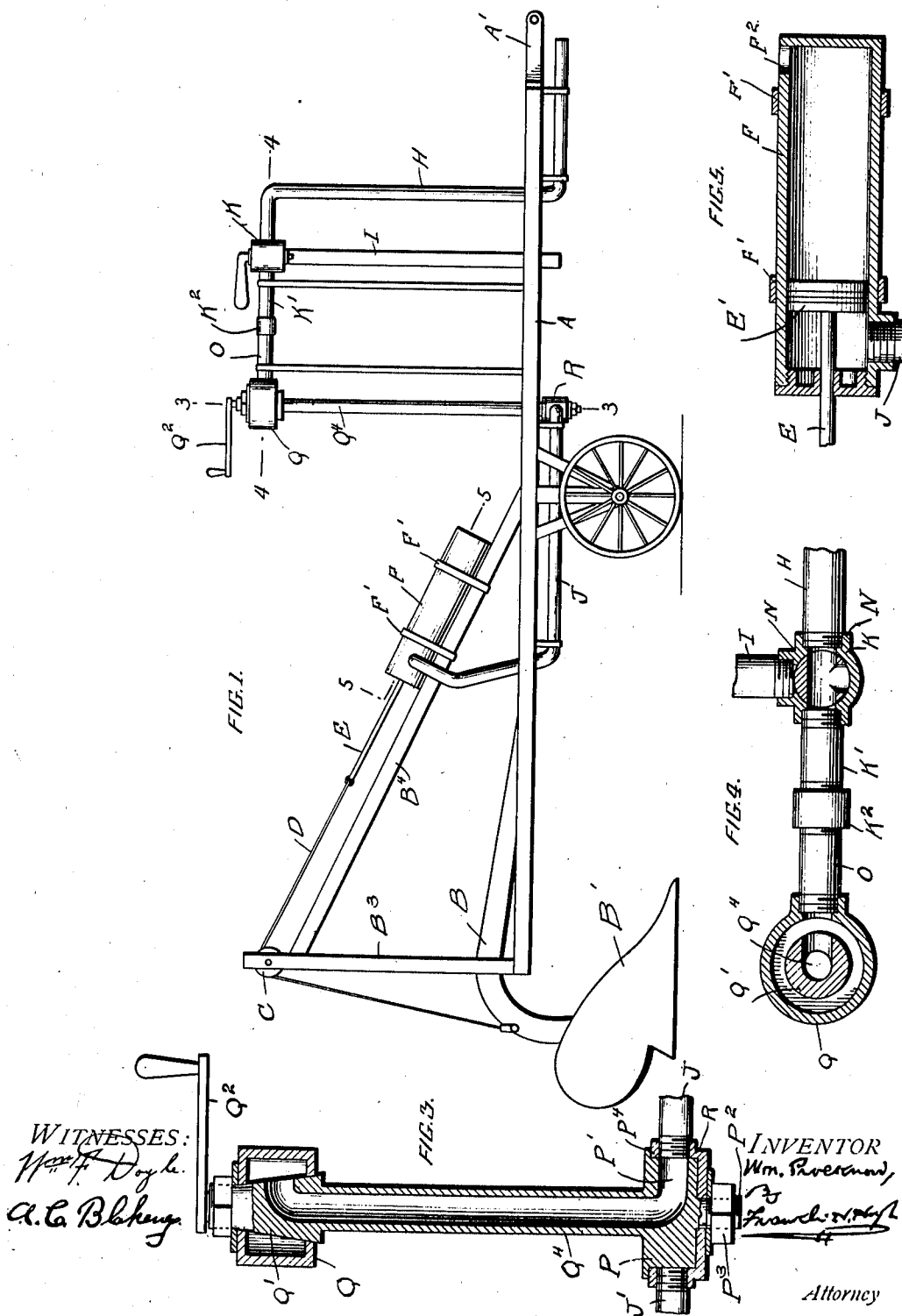


W. PROCKNOW.
PLOW LIFTER.
APPLICATION FILED SEPT. 3, 1910.

2 SHEETS—SHEET 1.

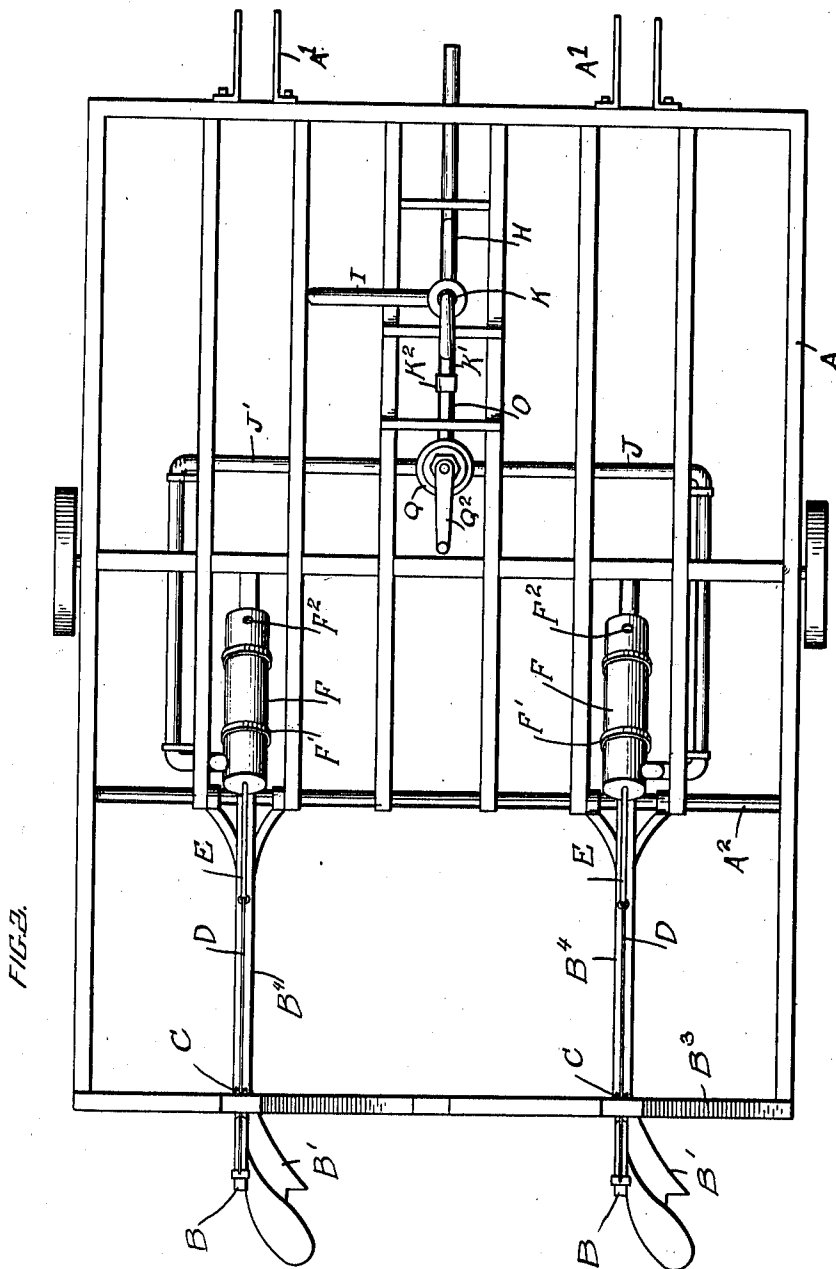


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2 SHEETS-SHEET 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM PROCKNOW, OF SIBLEY, IOWA.

PLOW-LIFTER.

988,813.

Specification of Letters Patent.

Patented Apr. 4, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM PROCKNOW, a citizen of the United States, residing at Sibley, in the county of Osceola and State of Iowa, have invented certain new and useful Improvements in Plow-Lifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in apparatus for lifting plows, etc., by the use of compressed air or steam and it consists of a simple and efficient device of this nature having various details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, in which:—

Figure 1 is a side elevation of my invention. Fig. 2 is a top plan view. Fig. 3 is a detail sectional view on line 3—3 of Fig. 1. Fig. 4 is a sectional view on line 4—4 of Fig. 1, and Fig. 5 is a sectional view on line 5—5 of Fig. 1.

Reference now being had to the details of the drawings by letter, A designates a frame which is adapted to be attached to the engine for drawing the apparatus, connection being made by means of the straps A'. Said frame has a crossbar A² thereon to which the plow beams B are pivotally mounted, having plows B' fixed thereto. Rising from the frame are the standards B³, braced by the beams B⁴, and a pulley C is journaled at the upper ends of each pair of standards and over which a cable D passes which is fastened at one end to the plow beam and its other end to the stem E of a piston E', movable within a cylinder F, each of which is held by means of straps F' to a beam B⁴. Said cylinder, there being one for each plow beam, is provided with an exhaust port F² to prevent a partial vacuum forming in the cylinder after the piston is moved in one direction.

A pipe, designated by letter H, leads to and is adapted to communicate with a supply main, air or steam, and a branching pipe I leads from the pipe H and affords means

for exhausting air or steam to the atmosphere. A valve casing K communicates with the pipes H and I and a three-way valve N is positioned in said casing and affords means whereby the steam or air may be allowed to pass through the casing and pipe K' and also through the union K² to the pipe O. Said valve also allows the air or steam to exhaust from the pipe K', through the pipe I to the atmosphere by turning it in a certain position. A boxing, designated by letter Q, communicates with the pipe O and has pivotally mounted therein a hollow stem Q' to which a crank handle Q² is fixed. Said stem has a duct Q⁴ leading therethrough and communicates with a valve P having a duct P' leading there-through. Said valve P is mounted in an air-tight casing R. Said valve has a short stem P² projecting through an aperture in the casing R and a nut P³ is mounted upon the end of said stem P² and serves as means for securely holding the valve in place. Said valve P is provided with a flange P⁴ which fits against the marginal edge of the casing in which the valve is mounted. Said casing R has apertures in its circumference, one of which communicates with the pipe J, which leads to and communicates with one end of the cylinder F, while a second pipe J' also communicates with the casing R and with one end of the other cylinder F, it being understood that there will be as many pipes J and J' as there are gang plows to be raised by the apparatus.

The operation of my invention will be readily understood and is as follows:—When it is desired to cause one or another of the gang plows to be raised, the steam or air is allowed to pass from the pipe H to the boxing Q by turning the valve N into proper position to close exit from the valve H to the pipe I. By turning the handle Q², the duct Q⁴ may be thrown into communication with either the pipe J or J', accordingly as it may be desired to cause one plow or the other to be raised. In the drawings, I have shown the duct as communicating with the pipe J which will cause the pressure to be applied to the piston E within the cylinder F, thereby driving the piston within the cylinder and drawing upon the cable C connected therein, thereby causing the plow frame to be raised. In the event of it being desired to cause the other plow beam to be raised, the handle Q² is given a partial rotary

movement so that the duct therein will register with the duct in the pipe J, which will cause the other plow beam to be raised. When it is desired to lower the plow, the valve N is given a partial rotary movement in order to allow the steam or air under pressure to escape from one cylinder or the other through the ducts in the valve stem, casing E and pipe I to the atmosphere. By reason of the vents F² in the cylinders, a tendency to form a vacuum within the cylinders as the piston moves to the opposite end of the cylinder will be avoided.

It will be understood from the foregoing that any number of cylinders may be employed with pistons adapted to actuate a plow beam by the mechanism shown.

What I claim to be new is:—

An apparatus for lifting plows comprising a frame, a plow having a beam pivoted thereto, said frame provided with inclined portions, a cylinder fastened to the latter, a piston in said cylinder, a pulley upon the frame, a cord fastened at one end to the piston rod, passing about said pulley and fastened to the plow beam, a casing having openings in its top and bottom of different diameters and beveled edges to each opening, a pipe communicating with an opening

in the wall of said casing, a stem having a longitudinal passageway extending there-through and its upper end being conical shaped and having bearings against the beveled marginal edges of the openings in the casing, a handle fixed to said stem, the upper end of said passageway opening through the circumference of the conical shaped portion, the lower end of the stem having a cylindrical outlined portion with a flange about its upper edge, the lower end of the passageway opening through the circumference of said enlarged portion of the stem, a casing in which the lower end of the stem has a bearing, an integral screw projecting from the bottom of the stem and passing through an aperture in the casing in which the lower end of the stem is mounted, a nut fitted to said screw, a pipe communicating between said cylinder and the casing in which the lower end of the stem is mounted, and means for supplying the fluid to said casings.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM PROCKNOW.

Witnesses:

THEODORE H. GRAVES,
WILLIAM ISACK.