

G. B. Roe,
Cattle Pump.

N^o 37,923

Patented Mar. 17, 1863.

Fig. 2.

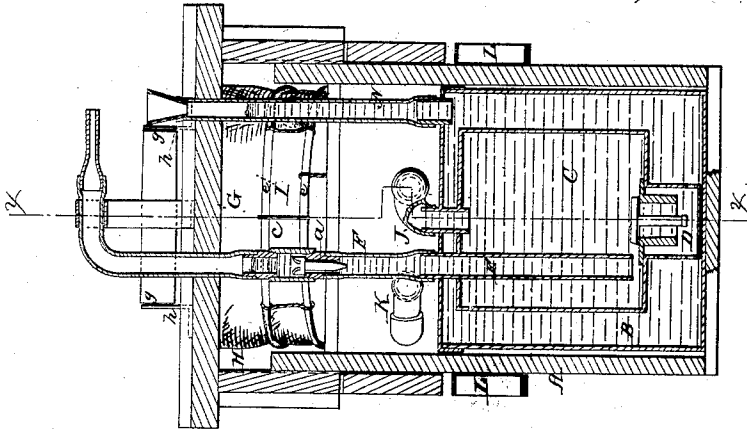
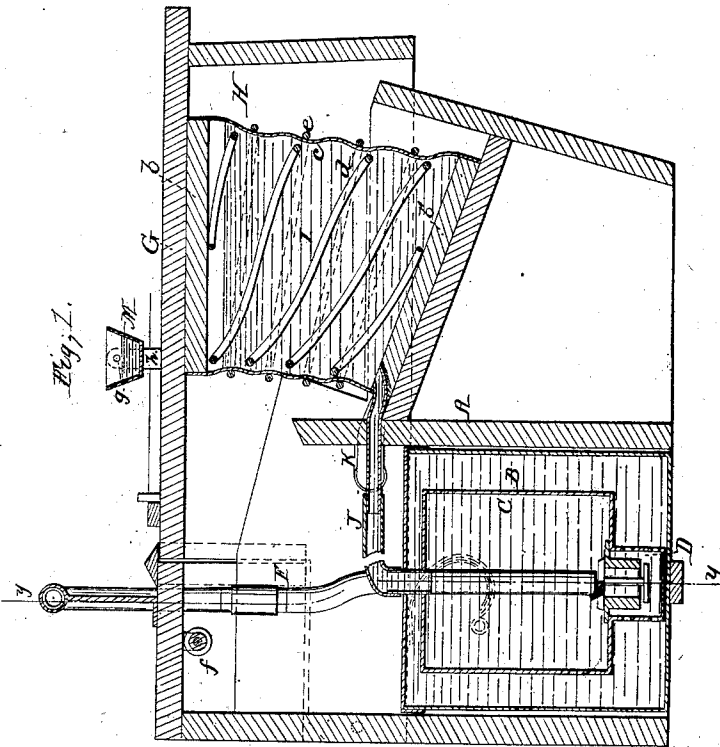


Fig. 1.



Witnesses,
J. W. Cornell,
A. H. Howell,

Inventor,
G. B. Roe
by Munn & Co
attys

UNITED STATES PATENT OFFICE.

GILES B. ROE, OF PAINE'S POINT, ILLINOIS.

IMPROVEMENT IN CATTLE-PUMPS.

Specification forming part of Letters Patent No. 37,923, dated March 17, 1863.

To all whom it may concern:

Be it known that I, GILES B. ROE, of Paine's Point, in the county of Ogle and State of Illinois, have invented a new and Improved Cattle or Stock Pump; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a transverse vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to an improved pump of that class which are designed for raising water for cattle or stock, and to be self-acting—that is to say, operated by the cattle or stock while in the act of passing to the trough or water-receptacle in order to drink.

The invention consists in the employment or use of an elastic water and air drum in connection with suitable pipes, a water-receiver within the well, a yielding platform, and a self-adjusting trough, all arranged as herein-after fully set forth.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents the base or fixed portion of the device; and B represents the well or water-receptacle from which the water is pumped. Within this well or water-receptacle there is a hollow drum, C, constructed of cast-iron or other proper material, and having a valve, D, at its lower part, opening inward, as shown in both figures. The drum C is at the bottom of the well B, and it has a tube, E, inserted vertically in it, extending downward nearly to its bottom, and to the upper end of this tube there is secured a pipe, F, flexible or rigid, which extends upward to the point where it is desired to discharge the water. The pipe F contains a check-valve, *a*, as shown in Fig. 2.

G is a platform, which forms the cover or top of the box H, within which an elastic drum, I, is placed. This drum I may be composed of two circular heads, *b b'*, with a body, *c*, of india-rubber or other suitable flexible material, strengthened by a coil of wire, *d*, within, and metal bands *e* without. The

upper head, *b*, of this drum is permanently secured to the under side of the platform G, and the lower head, *b'*, is secured to the base or fixed part A of the device. (See Fig. 1.) The elastic or flexible drum I communicates with the drum C in the well by means of a pipe, J. There is a pipe, K, communicating with the lower part of the drum I, the use of which will be presently explained. The box H is connected to the upper part of the fixed part A of the device by means of pivots *f*, to admit of the box, and consequently the platform G, rising and falling, and springs L L are attached to the sides of the fixed part A, to act against the under side of the box H and keep the same elevated, when their power is not overcome by a weight on the platform G. On the platform G there is placed a trough, M, the ends of which are suspended by pivots *g* in uprights *h h*, attached to the platform. This trough, in consequence of being thus suspended, is allowed to adjust itself by its own gravity in a perfectly vertical position in any position of the platform. The nozzle of the pipe F is so adjusted as to admit of the water discharged from it passing into the trough M.

The operation is as follows: An animal in passing upon the platform G depresses the box H, and consequently compresses the drum I, and the water is forced out from the drum C in the well up through the pipe F, and is discharged into the trough M, from which the animal drinks. When the animal passes off from the platform, the latter is raised by the action of the springs L L, and the drums C I fill again with water, the valve D in the lower end of C, which closes during the compressing of drum I, opening during its expansion. This operation of the pump, it will be seen, is a forcing one, but a combined suction and force is obtained by attaching the pipe K to pipe F and closing the upper end of the tube E. By this arrangement it will be seen that the water will be expelled through the pipe F direct from the elastic or flexible drum I, and the latter as it rises will be filled by suction from the drum C.

N is a vent-pipe for the well B.

I may remark that the trough M should be encompassed at three sides by a fence or guard, in order to compel animals to pass upon the platform to reach the trough.

I do not confine myself to any particular material in constructing the pump herein described, nor to any particular size or dimensions. India-rubber, however, would probably be the most preferable material for the elastic drum I, strengthened as described. The springs L L may be aided in their work by a weight connected to box H by a cord or chain passing over a pulley. The weight, however, is an equivalent of the springs, and either or both may be used.

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

1. The drum C, placed in the well B and provided with a valve, D, at its lower end, in

combination with the elastic or flexible drum I, connected with the movable platform G, and communicating with the drum C, to operate as and for the purpose set forth.

2. The combination of the pipes F K with the tube E, arranged as shown, when used in connection with the drums C I, for the purpose set forth.

3. The suspended or self-adjusting trough M, placed on the platform G, for the purpose herein set forth.

G. B. ROE.

Witnesses:

HIRAM WOOD,
MASON TAYLOR.