July 24, 1934. J. ANDERSON 1,967,651

GUTTER BROOM FOR STREET SWEEPERS

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Fig. 1.

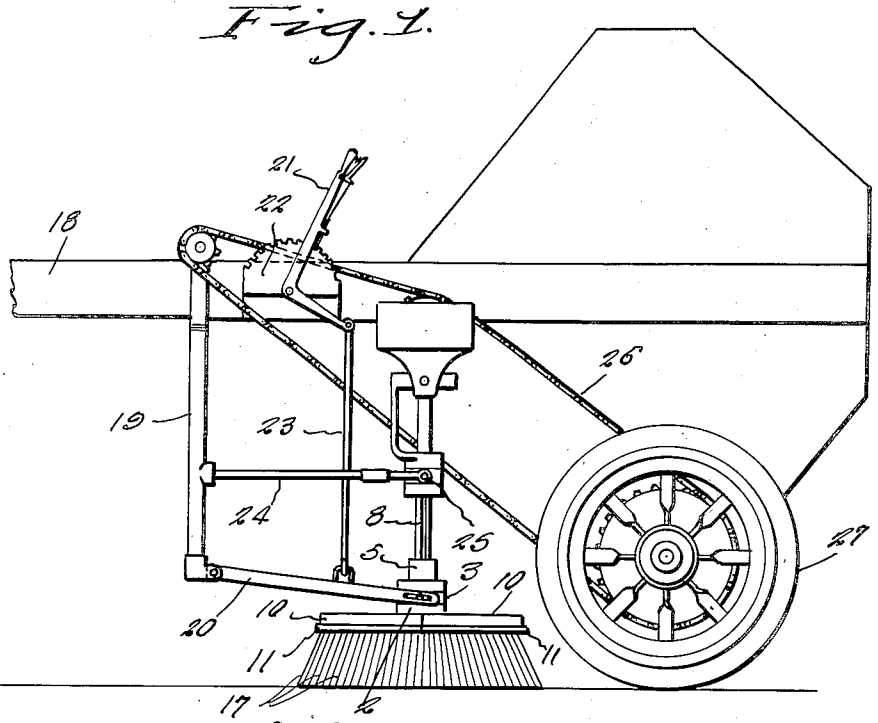
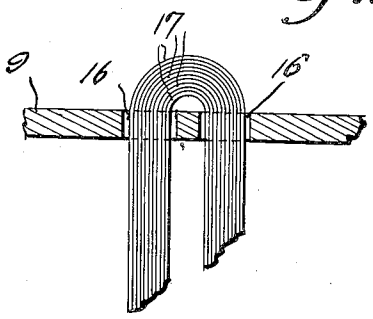


Fig. 11.



Fig. 2.



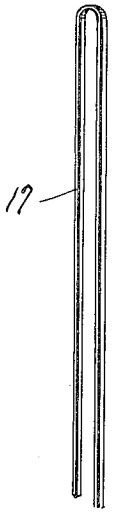


Fig. 12.

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Fig. 2.

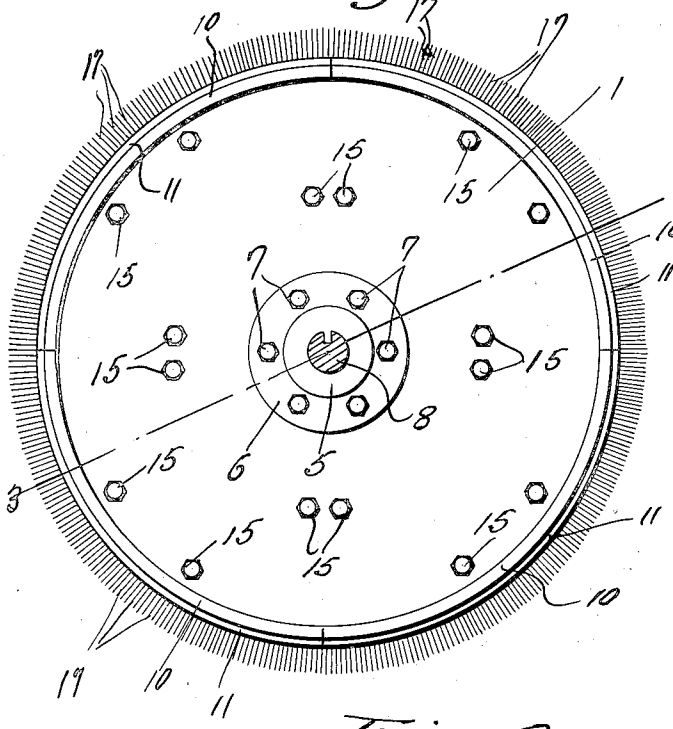


Fig. 9.

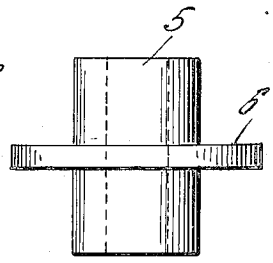


Fig. 8.

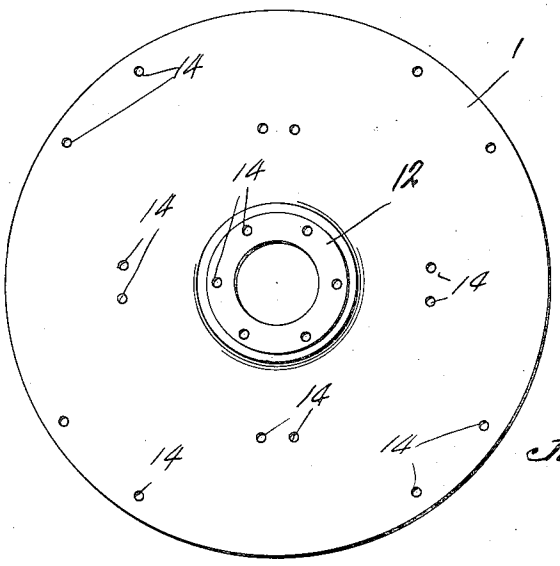
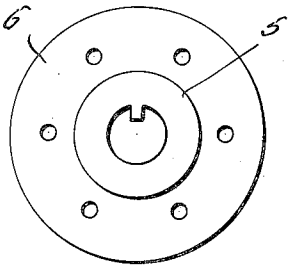


Fig. 10.



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Fig. 3.

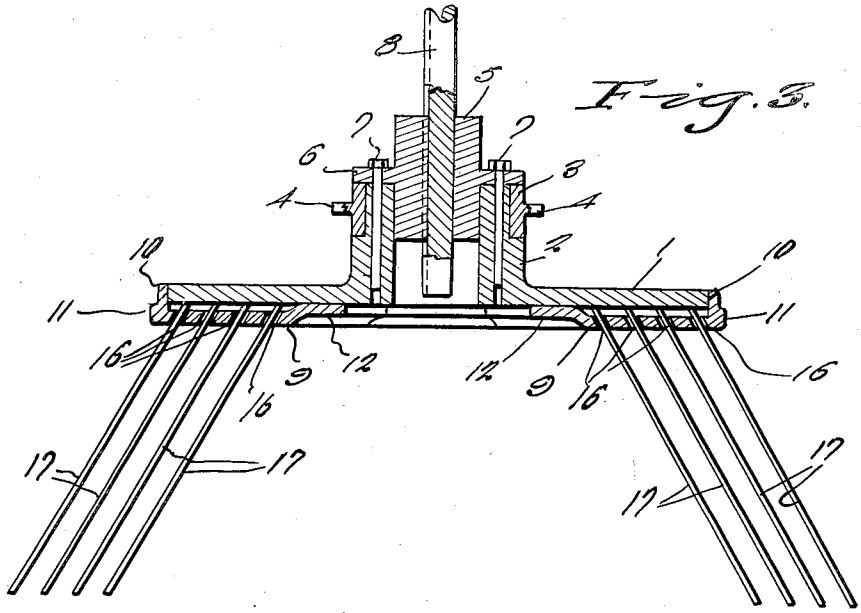


Fig. 5.

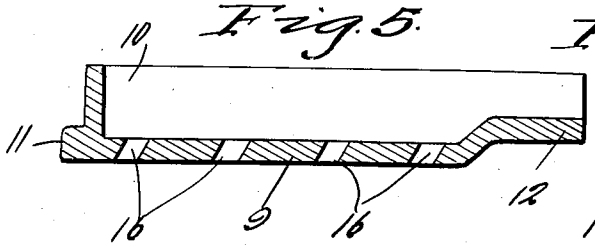


Fig. 4.

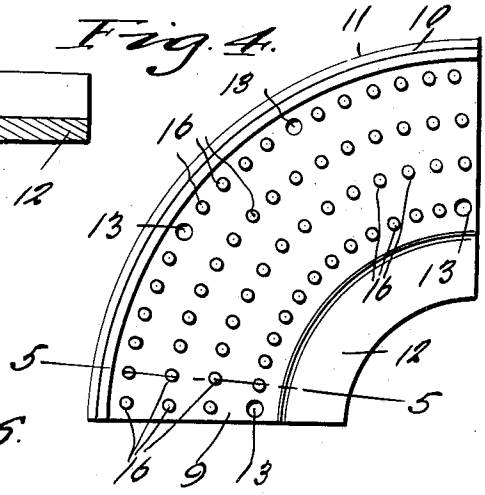
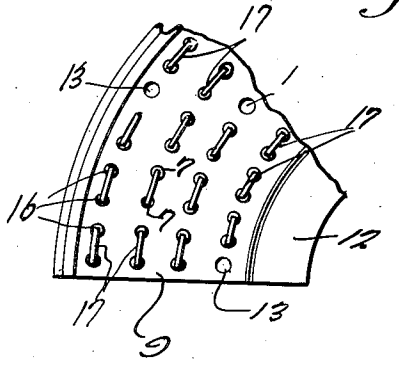


Fig. 6.



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UNITED STATES PATENT OFFICE

1,967,651

GUTTER BROOM FOR STREET SWEEPERS

John Anderson, New Bedford, Mass.

Application February 14, 1933, Serial No. 656,719

1 Claim. (Cl. 15—180)

The present invention relates to new and useful improvements in gutter brooms for street sweepers and has for some of its objects to provide, in a manner as hereinafter set forth, a broom of this character which will be simple in construction, strong, durable, efficient and reliable in use, light in weight, compact and which may be manufactured at low cost.

Another important object of the invention is to provide a broom of the aforementioned character embodying a novel arrangement of replaceable wire or metal bristles through the medium of which maximum wear and efficiency will be obtained.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a view in side elevation of a gutter broom in accordance with the present invention, showing the means for mounting same for vertical adjustment on a street sweeper.

Fig. 2 is a view in top plan of the broom, showing the supporting shaft in horizontal section.

Fig. 3 is a view in vertical transverse section, taken substantially on the line 3—3 of Fig. 2.

Fig. 4 is a detail view in top plan of one of the segmental bristle plates.

Fig. 5 is a view in vertical transverse section, taken substantially on the line 5—5 of Fig. 4.

Fig. 6 is a detail view in top plan of a portion of one of the bristle plates, showing the mounting of the bristles therein.

Fig. 7 is a fragmentary view in vertical section, taken substantially on the line 7—7 of Fig. 6.

Fig. 8 is a detail view in top plan of the disk which carries the bristle plates.

Fig. 9 is a detail view in side elevation of the member which slidably connects the disk to the vertical shaft.

Fig. 10 is a plan view of the member shown in Fig. 9.

Fig. 11 is a detail view in perspective of one of the bristles, before same is bent to the form in which it is used.

Fig. 12 is a detail view in perspective of one of the bristles, after it is bent to substantially U-shaped or hair pin form for use.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a disk 1 of suitable metal having formed integrally therewith an upstanding, central neck 2 having a reduced upper portion upon which a ring 3 is rotatably mounted, said ring 3 having lugs 4 projecting from diametrically opposite sides thereof. The reference numeral 5 designates a core which is mounted in the neck 2 through the medium of an apertured flange 6 which is formed integrally on an intermediate portion of said core. The flange 6 rests on the upper end of the neck 2 and is removably secured thereon by bolts 7. As best seen in Fig. 3 of the drawings, the flange constitutes a retainer for the rotary ring 3. The core 5 is splined for vertical adjustment on the rotary drive shaft 8.

Removably mounted on the lower side of the disk 1 are substantially segmental bristle plate sections 9 having formed integrally therewith upstanding outer marginal flanges 10 which abut the outer periphery of the disk 1. Beads 11 project outwardly beyond the flanges 10 on each of the plates 9, said heads constituting reinforcements for the plates and preventing contact of the flanges 10 with curbings and other obstructions. The plates 9 are further provided with raised or upwardly offset inner marginal portions 12 which bear against the disk 1, thus spacing the portions of said plates in which the bristles are mounted from said disk 1. The plates 9 are provided with threaded openings 13 which register with openings 14 in the disk 1 for securing bolts 15 for detachably securing said plates in position on the disk.

The plates 9 are further provided with circular series of outwardly inclined openings 16 which accommodate the substantially U-shaped flat metal bristles 17. The openings 16 constituting each circular series are provided in pairs to accommodate the legs of the bristles 17. This is illustrated to advantage in Fig. 7 of the drawings. A plurality of the bristles 17 are mounted in each pair of openings 16 in such manner that the comparatively broad faces or sides of said bristles are at substantially right angles to the direction of rotation of the broom and said bristles are, of course, secured in position in the openings 16 by the disk 1. The bristles are originally straight, as seen in Fig. 11 of the drawings, and when mounted in the plates 9, said bristles are bent to a substantially U-shape, as seen in Fig. 12.

The reference numeral 18 designates a portion of a conventional street sweeping machine, from one side of which a hanger 19 depends. Pivotally mounted on the lower end of the hanger 19 is a fork 20 having slots therein in which the lugs 4 of the ring 3 are engaged. A hand operated bell

crank lever 21 is pivotally mounted on a notched segment 22 which, in turn, is mounted on the machine 18. A link 23 operatively connects the lever 21 to the fork 20 for adjusting the broom vertically on the shaft 8. The reference numeral 24 designates a brace or shock absorber which projects from the hanger 19 and which is rotatably connected, as at 25, to an intermediate portion of the shaft 8. A suitable chain and gear connection 26 drives the shaft 8 from one of the wheels 27 of the machine 18.

It is believed that the many advantages of a gutter broom constructed in accordance with the present invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction, and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

Having thus described my invention, what I claim as new is:—

A rotary broom of the class described comprising a disk, means for mounting the disk on a support, a sectional plate mounted beneath the disk, said plate including a raised central portion engaged with the lower face of the disk and an upstanding marginal flange abutting the periphery of said disk, the rest of the plate being free of the disk, and bristles mounted in the plate.

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