SILO INSTALLATION FOR STORING ARTICLES

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1 Claim. (Cl. 193—12)

This invention relates to silo installations.

These silos consist of slide systems which are located within each other. Each slide has the shape of a continuous winding; the windings are vertically arranged above each other and have a slope. The articles to be stored, such as bags, boxes and the like, are entered at the top of the slides and slide downwardly on the same by their own weight. The goods and articles may also be stored in these slides by the application of closure means at the discharge end of the same. In this manner large quantities of goods can be stored and discharged from the slides in conformity with existing requirements.

In the hitherto customary devices of this type the individual slide systems are adjacent to each other. In view of the large turning radius required at both ends of the slide windings which have a great length and consist of straight and turning parts, the drawback arises of the creation of large unused intermediary spaces within each slide system; a highly unsatisfactory utilization of the space available in these slide installations is the natural consequence.

It is the main object of this invention to eliminate this disadvantage.

It is a further object of the invention to possibly reduce manual work while manipulating the silo installations.

The invention is illustrated in the accompanying drawings, wherein:

Fig. 1 shows a perspective view of a silo installation composed of two systems of slides;

Fig. 2 shows a horizontal sectional view thereof and Fig. 3 shows a vertical sectional view of the same.

The silo installation shown in the drawing consists of a block 1 composed of slides; it is supported upon a foundation 3 by means of a frame work 2. The block consists of two systems of slides 4 and 5. Each slide system consists of sloping slides 6 which have the shape of channels forming continuous windings. These slides may consist of metal, wood or another suitable material; the stored goods slide downwards in these slides under the influence of their own weight.

The individual slideway windings are composed of substantially straight center sections 7 and turning edge parts 8.

The two slide systems 4, 5 are arranged within each other the slide system 4 being centrally located and surrounded by slide system 5.

The turning edge portions 6 of the slide system 4 have a minimum curvature whereby a gentle change of direction is secured.

A free space 9 is formed by the straight sliding parts 7 which space harbours the control passages 10, ladders 11, a lift 12 and other means used for a supervision of the operation of the device.

The loss of space caused by the lateral turning radius of the known silo installations having adjacent located slide systems is eliminated by the invention where the interior slide system 4 is surrounded by the slide system 5.

Further slide systems as above described, and surrounding each other, as indicated by system 14, may be provided.

Since in a particular embodiment of the invention the slide systems of all slide systems are wound from the top of the silo to its bottom in the same direction and are adjacent arranged at the same height the inspection of the work may be greatly simplified by the provision of control passages in the center of the block composed of the slideways.

The slides 1 and the control passages 10 are supported by a frame work 2; the frame work is self-supporting and also carries the outside cover 15. Since the silo structures may not be sufficiently self-supporting it is advisable to support the same by the wall of an adjacent building.

In operation the instant silo installation the articles to be handled by the same are transported to the top of the slideways 6 whereupon the goods slide down due to their own weight.

Discharge devices may be provided at the end of the slideways whereby the same may be either locked and the goods stored or the same may be directly discharged.

Since certain changes may be made in the above apparatus and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, what I claim as new and desire to be secured by Letters Patent, is as follows:

A silo for the transport and the storage of goods comprising a plurality of coaxially located transporting and storing systems, said systems being composed of gradually downwardly extending superposed spiral slides consisting of substantially straight lateral and rounded edge proportions, said slides forming continuously spirally shaped superposed slideways for said goods to effect a downward slide thereof under the influence of their own weight, and an inner free space in the center of said silo and formed by said slides, said inner free space accommodating control devices and supervision passages and a frame to support said superposed slideways.

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