

June 4, 1929.

K. HIRSCHNER
 DEVICE FOR THE DUSTFREE DISCHARGE OF CIRCULAR
 DUSTBINS INTO REFUSE COLLECTING CARTS
 Filed Feb. 17, 1928

1,715,364

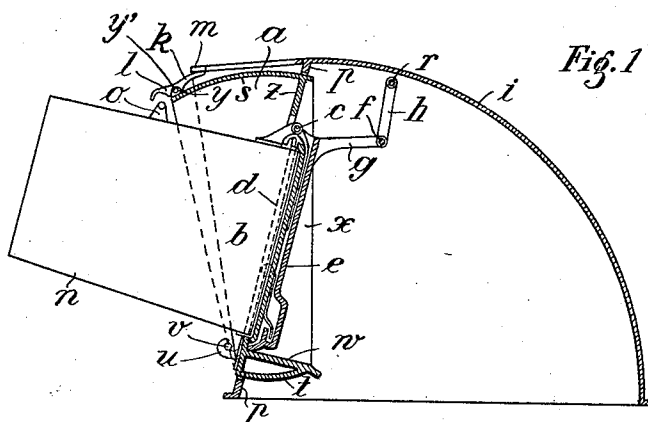


Fig. 1

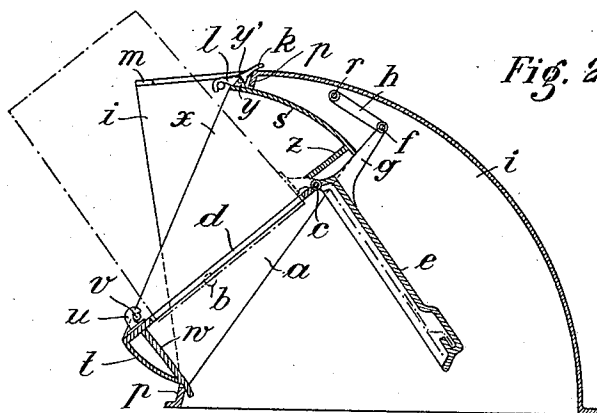
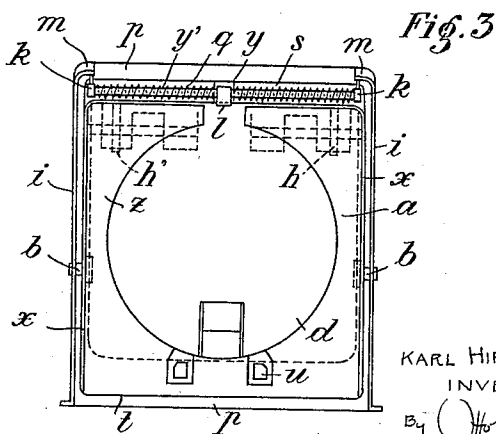


Fig. 2



KARL HIRSCHNER
 INVENTOR

By *Offenbach*
 his ATT'Y.

Patented June 4, 1929.

1,715,364

UNITED STATES PATENT OFFICE.

KARL HIRSCHNER, OF WEIDENAU-ON-THE-SIEG, GERMANY, ASSIGNOR TO THE FIRM OF SCHMIDT & MELMER, OF WEIDENAU-ON-THE-SIEG, GERMANY.

DEVICE FOR THE DUST-FREE DISCHARGE OF CIRCULAR DUSTBINS INTO REFUSE-COLLECTING CARTS.

Application filed February 17, 1928, Serial No. 254,991, and in Germany March 4, 1927.

My invention relates to a device for the dustfree discharge of circular dustbins with hinged covers into refuse collecting receptacles or carts and is an improvement on the pending application Serial No. 76091, filed December 17, 1925.

My invention consists substantially in adapting a rocking or oscillating member provided with the charge opening on pivots between the sidewalls of the hood sealing the cart, in such a manner that when the bin is being tipped into the cart said rocking member swings inwards with one end and outwards with the other end. The handling of the bin during the tipping is greatly facilitated in this way, inasmuch as part of the weight only of the dustbin need be lifted. Preferably the arrangement is such, that the said rocking member is not directly carried back into the initial position by the cover or lid, but that the rocking member is coupled with the dustbin by means of suitable coupling members in such a manner, that the lid of the dustbin and the hinge of the lid are relieved of all strains. This coupling of the dustbin and the rocking member may be effected in such a manner that a coupling member of the rocking member engages a coupling member provided on the shell of the bin when the bin is being tipped into the cart, or that on the frame serving for the reception of the dustbin coupling members are provided, which are adapted to be displaced by a rotary or rectilinear motion, which are controlled by springs and on the other hand are guided by suitable cam surfaces when the rocker is operated.

In the drawing affixed hereto and forming part of my specification an embodiment of my invention is illustrated by way of example.

In the drawing is:

Fig. 1 a cross-section through the hood of the cart with the dustbin placed in position for tipping.

Fig. 2 a similar cross-section with the dustbin in the tipping position, and

Fig. 3 a front elevation of my improved device. Like parts are indicated by like letters of reference throughout all the figures of the drawing.

Referring to the drawing it will be seen that the rocker *a* is adapted to swing between the sidewalls *i* of the hood upon pivot pins *b*. The rocker *a* is composed of the side portions

x, the top part *s*, the lower enclosing member *t*, and the transverse plate *z*. The enclosing plates *s* and *t* extend right across the width of the rocker and are joined to the side plates *x*. The bottom cover *t* encloses a chute *w* also extending right across the width of the rocker. A cover or lid *e* hinged at *c* closes the charge opening *d* in the rocker *a*. The rigid arms *g* mounted on the cover *e* carry in hinge joints *f* the connecting links *h*, *h*¹. These connecting links *h*, *h*¹ are adapted to rotate upon a rod *r* extending between the side walls *i* of the hood. A rod or spindle *y*¹ extending across the entire width of the rocker is adapted to turn in bearings *y* upon the curved top *s* of the rocker. At the ends of the spindle *y*¹ are provided fingers *k* and in the center the coupling hook *l*. The fingers *k* and the hook *l* are controlled by a helical spring wound around the spindle *y*¹. For operating the fingers *k* against the resistance of the spring stops *m* are provided upon the sidewalls *i*. On the shell *n* of the dustbin is mounted a coupling member *o* adapted to cooperate with the coupling hook *l* on the rocker. A packing frame *p* enclosing the rocker *a* seals the rocker dustproof against the outside.

The improved device operates in the following manner: the dustbin is in the usual way hung up on the hooks *u* of the rocker *a* by means of the suspension rod *v* mounted upon it and tipped up. A hook on the lid of the bin then engages a pocket or recess in the cover *e* closing the charge opening. During the further progress of the tipping operation the ring enclosing the mouth of the bin comes in contact with the edge of the charge opening *d* and forces the part of the rocker *a* above the pivot inwards while the lower part of the rocker is simultaneously pulled outwards by the suspension rod *v* and the hooks *u*. The fingers *k* then slide off the stops *m* and disengage the coupling hooks *l* controlled by the helical spring and these hooks come in engagement with the coupling members provided upon the shell of the bin. While this takes place the joint *f* with the connecting links *h* are swung upwards and the lid of the bin hooked into the cover *e* of the charge opening is opened. When the bin is withdrawn it forces by means of the ring around its mouth the outward swung portion of the rocker inwards, while simultaneously the bin

coupled with the rocker by means of the coupling members *o*, *l* pulls the inwardly swung part of the rocker outwards so that thus the closing motion takes place without subjecting the lid and the hinge of the bin to any strains, on the one hand by the dust-bin pressing upon the outwardly swung portion of the rocker, and on the other hand by the action of the coupling members *o*, *l*.

10 Various changes and modifications may be made in the details of construction without departing from the spirit of my invention.

I claim as my invention:

1. In a device for the dustfree discharge of dustbins with hinged lids into refuse collecting carts, a hood carried by said cart, a rocking member pivoted to said hood and comprising a transverse plate, side walls, a curved upper wall, and a lower curved wall, and means carried by the rocking member for receiving the edge of the bin, said rocking member adapted to turn between the side-
 15 walls of the hood in such a manner that when the bin is tipped up and gradually emptied said rocking member moves into the cart with one end and out of it with the other.

2. In a device for the dustfree discharge of dustbins with hinged lids into refuse collecting carts, a pivotally mounted rocking member adapted to turn between the side-
 20 walls of the hood in such a manner that when the bin is tipped up and gradually emptied said rocking member moves into the cart with one end and out of it with the other, a cover for closing the charge opening in said rocking member, and connecting links mounted upon the hood adapted to open and close said cover by the swinging motion of said rocking member.

3. In a device for the dustfree discharge of dustbins with hinged lids into refuse collecting carts, a pivotally mounted rocking member adapted to turn between the side-
 25 walls of the hood in such a manner that when the bin is tipped up and gradually emptied said rocking member moves into the cart with one end and out of it with the other, a cover for clos-

ing the charge opening in said rocking member, and connecting links mounted upon the hood adapted to open and close said cover by the swinging motion of said rocking member, and a coupling member upon the shell of said bin adapted to engage a coupling member on said rocking member in such a manner, that when the rocking member is withdrawn the hinge and the lid of the bin are relieved of strain.

4. In a device for the dustfree discharge of dustbins with hinged lids into refuse collecting carts, a pivotally mounted rocking member adapted to turn between the side-
 30 walls of the hood in such a manner that when the bin is tipped up and gradually emptied said rocking member moves into the cart with one end and out of it with the other, a cover for closing the charge opening in said rocking member, and connecting links mounted upon the hood adapted to open and close said cover by the swinging motion of said rocking member, a frame for the reception of the bin, coupling members upon said frame, springs for controlling said coupling members, and cam faces for controlling said coupling members during the operation of said device.

5. In a device for the dustfree discharge of dustbins with hinged lids into refuse collecting carts, a pivotally mounted rocking member adapted to turn between the side-
 35 walls of the hood in such a manner that when the bin is tipped up and gradually emptied said rocking member moves into the cart with one end and out of it with the other, a cover for closing the charge opening in said rocking member, and connecting links mounted upon the hood adapted to open and close said cover by the swinging motion of said rocking member, the closing motion of said cover being adapted to take place without straining the hinge or the lid of the bin partly by the bin pressing upon the shorter portion of the rocking member, partly by a weight provided on said cover.

In testimony whereof I affix my signature.

KARL HIRSCHNER.