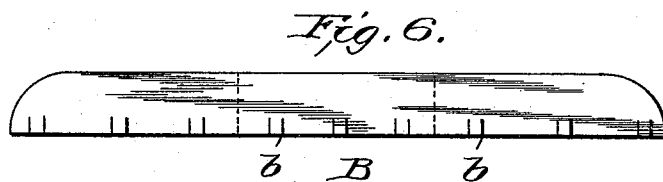
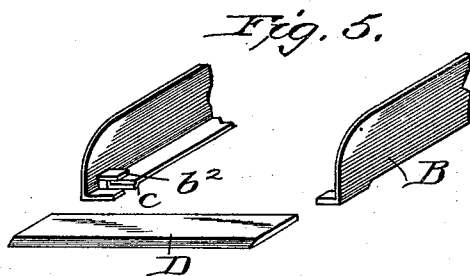
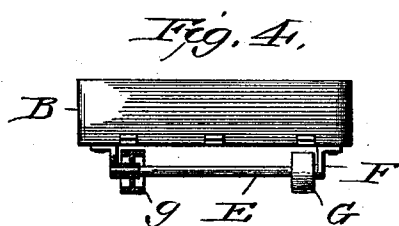
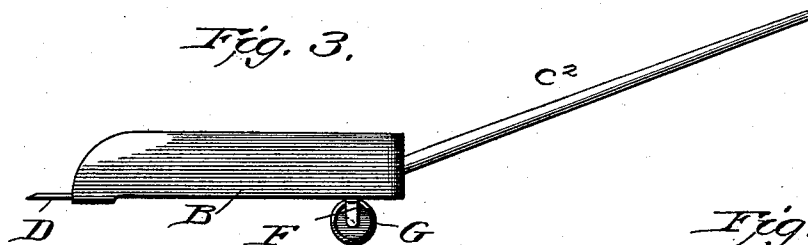
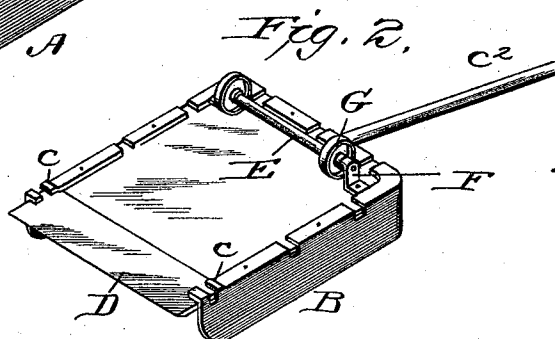
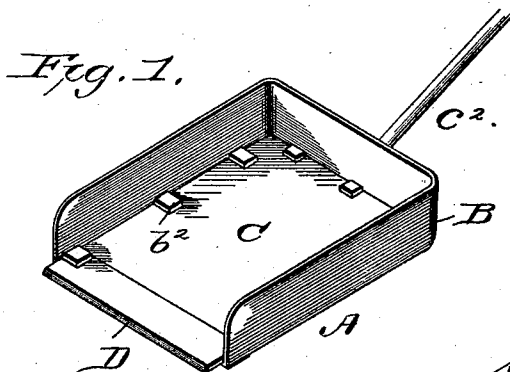


(No Model.)

W. H. WYMAN.
STREET SCRAPER.

No. 542,867.

Patented July 16, 1895.



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UNITED STATES PATENT OFFICE.

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STREET-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 542,867, dated July 16, 1895.

Application filed May 15, 1895. Serial No. 549,456. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WYMAN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Street-Scrapers; 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.

This invention relates to an improvement in street-scrappers.

The object of the invention is to provide a street-scraper constructed of a small number of parts, such parts being so arranged and assembled as to admit of their being readily separated and put together without the necessity of employing skilled labor, and should one of the parts become broken it may be readily replaced at but a slight cost; furthermore, to provide a street-scraper in which the bottom portion will be held in place by a minimum number of fastening devices, such fastening devices being disposed, preferably, at the point of greatest strain; furthermore, to provide a street-scraper having supporting-wheels mounted thereon, the wheels and their axle being each free to turn independent of the other, so that should one of the wheels become rust or dirt locked on the axle the other wheel will still be free to turn independently of the axle and the locked wheel and the axle free to turn independently of the loose wheel; furthermore, to provide a street-scraper having a removable scraping edge held in place, preferably, by frictional contact with portions of the body of the scraper, such arrangement permitting of the ready replacement of a new scraping edge when one has become worn out or damaged by use.

In a street-scraper characterized by my invention I provide a body portion constructed of two parts—namely: an approximately rectangular frame, constituting two sides and the back of the body portion, and a bottom portion connected with the frame. The bottom may be secured to the frame in any desired manner, but as a matter of further and specific improvement I produce in the lower edge of the frame a series of kerfs or slits, the metal between the alternate slits being turned at right angles to the width of the body, thus

forming an approximately continuous flange, and the metal between two adjacent kerfs being also bent at right angles to the body of the frame but at a lower plane, so as to provide, in conjunction with the flange, a series of lugs or projections, between which and the flange the bottom of the scraper is slipped, suitable fastening devices, such as rivets or bolts, being passed through the lugs and through the body for retaining it in place. As the pressure is always toward the rear—that is, toward the handle of the scraper—it follows that by employing but a few number of fastening devices, and disposing these at the points of greatest strain, the bottom will be held securely in place. To these ends, therefore, I find in practice that I need employ but three fasteners, arranged one at the outer ends of the frame and one at the rear portion thereof, the ones at the outer ends of the frame serving not only to hold the bottom in place, but also to prevent spreading of the frame when strain is brought to bear thereon.

As a matter of further and specific improvement I provide a novel form of mounting for the supporting-wheels, comprising two hangers provided with suitable journals at their lower ends, an axle loosely mounted in the journals, and a pair of supporting-wheels loosely mounted on the axle between the hangers. By this arrangement, should the axle become locked in its bearings, the wheels will still be free to turn, or should the wheels become locked on the axle the axle will be free to turn in its bearings.

As it is an essential requisite that devices of this character should be made as cheaply as possible, consistent with durability and effectiveness in use, it follows that if great care were required in fitting up the journal-boxes and the axles the cost of production of the scraper would be materially increased. By the arrangement I have described the axle, the two hangers, and the supporting-wheels may all be of cast metal, preferably malleable cast-iron, and may be assembled without requiring any nice dressing.

In the accompanying drawings, forming a part of this specification, and in which like letters of reference indicate corresponding parts, I have illustrated one form of embodiment of my invention capable of carrying the same into effect, although other forms

may be employed without departing from the spirit thereof, and in these drawings—

Figure 1 is a perspective view of a scraper constructed in accordance with my invention. Fig. 2 is a similar view, the scraper being inverted. Fig. 3 is a side elevation. Fig. 4 is a rear elevation showing the hangers and axle separated. Fig. 5 is a detail perspective view showing more clearly the manner in which the removable scraping edge is connected with the body of the scraper. Fig. 6 is a detail view of the frame before the same is bent up into shape, showing the same provided with a series of kerfs or slits.

Referring to the drawings, A designates the scraper comprising a frame B and a bottom portion C. The lower edge of the frame previous to being put up into shape is provided with a series of slits or kerfs b , which are so disposed with regard to the length of the frame as to leave three lugs or projections b^2 on each side and on the end. The metal between the lugs is bent at right angles to the width of the frame so as to form practically a continuous flange on the inside of the frame, the lugs b^2 being also bent at right angles to the width of the frame, but at a different plane, so as to leave a sufficient space between the lugs and the flange to permit of the insertion of the bottom. In order to hold the bottom in place within the frame, fastening devices, such as rivets or the like, are passed through certain of the lugs and through the bottom. In practice I have found that by seating a rivet through the two outer lugs and the center lug at the rear of the scraper I can effect a permanent and effectual assembling of the bottom and the frame.

If desired, the bottom C may be projected outward beyond the frame, so as to form a scraping edge; but as a matter of specific improvement I provide a removable scraping edge D, which latter is held in place between the two outer lugs and an offset portion c of the bottom. The edge is held in place preferably by frictional contact between the lugs and the offset of the bottom; but it is to be understood that, if desired, I may employ rivets. The rear portion of the body is provided with a suitable handle c^2 , which may be either fixed with relation to the body or adjustable therewith, as may be desired.

Arranged near the rear portion of the bottom portion and at a point where, when the scraping edge is in contact with the pavement, the wheels will also be in contact with the pavement, so that the frictional resistance between the scraping edge and the pavement is reduced to a minimum, is an axle E, journaled at its ends in hangers F, secured to the underside of the bottom portion and mounted upon the ends of the axle. Inside of the hangers are wheels G, which are free to rotate on the axle, as is also the axle free to rotate in the bearings in the hangers. The wheels G are each provided with a flanged tread g , so that while the wheels shall possess the requi-

site strength and lightness the flange will prevent any possibility of it catching either in the slot or track of a cable line where the scraper is used between the tracks. The width of the scraper is so proportioned with relation to the space between the slot-rail and the rail proper that the scraper will effectually clean the space between the two rails, and that in a direction parallel with the rails.

By providing the offset c on the bottom of the scraper the removable scraping edge is caused to lie flat and in the same plane with the upper surface of the bottom, so that there will be presented no shoulder or offset that would tend to prevent the dirt from passing to the rear portion of the pan.

In operation the scraper is pushed along over the street, with the scraping edge in contact therewith, the force of contact being regulated by the workman. When a pile of debris has been collected within the scraper it may be thrown to the back portion thereof by simply tilting the handle downward in a manner that will be perfectly obvious, thereby leaving a space for the collection of more debris.

It will be noticed by reference to Fig. 4 that the wheels G are set in under the body and at a point back of the sides thereof. This is done in order to permit of the scraper being pushed along the pavement close against the curbstone and also to shield the wheels from injury when in use.

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

1. A street scraper having a frame provided with an inward-extending flange having lugs or projections therein occupying a plane above that occupied by the flange proper, and a bottom held in place between the lugs and the flange.

2. A street scraper having a frame provided with an inward extending flange, and a series of lugs or projections formed by separating sections of the flange, a bottom held in place between the lugs and the flange, fastening devices for retaining the bottom and frame assembled, and a removable scraping edge held in place between two of the lugs and the bottom, and lying flush with the latter.

3. A street-scraper comprising a frame provided with an inward-extending flange having lugs or projections therein occupying a plane above that occupied by the flange proper, a bottom held in place between the lugs and the flange, hangers secured to the under side of the bottom inside the flange, an axle loosely journaled in the hangers, supporting-wheels loosely mounted on the axle, and means for propelling the scraper, substantially as described.

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

WILLIAM H. WYMAN.

Witnesses:

R. M. ELLIOTT,
H. M. STERLING.