No. 876,727. PATENTED JAN. 14, 1908.

C. K. PEVEY.

STREET SWEEPER.

APPLICATION FILED JUNE 9, 1905.

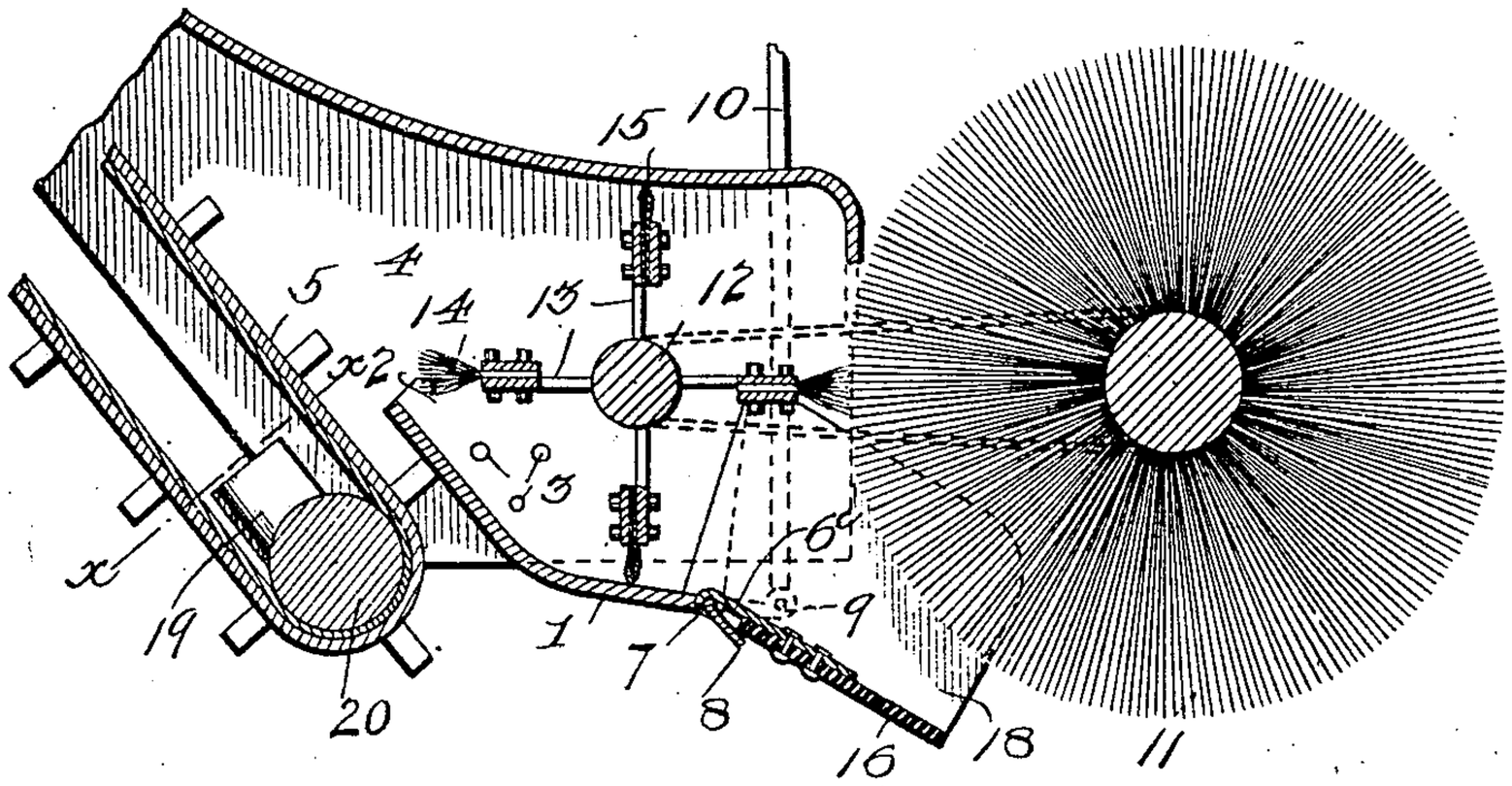


Fig. 4. Fig. 1.

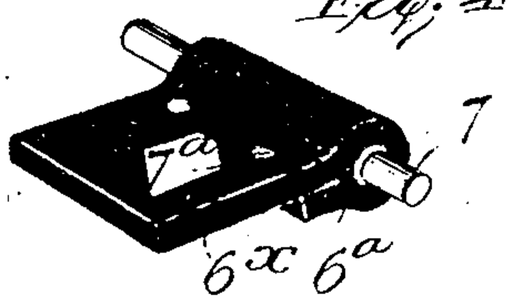
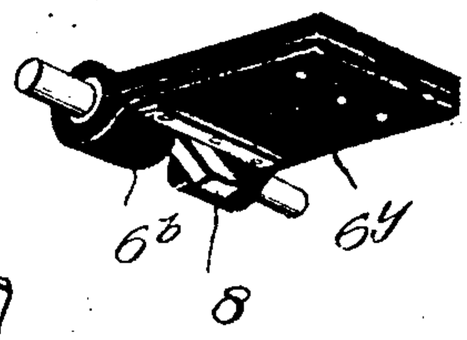


Fig. 5.

Fig. 2.



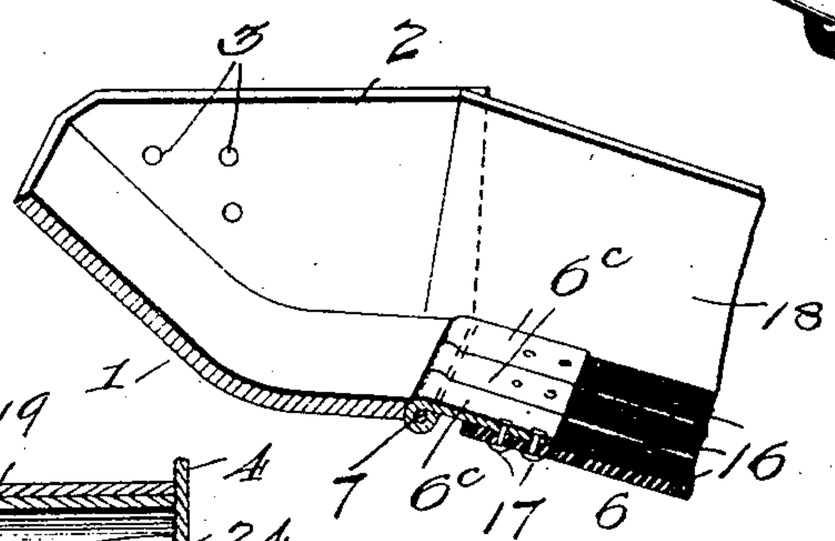


Fig. 6.

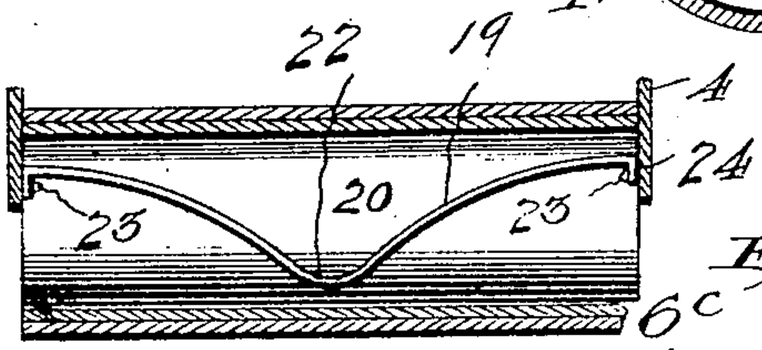
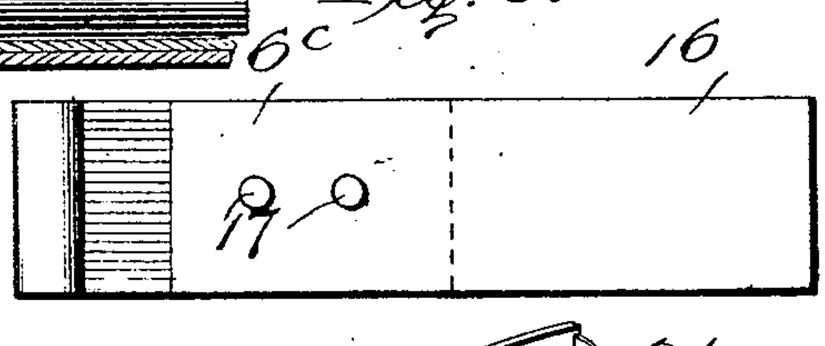


Fig. 3.



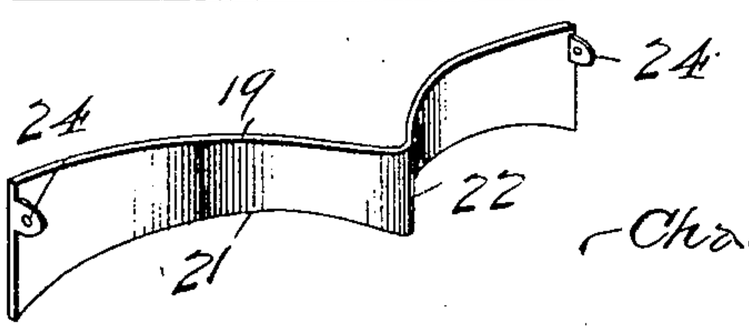


Fig. 7.

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STREET-SWEEPER.

No. 876,727. Specification of Letters Patent. Patented Jan. 14, 1908.

Application filed June 9, 1905. Serial No. 264,461.

To all whom it may concern:

Be it known that I, CHARLES K. PEVEY, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Street-Sweepers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in street sweeping machines, especially to that type of machine in which a large rotary brush or broom is used to sweep the refuse into a pan provided with a series of plates hinged to the edge thereof adjacent to the broom. In short, my invention is an improvement on the form of sweeper shown in the patent to E. S. Day, No. 669,512, and dated March 12, 1901.

In the use of this patented sweeper, it has been found that the rigid metal plates hinged to the rear edge of the pan are often bent out of shape by coming in contact with a rock or irregularity in the road when the machine is backed without raising said plates, resulting from the carelessness of the driver, shying of the horses, or other cause.

The object of my invention is to provide against the bending of said plates out of shape on such occasions.

The invention consists in constructing said plates of flexible material which will give when it strikes an irregularity in the road and will resume its place afterwards.

The invention also consists in the features of construction and combinations of parts hereinafter described and more particularly pointed out in the claims concluding this specification.

In the accompanying drawing illustrating the preferred embodiment of my invention: Figure 1 is a broken sectional view transversely through the broom, scraper, frame, conveyer, pan and one of the plates hinged to said pan, of a machine constructed in accordance with my invention. Fig. 2 is a fragmentary detailed view illustrating metal plates with flexible edgings. Fig. 3 is an under plan view of one of said plates. Fig. 4 is a detailed perspective view of a plate made entirely of flexible material, a portion of the pivoted rod around which it is mounted being shown as well as the metal sleeve arranged around said rod and within the loop of the flexible material. Fig. 5 is a similar view of a modified construction of all flexible plates in which double thickness is used. Fig. 6 is a cross sectional view on the line x—x of Fig. 1 showing the arrangement and shape of the scraper for cleaning the lower conveyer-carrying roller, and Fig. 7 is a perspective view of said scraper detached.

While the preferred embodiments of my invention are illustrated in the accompanying drawings and their constructions and operations are described in this specification, the right is reserved to make such changes from the constructions shown and described herein as the scope of the claims hereto appended will permit.

Referring more particularly to the drawings, 1 is the stationary portion of the pan which is provided with side flanges, 2, secured by rivets, 3, or other suitable means, to the body, 4, of the sweeper. The forward edge of said pan extends to the conveyer, 5, while near its rear edge are hinged a series of plates, each pivoted around a common rod, 7, provided with fingers, 8, extending below each of said plates. The pivoted plates are arranged in juxtaposition to the edge of the stationary portion of the pan, and form a continuation thereof as shown, so that the dirt is not allowed to drop out between them. A crank, 9, rigidly secured to said rod at one end is pivotally connected at the other end to the operating rod, 10, whereby all the plates may be raised at the same time and yet each may be thrown upward independently of the others when it strikes a projection in the road. The main broom, 11, is hung at the rear of the machine, as shown, and sweeps the dirt up over the hinged plates into the stationary portion of the pan. The scraper frame, 12, which may be provided with any number of blades, 13, as may be desired, each of which is provided with an edging of wire bristles, 14, or of folded flexible fabric, 15, is arranged in front of the broom and above the stationary portion of the pan. As said frame is revolved, its blades alternately engage the broom and the dirt on the bottom of the pan, thereby serving the double purpose of cleaning the broom and passing the dirt forward to the conveyer.

I preferably make the plates entirely of rubber or some other suitable flexible material. When made of thick rubber, as shown at 6^x in Fig. 4, only one thickness is

used, and the forward edge is looped over the rod, 7, and secured by suitable means such as the rivets, 7^a.

To insure the free and easy movement of the plate upon the rod, a metal sleeve, 6^a, is inserted within the folds or looped portion of the plate and fits loosely around said rod. If thinner rubber 6^y is used to make the plates, it is folded at the center around the sleeve and the two thicknesses are held together by two or more transverse rows of rivets, as shown in Fig. 5. The upper or forward portion of the plates may be stiffened and be given greater rigidity by vulcanizing or by placing a metal plate, 6^b, below it, as shown in Fig. 5.

As shown in Figs. 1, 2 and 3, a further modification of my invention consists in making the upper or forward portion of the plates 6, of metal, 6^c, to which is secured a flexible edging, 16, by means of rivets 17. In the latter form, the two end plates are preferably provided with side flanges, 18, which, with the flanges 2 of the pan, hold the bristles of the brush in place, preventing them from spreading out, and keep the dirt from working off the ends of said plates and pan.

The scraper, 19, is preferably made of sheet metal bent to extend across the upper portion of the roller, 20, between the runs of conveyer 5. The lower edge of the scraper plate is cut out on a curved line, 21, at each side of the central bend, 22, so that it fits upon the curved surface of the roller. Said scraper is secured in position by rivets or bolts, 23, passing through ears, 24, on the ends of said scraper plate and the body, 4, of the sweeper. It will be noted that the scraper, when in the position shown, is arranged out of the way and does not interfere with the free action of the conveyer while, at the same time, it is placed at the point where it accomplishes the best result.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

In a machine of the character described, the combination, with a stationary pan, and a broom of a series of flexible plates independently hinged to a common rod and forming a continuation of said pan, said rod having a series of fingers extending therefrom, one below each of said plates, and means to rotate said rod whereby all of said plates will be raised simultaneously.

In testimony whereof, I affix my signature, in presence of two witnesses.

CHAS. K. PEVEY.

Witnesses:

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