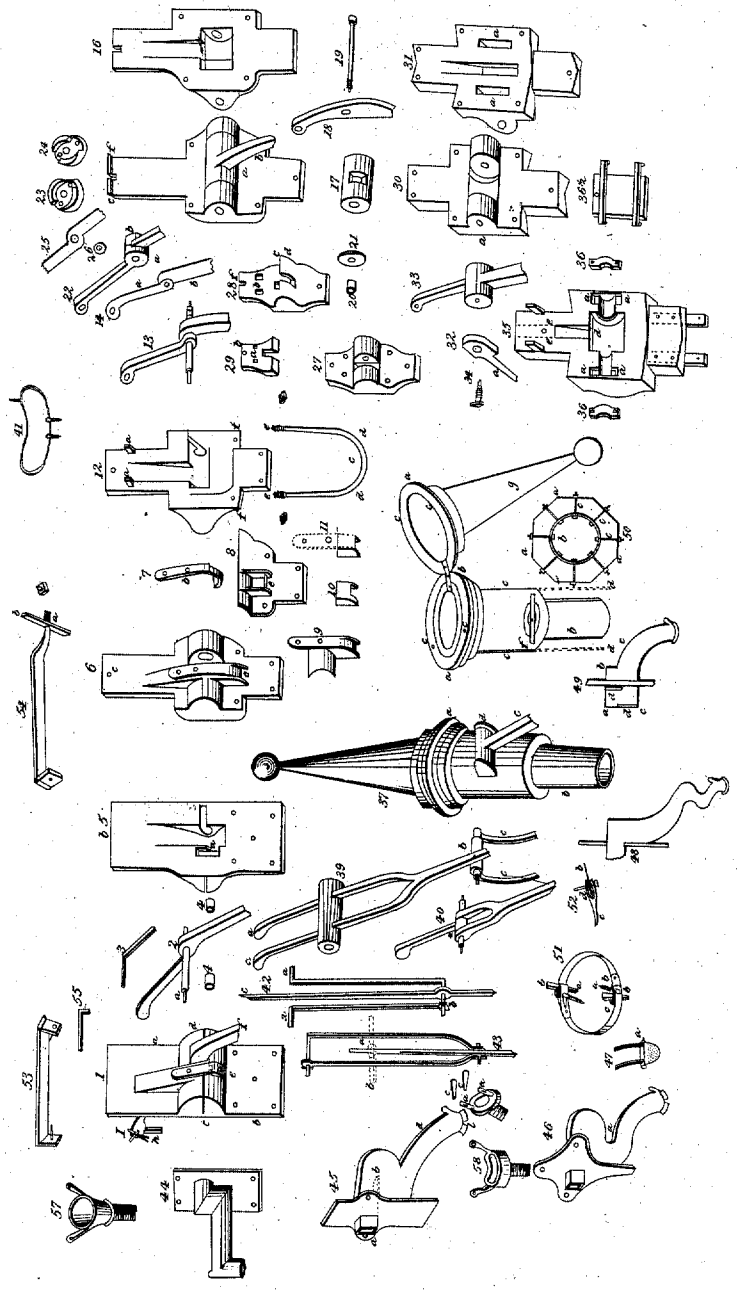
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M. Mettee,

Pump Brake,

Patented Mar. 9 1833.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

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Mar 9, 1833 239.

Martin Mettee of Baltimore State of Maryland

Letters Patent.

The schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said Martin Mettee, himself of his improvement in Pumps

To all to whom these presents shall come,

Be it known, That I. Martin Mettee of the City of Baltimore & State of Maryland, have invented a new and useful improvement in the Pump. & that the following is a full and exact description of the construction and operation of the said machine or improvement as invented by me, —

Fig 1. is a piece in my former Patent (which bears date of the twentieth day of May, one thousand eight hundred and thirty) representing a fulcrum box attached to the pump stock, in which box the handle rests & operates. a.b. are two plates which join at the line c. d, by the hinge at e f. is a section of the handle g. is the end of the neck receiving h, which is a section of the spear with a key, —

Fig 2. also of the former Patent is a section of the handle at f. & g. Fig. 1. with the pin a, — The neck and pin are welded together forming one solid piece: the pin having shoulders square at the right & the handle driven on

Fig 3. of former Patent, is a section of the upper end of the spear, bent at a right angle, and prepared to pass thro' the eye, as at Fig 1. —— Figs 4, 4. of former patent, are hollow friction rollers adapted to the ends of the pin

Fig 5. of former patent, is the inside view of the fulcrum box Fig 1. without the handle & neck.

Fig 6. is an improvement on Fig 1. the mortice thro' which the handle passes, being so altered as to have cut the flange a. Fig 5 & to admit the left side of the handle at the pin to come

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in a line with the right side of the neck. e. is a hook instead of the hinge a, Fig 1. for more ready direction of Fig 7. the hook detached. — Fig 8. section of Fig 6. e. shewing a bolt to receive the hook Fig 7. — Fig 9. shews a variation of Figs 7. 8. — Fig 10 a section shewing a bridge e, as a substitute for the bolt e, Fig. 8. — Fig 11. the same as fig. 9. — Fig. 12, inside view of Fig 6, without the flanges a, fig 6, — Fig 13 section of the handle and neck, adapted to fig 6, — the left side of the handle being in a line with the right side of the neck, the two forming one solid piece, with the pin drove in, in the original plan the handle & neck, being two distinct pieces, were subject to give way or come loose. — Instead of the left side of the handle being in a line with the right side of the neck, this form may be removed by the box being formed accordingly

Fig 14 side view of Fig 13. — a, on the upper side of the neck being in a line with (or a little lower than) b, on the lower side of the handle; the object of which is to prevent the neck from striking against the inside of the box

Fig 15, a variation of Fig 6, consisting of one solid piece

Fig. 16 inside view of Fig. 15. without the handle.

Figs 17 & 18 correspond with a b. Fig 15. Fig. 17. is a cylinder thro which the neck of the handle Fig. 18. passes the bolt Fig. 19. enters at c. 15 passes thro a b. 17. 18, and comes out at d. 15..... Fig. 20 is one of two rings or rollers which fit loosely in each end of the cylinder 17. Fig 21 is one of two washers at each end of 17. — Fig 22. is a variation of a. b. 15, a. b. two pieces as Figs 23. 24. one of which being a counter part of the other, formed to receive the section of the neck, and handle 25, Fig 26. is a ring or roller adapted to the hole in 25, the pieces 23. 24 and the handle are bound together by rivets as seen at the dots in 22, Fig 27. a variation of Fig. 6. intend to dispense with the hook. — It consists of two pieces Figs 28. 29. 29. is taken from 28, & turned

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over showing two small projections, a. which fit into the mortise. b and which by means of the dovetail in the joint of the two pieces 28. 29. the outer edge of the projection c. of the piece 28, being formed so as to prevent the piece 29 from coming out without it being first pulled outwards, at the top, and then lifted upwards to detach it from 28. the front part of the bed in which the pin rests extends up about two thirds of the diameter of the pin, thro' the hole of 29 & 28. a bolt passes to bind the pieces together, Fig. 30 is a variation of 15, Fig. 31. is 30 turned over, a. a. mortises which receive two pieces, one of which is represented at Fig. 32. which is a rest with a shank, a, drove or screwed into or thro' the stock.

Fig. 32 is a variation of 17. 18. consisting of one solid piece, having pivot holes at each end to receive the points of two screws one of which is seen at . Fig 34. which passes in to the hole a, Fig 30. thence thro' 32, which has a screw hole in it adapted to the screw bolt 34 which is retained & partly supported by 32, The pivot and the hole in which it plays is a substitute for the pin and journals, Fig 35. is an inner view of a variation of Fig 15. the part of the plate next to the stock and back of the journals of the pin is taken away & the journals are kept in their places by the vertical caps, 36. 36. which are partly sunk into the stock and partly into the mortises a. a. & a, a, b. b, pieces riveted to or cast on the main plate and are intended to cut into one or more staples fitted into a plate, which plate is fastened horizontally across the stock,

The dotted lines 35. represent a slot extending to d, which may be cut entirely out of any of the pieces similar to it. in which case the piece 36½ is intended as a door or cover for the slot & it may be secured by hinges catches or other fixtures.

Fig. 37. represents a hollow metal top to the stock; consisting of two pieces joined at the flanges as a. or the flanges a. a, Fig. 38 b. 38. a hinge c. c. c. c. holes to receive screw bolts, b. 37. the part which sits into the top or bore of the

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stock. The hole in the foot b. receive screw bolts to bind the stock to the foot. The other lines d d. 38. represent a continuation of the lines c.c. when the foot b 37. or b. 38 is not attached in which case the stock will be embraced by the lines d. d. the top of stock will be bound together by screw bolts as before directed c. 37. a handle &c as 33. any of the others may by adaptation be applied d. the projection or lugs for the pin or shafts of the handle which may be placed higher up or immediately at the connection of the flanges in which case the neck will stay within the hollow of the cap. Figs 39. 40. are varied forms of the handle and neck, c.c. 39. springs supporting a roller b. against which the handle strikes, to give an easy reaction. the feet of the springs are fastened to the stock F. 41 above 12. is a form of a spring for the same purpose in either this form, a circle, an ellipsis or any other form would answer a good purpose Fig 42 is a section of a pump spear. a. a. parts of the pitmen adapted to the necks a. a. of 39. b. the working connection of the pitmen & the spear, Fig 43. another form of the pitman and spear, adapted to fig 38, or any other of the single necks a. 43. is the top of the spear, passing thro' a plate b. which is also seen at f 38. the plate may contain two or more plain or grooved rollers to guide the spear. 42. is a section of the spear which is designed to pass thro' the plate covering the hollow of the cap. as seen at g 38

Fig 44 a cast iron spout of my former Patent, the peculiarity of which is that it may contain either one or two gearings one in the nozzle, cast in it about one inch up, the other at the back within the stock, — The spout also contains two semicircular pieces, each of which half or about half closes the passage standing on opposite sides about two inches apart within the stock, —

Fig. 45 a new form of a spout with a four square passage the dotted lines from a. to b. represent a slide within the passage

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which may be solid a b, or it may extend this b e, with a grating and the slide may be perforated with holy between a. & b. a is a grating suspended by hinge and may be used as a substitute for the slide Fig. 46. another form of the spout having a curve as at a, giving a freer vent to the fluid having the inner fixtures similar to those of 45.

Fig 47. a cullender cap fitting over or within the nozzle of the spout secured by a bolt as at a, to be used when the slide & gratings at 45. are not applied, Fig 48 another form of the spout. Fig. 49. another form of the spout with a passage square from a, to b; from b. to c, is a grating d,d, solid perforated or grated plate. e. a suspended grate, a,a. a. in Fig. 50. represents the stock or head of the pump. the part b. is a broad ring in the bore of the stock c.c. & c, screw bolts binding the stock to the ring.

Fig. 51. a straining band embracing the pump stock a.a. bolt passing thro the band into the pump b. b. key wedges, each of which passes thro between the band at the end of one piece of the band, and the bolt Fig 52, a vertical section of another form of the joint of the band b. is the same as b. of 51; c. is the same as c. 51. except the addition of the branch, d, which embraces the key and bent-end d, — Fig 53. a piece in the former Patent which secures the ball-cap to the pump

Fig. 54 another form for the same object; a, and b, screw & plate as substituted for the knee a 53. the screw at a 54 may enter the hole c, in the box Fig. 6. & be secured by a nut

It may also drop into the slot. at the top of 15 or 16. in this case the plate b. 54 will drop under the flange. from e, to f. in Fig. 15, — The plate 54 may be let into the head of the stock near the bore, and as a substitute for the screw a, there may be a screw bolt passing thro the hole c, Fig. 6 into the plate b. Fig. 55, of the former Patent, was attached to the cap, & hooked over the upper end of the box as at b. Fig. 6.

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The bow e, under Fig 13. is intended to secure the top to the pump & to bind the stock, the bow from d. to d, passes round the pump but the parts between d. e. f. d, e, pass thro' the sides of the stock & thro' the holes f. f. and are secured by nuts, this bow, may also be applied to secure the spout, and bind the stock at 45 or 46,

In my former Patent I employed screw bolts to prevent the stock from splitting, one was placed across just above the spout the just under the handle mortice, & one in each of the remaining angles just above, these bolts were simply screwed into the wood; which by reason of their resting could not afterwards be tightened, — I now place one bolt across the mortice about two inches below the cap, which not only prevents the mortice from spreading but serves as a check, for the neck of the handle, The remaining bolts are situated as they originally were In applying the bolts, I now make the holes considerably larger than the bolts, & insert into the wood a plain nut for the head of the bolt, to rest or turn against and insert another with a screw for the screw of the bolt to lodge into a. a. Fig 12. projections which enter into the stock on each side of the handle mortice to prevent the upper part of the fulcrum box from playing or moving upwards by the motion of the handle as well as to brace the timber & to retain the mortice in its original width, Fig 56. is an apparatus by which the fire hose may be supplied with water by the pump a. a. are shanks which pass up thro' the cut b, by the sides of the nozzle; the key c. c. pass thro' the holes in the upper ends of the shanks and rest on the flange of the nozzle and bind all firmly together,

Fig. 57 is for the same purpose applicable to pumps with nozzles similar to those of Nos. 45. & 46. having a funnel mouth it is attached to the spouts by means of steads of iron rivetted on Fig 58, is also an instrument for the same purpose adapted to the common wooden spout, it likewise cut

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nozzles in the nozzle. I also apply the common hydrant-plug or any other suitable one may be applied to any part of the pump for the purpose of supplying the Hose, a friction ring as 36. may also be applied to the eye of the neck & joint of the spear, — After a careful examination I believe the improvements embraced in these drawings & descriptions to be my own invention, yet I wish it to be distinctly understood that I claim nothing in either the principle, or the application which shall not prove to be my own & new,

Witnesses
I. B. Bailey
Edward Talbott

Martin Mettee
(Dr en portfolio)

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Ch

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