No. 872,735. PATENTED DEC. 3, 1907.

A. KNUTSON.

GRAVEL LOADING MACHINE.

APPLICATION FILED APR. 11, 1907.

3 SHEETS—SHEET 1.

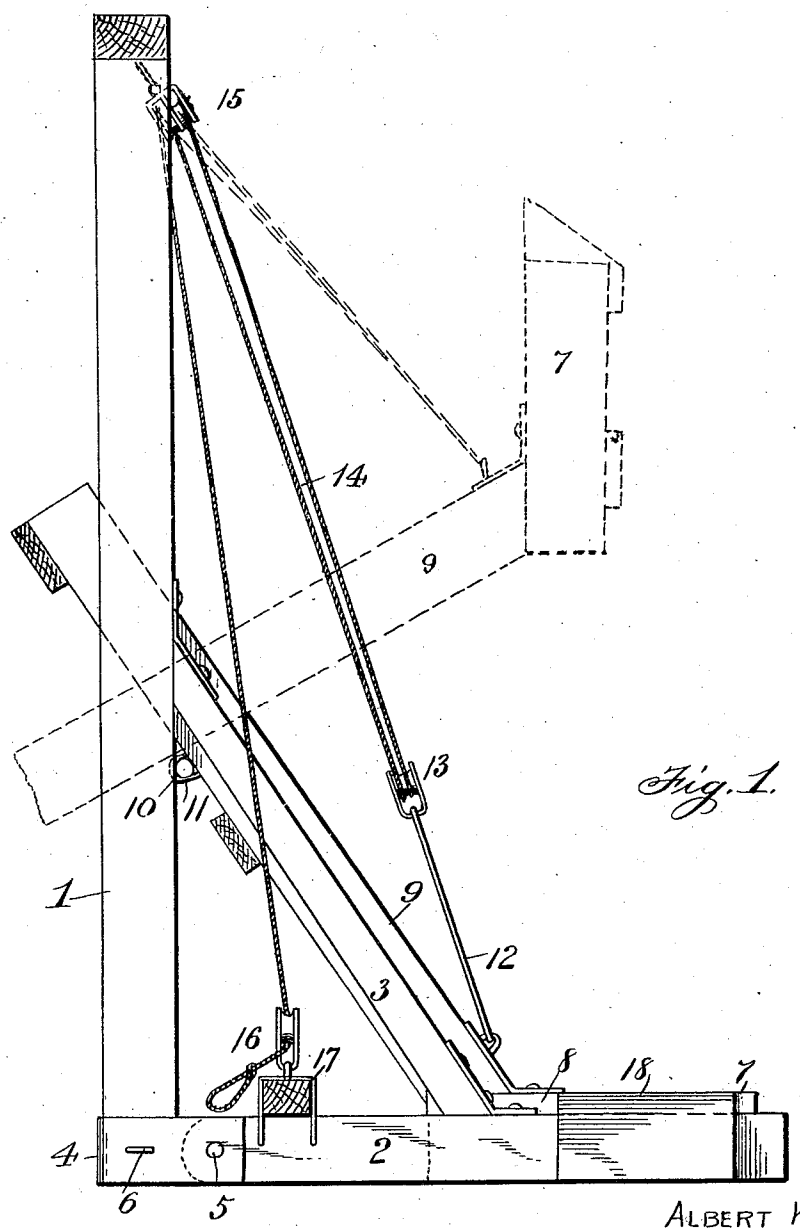


Fig. 1.

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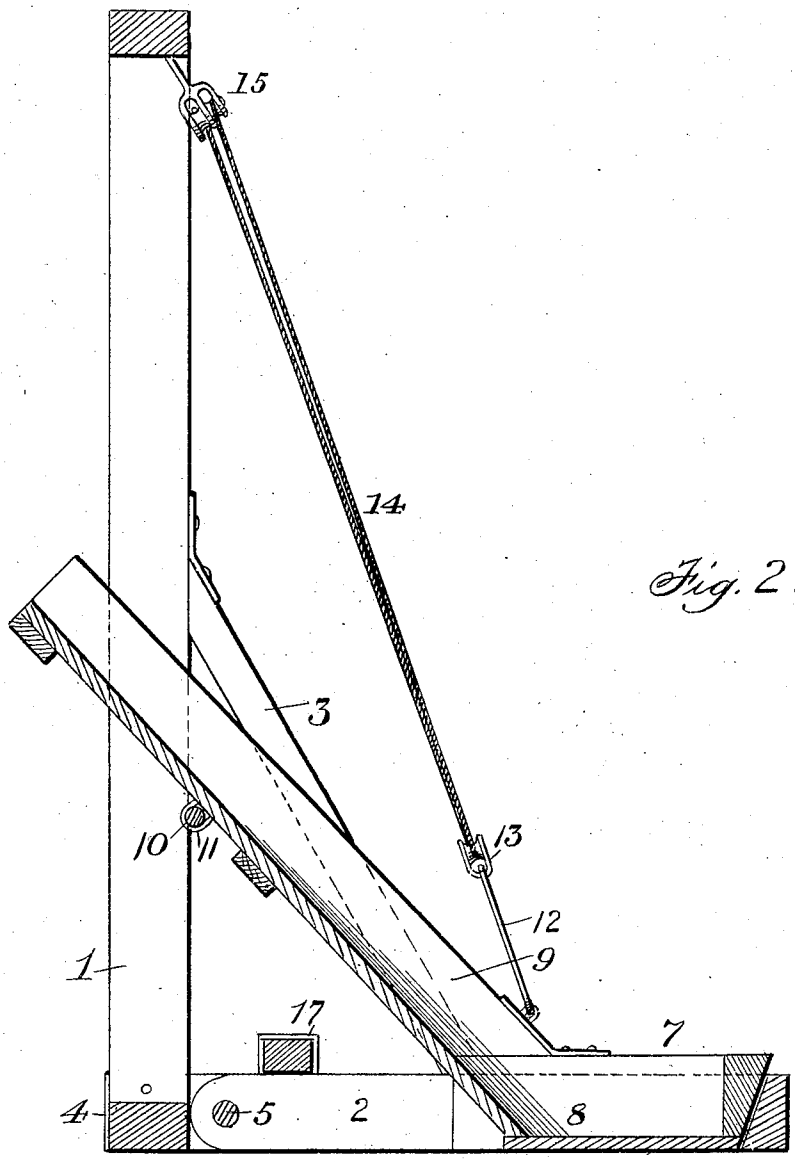


Fig. 2.

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3 SHEETS—SHEET 3.

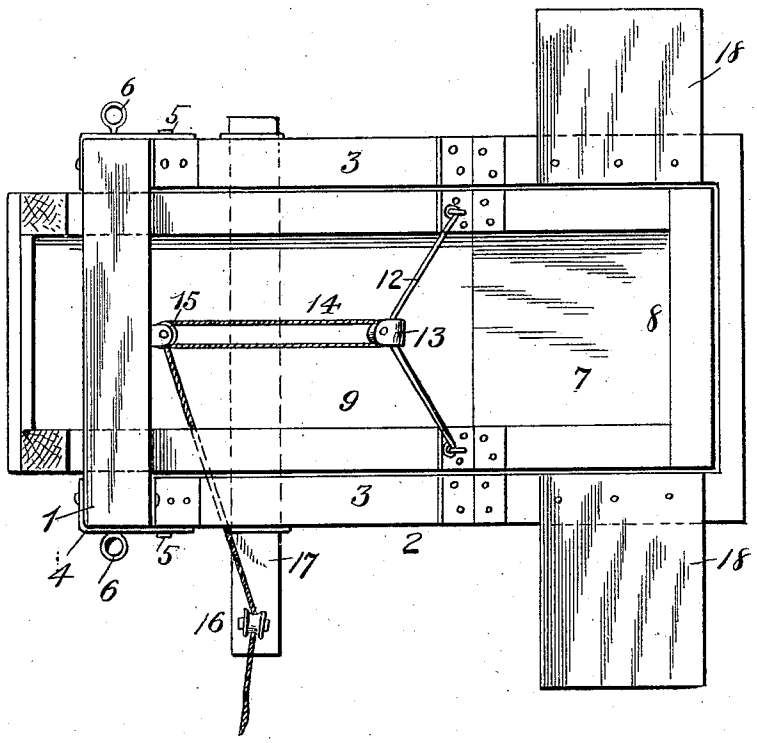


Fig. 3.

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UNITED STATES PATENT OFFICE.

ALBERT KNUTSON, OF RED CLOUD, NEBRASKA.

GRAVEL-LOADING MACHINE.

No. 872,735. Specification of Letters Patent. Patented Dec. 3, 1907.

Application filed April 11, 1907. Serial No. 367,639.

To all whom it may concern:

Be it known that I, ALBERT KNUTSON, a citizen of the United States, residing at Red Cloud, in the county of Webster and State of Nebraska, have invented certain new and useful Improvements in Gravel-Loading Machines, of which the following is a specification.

My invention relates to improvements in machines for loading gravel, earth, manure or other material it may be desired to remove or transfer. Its objects are to carry out the aforesaid purposes in a simple, economic, convenient and effective manner and with the minimum expenditure of labor and time.

Said invention consists of certain features or instrumentalities substantially as hereinafter fully disclosed and specifically pointed out by the claims.

In the accompanying drawing illustrating the preferred embodiment of my invention—Figure 1 is a side elevation thereof, with the "dump" or loader proper also shown in dotted lines in elevated position. Fig. 2 is a central longitudinal section of the same. Fig 3 is a plan view thereof as when in position to receive the material, in practice scraped thereinto.

In the disclosure of my invention, I provide an upright frame 1, which is suitably braced in position from a horizontal or base frame 2 by diagonal pieces or braces 3 secured at their respective ends to said frames. The base or horizontal frame is preferably further connected to said upright frame by means of metal pieces or plates 4 secured laterally to the vertical members of the latter, near the extreme lower ends thereof, said plates having inserted through them an end-bent rod 5 also passed through the lateral members of said base-frame. Suitable ring-ended pieces of stout wire or rod 6 are passed through, and suitably held in the lateral portions or uprights of the frame 1, the same also preferably passing through the plates 4, as an improvised or convenient means for the application of the draft thereto as may be desired in transporting the machine about from point to point for use.

A "dump" or loader proper 7, formed of a horizontal receptacle or "pan" 8 having an obtuse-angled chute-extension 9 initially occupying an upstanding inclined position, is arranged with said "pan" or receptacle member let into the base or horizontal frame 2 and with said upstanding chute-extension member pivotally supported upon a pivot-rod or bar 10 passing through preferably staples 11 secured to the underside of said chute-extension, a short distance below its upper end, said pivot-rod being received by, and bearing in staples 11 or like means, secured in the uprights of the frame 1. Said "dump" or loader proper has suitably connected or linked thereto, near its conjunction with the "pan" or receptacle, a bail 12 which freely passes through the looped portion of a pulley block 13. A hoisting line or rope 14 has one end connected to, and itself passed or rove through said pulley block and through a second, double pulley block 15 suitably suspended in position from the upper cross-piece of the frame 1, said line or rope being next passed through a third pulley-block 16 suitably connected preferably to a projecting bar 17 secured across the frame 2. The draft or means for elevating the "pan" or receptacle end of the dump, or loader proper, is suitably applied to the free end of the line or rope 14.

Suitable "approaches" or inclined pieces 18 are fixed or movably applied laterally to the frame 2, with their lower ends resting upon the surface or ground and their upper ends arranged about flush with the upper edges of the "pan" or receptacle 8, upon which "approaches" the material, as earth, gravel, manure and the like, may be conveniently raked into said pan or receptacle as will be readily understood. When said pan or receptacle is suitably filled the draft is applied to and a pulling force exerted upon the line or rope 14, which will, as above noted, have the effect to elevate that end of the "dump" or loader proper, as is obvious; the opposite end of the latter being tilted downward, resulting in dislodging the "pan" contents and causing the latter to pass down the chute-extension for dumping or delivery into the vehicle or cart for receiving the same for final disposition or hauling away.

I have found by practical experience that, with this machine, a single man is enabled to accomplish as much as has been heretofore done by four men in a given length of time, as for instance a day, with other facili-

ties; also it is noted that this device is very simple, economic of manufacture and effective for its intended purpose in operation.

I claim—

1. A machine as described, comprising a supporting frame having an upright frame and a horizontal base frame, a receptacle adapted to set within the horizontal frame, said receptacle having an obtuse angle chute pivoted to the upright frame, and means for raising and lowering said receptacle and chute.

2. A machine as described, comprising a supporting frame having an upright frame and a horizontal base frame, a receptacle adapted to set within the horizontal frame, said receptacle having an obtuse angle chute pivoted to the upright frame, and means for raising and lowering said receptacle and chute, comprising a rope first passed through a pulley attached to a bail on the chute, secondly through a double pulley suspended from the upright frame and finally through a pulley on the horizontal base.

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

ALBERT KNUTSON.

Witnesses:

WM. WOLFE,

ROBT. DUMERELL.