F. C. SPIESS & A. DOBLER.

Improvement in Malt Reservoirs.

No. 115,652. Patented June 6, 1871.

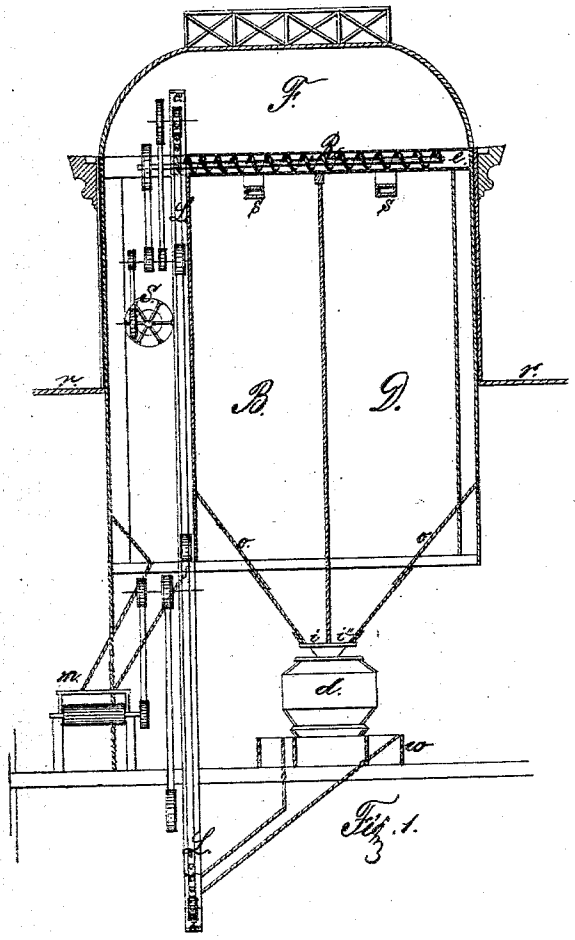


Fig. 1.

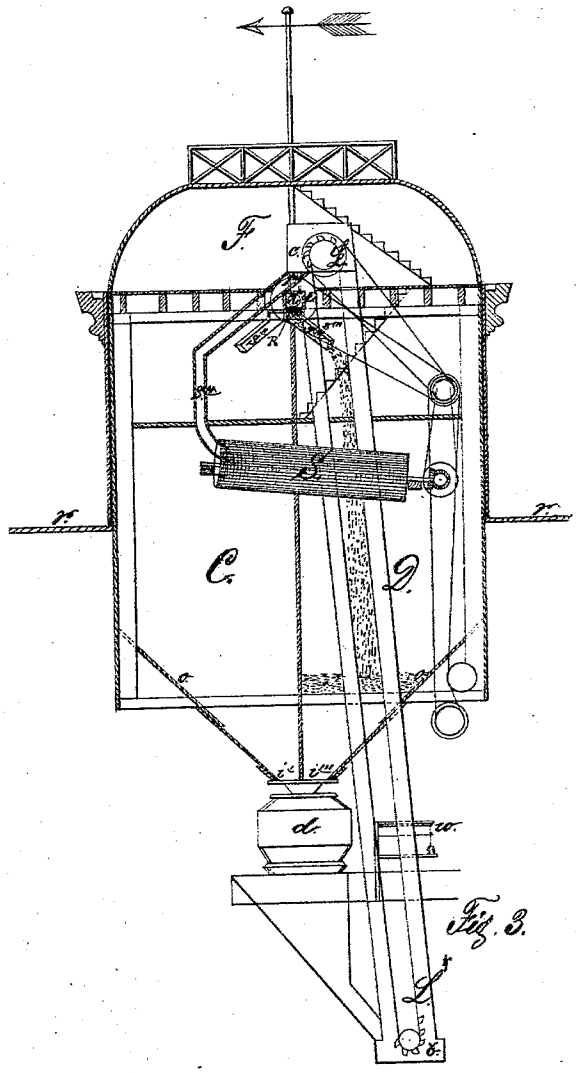
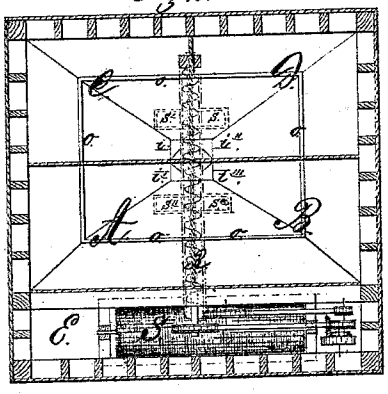


Fig. 3.

Fig. 2.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

FREDERICK CH. SPIESS, OF NEW YORK, AND ANTON DOBLER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MALT-RESERVOIRS.

Specification forming part of Letters Patent No. 115,652, dated June 6, 1871.

We, FREDERICK CH. SPIESS, of the city, county, and State of New York, and ANTON DOBLER, of Brooklyn, county of Kings and State of New York, have invented certain Improvements in Malt-Reservoirs, of which the following is a specification:

The first part of our invention relates to the combination of an elevator with a so-called Archimedean or Dutch screw and with spouts, in such a manner that the said screw and spouts shall be capable of forwarding and delivering the grain or malt into four or more separate compartments, according to the quality of the grain or the malt; the object of this part of our invention being to facilitate the storing of the different sorts of grain or malt, to save labor and space.

The second part of our invention relates to the combination of elevator and Dutch screw with a sieve, so that the taking off of the rootlets and the cleaning of the malt can be effectually accomplished in a narrow compartment, which, adjoining and belonging to the malt-reservoir, forms at the same time the well of the elevator, whereby, also, a considerable saving of space will be gained.

Description of the Accompanying Drawing.

Figure 1 is a vertical central section of a malt-reservoir embodying our invention. Fig. 2 is a plan of the same. Fig. 3 is a vertical section, showing the length of the sieve and its position, as also the respective parts of the driving machinery.

The malt-reservoir is built in form of a tower, as indicated by the drawing. It is divided by vertical partitions into five compartments, shown by the letters A, B, C, D, and E. E contains the elevator L and the sieve S, with the necessary driving machinery, as shafts, pulleys, and belts. The screw-wheel is placed as high as below the floor of the upper part F of the tower, and properly inclosed by the box *e*. The communication of this box with the separated compartments or malt-reservoirs is established by two pairs of spouts, *s s'* and *s'' s'''*, which are hung and made sliding on the bottom of the box, (shown in Fig. 3,) where the latter is provided with corresponding openings, securing thus an alternative discharging of the grain or the malt into one or the other of said compartments. The grain or malt drawn by the cups or beakers of the elevator-chain out of the box *b* empties into the box *c*, which is placed in the upper part F of the tower, and from there, by the short spout *p*, into the screw-box *e*, from where it is finally directed by the screw R and the spouts *s s' s s''* into the separated compartments A B C D, or by the spout s^4 into the sieve S, &c. The grain-compartments have an inclined bottom, *o o o o*, which forms a hopper, closed at the mouth by four corresponding slides, *i i' i'' i'''*, as may be seen in Fig. 2, by which means the grain or malt may be let out of either one or more compartments, mixed in box *d*, or weighed by the scale *w*, and returned by the elevator to their respective places. The bottom of the compartment E is also inclined and separated from the bottom of the other compartments, as indicated in Fig. 1, so as to form a separated hopper by which the malt or grain may be easily directed to the mill *m*, &c. The elevator L, the screw R, and the sieve S are so placed that they occupy the least possible room, and their combination is such that they may be put in motion and will turn over the grain or malt in either compartment or, freed from the rootlets and well cleaned by the sieve, into the compartment E, and from there to the mill *m*, &c., with very little attention and without the least danger whatsoever. The tower above the roof *r r* of the main or adjoining building is carefully lined on the outer sides with double boards, between which a layer of roofing felt or pasteboard, (as indicated by the deep black lines in Figs. 1 and 2,) well impregnated with tar, is properly secured, whereby the grain or malt is most effectually protected from light or moisture. Double walls, which are commonly applied in all timber buildings, do not answer the purpose so well, unless they are provided on the inside with a layer of mortar or plaster of some thickness; this, however, involves too great an outlay of money.

Having now fully described our invention, we wish it to be distinctly understood that we do not claim malt-reservoirs built in form of a tower with double walls, and provided with the usual grain-elevator and but two separated compartments for storing grain or malt; but

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a grain-elevator with a so-called Archimedean or Dutch screw and two or more pairs of spouts communicating with four or more separated compartments, as hereinbefore fully described, and for the purpose set forth.

2. The combination of grain-elevator, Archimedean or Dutch screw, spouts, and sieve, arranged as herein fully described, and for the purpose set forth.

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