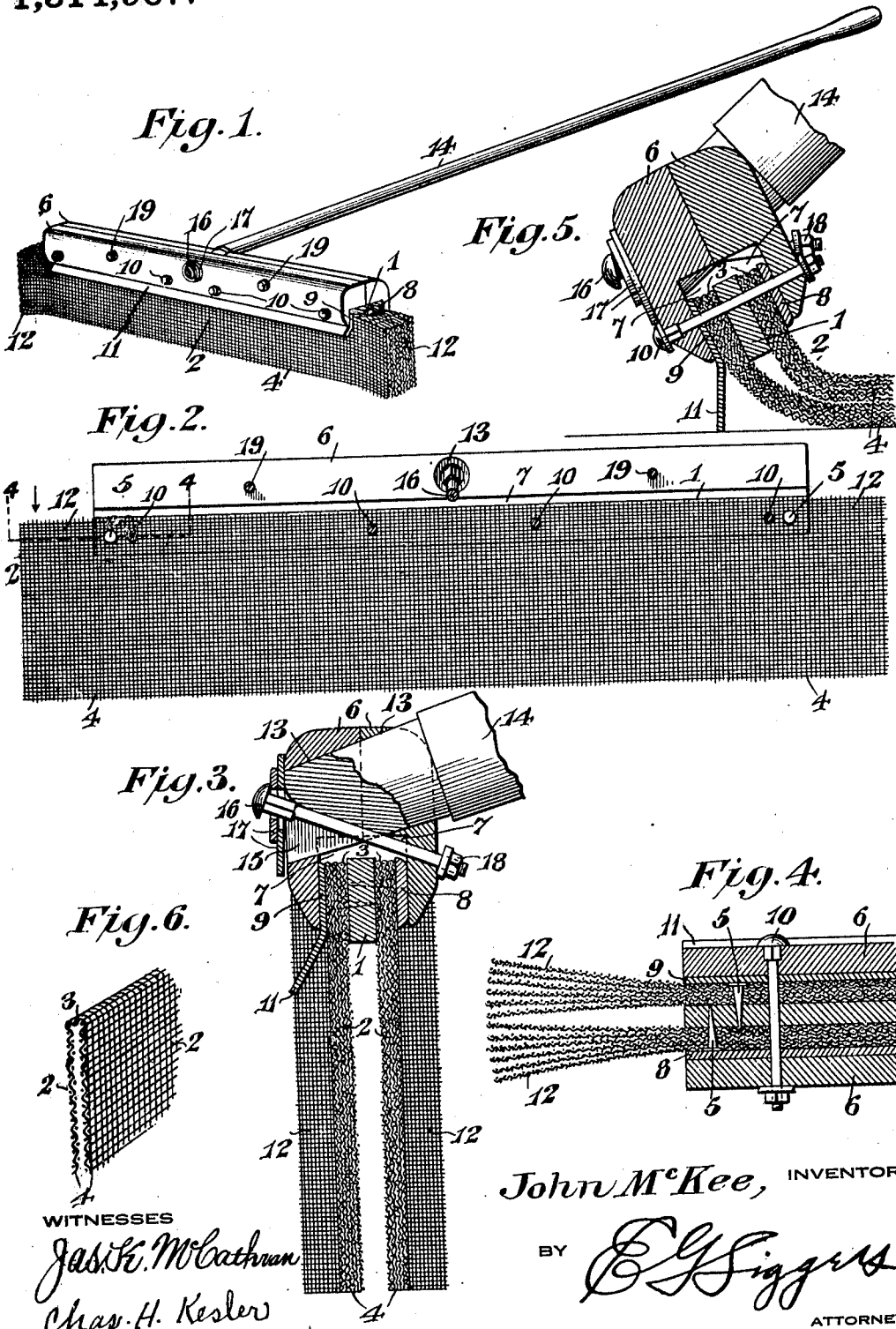


J. McKEE.
SWEEPER.
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1,314,967.

Patented Sept. 2, 1919.



WITNESSES

Jas. K. McEachron
Chas. H. Kesler

John McKee, INVENTOR

BY

E. G. Siggers

ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN McKEE, OF GREENEVILLE, TENNESSEE.

SWEEPER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN McKEE, a citizen of the United States, residing at Greeneville, in the county of Greene and State of Tennessee, have invented a new and useful Sweeper, of which the following is a specification.

This invention relates to sweepers or brooms especially adapted for use on streets, in stables, in warehouses and in sweeping yards or grass.

An object of the present invention is to improve the construction of sweepers or brooms by utilizing woven wire, wire netting, metallic screening or similar sweeping material instead of the fibers, ratan, or metallic material now in use.

Another object of the invention is to provide a construction which will prevent the dirt, trash, or refuse from slipping past the ends of the sweeper when it is being used adjacent a side wall or curb.

A further object of the invention is to provide a scraper so arranged with reference to the handle and at such an angle thereto that a single motion will scrape and scoop the dirt or trash, the sweeping material of the broom cooperating therewith to clean the surface.

A still further object of the invention is to provide detail improvements in construction for clamping the strips of netting or woven wire to the head of the broom and for attaching the handle thereto.

In the accompanying drawing, I have illustrated one embodiment of my invention, in which:—

Figure 1 is a perspective view thereof on a reduced scale.

Fig. 2 is a rear elevation of the same, with the handle and rear clamping member removed.

Fig. 3 is a transverse sectional view thereof illustrating the manner of connecting the handle to the head and on a slightly enlarged scale.

Fig. 4 is an enlarged detail sectional view on the line 4—4 of Fig. 2.

Fig. 5 is a transverse sectional view thereof through one of the clamping bolts and on a slightly enlarged scale, illustrating the cooperative action of the scraper and brush.

Fig. 6 is a detail perspective view of the woven wire, screening or netting used.

In the embodiment of the invention here illustrated, there has been provided an at-

taching piece 1 constituting a spacing block, preferably of wood. Substantially rectangular strips 2 of metallic wire netting of comparatively fine mesh are attached to each side of the piece or block 1. In the embodiment of the invention here shown, each of the strips is doubled as indicated at 3, Fig. 6, providing opposite plies and contiguous free edges 4 constituting the sweeping material of the broom and projecting below the head thereof. The strips are attached adjacent the doubled portions thereto to the piece 1 by means of tacks 5, or like attaching devices, see Fig. 4.

I do not desire to be limited to any particular kind of wire netting. The well known window and door screening which is made of interwoven metallic wires has been found in actual practice to be very satisfactory for this purpose.

The head of the broom comprises a pair of wooden clamping members 6 provided with angular recesses 7 at the lower inner portion thereof. These recesses cooperate to form a substantially rectangular recess adapted to receive the upper portions of the strips of wire netting and piece 1 to which they are attached. Clamping strips or plates, preferably of metal, are interposed between the sweeping material and the members 6 and are co-extensive in length with the clamping members. The rear clamping strip is indicated at 8, and the front clamping strip is indicated at 9. The lower portions of the clamping members 6, the clamping strips or plates 8 and 9, the doubled strips of wire netting and the attaching piece are all clamped together by means of a plurality of transversely extending bolts 10, whereby a very strong and durable structure is obtained.

The lower portion of the clamping strip 9 extends below and outwardly from the member 6, forming a scraper 11 in front of the sweeping material. This scraper, as will be clearly seen in Fig. 3, diverges downwardly from the vertical plane of the sweeping material at an acute angle thereto.

The sweeping material, however, extends a substantial distance below and beyond the operating edge of the non-elastic scraper.

The ends 12 of the wire netting strips project at each side beyond the ends of the head of the broom or sweeper and attaching piece, as clearly shown in Figs. 1, 2 and 4. These ends are more or less resilient and flexible

in all directions, and serve a purpose which will be more fully described hereinafter.

The upper portions of the clamping members 6 are provided with a forwardly and downwardly inclined passageway 13 receiving the handle 14. The lower forward portion of the handle is provided with an opening 15, through which and through the members 6, extends a transverse inclined bolt 16 engaging at one end the washers 17 outside of one of the members, and being provided with a suitable nut 18 at its opposite end engaging the opposite clamping member, whereby the handle is securely held in place upon the head.

The upper portions of the members 6 above the recesses which are in contact with each other, are further held together by means of transversely extending bolts 19, Fig. 1.

The above described construction is much superior to the fiber or ratan sweepers or brooms now in use. The transverse and longitudinal wires of which the netting is made give the sweeping material a strength, elasticity and cleaning properties not possessed by unwoven wire or metal agent. It is much more durable and works better on grass and pavements. One advantage of my invention is that rubbish does not adhere to the sweeper as in other constructions. As in most sweepers of this kind, the sweeping stroke is also here made preferably by pushing the sweeper from you or in front of you. This pushing, however, can now be done very easily by reason of my construction. My improvement provides a construction which raises very little dust, and cleans and sweeps better at a stroke than constructions now in use. The material used does not crush or mat and quickly returns to vertical position on account of the inherent elasticity thereof due to the fact that the fabric is made up of transverse and longitudinal wires.

The netting wires extending longitudinally from one end to the other of the strip lengthwise thereof materially strengthens the sweeping material and increases the elasticity and cleaning property thereof.

When it is desired to scrape dirt sticking to a surface, all that is necessary is to push the broom downwardly by exerting a pressure on the handle, bringing the scraper into engagement with the surface. A forward pressure upon the handle then scrapes and scoops the dirt from the surface at one operation. The method of thus using the scraper is clearly shown in Fig. 5, and it will be noted that the resilient netting forming the sweeping material of the broom is bent rearwardly and extends to the rear of the scraper at the same side of the head, so that, as the scraper is pushed forwardly, the netting will also perform its cleaning

and sweeping function simultaneously with the scraping function of the scraper.

My broom also has a special advantage when it is desired to clean surfaces which lie adjacent curbs and side walls, and for this purpose the projecting ends of the sweeping material, which are flexible and resilient, are adapted to lie against and closely engage the curb or side wall, as the broom is pushed forwardly lengthwise therewith. This will prevent any dirt or rubbish from escaping to the rear of the broom between the same and the curb. By keeping the end of the broom, which is remote from the curb or side wall, in a slightly forward position, the escape of dirt or rubbish past both ends of the broom will be prevented.

While I have shown and described one embodiment of my invention, it is to be understood that I do not desire to be limited to the details of construction herein shown and described, for obvious modifications will occur to anyone skilled in the art.

The construction herein shown, minus the handle, could be applied to a sweeping machine with equally good effect, and I desire the claims to be so interpreted.

What is claimed is:—

1. In a broom or sweeper, the combination with a head, of a plurality of strips of woven wire netting of fine mesh attached to the head, projecting therefrom and constituting the sole sweeping body of the sweeper; the longitudinal and transverse wires of the netting imparting strength and elasticity to the body.

2. The combination with the head of a sweeper, of a plurality of strips of woven wire netting of fine mesh doubled within said head, secured thereto at the doubled portion, and projecting outwardly therefrom, said strips being longer than said head so as to form resiliently flexible ends projecting beyond the ends of said head.

3. In a sweeper, a wooden attaching block, a plurality of strips of sweeping material doubled to form opposite plies, means for attaching said material at the doubled portions to the opposite sides of said block, the free portions of said strips projecting outwardly from the block, clamping members constituting the head and between which members the block and strips are interposed, and bolts passed through said members, said strips and said block, said members and said block being of substantially the same length, while the sweeping material is of greater length so as to project beyond the ends of the head for the purpose set forth.

4. In a sweeper, an attaching block, sweeping material attached to said block, clamping members having their lower portions recessed and adapted to receive said attaching block and sweeping material, clamping plates interposed between said clamping

members and said attaching block and sweeping material, and bolts for clamping said members, plates, block and sweeping material together.

5 5. In a sweeper, an attaching block, strips
of sweeping material secured to the sides of
said attaching block, abutting clamping
members recessed at their lower portions and
adapted to receive said attaching block and
10 sweeping material, clamping plates inter-
posed between said members and said at-
taching block and sweeping material, clamp-
ing bolts extending through the lower por-
tions of said clamping members, clamping
15 plates and attaching block for binding the
sweeping material securely in position, a
handle extending through the upper por-
tions of said clamping members, means for
retaining said handle in place, and addi-
20 tional means for clamping the upper por-
tions of said clamping members together.

6. The combination with a head formed
of clamping members, of sweeping material
secured within the head by said members
25 and projecting outwardly therefrom, a plate
interposed between one of said members and
the said material, and means for securing the
members, the material and the plate to-
gether, said plate being of substantially the
30 same length as said members and projecting
beyond the lower edge thereof at an angle
to form a scraper.

7. The combination with the head of a
sweeper composed of opposite clamping
35 members and means for fastening them to-
gether, of sweeping material attached to
said head by said members and projecting
outwardly therefrom, and a scraper blade
clamped between one of said members and
40 the sweeping material and bent longitudi-
nally outside the head and extending down-
wardly and outwardly from the head in
front of said material at an angle thereto to
form a scraper, said scraper blade being of
45 substantially equal length to the head but of
materially less width than the sweeping ma-

terial so as not to come in contact with the
surface to be swept until said material is
flexed in the act of sweeping.

8. The combination with a head, of sweep- 50
ing material secured to and projecting out-
wardly therefrom, and a scraper blade also
secured to said head by the same fastening
means that secures the sweeping material to
the head and projecting downwardly and 55
outwardly from the head in front of said
sweeping material at an angle to said mate-
rial when the latter is in its normal position,
the extent of projection of said scraper blade
being materially less than the projection of 60
the sweeping material from said head, and
the lower or active edge of said blade being
on a horizontal plane from one end to the
other whereby when the material is flexed in
sweeping, said edge of the blade is brought 65
simultaneously into engagement with the
surface to be swept in advance of said mate-
rial, the blade assuming a substantially ver-
tical position.

9. The combination with a head, of strips 70
of wire netting secured to and projecting
outwardly therefrom and constituting the
sweeping body of the sweeper, and a scraper
also secured to said head against the sweep-
ing material and projecting downwardly and 75
outwardly from the head in advance of said
body, being bent outside the head at an acute
angle to the normal inactive position of said
sweeping body, whereby the free edge of the
scraper contacts with the surface when the 80
sweeping body is flexed rearwardly in sweep-
ing said surface, causing the scraper and
sweeping body to be active simultaneously
upon said surface.

In testimony, that I claim the foregoing as 85
my own, I have hereto affixed my signature
in the presence of two witnesses.

JOHN McKEE.

Witnesses:

I. D. BRABSON,
CHAS. P. BAKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."