O. E. STREHLOW.

SKIP.

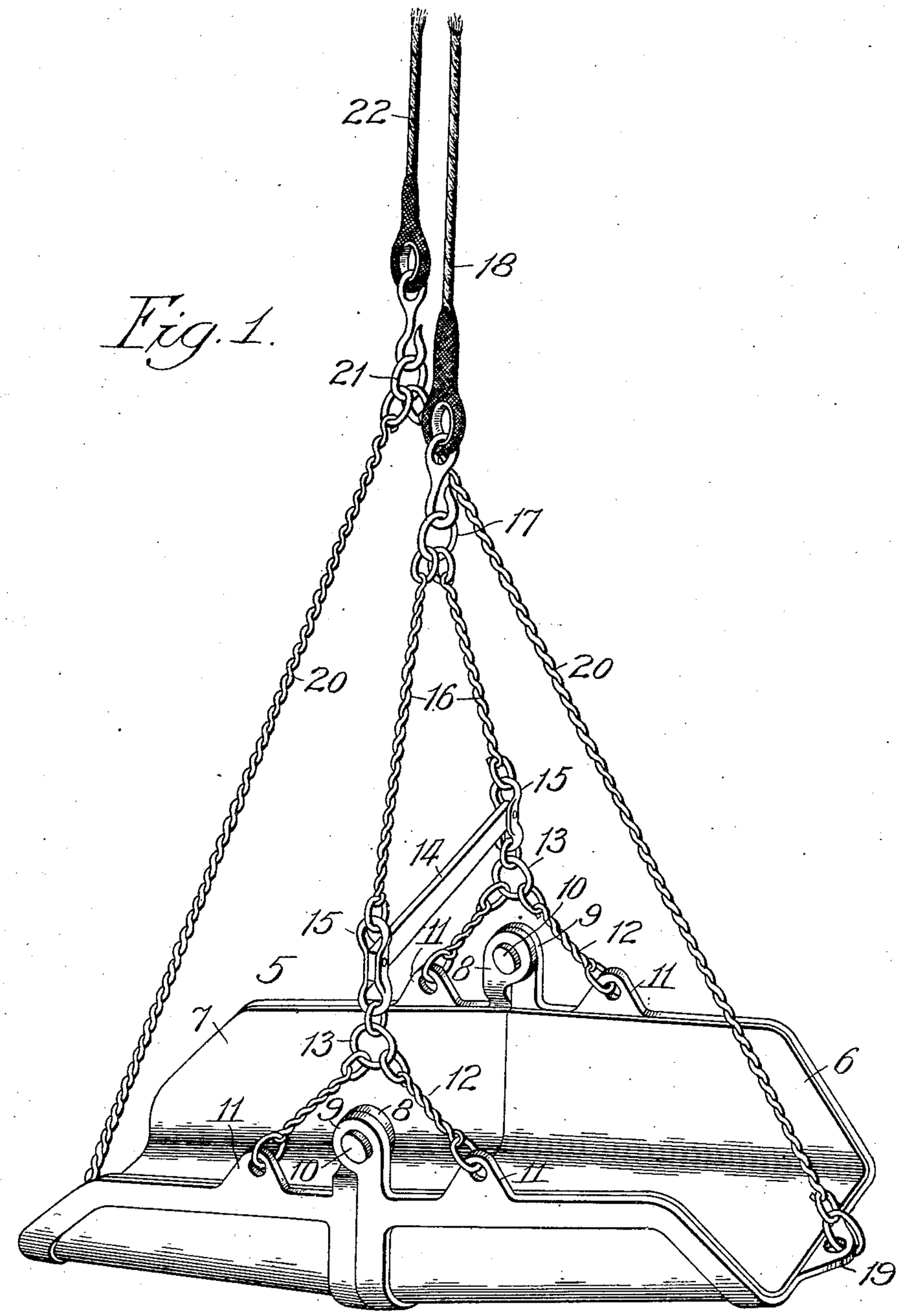
APPLICATION FILED FEB. 4, 1908.

935,282.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Chas. F. Gaylord,
John Enders.

Inventor:
Oscar E. Strehlow,
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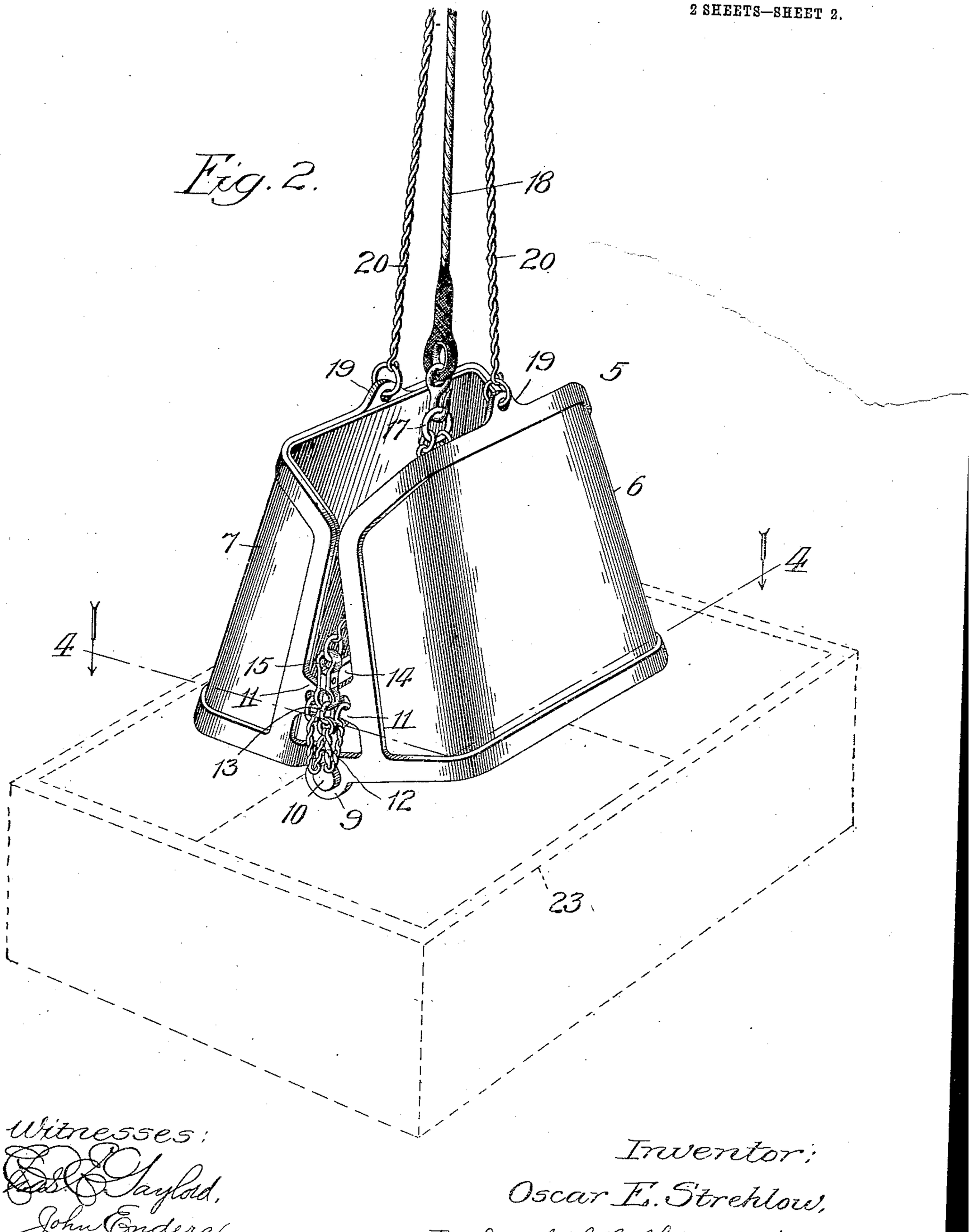
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

OSCAR E. STREHLOW, OF CHICAGO, ILLINOIS.

SKIP.

935,282. Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed February 4, 1908. Serial No. 414,185.

To all whom it may concern:

Be it known that I, OSCAR E. STREHLOW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Skips, of which the following is a specification.

My invention relates to an improvement in the class of devices known as "skips" and "kibbles" and used for transfer by hoisting means when loaded with material (as stone, dirt, coal, concrete and the like) from the place of loading to a car, a boat, or boxes, and the like, into which the contents are dumped.

The ordinary form of skip, upon which my invention is an improvement, is that of a rigidly continuous receptacle open at one end. In dumping into a car the contents of such a skip they are necessarily directed to one point beyond its center of gravity and tend to overbalance and derail it, besides wasting the material on account of its spilling from the car, the capacity of which usually approximates that of two or more skips. To prevent this tendency, it is quite common to provide a hopper through which to dump the skip into cars of a train moving under it, but this incurs expense because of the cost of the hopper and of requiring it to be handled and the train to be moved, and besides the work rapidly wears it out.

My invention overcomes the objection referred to, and others, by presenting the advantages of enabling the load to be dumped into a car in a manner to distribute itself from the center thereof and avoid any waste of the material by spilling; and the construction whereby this is accomplished is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved skip as it appears when suspended from a derrick or other form of hoist; Fig. 2 a similar view of the same, presented with relation to the box of a car, shown by dotted representation, the skip being in the folded condition to which it is reduced in dumping its load.

The body 5 of the skip, of the preferred form illustrated, involves as its essential construction two hinged sections 6 and 7 adapted to be folded on their hinge-connection in an upward direction for the purpose hereinafter explained. To this end one of the two similar sections is provided on opposite sides of its inner-end portion with corresponding upwardly projecting perforated ears 8, 8, and the other section has on opposite sides of the opposing end similar ears 9—9, each to register at its perforation with that of the adjacent ear 8 to receive the pivot-pin or pintle 10 for hinging the sections together.

For hoisting the skip it is provided on its upper edges at opposite sides of each hinge-joint with eyes 11, the two members forming the pair on each side of the device being connected by a chain 12 containing midway between its ends a ring 13; and the two rings are connected by a spreader-bar 14 at clips 15 pivotally supported on its ends and connected by a suspension-chain 16 containing midway between its ends a ring 17, in which to hook the hoisting-cable 18 depending from a derrick, cable-way, crane, or other suitable type of hoist (not shown). Similar eyes 19 project centrally from the outer ends of the base of the divided skip at which to connect the dumping-chain 20 containing midway between its fastened ends a ring 21 in which to hook the dumping-cable 22 depending from such hoisting device.

In the representation of Fig. 1 the skip is shown as it appears when suspended from the hoist, with all the strain of the weight of its load exerted upon the chains 12 through the rigging connecting the hoist-cable 18 therewith, to tend to hold the sections 6 and 7 together at their meeting ends, and thus to maintain the skip in unfolded or expanded condition, wherein the chain 20 is more or less slack.

The loading position of the skip is on the ground, as in a stone-quarry, the open ends permitting heavy stones to be rolled through them into the skip, although the ends may be closed when the material for loading it is of a character requiring to be shoveled, or of a semi-liquid character; and when in the position for loading, the chain 20 lies out of the way to one side of the skip, being unhooked from the cable 22, as is the cable 18 from the chain 17, which with the chains 16 and 12 may then lie loosely without obstructing the loading operation.

To hoist the loaded skip to the point of dumping it into a car, the cables 18 and 22 are hooked, respectively, into the rings 17 and 21, and the hoist is actuated to raise the load by the chains 12, and maintain the chain 20 slack, and to transfer the loaded

skip to the dumping point over the center of a car, when the cable 18 is slackened and the cable 22 tautened to lift by the chains 20 and fold toward each other into the condition represented in Fig. 2, the sections 6 and 7 thereby separating them at their inner or meeting edges. In thus separating, each section forms a species of chute with an open discharge-end and the contents of the skip discharge at the center of the car, whence they spread over its entire inner area. In folding, the sections describe converging angles tending to direct the contents of each toward the contents of the other, whereby their impact directs them vertically downward to the central point in the car, and when the skip sections finally assume their fully folded vertical position they are empty, having, in unfolding, spread the load over the car. In the operation of folding the edges of the outer narrow ends of the sections come together with sufficient force to effect a jarring action on the skip structure, which serves to cause a cleaning of the skip and the dislodgment of any portion of the load which would otherwise adhere thereto, especially where such load is composed of moist material, as for instance fresh earth. The skip may be returned, in its folded condition, by the hoist to the point of loading.

It will be noticed that the corners of the sections are somewhat rounded. This will prevent the skip in the event of its turning (when suspended for dumping over a car) to extend with the corners diagonally to the length of the car-body, and while being dumped in that position, from a tendency to spill over the car-sides, or misdirect the discharge as might occur with the corners square. It will furthermore be noticed that the skip-sections taper toward their outer ends, or flare toward their hinged ends. This construction produces a gradual widening of the sections toward their discharge-ends, whereby tendency is avoided to their becoming clogged in discharging by interwedging of the material of the load between the sides of the skip.

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

1. A skip comprising a flat-bottomed body formed of two open-ended tapering sections hinged together at their wider meeting ends to fold upwardly for dumping, whereby said structure is adapted to rest stably on the ground in its opened position, and to form when folded a downwardly and outwardly inclining discharge chute with the outer narrow ends of said sections in contact, as set forth.

2. A skip comprising a body formed of two-open-ended tapering sections, a hinge-joint connecting the sections at their wider meeting ends, cable-attaching ears located on said sections a sufficient distance from the hinge-joint to meet above the same when the skip is folded, and a cable secured to the ends of the sections to fold the same upwardly, whereby said skip when in folded position is caused to form a downwardly and outwardly inclined chute with the edges of its free end-portions resting against each other, as set forth.

OSCAR E. STREHLOW.

In presence of—
L. HEISLAR,
R. SCHAEFER.