

E. ZÜBLIN.
CLOSURE FOR EXIT ORIFICES OF SILOS AND THE LIKE.
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1,061,579.

Patented May 13, 1913.

Fig. 1.

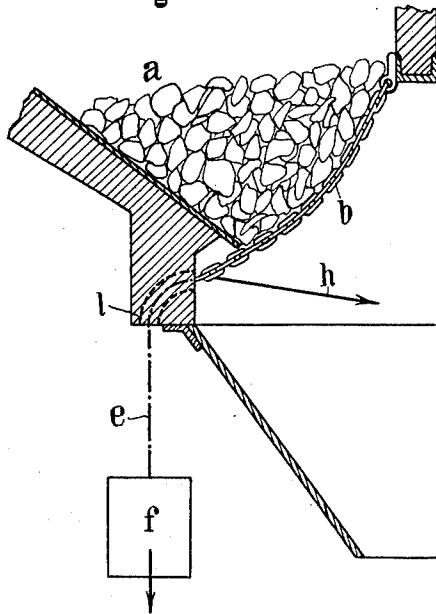


Fig. 2.

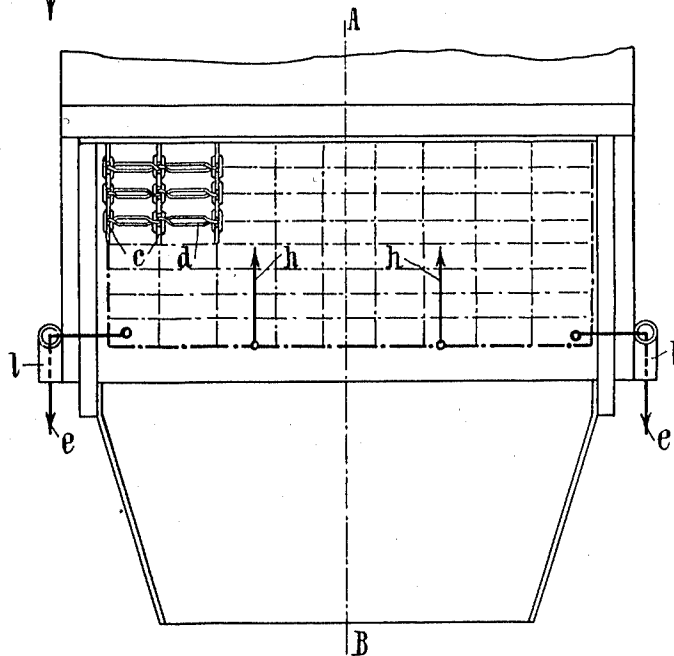
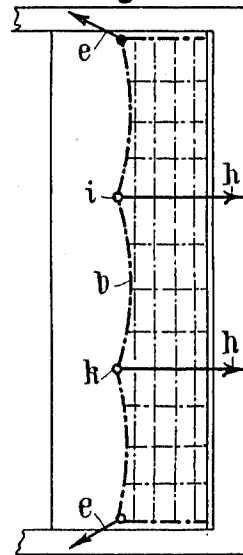


Fig. 3.

Witnesses:
Ed. B. Romelun.

Inventor:
Eduard Züblin
by B. Singer
Att'y

UNITED STATES PATENT OFFICE.

EDUARD ZÜBLIN, OF STRASSBURG, GERMANY.

CLOSURE FOR EXIT-ORIFICES OF SILOS AND THE LIKE.

1,061,579.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed February 6, 1912. Serial No. 675,870.

To all whom it may concern:

Be it known that I, EDUARD ZÜBLIN, a citizen of Switzerland, residing at Strassburg, in Alsace-Lorraine, Germany, have invented new and useful Improvements in Closures for Exit-Orifices of Silos and the Like, of which the following is a specification.

The invention relates to improvements in chute closures and particularly to that class of chutes which are used in silos or the like where it is necessary that the chute be quickly closed and opened to the required degree so as to avoid delay in the operation and interruption in loading.

The apparatus according to the present invention consists chiefly of a net made of links formed of interlocking parts which by means of operating members is moved into and out of its closed position. The flexibility of this net-like closure permits the discharge opening to be rapidly adjusted not only with respect to its size but also with respect to its shape so that the discharge of the material may be regulated at will.

In the accompanying drawing forming a part of the specification: Figure 1 is a cross sectional view of the closure on line A—B of Fig. 3. Fig. 2 is a plan view of the apparatus in an open position. Fig. 3 is a front view thereof.

The discharge opening *a* is closed by means of a net-like closure *b* made of interlocking links. The links may consist of chain links *c* of the customary type which are connected so as to form a net-like structure by means of intermediate somewhat larger links *d* (Fig. 3). Tensioning elements for instance chains *e* are connected to the edges of the net-like closure and are operated by means of weights *f* so that the net is held closed against the under edge of the hopper or chute thereby forming a tight closure of the same and to prevent the escape of smaller pieces of the material to be loaded. Furthermore tensioning members *h*, such as chains, are arranged at intermediate points along the lower edge of the closure and serve to regulate the size and shape of the

discharge opening and thereby regulate the quantity of the material to be discharged. By exerting a pull on the net at the points *i* and *k*, the closure will be brought into the position shown in Fig. 2. The number and position of said intermediate points is optional and the tensioning elements attached thereto may be either operated separately or simultaneously. The chains *e* pass through guide channels *l* so that the closure is caused to pass under the edge of the chute. The chains *h*, controlling the opening are passed over suitable winding apparatus by means of which they may be controlled for adjustment of the size and shape of the opening.

The closure is kept in the closed position by means of the chains *e* and the weights *f* attached thereto. When it is desired to discharge material from the chute one or more of the chains *h* are released so that an opening is formed between the wall of the chute and the closure, the size of which is adjustable and depends on the amount of release of the chains *h*. Several chains may be combined to operate the closure and may also be arranged so that they all can be operated from one point.

It is clear that changes may be made in the form and number of parts without departing from the scope of my invention.

I claim:

1. A chute closure comprising in combination with the chute provided with channels at its sides, a flexible curtain adapted to tightly close the discharge opening of said chute, chains passing through said channels of the chute carrying weights for holding said curtain in its closing position tightly against the under edge of said chute, and means for adjusting the width and shape of the discharge opening of said chute, substantially as described.

2. A chute closure comprising in combination with the chute provided with channels at its sides, a flexible curtain adapted to tightly close the discharge opening of said chute, chains passing through said channels of the chute carrying weights for holding said curtain in its closing position tightly

against the under edge of said chute, and a plurality of chains secured to the flexible closure at suitable places intermediate its width for adjusting the width and shape
5 of the discharge opening of said chute, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

EDUARD ZÜBLIN.

Witnesses:

SIEGFRIED HAUSER,

AUGUST OSTERMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."