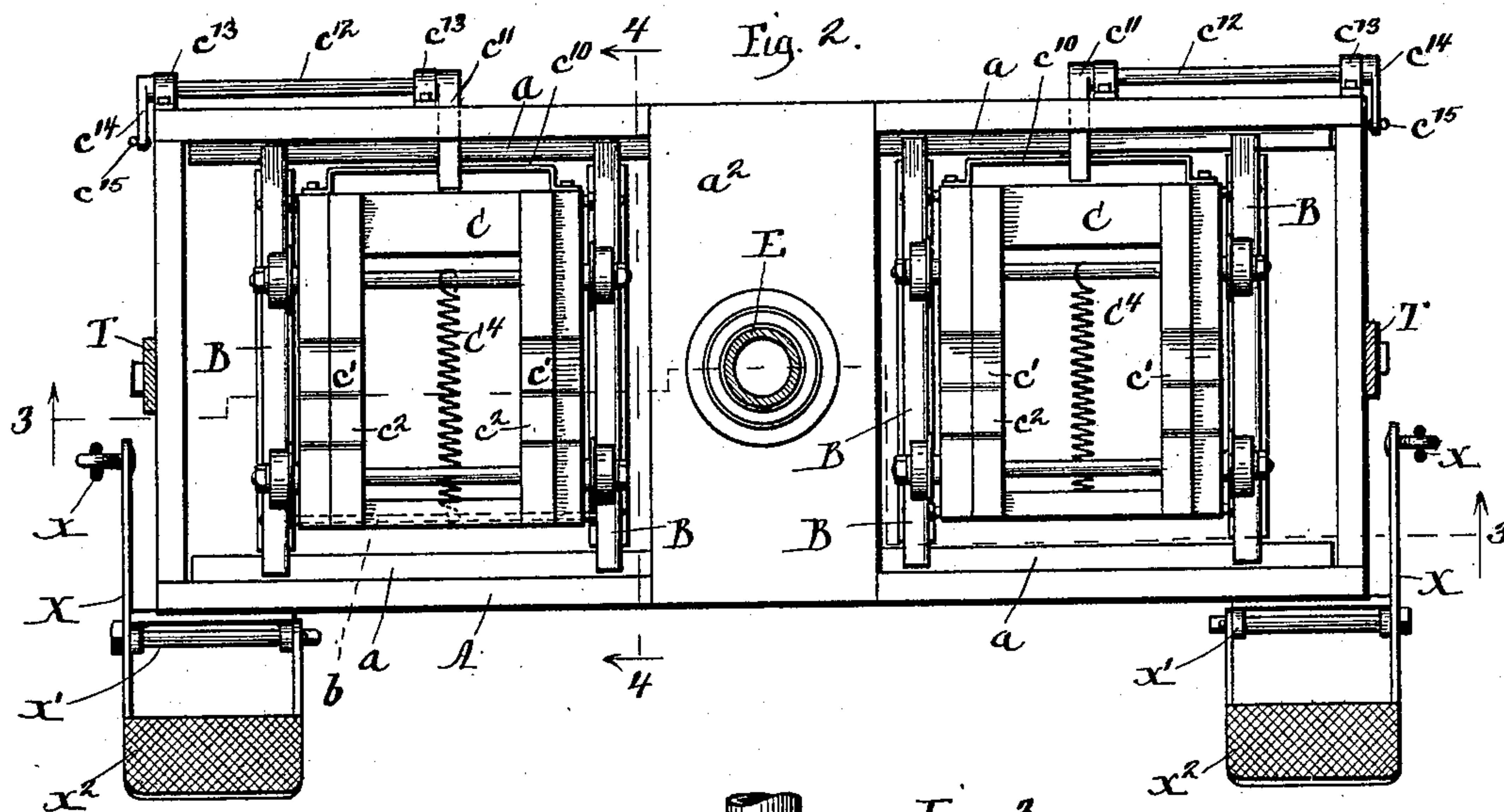
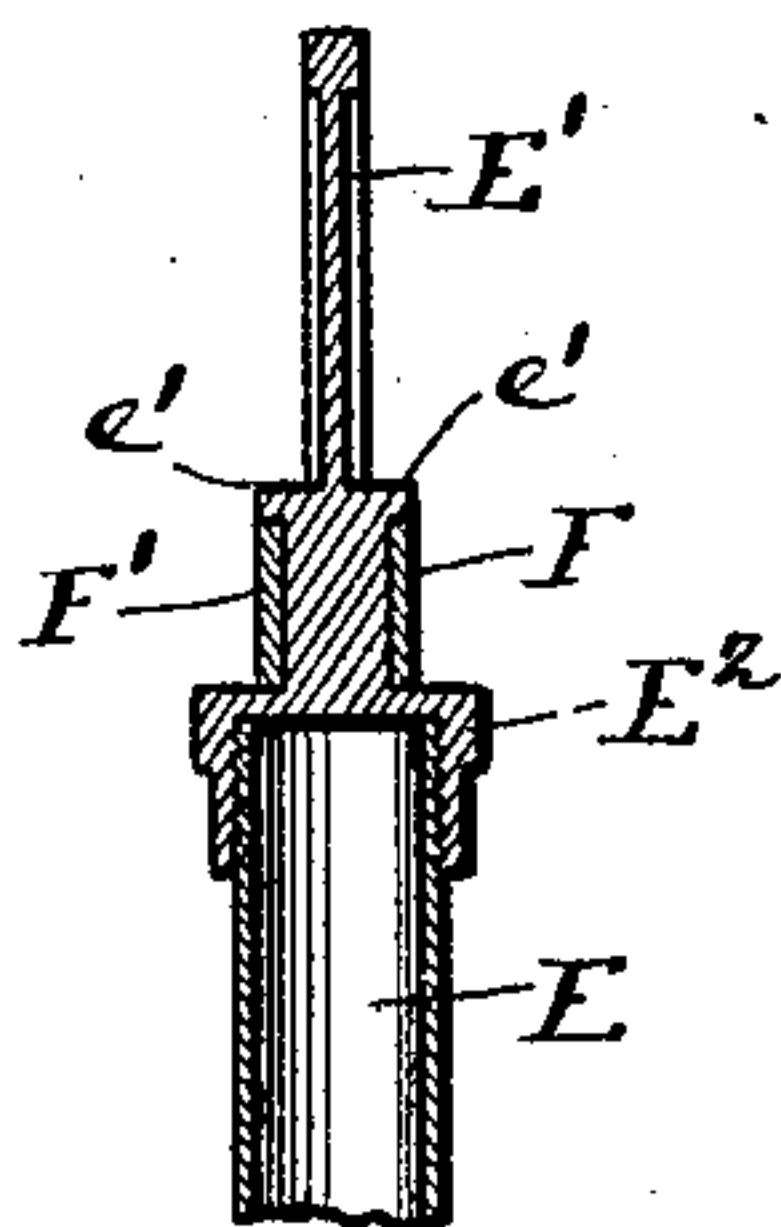


Fig. 4.^a



Witnesses:

Frederick Adamick
Alberta Adamick

Inventor:

C. Haefner
By *Wm. Fisher*
Attorneys.

5 Sheets—Sheet 3.

No. 594,204.

Patented Nov. 23, 1897.

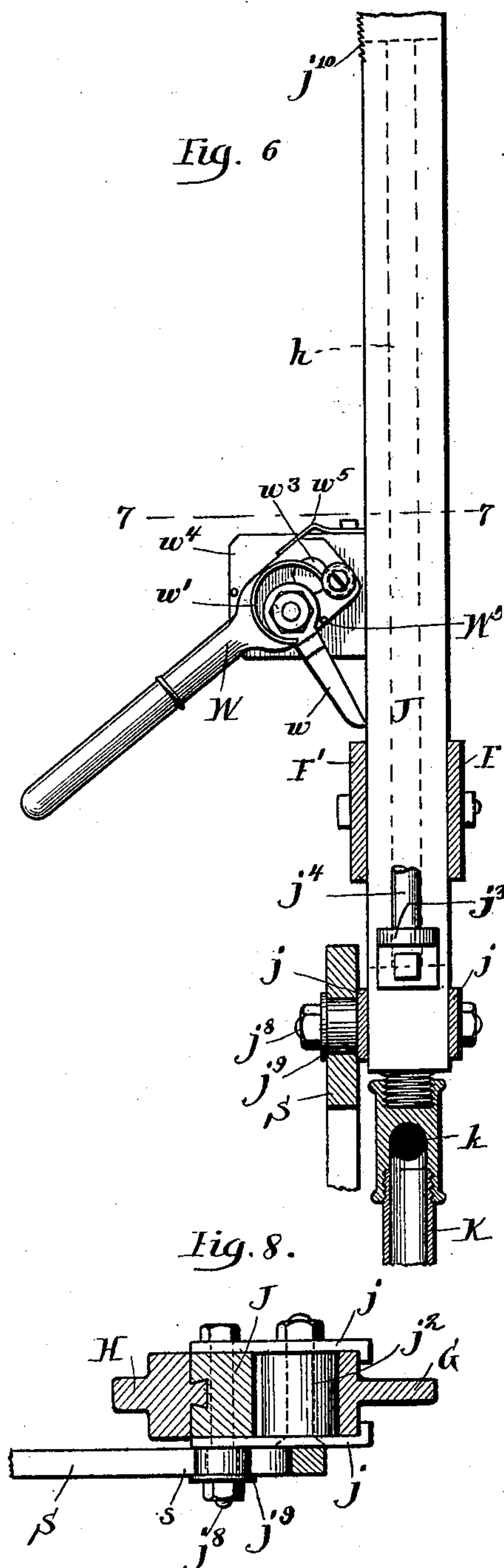
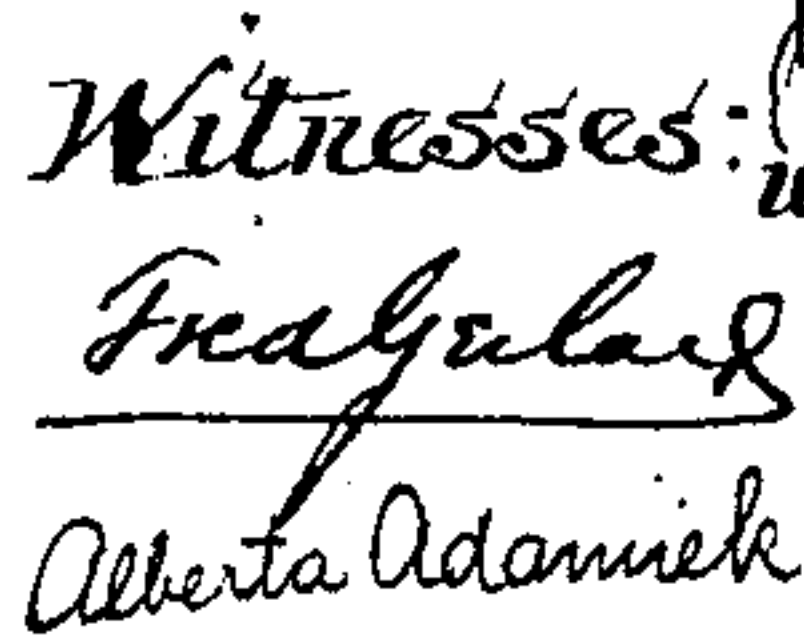


Fig. 8.

Inventor:

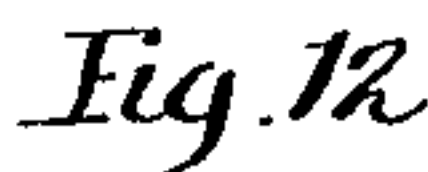
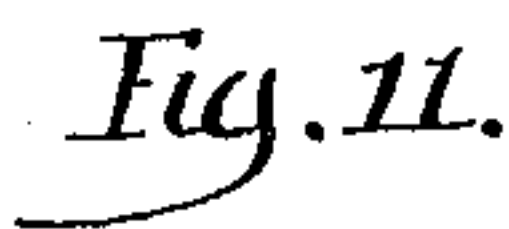
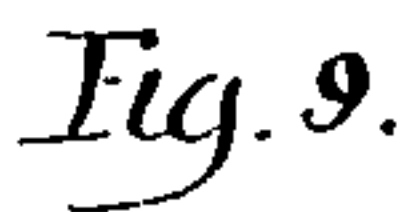
C. Haefner

By *Pier & Fisher*
Attorneys.

5 Sheets—Sheet 4.

No. 594,204.

Patented Nov. 23, 1897.



Fred Gerlach
Alberta Adamick

C. Kaefer
By Paul Fisher
Attorneys.

(No Model.)

5 Sheets—Sheet 5.

C. HAEFNER.
APPARATUS FOR FILLING BARRELS.

No. 594,204.

Patented Nov. 23, 1897.

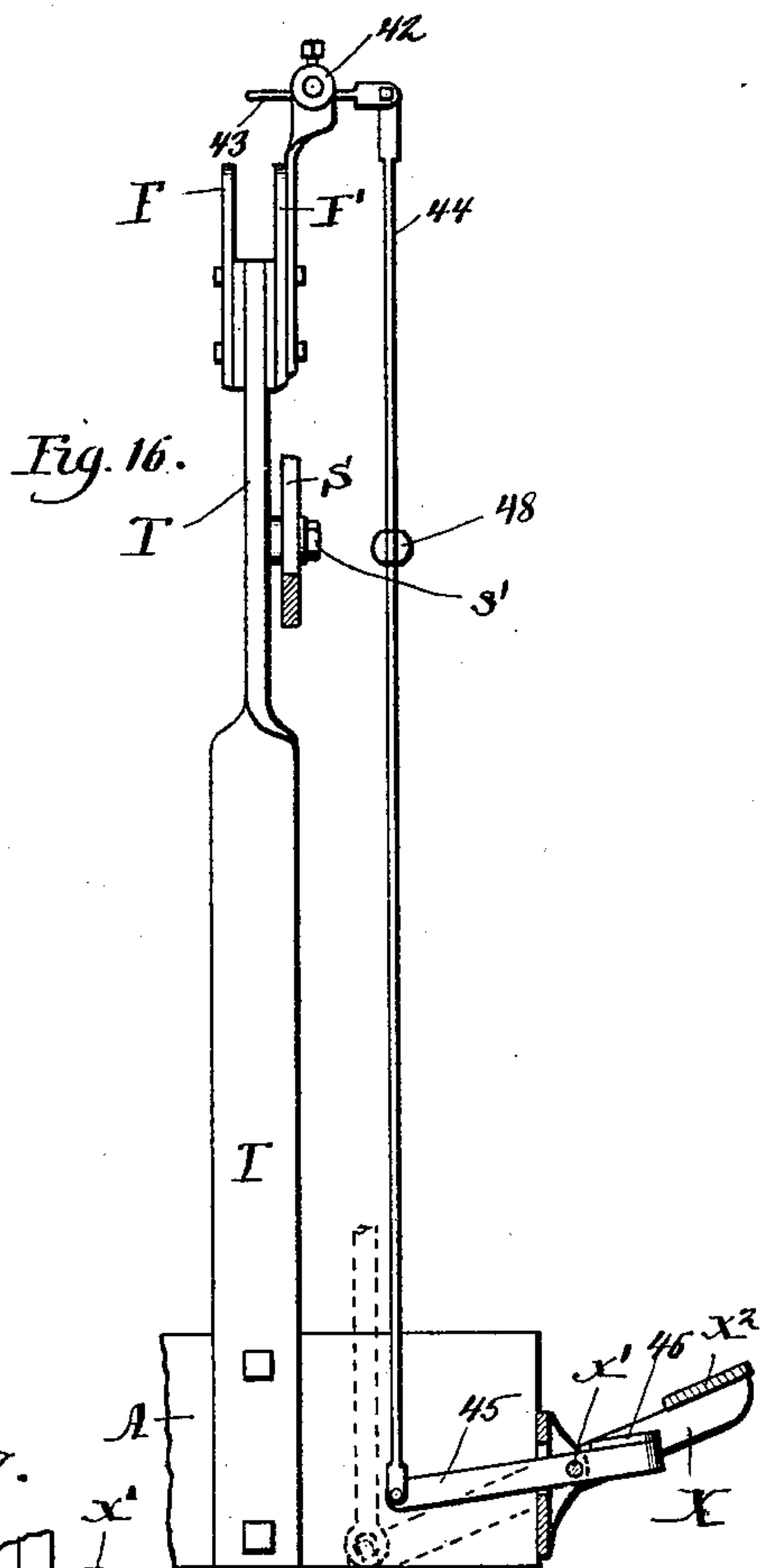
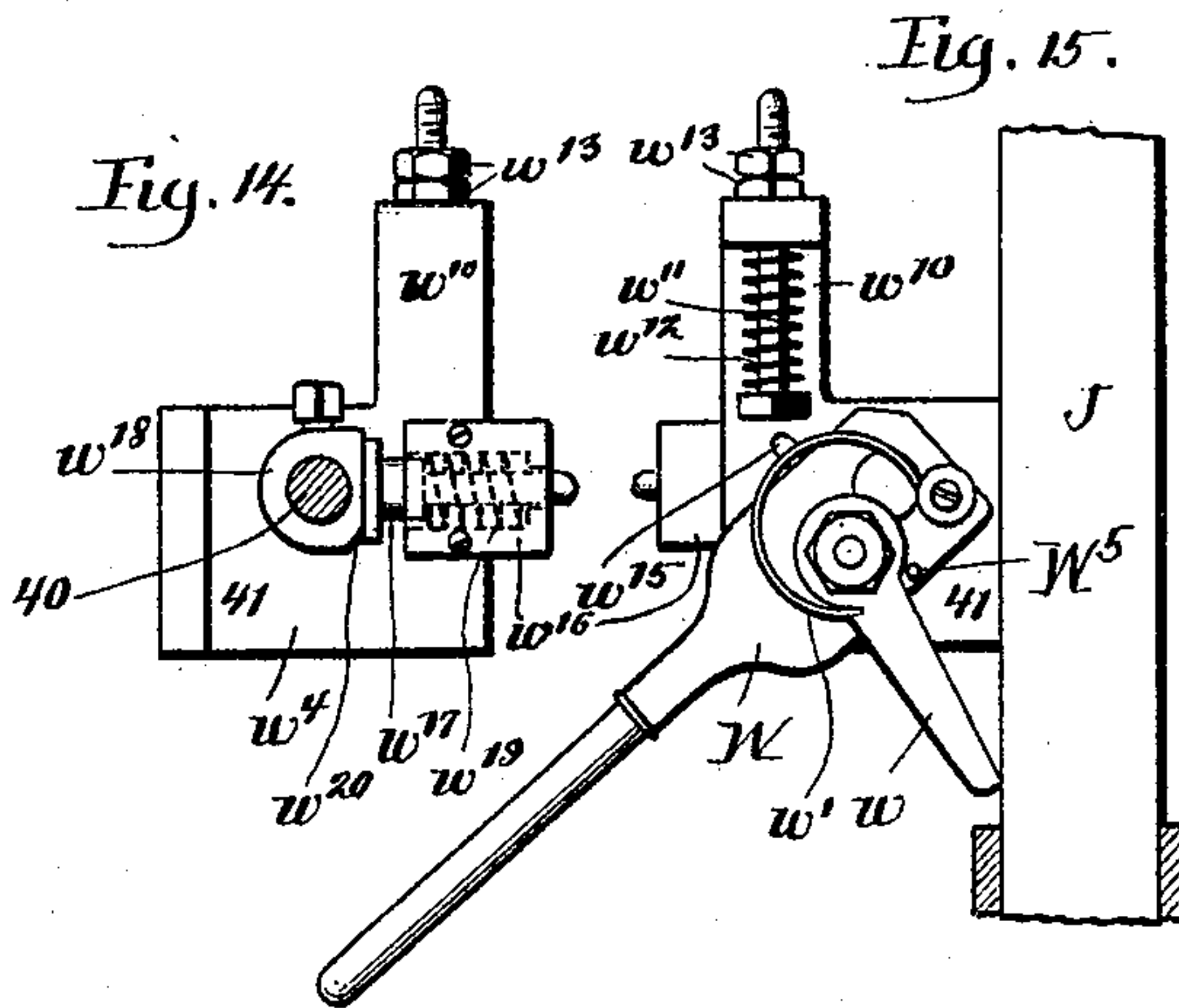
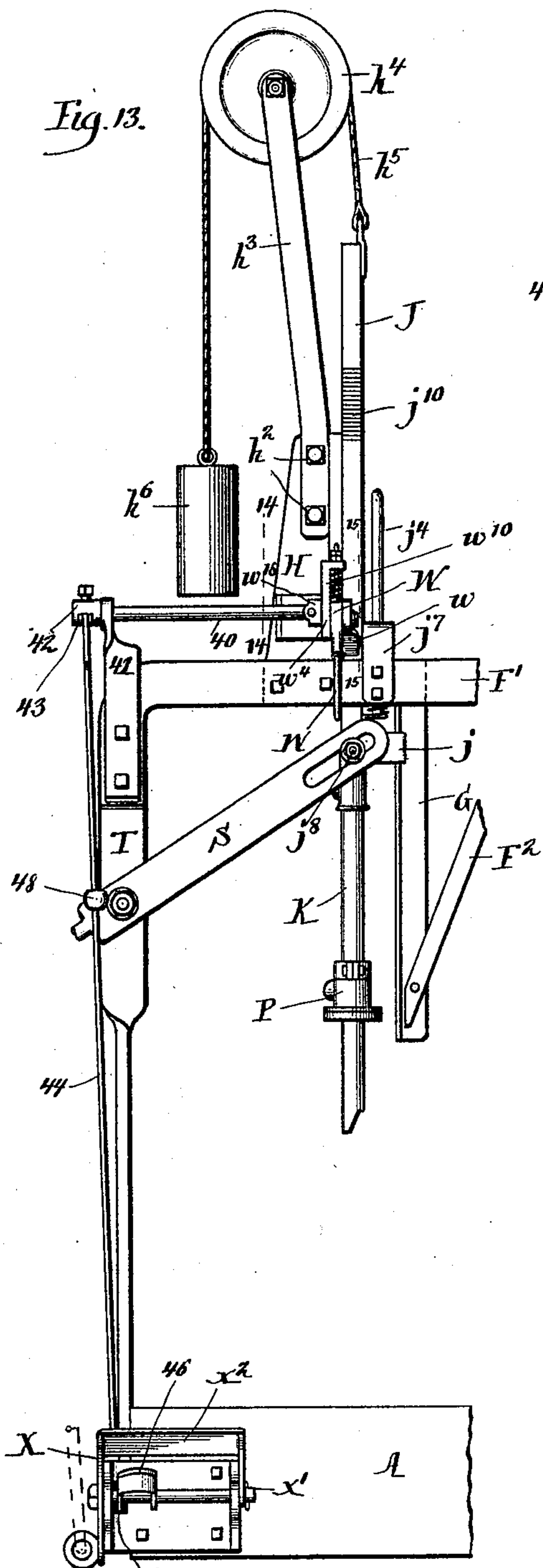
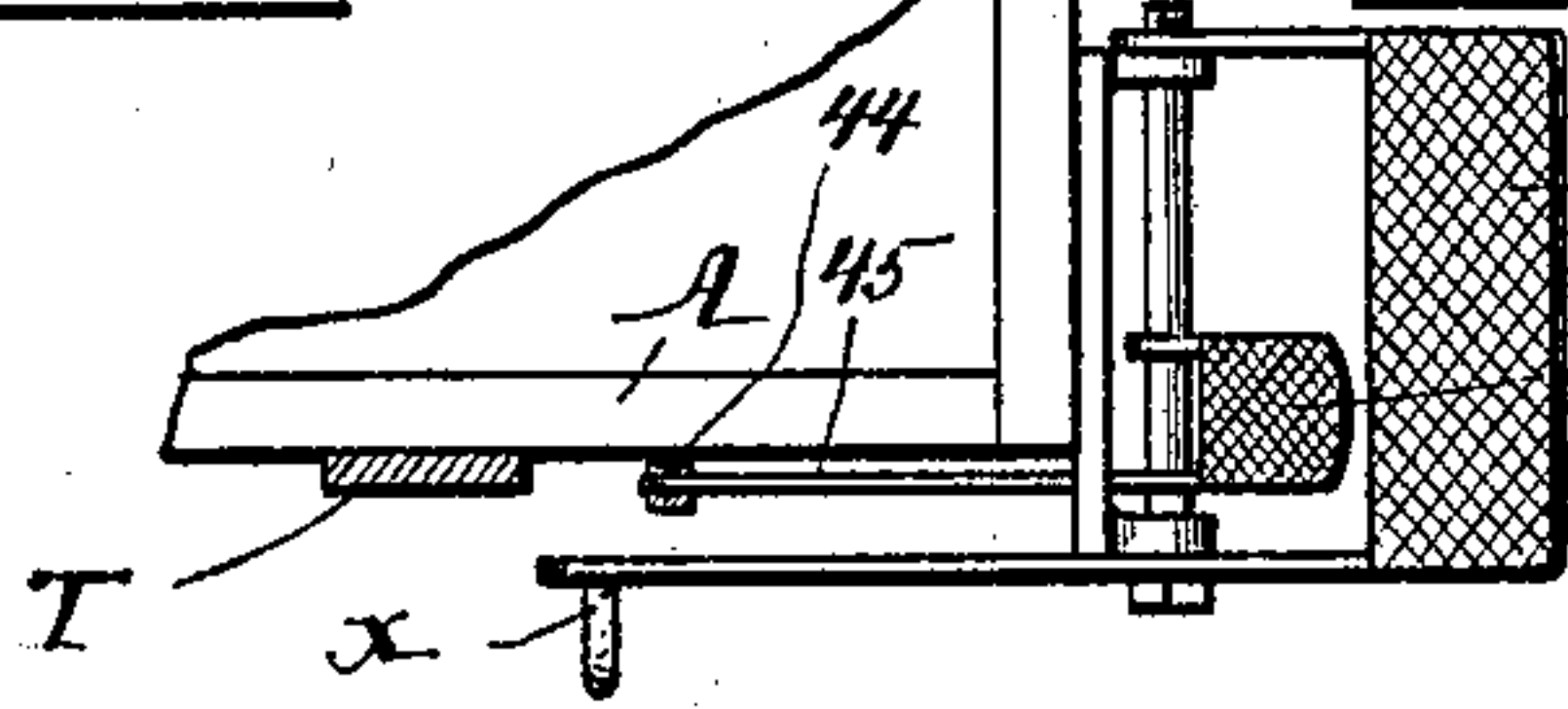


Fig. 16.



Witnesses:
Fred G. Lach
Alberta Adamek

Inventor:
C. Haefner
By R. H. Fisher
Attorney

UNITED STATES PATENT OFFICE.

CARL HAEFNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE NATIONAL
FILTER AND CARBONATING COMPANY, OF SAME PLACE.

APPARATUS FOR FILLING BARRELS.

SPECIFICATION forming part of Letters Patent No. 594,204, dated November 23, 1897.

Application filed November 23, 1896. Serial No. 613,056. (No model.)

To all whom it may concern:

Be it known that I, CARL HAEFNER, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Apparatus for Filling Barrels, Kegs, or the Like with Fluids, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Figure 1 is a view in front elevation of my improved apparatus. Fig. 2 is a plan view of the base of the apparatus, the standard being shown in section. Fig. 3 is a view in vertical section on line 3 3 of Fig. 2. Fig. 4 is a view in transverse section on line 4 4 of Fig. 2. Fig. 4^a is a detail view, in vertical section, through the cap-plate of the main standard. Fig. 5 is a detail view, in front elevation, parts being removed, of the guide mechanism for the plunger that carries the supply-nozzle and adjacent parts. Fig. 6 is a detail side view of the plunger and adjacent parts, certain of the parts being shown in vertical section. Fig. 7 is a view in horizontal section on line 7 7 of Figs. 5 and 6. Fig. 8 is a view in horizontal section on line 8 8 of Fig. 5. Fig. 9 is a view in end elevation of the treadle mechanism whereby the plunger, &c., is shifted. Fig. 10 is a plan view of the overflow-reservoir, the standard being in section. Fig. 11 is an enlarged detail view, in vertical section, through the delivery spout or nozzle and connected parts in position within the keg. Fig. 12 is a plan view of a divided collar that connects the delivery nozzle or spout to the overflow-pipe. Fig. 13 is a view in front elevation showing a portion of the machine embodying a modified form of the invention in which the mechanism for releasing the plunger is controlled by both hand and foot levers. Fig. 14 is a detail sectional view on line 14 14 of Fig. 13. Fig. 15 is a detail sectional view on line 15 15 of Fig. 13. Fig. 16 is a view in side elevation of the mechanism shown in Fig. 13, parts being omitted. Fig. 17 is a detail plan view showing the arrangement of the foot-levers in Fig. 13.

The present invention has primarily for its object to provide an improved racking appa-

ratus or means for filling barrels, kegs, or like receptacles with liquids or fluids of various kinds and more especially such liquids and fluids that are impregnated with carbonic-acid gas.

The invention consists in the various novel features of improvement hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

A designates the base or platform, upon which the kegs or barrels will be sustained during the filling operation. The front and back walls of the base A are provided with slide bars or ways *a*, upon which rest the heads of the rails B. (See Figs. 2, 3, and 4.) The rails B are tied together by the cross-rods *b*, so that the rails can be shifted in unison along the slide bars or ways *a*. Upon the rails B are mounted the trucks C, the wheels *c* of which rest upon the rails B. The trucks C have their side bars formed with seats or depressions *c'*, within which the kegs or barrels will rest during the filling operation, and the side bars of the trucks are preferably reinforced with strap-irons *c*², as more particularly seen in Figs. 3 and 4 of the drawings. Each of the trucks C occupies the position beneath a corresponding filling spout or nozzle of the apparatus and the kegs or barrels to be filled will be rolled onto the trucks, suitable inclined ways D (shown only in Fig. 4) being employed for this purpose. When the kegs or barrels are in position upon the trucks C, the trucks, with the kegs or the barrels thereon, can be shifted either longitudinally or transversely of the base in order to bring the bung-hole or bushing of the kegs or barrels in exact position beneath the filling spout or nozzle. The rails B being freely movable upon the ways or bars *a* and the truck-wheels *c* being movable on the rails B readily permit this shifting of the kegs or barrels to the proper position.

Centrally of the base A rises the standard E, that consists, preferably, of a tubular column set within a base-plate or socket *e*, attached to the bottom of the base A, and across the top of the base A extends a cross-plate *a*², through which the column E passes, (see Fig. 3,) and whereby it is more securely held in

position. Upon the top of the standard or column E is fixed a cap-plate E'. (See Fig. 4^a.) This cap-plate is preferably formed with a socket E² to receive the upper end of the collar, and in piece with this socket is formed the body of the cap-plate E'. (See Fig. 1.) Across the front and back of the cap-plate E' are formed the ribs e', and between the ribs e' and the socket E² extend the horizontal bars F and F'. (See Figs. 1, 6, and 7.) The bars F and F' are held to the cap-plate E' by through-bolts f, that pass through the upper ends of the diagonal brace-bars F², the lower ends of these brace-bars being bolted to the lower ends of the slide-bars G, the upper ends of which slide-bars extend between the bars F and F' (see Fig. 7) and are bolted thereto. Preferably the slide-bars G are T-shaped bars, and suitable blocks g are interposed between the web of the bars G and the bars F F'. From the bars F F' rise the standards H, the lower ends of which standards (see Figs. 5 and 7) extend between and are bolted to the bars F F'. The standards H are preferably of cast metal, their lower ends being expanded to fill the space between the bars F and F', and each of the standards H is formed with a dovetail guide-rib h, that sets within a corresponding dovetail groove formed in the side of the adjacent plunger J.

To the top of each of the standards H is bolted, as at h², the upright bars or arms h³, that carry the pulleys h⁴, over which extend the cords h⁵, and each of these cords has one end attached to a counterbalance-weight h⁶, while its opposite end is connected to the upper end of the corresponding plunger J. Each of the plungers J extends downward between the bars F F', and at its lower end each plunger J is provided with guide-arms j, that engage the edges of the slide-bar G, (see Fig. 8,) and between the arms j is interposed the friction-roller j², that bears upon the working face of the bar G.

To each of the plungers J is preferably connected a bracket j³, carrying an upright rod j⁴, (see Fig. 5,) that passes through a coil-spring j⁵ and through an arch-bar j⁶, attached to the bars F F', and this coil-spring j⁵ serves to cushion the movement of the plunger J when the latter is drawn to its retracted position, as seen in Fig. 1.

To the lower end of each of the plungers J is connected the upper end of the delivery pipe or nozzle K, (see Figs. 5 and 6,) the lower end of the plunger being preferably formed with a threaded extension to engage a correspondingly-threaded seat at the top of the pipe or nozzle K. In the upper part of the pipe or nozzle K is formed an opening k, to which is connected a supply-pipe M, the opposite end of this pipe being connected to one of the branches of the supply-controlling cock or faucet M'.

By reference to Fig. 10 of the drawings it will be seen that in the embodiment of my invention here illustrated the faucet M' con-

nects with the main delivery-pipe m, that leads through the standard E, and it will be understood that the faucet or cock M' is fitted with a three-way valve m', which permits the supply of liquid received through the pipe m to be discharged through either branch of the faucet M' or to be shut off from both. Each of the hollow pipes or nozzles K passes through a plug or stopple P, that is adjustably held upon the pipe or nozzle K by means of the divided collar P'. (See Figs. 11 and 12.) Preferably the upper end of the plug P is formed with an annular flange p, (see Fig. 11,) that will be engaged by the lower flanged portion p' of the collar P', and between the plug P and the collar P' will be introduced a packing-ring P², of rubber or the like. The sections of the collar P' are held together by bolts p², (see Fig. 12,) that pass through the lateral flanges of the collar. It will be seen that by means of the collar P' the plug P can be adjustably retained at any desired position along the delivery pipe or nozzle K. Each of the plugs P has its lower interior diameter greater than the exterior diameter of the corresponding delivery pipe or nozzle K, thereby forming therewith an annular channel p⁴, that communicates with the channel p⁵ of the pipe p⁶, the flow through this pipe p⁶ being controlled by a shut-off cock p⁷. Each of the pipes p⁶ is connected to an overflow-pipe R, that leads to the overflow-chamber R', and each of the overflow-pipes R has interposed an inspection-glass r in order to enable the attendant to readily observe when the filling operation is completed. The overflow-chamber R' is preferably furnished at its top with a pressure-gage r' and a safety-valve r², and at its bottom is provided with a faucet r³, by which its contents may be drained off when desired. The lower portion of each of the plugs P is reduced, as shown in Fig. 11, to fit within the bung-hole or bushing of the kegs to be filled, and around this reduced portion of each plug is placed a soft-rubber ring or gasket p⁸, whereby the tight joint between the plug P and the bushing of the keg is effected. Preferably the overflow-reservoir R' is made U-shaped, as seen in Fig. 10, so as to conveniently fit about a standard E.

In order to permit each of the delivery pipes or nozzles to be conveniently inserted and held within the bushings of barrels to be filled, I have provided the mechanism next to be described. From the lower end of each of the plungers J projects laterally the end of a bolt j⁸, (see Figs. 1 and 8,) that passes through a slot s, formed in the end of a lever S, and preferably a sleeve encircles the bolt j⁸ and a washer j⁹ retains the lever S in position with respect to the bolt j⁸. The lever S is pivotally connected at s' to an upright bar T, the lower end of which is bolted to the end of the base A, while its upper end extends between and is bolted to the outer ends of the bars F F'. The outer end of each of the levers S is formed with

a stem s^2 , on which is adjustably held a sleeve s^3 , that is connected to the upper end of the coil-spring S' , the opposite end of this spring being attached to a rod s^4 , that is adjustably united to the bracket s^5 . (See Fig. 1.) Upon the stem s^2 of the lever S is also adjustably mounted a sleeve v , that is formed with a hook v' , that engages an eye y , projecting from a sleeve y' , (see Figs. 1 and 9,) attached to the upper end of the treadle-rod Y . The lower end of the treadle-rod Y is connected, as at x , to the treadle X , that is pivoted, as at x' , and has its front end provided with a foot-plate x^2 .

Each of the plungers J is provided with a number of fine rack-teeth j^{10} , (see Figs. 1 and 6,) with which will engage a pawl w , that is pivoted to a hand-lever W , this pawl being pressed normally into position to engage the rack-teeth j^{10} by means of a curved spring w' , conveniently fixed to the lever W . The lever W is pivoted upon a stud w^3 , that projects from a bracket w^4 , attached to the standard H , and a plate-spring w^5 bears upon the edge of the hand-lever W and serves to force the same normally downward. A pin W^5 , projecting from the lever W , will engage the pawl w when the lever is swung upward to lift the pawl from engagement with the rack-teeth j^{10} .

From the foregoing description the operation of my invention will be seen to be as follows, viz: The barrel Z to be filled with beer or like carbonated liquid will be rolled onto one of the trucks C , and this truck will be shifted so as to bring the bushing of the barrel or keg Z immediately beneath the lower end of the corresponding delivery pipe or nozzle K . The attendant will then depress the treadle X , (see Figs. 1 and 9,) thereby causing the lever S to rock about its pivot-point and to force downward the corresponding plunger J until the lower end of the delivery pipe or nozzle K has passed into the barrel or keg Z and the packing ring or gasket p^8 of the plug P bears upon the upper end of the bushing z of the barrel Z . (See Fig. 11.) When the delivery pipe or nozzle K has thus been caused to enter the keg or barrel, the ratchet-teeth j^{10} of the plunger J will be in engagement with the end of the pawl w . The attendant can then by forcing downward the hand-lever W further depress the plunger J , thereby causing the packing ring or gasket p^8 to more firmly bear upon the bushing z of the keg or barrel Z , and the engagement of the pawl w with the teeth j^{10} will prevent the rise of the plunger after the operating-handle W has been thus forced downward. After the delivery pipe or nozzle K is in position within the keg or barrel Z the attendant will turn the three-way cock m' , so as to cause the supply of beer entering the delivery-pipe m to pass into the supply-pipe M and thence downward through the delivery pipe or nozzle K to the barrel or keg. At the same time the attendant will turn the cock p^7 , so as to open communication be-

tween the interior of the keg Z and the interior of the overflow chamber or reservoir R' , and as the beer is delivered into the keg under pressure the air within the keg and gas and foam escaping from the beer delivered to the keg will be forced from the keg through the pipe p^6 and discharge-pipe R into the overflow-chamber R' , this chamber serving thereby to collect and retain the gas and foam from the beer, and as well also to retain any overflow of clear beer that may occur at the completion of the filling operation. As soon as the attendant observes clear beer passing through the inspection-glass r in the pipe R he will turn the three-way cock m' and the cock p^7 , so as to cut off further admission of beer to the barrel Z and cut off communication between the barrel and the overflow-chamber.

By means of the safety-valve and pressure-gage with which the overflow-chamber is provided it is obvious that the desired pressure may at all times be maintained within the keg or barrel during the filling operation. During the time that the barrel or keg Z is being thus filled at one end of the apparatus a keg or barrel will have been placed beneath the delivery pipe or nozzle K at the other end of the apparatus, and the attendant by operating the corresponding treadle will have forced such delivery pipe or nozzle into the empty barrel in readiness for the passage of beer thereinto. Hence when the attendant turns the three-way cock m' to cut off the delivery of beer into a keg that has been filled he can by the same operation cause the flow of beer into the empty keg at the opposite end of the apparatus, and when the cock p^7 is turned to cut off the communication between the barrel that has been filled and the overflow-chamber R' the other cock p^7 will be opened to establish communication between the overflow-chamber R' and the empty keg or barrel, or the attendant before the completion of the operation of filling one keg can, after the empty keg has been placed in position at the opposite side of the apparatus, open the cock p^7 and at once establish communication between the overflow-chamber R' and the empty keg or barrel. Consequently the gas and foam and overflow beer escaping from the keg being filled will pass immediately, by way of the overflow-chamber R' and connecting-pipes, into the empty keg, and as a consequence not only will all waste be avoided, but the filling operation will be materially expedited.

So far as I am aware my invention presents the first instance of a double racking apparatus in which the above-described operation is possible. By providing treadles in convenient position for operation by the attendant his hands will be free for the prompt manipulation of the valves and for the shifting of the casks. The springs j^6 serve as cushions for the plungers J when the check-pawls w are released by the upward move-

ment of the operating-handle W, the counterbalance-weight h^6 and the spring S' at such time serving to restore the plungers and connected parts to their normal position. The rollers j^2 , bearing upon the face of the guide-bars G, reduce the friction of parts and insure the easy movements of the plungers.

By connecting the discharge-pipes K to the lower part of the overflow-chamber R' all beer or foam received into the overflow-chamber from one keg or barrel will be delivered into the next keg or barrel to be filled, and by means of the pressure-gage and safety-valve at the top of this overflow-chamber the desired pressure within the keg or barrel may be maintained during the filling operation.

By providing a three-way cock m' , to which both of the delivery-pipes M are connected, the attendant can by the same operation cut off the supply of beer from one keg and establish the flow of beer to the next keg to be filled.

Inasmuch as it is exceedingly desirable that the operator shall quickly withdraw a keg or barrel Z that has been filled from beneath the filling pipe or nozzle K in order that the bung may be driven into the bushing before any considerable quantity of beer escapes, I prefer to provide the mechanism next to be described, whereby the trucks C, whereon the kegs Z are sustained, shall be automatically released and drawn forward when the filling pipes or nozzles are completely removed from the kegs, thus leaving the kegs in position to permit the operator to insert the bungs therein and to tightly drive the bungs into the bushing by a hammer. To one of the axles of each of the trucks C is attached one end of the coil-spring C^4 , the opposite end of this spring being connected to one of the cross-rods b , whereby the rails B are tied together. (See Figs. 2 and 4.) By this means each of the trucks C will be drawn normally to the front of the base A, and when in such position the bushing of the keg upon such truck will be away from beneath the filling pipe or nozzle K, so that the operator can freely drive the bung into the bushing. To the rear of each of the trucks C is connected a rod or loop c^{10} , adapted to be engaged by a hook-arm c^{11} , (see Figs. 2 and 4,) that is connected to a rock-shaft c^{12} , journaled within brackets c^{13} . The outer end of the rock-shaft c^{12} has fixed thereto an arm c^{14} , to which is connected a rod c^{15} , (see Fig. 9,) the upper end of this rod having a stop c^{20} and passing through a guide loop or eye c^{16} and being bent to pass over the upper edge of the lever S. (See Fig. 1.) Preferably a coil-spring c^{18} is connected to the arm c^{14} (see Fig. 9) in order to hold this arm in the retracted position.

From the foregoing description it will be seen that when the parts are in the position shown in Fig. 1 of the drawings—that is to say, with the pipes or nozzles K in raised position—the rod c^{15} being engaged by the lever S will rock the shaft c^{12} and will hold the hook-

arm c^{11} in such position that its hooked end will not engage the rod or loop c^{10} at the rear of the corresponding truck C. As soon, however, as the barrel or keg has been moved into position beneath the filling pipe or nozzle K and the filling pipe or nozzle has been forced downward into the bushing of the barrel the hook-arm c^{11} will engage with the rod or loop c^{10} and thus retain the truck in retracted position. When, however, the operator by depressing the treadle X in manner above described lifts the filling pipe or nozzle K out of the barrel or keg that has been filled, the lever S by lifting the rod c^{15} will cause the shaft c^{12} to rock and will cause the hook-arm c^{11} to pass out of engagement with the rod or loop c^{10} , thereby permitting the coil-spring C^4 to draw the truck C and the keg Z to the front of the base A in readiness for the operator to insert and drive in the bung.

Inasmuch as it is of importance that the hands of the operator should as far as possible be free to manipulate the cocks and handle the kegs and drive in the bungs, I prefer to provide the apparatus next to be described, whereby the release of the plungers J can be more readily effected through the medium of the treadle. This feature of my invention is more particularly illustrated in Figs. 13 to 17 of the drawings. Instead of mounting the hand-lever W upon a pin w^3 , as in the construction hereinbefore described, I fix this hand-lever upon a rock-shaft 40, that is journaled in the brackets 41, (see Fig. 13,) and upon the outer end of the rock-shaft 40 is fixed a sleeve 42, (see Fig. 16,) through which passes a rod 43, that is pivotally connected to a rod 44, that leads to the base of the machine, and is there pivotally connected to a treadle 45, that is pivoted, as shown, to the front of the base A. Preferably the treadle 45 is pivoted upon the same rod x' on which the treadle-lever X is pivoted and the treadle 46 is arranged in proximity to the treadle x^2 for convenience in operation. It will thus be seen that when the operator depresses the treadle x^2 and forces the plunger J downward the rack-teeth j^{10} will be brought into engagement with the pawl w , (see Fig. 6,) and thereafter the operator will by means of the hand-lever W force the plunger J farther downward in manner hereinbefore described. During this last-described movement of the treadle x^2 the operator will not depress the treadle 46, which when the treadle x^2 is depressed will extend above such treadle. When, however, the keg has been filled, the operator will depress the treadle 46 and will thereby rock the shaft 42, so as to cause the hand-lever W to be correspondingly rocked and to lift the pawl w from engagement with the ratchet-teeth j^{10} of the plunger J. Hence it will be seen that the release of the plunger can be effected without the necessity of the operator using his hands for such purpose and at a time when he will need to manipu-

late the several cocks. In this last-described form of my invention I have shown the bracket w^4 , provided with a standard w^{10} , (see Figs. 14 and 15,) having an annular portion
5 through which passes a rod w^{11} , that is encircled by a coil-spring w^{12} , that bears against the headed end of the rod and forces such head normally down, while the upper end of the rod is threaded and is held in proper po-
10 sition by means of the nuts w^{13} .

The hand-lever W (see Fig. 15) is shown as provided with an offset w^{15} , that will contact with the head of the rod w^{11} when the hand-lever is thrown upward by the operation of
15 the supplemental treadle 46 in manner hereinbefore described. I prefer also to attach to the bracket w^4 a spring-chamber w^{16} , through which passes a plunger w^{17} , that bears against a sleeve w^{18} , that is fixed to the rock-
20 shaft 42, this sleeve w^{18} having flattened faces to bear against the end of the plunger w^{17} . The purpose of the sleeve w^{18} and the plunger w^{17} , that is forced normally against the sleeve by the coil-spring w^{19} within the chamber w^{16} ,
25 is to hold the rock-shaft 42 in such position as will cause the pawl w to normally engage with the ratchet-teeth j^{10} on the plunger J. When, however, the rock-shaft 42 has been
30 turned by the depression of the treadle 46 in manner above described, the sleeve w^{18} will be turned also, so as to cause its corner w^{20} to bear against and force backward the plunger w^{17} . I have shown the rod 44 as provided with a button 48, fixed thereto, and by means
35 of this button the operator can rock the shaft 42, so as to force the pawl w downward in order to firmly depress the plunger J and cause its plug to bear against the bushing of the keg. When the button 48 is thus used,
40 the operator need not ordinarily use the hand-lever W. Thus, for example, instead of using springs to draw the trucks C forward when released these trucks might be mounted upon inclined ways, which would accomplish the
45 same object.

It is manifest that the precise details of construction above set out may be varied by the skilled mechanic without departing from the spirit of the invention, and features of
50 the invention may be employed without its adoption as an entirety.

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

55 1. In apparatus for filling kegs or barrels the combination with a filling-pipe provided with a plug and with a plunger to which said pipe is rigidly connected, of a pivoted lever one end whereof is connected with said plun-
60 ger, a treadle connected with the opposite end of said lever and whereby the plunger may be operated, and a pivoted hand-lever provided with means for engaging said plun-
65 ger in order to force the same downward and effect a more secure bearing of the plug

against the bung of the keg to be filled, substantially as described.

2. In apparatus for filling kegs or barrels the combination with a filling-pipe provided with a plug adapted to close the bung of a
70 keg or barrel and with a plunger or support for said pipe, of ratchet-teeth, a pawl engaging said ratchet-teeth to force the plunger downward, and a lever for operating said pawl whereby a final downward movement of the
75 plunger can be imparted to force the plug into secure bearing against the bushing of the barrel or keg to be filled, substantially as described.

3. In apparatus for filling kegs or barrels
80 the combination with a filling-pipe provided with a plug and with a plunger or support for said pipe, of a treadle for operating said plunger, said plunger being provided with ratchet-teeth, a pawl engaging said ratchet-teeth and
85 whereby said plunger may be forced downward and a pivoted lever to which said pawl is pivotally connected, said lever serving by its shift of the pawl to effect the final downward movement of the plunger, substantially
90 as described.

4. In apparatus for filling kegs or barrels the combination with a filling-pipe and with a plunger or support rigidly connected to said
95 pipe, of a vertical guide for said plunger, a pivoted lever for operating the plunger, a treadle connected with said lever, ratchet-teeth j^{10} upon the plunger, a pawl w engaging said ratchet-teeth and a pivoted hand-lever
100 W whereon said pawl is pivotally mounted and whereby the final downward movement of the plunger may be effected, substantially as described.

5. In filling apparatus of the character described, the combination with a filling-pipe
105 provided with a plug and with a plunger or support for said pipe, and a main operating-lever, of a pivoted supplemental lever and an intermediate connection between said lever and said plunger whereby said plunger may
110 be forced downward, and a treadle for shifting said lever to release the plunger, and suitable connections between said treadle and said lever, substantially as described.

6. In filling apparatus of the character de-
115 scribed, the combination with a filling-pipe provided with a plug and with a plunger or support for said pipe, of ratchet-teeth upon said plunger or support, a pawl for engaging said ratchet-teeth and a lever for shifting said
120 pawl to force the plunger downward, and a treadle for releasing said pawl and suitable connections between said treadle and said lever, substantially as described.

7. In filling apparatus of the character de-
125 scribed, the combination with a filling-pipe provided with a plug and a plunger or support for said pipe and with a treadle for operating said plunger, of means for forcing said plunger or support downward and lock-
130

ing it in depressed position, and a releasing-treadle whereby said plunger can be released, said releasing-treadle being located in proximity to the treadle whereby the plunger is
5 operated, substantially as described.

8. In apparatus for filling kegs or barrels the combination of duplicate filling-pipes and plungers or supports rigidly connected therewith and extending upward therefrom, a
10 frame provided with vertical guides whereon said plungers or supports are mounted in manner free to slide, plugs connected to said filling-pipes, pivoted levers connected to said plungers or supports, individual treadles con-
15 nected to said pivoted levers for operating the plungers or supports, an overflow-reservoir, a main delivery-pipe *m* provided with a three-way cock *m'*, individual branch delivery-pipes *M* connecting each of the filling-pipes to said
20 main delivery-pipe *m*, an overflow-reservoir *R'* and discharge-pipes *R* connecting the plug of each filling-pipe with the bottom of the overflow-reservoir whereby the overflow from one barrel will be delivered into the reservoir and
25 will be discharged therefrom when the next barrel is to be filled, substantially as described.

9. In apparatus for filling kegs or barrels the combination of duplicate filling pipes or nozzles provided with chambered plugs adapt-
30 ed to close the bung-holes of the kegs to be filled, a main delivery-pipe provided with a three-way cock, branch pipes leading from said main delivery-pipe to the individual fill-
35 ing pipes or nozzles, an overflow-reservoir, individual discharge-pipes leading from said

chambered plugs to the bottom of said overflow-reservoir and cocks for controlling the flow through said several pipes, substantially as described.

10. In apparatus for filling kegs or barrels 40 the combination with a filling-pipe and with a plunger for raising and lowering the same, of a frame extending above said filling-pipes and provided with a depending vertical support whereon said plunger is mounted in man- 45 ner free to slide, a tank located beneath said frame, a truck or support arranged above said tank for supporting the barrel or keg to be filled, means for moving said barrel truck or support away from the position that it oc- 50 cupies during the filling apparatus and a latch for holding said barrel support or truck in position, substantially as described.

11. In filling apparatus of the character de- 55 scribed, the combination with a filling-pipe and with suitable means for raising and lowering the same, of a subjacent base provided with rails and with a barrel support or truck mounted upon said rails, a spring for shift- 60 ing said barrel support or truck, a catch for retaining said barrel support or truck against the force of said spring, and suitable connections between said catch and means whereby the filling-pipe is operated, substantially as described.

CARL HAEFNER.

Witnesses:

FRED GERLACH,
ALBERTA ADAMICK.