

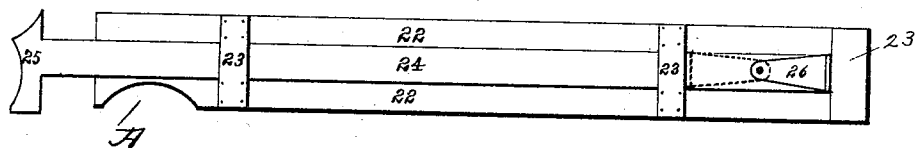
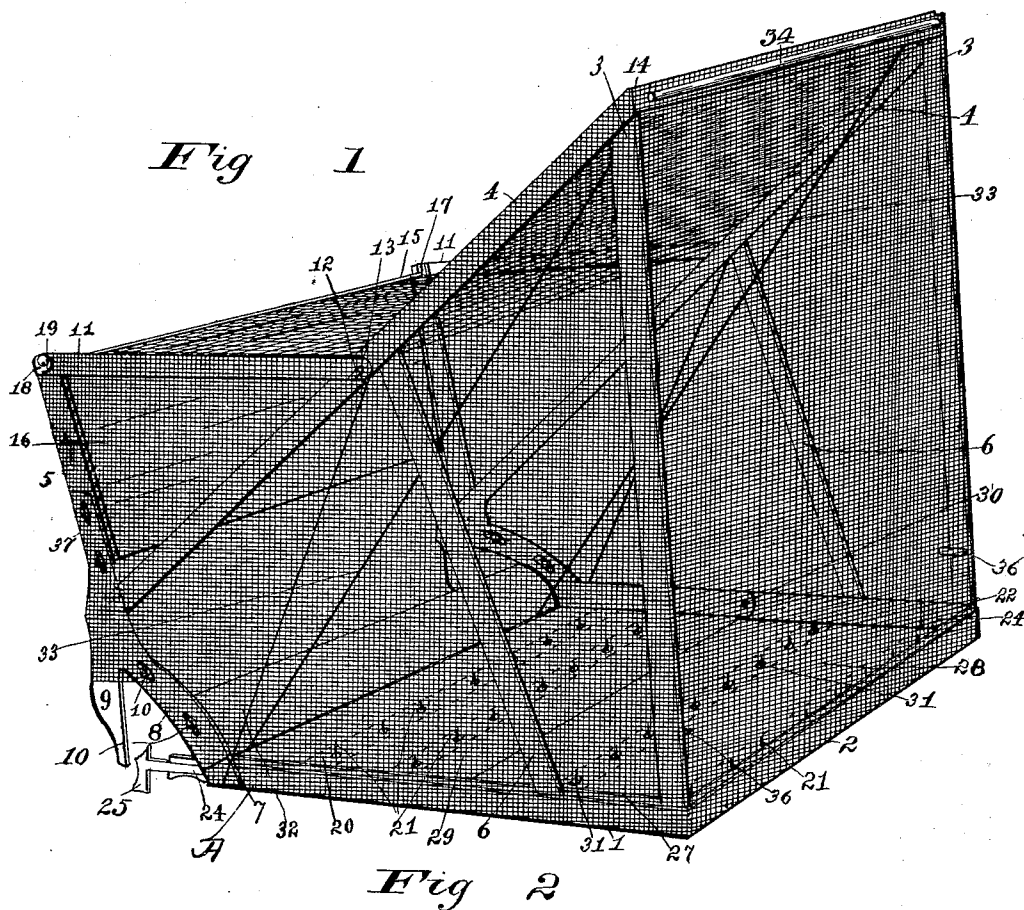
(No Model.)

S. F. POWELL.
GRASS RECEPTACLE.

3 Sheets—Sheet 1.

No. 459,460.

Patented Sept. 15, 1891.



WITNESSES:

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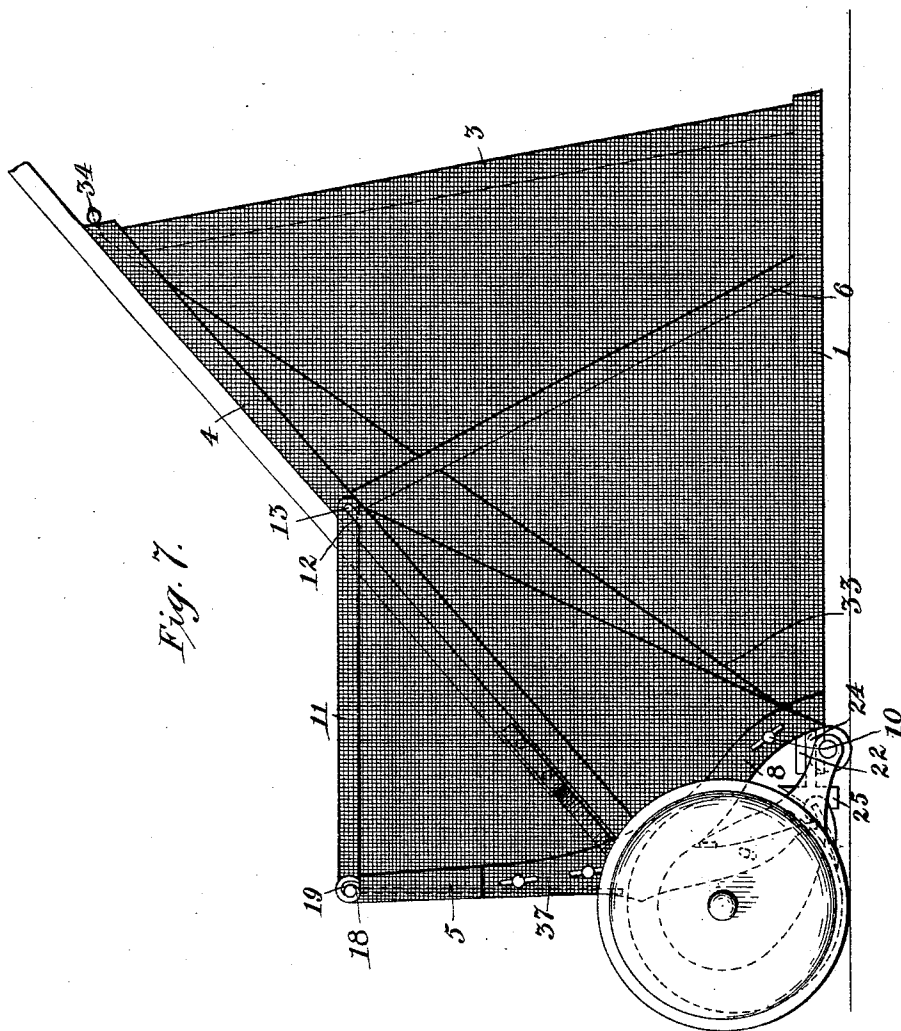
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WITNESSES

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UNITED STATES PATENT OFFICE.

SILAS F. POWELL, OF DENVER, COLORADO.

GRASS-RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 459,460, dated September 15, 1891.

Application filed October 12, 1888. Serial No. 287,955. (No model.)

To all whom it may concern:

Be it known that I, SILAS F. POWELL, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Grass-Receptacles for Lawn-Mowers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a receptacle for receiving and retaining (so long as may be desired) the grass cut by a lawn-mower; and its objects are to furnish a receptacle for such purpose of simple yet strong construction adapted to be attached to and operate with any of the customary types of such mowers.

The invention consists in the features, constructions, and combinations more particularly hereinafter described and claimed.

In the drawings is illustrated an embodiment of my invention, in which—

Figure 1 is a perspective view of the grass-receptacle; and Fig. 2, a side view of a detail, showing the construction of the lower side pieces of the frame. Fig. 3 is a perspective view of the device with the wire-cloth covering and side strips 1 1 removed. Figs. 4 and 5 illustrate enlarged details of the frame. Fig. 6 is a perspective view of the pan of the receptacle. Fig. 7 shows my device in position on a lawn-mower.

In constructing this improved grass-receptacle the body thereof or the sides, top, and rear end are formed of wire-cloth or other suitable transparent medium secured upon a main supporting-frame, so that the inside may be always open to inspection and its contents seen. This frame is constructed as follows: The reference-numerals 1 1 indicate the side bottom pieces of such frame, and 2 the bottom rear end piece uniting these side pieces 1 1, and these pieces may be one unitary strip bent around the sides and end, or they may be of two or more pieces suitably secured together. From the corners or meeting points of the rear end piece 2 with side pieces 1 1 rise the rear corner uprights 3 3, joined at their tops by the upper end strip 14. From the upper ends of these uprights side frame-strips 4 extend diagonally downward to the front, where they are secured to one end of inner curved plates 7, which plates at

their other or bottom end are secured to the bottom side strips 1 1. Where deemed necessary on account of the size of the receptacle or the length of the diagonal strips 4, intermediate bracing-strips 6, extending from the side pieces 1 to the diagonal strips 4, may be used. Across the bottom extend slats 20, supported by the bottom side frame-pieces 1 1, such slats being several inches (more or less) apart, so as to form an open bottom for the frame, on which rests a pan, to be hereinafter described. From these slats teeth 21 project upwardly through holes in the pan and into the receptacle, such teeth preventing the grass from working forward toward the cutters of the mower. This main frame is triangular in shape, with a hypotenuse intended to follow the line of the mower-handle, such shape giving great internal capacity without interference with the handle. With such main frame a secondary frame extending to the front and forming the front portion of the receptacle is used, constructed as follows: 8 8 indicate curved plates (more fully hereinafter described) by which the completed receptacle is attached to the mower, one on either side. From each a short arm 37 projects upwardly, to which is attached by bolts passing through elongated slots the arms 5, the line of elongation of the slots in arms 5 being at a right angle to the line of elongation of those in arms 37, so that the two arms are adjustable both vertically and laterally relatively to each other. The upper ends of the arms 5 are slotted, as shown at 17, these slots being to receive and give bearing to the pintle or axle 15 of a door 16, dropping by gravity when the mower is in normal operative position to near the cutters of the mower. At each end such pintle or axis 15 of the door passes through and is journaled in strips 11 of the secondary frame, in whose rear ends are the hook-slots 12, catching on the buttons 13 on the diagonals 4. Upon the ends of the pintle or axis are disks 19, having eccentric or cam grooves, which take, when the door is thrown out of normal position, on lugs or studs 18 and lock the door and side strips 11 from falling out of the bearings in slots 17 in the heads of arms 5. As before stated, there is an attaching-plate 8 on each side. These plates are curved as to their edges to correspond with the inner curved

plates 7, and the curvature of such plates is such as corresponds with the curvature of the upper face or edge of the rearwardly-extending frame-work of the mower in which the roller and the fixed cutter are secured. Hence such curvature may vary as such parts of various mowers differ. Such outer plates 8 have each a downwardly-extending hook-arm 9, which passes beyond and takes against the roller-supporting arm of the mower and between it and the adjusting-arm of the fixed cutter, or such hooked end may be secured in any convenient place therefor at the rear of the rotary cutter, such place of attachment depending, of course, on the style or model of the mower.

In assembling the parts for attachment the sides, rear, and top down to or about to the buttons or studs 13 are covered with wire-cloth or other suitable material, as before explained, and a separate piece of such fabric is secured to the side strips 11 for forming the remainder of the top and sides of the receptacle. By this construction I am readily enabled to adjust the plates 8 without tearing the wire covering of the receptacle. The strips 11 being removed with the door from the main frame, the latter is placed in position beneath the handle and with its curved forward end plates 7 at the proper place and the outer curved plates 8 hooked or secured in their position, as hereinbefore explained. These outer and inner curved plates are then fastened together by bolts 10 passing through elongated bolt-holes, which arrangement permits such adjustment of the inner and outer plates relatively to each other that while firmly united they still may be placed positively on their intended seats and make a reasonably tight joint thereat, so that no grass may escape from the receptacle at such points. The upper side strips 11 are then hooked on by passing the slots 12 over the buttons 13 and by forcing the pintle or journal of the door into the slots 17 in the upper ends of the arms 5, the part of the top carried by the side strips 11 being above the handle, while the remainder is below the handle.

Upon the toothed slats 20 of the bottom is to rest a pan or bottom, and this pan or bottom is constructed upon a frame having side pieces connected by a rear end piece. The side pieces are each constructed as follows: Two separate pieces 22 22 are secured together, one over the other and at a little distance apart, by cross-cleats 23. Such pieces are of a length sufficient to extend from the rear of the receptacle almost to the back of the fixed cutter, the under one being concaved on its lower edge, as shown at A, to rest on the bearing-box of the roller. Between these two pieces 22 22 slides an intermediate piece 24, having an enlarged head 25, concaved or fashioned to fit against the back of the fixed cutter. Between the cross-cleats 23 a button 26 is pivoted upon sliding bar 24 in such relation and of such size as to take at its free

end against the edges of cleats 23 as it is turned in one direction or the other. To the rear portion of this frame is secured the rear portion 28 of the pan or bottom, having apertures 31, through which pass the teeth 21 of the slats 20. The front portion 29 of such pan or bottom, and having similar apertures 31, is pivoted to the rear portion 28 at 30 30, so that it may be turned upward from the front, and for such turning wires, cords, or rods 33 are attached to the front end thereof, passing thence upwardly and out of the receptacle at its top and rear, where they are united to a handle-rod 34. While one central rim or cord would suffice for such raising, it would be in the way both of the ingress and egress of grass, leaves, &c. Hence one on either side is preferable. For a mower having a rear roller the front end of this pivoted front part of the pan or bottom should be convexed or formed to pass over such roller, as shown at 32, and its front end should lie snugly upon the rear of the fixed cutter.

In securing the pan in position the buttons 26 are turned toward the front, so that the parts 24 with the heads 25 may be telescoped somewhat between 22 22 on each side. The pan or bottom is then laid in position on the slats 20 and the parts 24 pushed forward until their heads 25 take upon the rear of the fixed cutter, when the buttons 26 are turned backward or toward the right, so that their free extremities shall engage the rear cleats or strips 23, thus locking the bars and heads in such position. This position of the buttons 23 is shown in full lines in Figs. 2 and 3, the opposite position being shown in dotted lines in the same figures. The shape of these heads prevents the side frames from becoming detached from the fixed cutter, while at the same time they pivot or fulcrum thereon. Now as the mower is propelled over the lawn such grass as is cut thereby and often any leaves, small twigs, &c., lying upon the lawn will be thrown into the receptacle and if the mower be somewhat rapidly operated with such force as to be thrown well back therein, where the upwardly-projecting teeth will retain it. If it be not thrown well back, but wholly or in part upon the front part 29 of the pan or bottom, such part is occasionally raised from its front upon its pivot 30 by means of the handle 34 and cords, wires, or rods 33, tipping the contents thereon into the rear of the receptacle. When the latter is sufficiently full, it is emptied by simply tipping the mower and handle forward, whereupon the pan or bottom falls forward so far as is permitted by the stops 36 on the rear uprights 3, which is sufficient to carry the contents clear of the teeth, the door at the same time falling open by gravity and the contents escaping.

It is evident that the area of the sides of the main frame of the receptacle might be rectangular instead of triangular, as shown—that is, that the strips 4 of the frame might

lie parallel to the bottom strips; but the form shown gives greater capacity and greater facility for the throwing of the cut grass well to the rear. If it be found that there is any danger of grass falling down between the edges of the pivoted part 29 of the pan or bottom and the sides of the receptacle, the sides of the pan may be extended upwardly to form shields, preventing the same.

Having thus described my invention, what I claim is—

1. A grass-receptacle for lawn-mowers, composed of a frame covered with wire-cloth and adapted to be attached to the mower and having a bottom formed of slats with upwardly-projecting teeth, and a pan detachably resting on such slats and having perforations through which the teeth pass, substantially as set forth.

2. A grass-receptacle for lawn-mowers, composed of a frame covered with wire-cloth and adapted to be attached to a mower and having a bottom formed of slats with upwardly-projecting teeth, and a pan detachably resting on such slats and composed of two sections, the forward section being pivoted to the main frame at 30 30, so that said section may be turned upward from the front, each part having perforations for the teeth to pass through and means for operating the forward part or section of the pan, substantially as set forth.

3. A grass-receptacle for lawn-mowers, said receptacle being provided with bottom side bars, to the forward extremity of which are secured on either side the curved upwardly-extending end pieces 7 and 8, adjustably secured together, each piece 8 being provided with a hook end 9 for attachment to the mower, substantially as described.

4. In a grass-receptacle for lawn-mowers, a

removable bottom or pan having telescopic sides, each side being composed of two pieces 22, secured together, with a space between them, by cleats 23, and a piece 24, located and capable of adjustment between the parts 22, piece 24 being provided with a head 25 and a pivoted locking-button 26, substantially as described.

5. In a grass-receptacle for lawn-mowers, the combination, with the main frame composed of the bottom side strips 1, a rear end strip 2, connected with the side strips, the rear upright end strips, one on each side, a strip 4, extending from the top of each strip 3 downwardly and toward the front end of the frame, and the top cross-strip 14, connecting the upper extremities of strips 3 and 4, said frame being suitably covered with wire-cloth, of a secondary frame composed of the strips 11 11, door 16, axle or spindle 15, arms 5 and 37, and curved plates 8, and means for detachably securing together the main and secondary frames, substantially as described.

6. In a grass-receptacle for lawn-mowers, the combination, with the main frame suitably covered with wire-cloth, of a secondary frame composed of the strips 11 11, doors 16, axle or spindle 15, arms 5 and 37, and curved plates 8, and means for detachably securing together the main and secondary frames, said means consisting of the ears or eccentric grooved disks 19 and pins 18, upon which the disks 19 are adapted to lock, substantially as described.

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

SILAS F. POWELL.

Witnesses:

L. F. WILBER,
B. L. POLLOCK.