

No. 665,273.

Patented Jan. 1, 1901.

H. A. SCHMIDT.
SCOOP OR CUP SHAPED ELEVATOR.

(Application filed Mar. 9, 1900.)

(No Model.)

Fig.1.

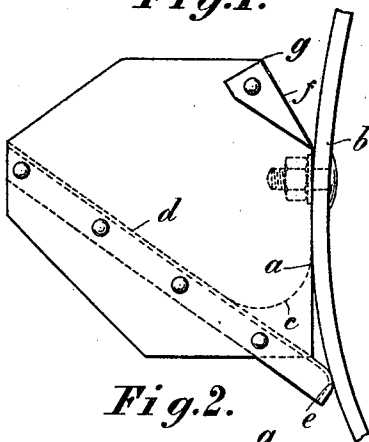


Fig.2.

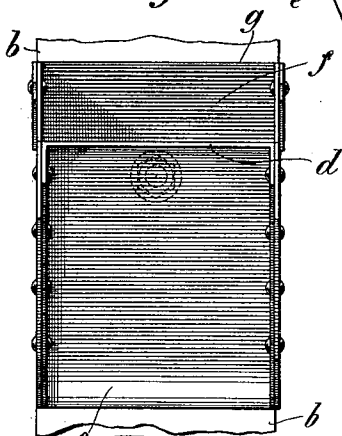
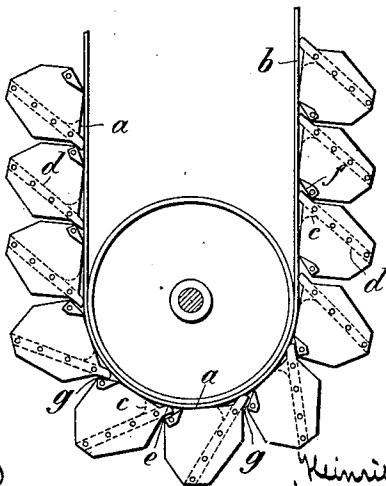


Fig.3.



Witnesses.
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by *[Signature]* atty

UNITED STATES PATENT OFFICE.

HEINRICH AUGUST SCHMIDT, OF WURZEN, GERMANY.

SCOOP OR CUP SHAPED ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 665,273, dated January 1, 1901.

Application filed March 9, 1900. Serial No. 8,095. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH AUGUST SCHMIDT, a subject of the King of Saxony, residing at Wurzen, in the Kingdom of Saxony and German Empire, have invented certain new and useful Improvements in Scoop or Cup Shaped Elevators, (for which I have applied for patents in England, dated February 2, 1900; in Austria, dated January 30, 1900, and in Hungary, dated February 1, 1900,) of which the following is a specification.

This invention consists of a scoop or cup shaped elevator in which the scoops or cups are so formed and attached to the elevator-belt that the spilling over of one cup into the space between the cup and belt while the next following cup is being emptied is completely prevented. The apparatus is so arranged that the upper edge of the back wall of the cup is bent outward and the front wall of the cup is provided with a backwardly-projecting continuation of the regular or continued line of the back wall. In many forms of cup elevators heretofore in use part of the materials which have been lifted up fall during the emptying of the cups into the opening which is formed between the back wall and the belt during the descent of the cups through the tilting forward of the cups and such materials stick fast therein. The consequent forcing out of the cup from the belt increases, of course, at the turning-points of the belt and the liability to spill over behind is also greatest at these points. It will now be understood that the before-mentioned forcing out of the back wall of the cup from the belt is a consequence of the usual mode of attaching the cups. It is, however, not easy to make this attachment in another manner, as, on the one hand, an attachment of the cups to the belt in more than one level or continuous line is prevented by their having to revolve around the circular belt-pulleys, and, on the other hand, the attachment has to be effected as high as possible, so that the pull exerted on the belt in the action of scooping up and in the further upward transport shall coincide as far as possible with the direction in which the belt is running. Should this pull, however, act on the belt in an inclined direction, not only will the belt thereby be greatly strained, but also the difficulty of

driving will be considerably increased and, furthermore, the regular motion of the elevator will be disturbed.

Figure 1 shows a side view of the elevator; Fig. 2, a front view of the same; Fig. 3, a chain of elevator-cups passing over a pulley.

This invention is intended to do away with the faulty conditions, and for this purpose, as is shown by the accompanying drawing of a descending cup of such an elevator, the cup is attached in the usual manner by its back wall *a* to the belt *b* and always on the same vertical line. The back wall *a*, formed out of one piece with the side walls of the cup, is continued outward, forming a rounded bottom *c*, which lies close up to the front wall *d*. The front wall is continued out toward the back somewhat beyond the extended line of the back wall *a*, and this continuation *e* is suitably bent outward at the end. The upper edge *f* of the back wall is likewise bent outward for a certain width, which necessitates the placing of the attachment-rivets or other similar appliances somewhat lower down in the back wall than usual. This circumstance, however, is no disadvantage in the present case, as the cups in consequence of the backwardly-projecting continuation of the front wall beyond the extended line of the back wall have a firm support on the belt by means of this continuation, even while revolving around the belt-pulley—that is to say, during their scooping action, the cup also itself during this action resting on the pulley. This arrangement of the continuation *e* of the front wall beyond the extended line of the back wall and the bent-over edge *f* of the back wall of the adjoining cup entirely prevents under all circumstances a spilling over behind the cups during the emptying thereof, as the opening between the continuation *e* of the front wall and the belt, caused by the tilting of the cups, is shut off by the continuation *e* itself, which reaches in this position of the cups beyond the spilling edge *g* of the next cup for the full width of the cups, so that a spilling over behind is quite impossible.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A scoop or cup for an elevator, the outer wall of which is provided with a projecting continuation adapted to rest against the belt

and to receive and direct the material discharged from the next scoop or cup, and the inner wall of which is turned outward away from the belt at its discharging edge, whereby
5 it may overlie such continuation on the adjacent scoop or cup, substantially as set forth.

2. A scoop or cup for an elevator, the outer wall of which is provided with a projecting continuation adapted to rest against the belt
10 and to receive and direct the material discharged from the next scoop or cup, and the inner wall of which is provided with means

for securing, at or near its center, to the belt or support at a point considerably removed from the discharge-lip of the scoop or cup 15 whereby the discharge-lip of the cup may move outward from the belt in passing around the pulleys, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two witnesses. 20

HEINRICH AUGUST SCHMIDT.

Witnesses:

RUDOLPH FRICKE,

B. H. WARNER, Jr.