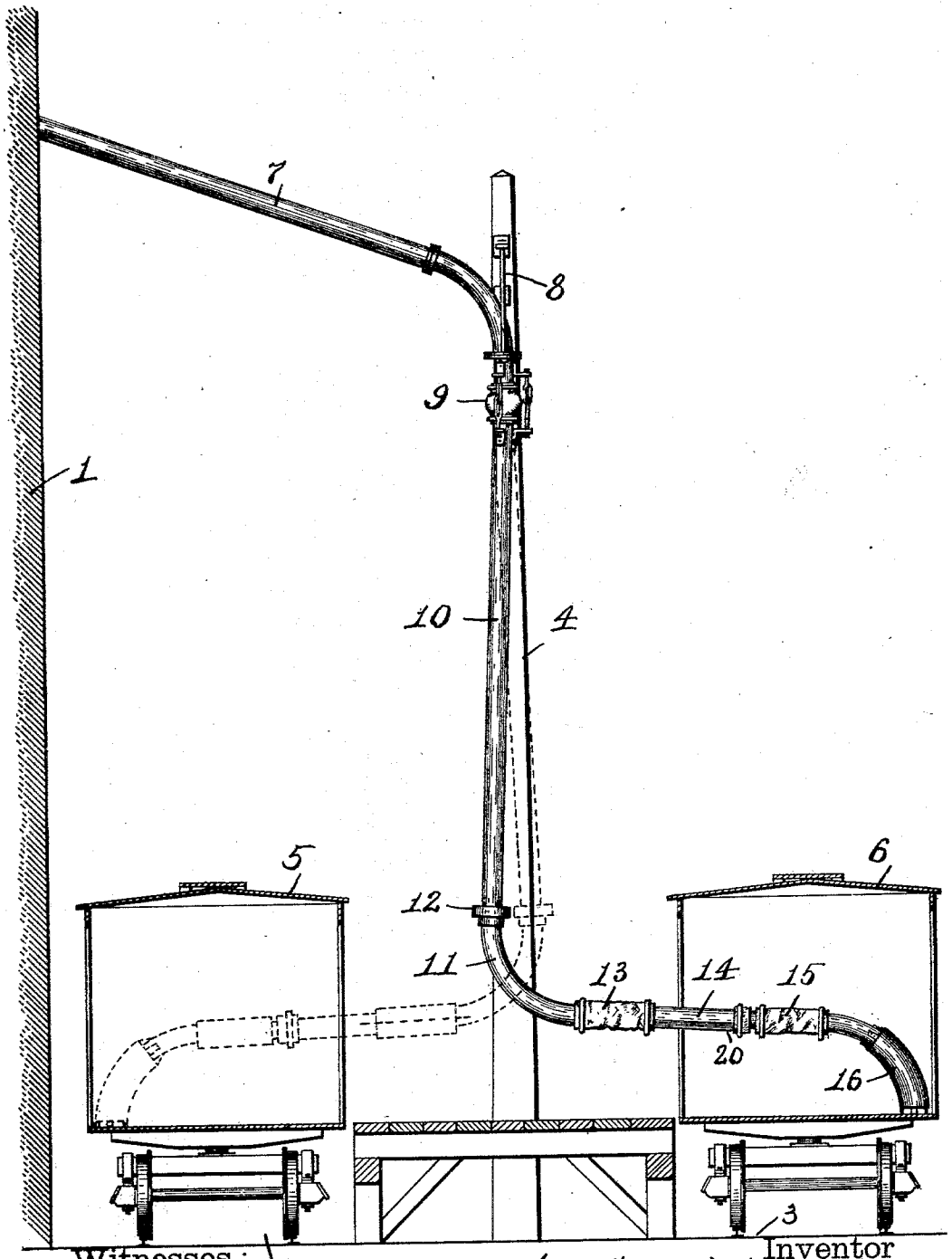
(No Model.) 3 Sheets—Sheet 1.

F. J. WEBER.

CAR UNLOADER.

No. 589,516. Patented Sept. 7, 1897.



Witnesses:
E. E. Shipley.
M. S. Belden.

FIG. 1.

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Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

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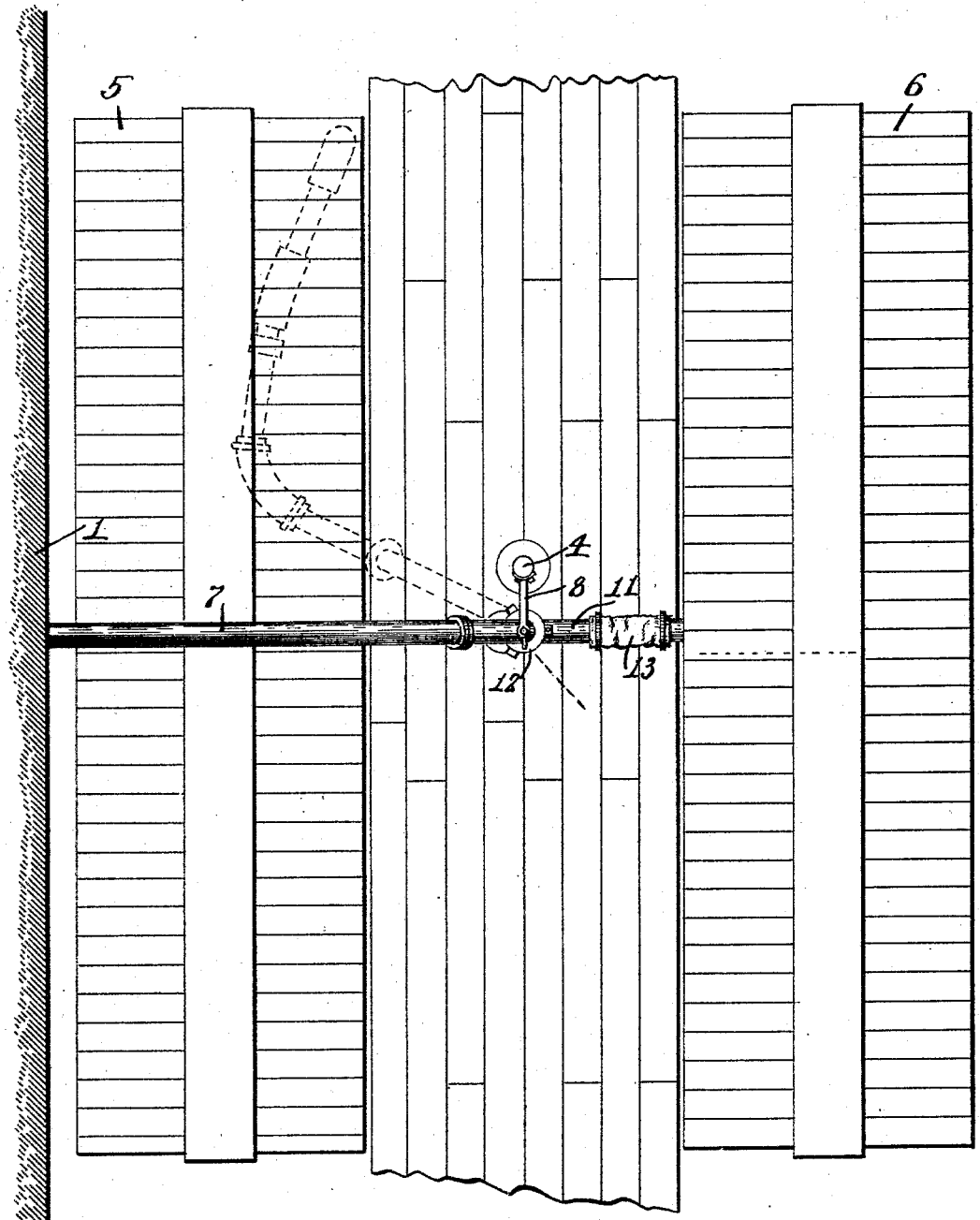


FIG. 2.

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(No Model.) 3 Sheets—Sheet 3.

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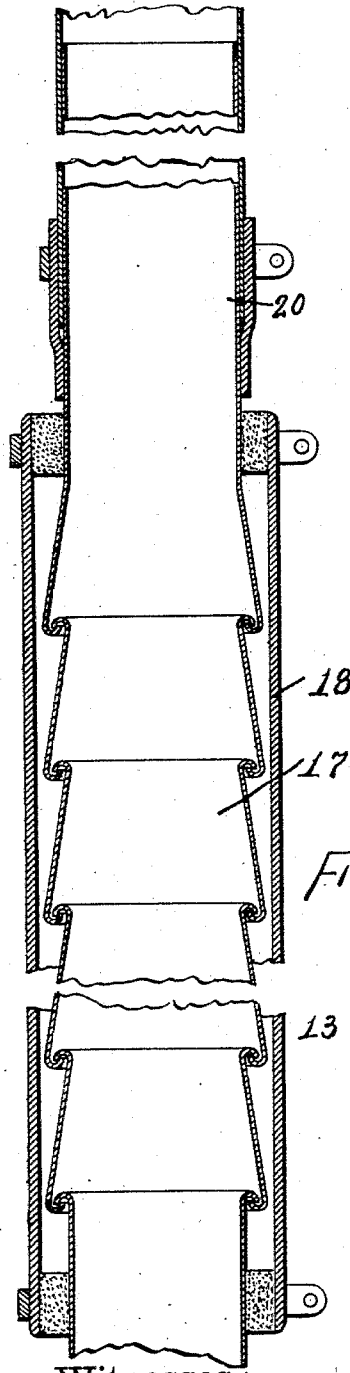


FIG. 4.

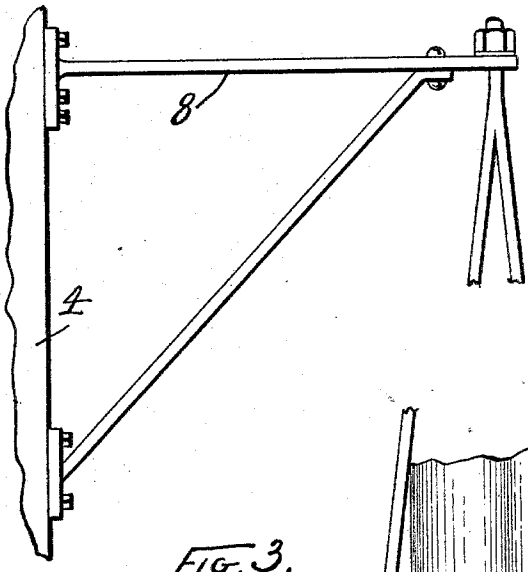
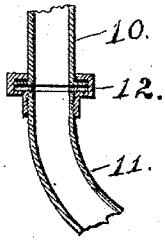
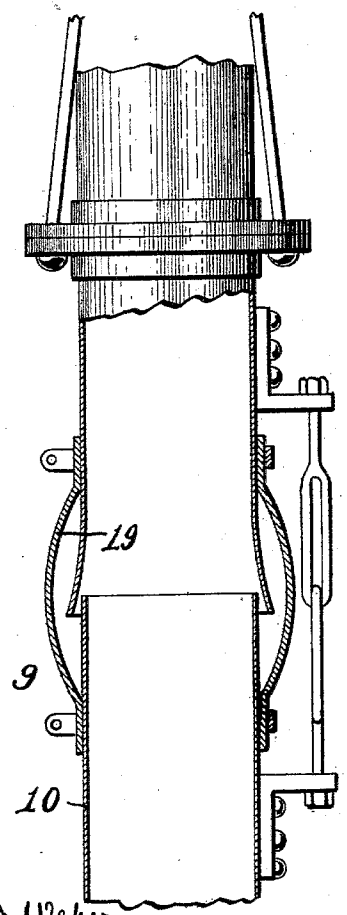


FIG. 3.

FIG. 5.





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UNITED STATES PATENT OFFICE.

FREDERICK J. WEBER, OF CONNERSVILLE, INDIANA, ASSIGNOR TO THE STEEL STORAGE AND ELEVATOR CONSTRUCTION COMPANY, OF SAME PLACE.

CAR-UNLOADER.

SPECIFICATION forming part of Letters Patent No. 589,516, dated September 7, 1897.

Application filed May 5, 1897. Serial No. 635,253. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. WEBER, of Connersville, Fayette county, Indiana, have invented certain new and useful Improvements in Car-Unloaders, of which the following is a specification.

This invention pertains to improvements in apparatus for unloading cars of grain, &c., by pneumatic process, and the improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is an elevation of my improved device; Fig. 2, a plan of the same; Fig. 3, an elevation of portions of the same, part vertical section, viewed in a direction at right angles to the direction of view of Fig. 1; and Fig. 4, a longitudinal section of one of the flexible pipe portions. Fig. 5 is a section view of the swivel-joint 12.

In the drawings, having general reference to Fig. 1, 1 indicates an elevator-building or other elevated structure into which the material is to be delivered when unloaded from the cars, it being assumed that this building or structure is provided with the apparatus usual in pneumatic transfer systems for producing a partial vacuum; 2, a track alongside thereof; 3, a second track parallel with the first one; 4, a mast or other elevated structure erected between the two tracks; 5, a car on track 2; 6, a car on track 3; 7, an inlet-pipe to the elevator-building leading to the top of the mast; 8, a bracket secured to the top of the mast and serving to support the outer end of pipe 7, pipe 7 having a downward turn at its outer end; 9, a flexible pipe-joint at the foot of said downward turn at the outer end of pipe 7; 10, a vertical pipe in downward prolongation of pipe 7 and suspended from flexible joint 9, this pipe 10 forming a pendulous pipe capable of swinging freely in any direction; 11, an elbow at the foot of the vertical pipe 10; 12, a swivel-joint uniting elbow 11 to pipe 10, this joint permitting of elbow 11 being turned in any desired direction; 13, a flexible pipe-section in prolongation of the lower end of elbow 11; 14, a rigid pipe-section in prolongation of flexible pipe 13; 15, a flexible pipe in prolongation of pipe 14, and 16 a mouthpiece forming the lower terminal of the pipe system, this mouthpiece forming a curve downward from flexible pipe 15.

It will be observed that the lower portion of the pipe system is capable of being turned in any direction by reason of the presence of swivel-joint 12, and that it is capable of being swung in any direction with flexible joint 9 as a point of oscillation. It is also obvious that the lower portion of the pipe system is capable of sidewise motion independent of the turning or swinging motion referred to, by reason of the presence of flexible sections 13 and 15. The suction end of the pipe may thus be inserted into a car on either of the tracks and the mouthpiece moved around within the car to any point, as will be understood from the dotted lines in Fig. 2. A partial vacuum being produced at the upper end of pipe 7 and the mouthpiece 16 being introduced into the grain to be dealt with the grain enters the mouthpiece and moves up the piping and enters the elevator structure.

The preferred construction of the flexible pipe-sections 13 and 15 may be understood from Fig. 4, though my present invention is not limited to this construction of flexible piping, nor is that construction of flexible piping claimed herein. The flexible piping is formed of intermembering loosely-engaging frusto-conical sections 17, inclosed in a flexible jacket 18, which jacket is held at its ends to the main portions of the pipe by drawbands.

It is desirable that pipe-section 14 be telescopic, as seen at 20, so as to permit the mouthpiece to be extended farther from the mast than the swinging of the vertical pipe 10 would conveniently permit. This provision is preferable, though not essential.

A preferred construction of the flexible joint 9 is illustrated in section in Fig. 3, in which it is seen that the ends of the pipe intermember loosely and are inclosed in a flexible jacket 19, secured to the pipes by drawbands, suspension-links taking the vertical strains at the joint. This special form of flexible joint is, however, neither essential to my present invention nor claimed herein.

I claim as my invention—

1. In a car-unloader, the combination, sub-

stantially as set forth, of an elevated support, an elevated pipe having a flexible joint carried by said support, a vertical pipe pendulous from said flexible joint, an elbow united to the base of said flexible pipe by a swivel-joint, and a mouthpiece united to said elbow by piping having a flexible portion.

2. In a car-unloader, the combination, substantially as set forth, of an elevated support, an elevated pipe having a flexible joint carried by said support, a vertical pipe pendulous from said flexible joint, an elbow united to the base of said flexible pipe by a swivel-joint, a flexible pipe connected with the lower extremity of said elbow, a telescope pipe connected with the outer end of said flexible pipe, a flexible pipe at the outer end of said telescope pipe, and a mouthpiece connected with the outer end of said flexible pipe.

3. In a car-unloader, the combination, substantially as set forth, of an elevated support, an elevated pipe having a flexible joint carried by said support, a vertical pipe pendulous from said flexible joint, an elbow united to the base of said flexible pipe by a swivel-joint, a curved mouthpiece, and a pipe having a flexible portion uniting the upper end of said curved mouthpiece with the outer end of said elbow.

FREDERICK J. WEBER.

Witnesses:
W. E. WILL,
L. E. LOWE.