No. 841,848. PATENTED JAN. 22, 1907.

G. F. CONNER.

WALK CLEANER.

APPLICATION FILED APR. 17, 1906.

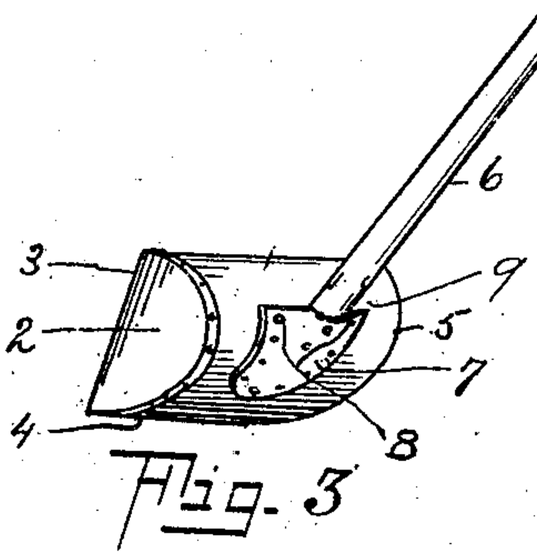

Fig. 3

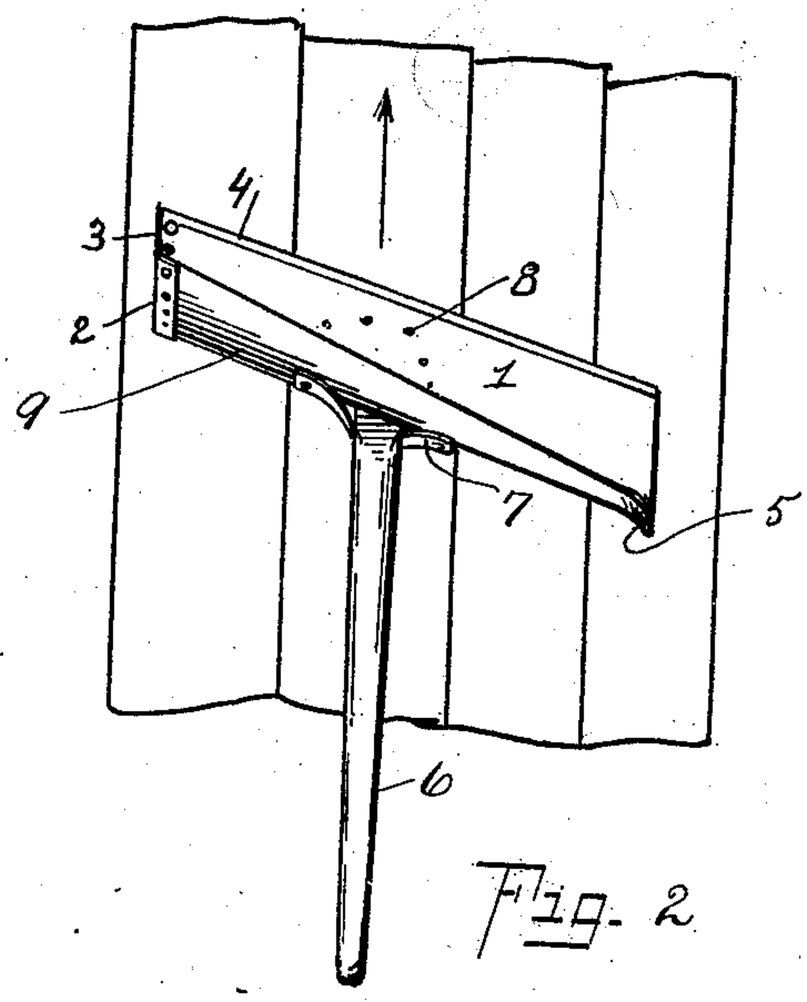

Fig. 2

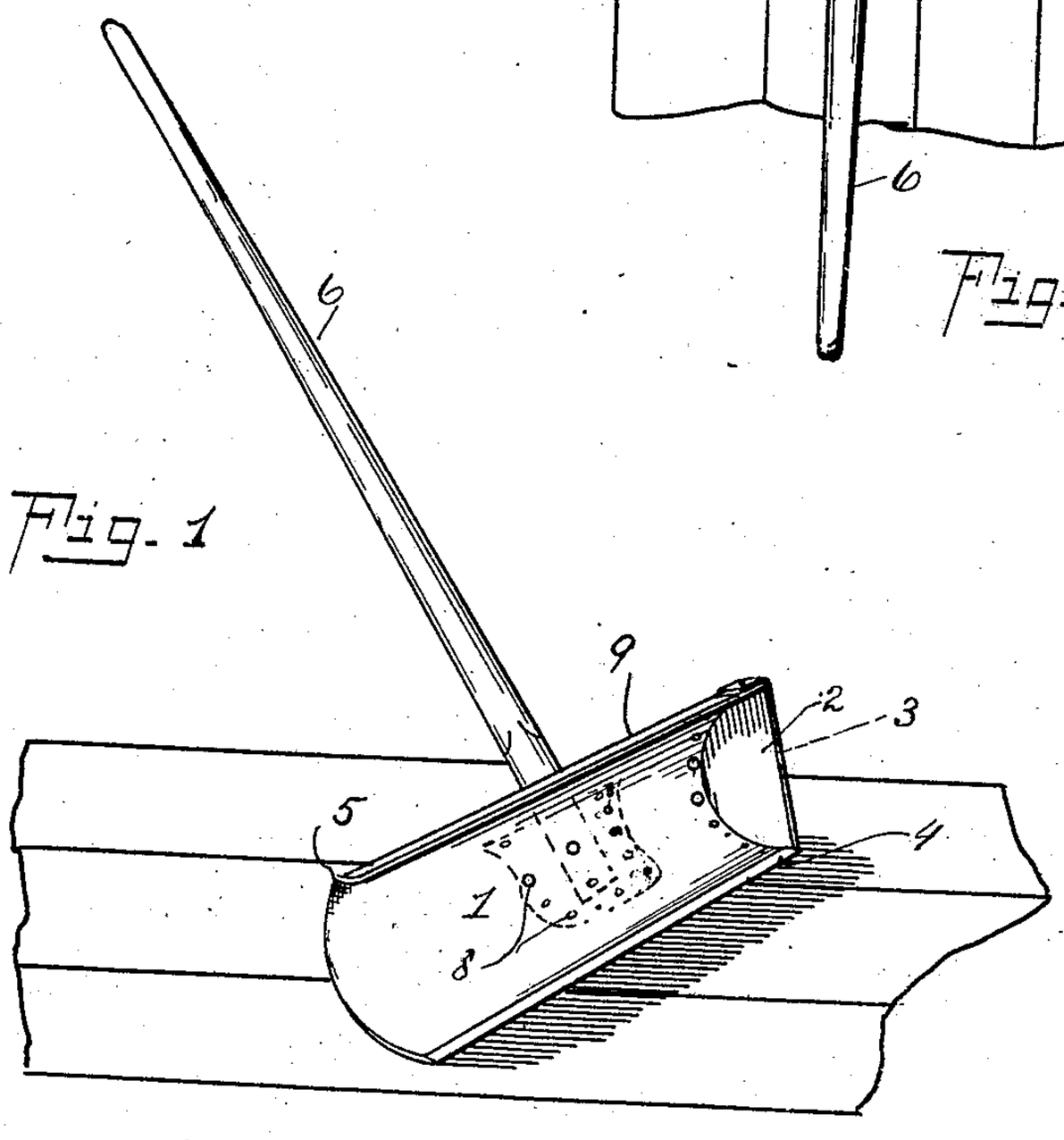

Fig. 1

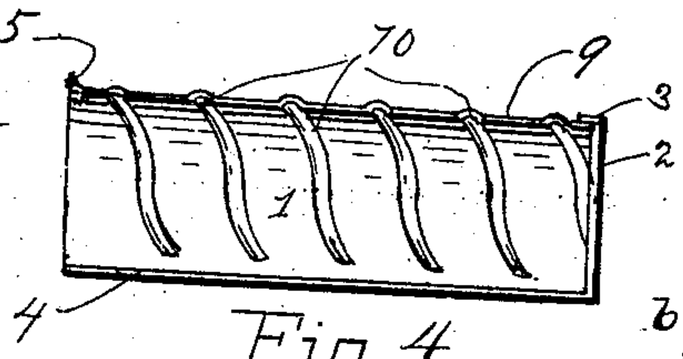

Fig. 4

Witnesses:

F. H. Woods

Inventor:

George F. Conner.

by Clemens R. Stocking

Attorney

UNITED STATES PATENT OFFICE.

GEORGE F. CONNER, OF PORT HURON, MICHIGAN.

WALK-CLEANER.

No. 841,848. Specification of Letters Patent. Patented Jan. 22, 1907.

Application filed April 17, 1906. Serial No. 312,221.

To all whom it may concern:

Be it known that I, GEORGE F. CONNER, a citizen of the United States of America, and a resident of the city of Port Huron, county of St. Clair, and State of Michigan, have invented certain new and useful Improvements in Walk-Cleaners, of which the following is a full, clear, and exact specification.

An object of the invention is to remove snow, &c., whether packed or loose, from a sidewalk without having to bodily lift it, as with a shovel, from the ground and to do this with little loss of time from retracing of steps or passing over the same ground several times.

To that end and for that purpose the invention is adapted to be operated by one person and to lift and roll the snow, &c., from a walk by the operator pushing it one or more times, according to the width of the walk, up and down its length.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a view in perspective of a cleaner embodying the features of the invention in operative position. Fig. 2 is a view in plan of the cleaner in operative position, the arrow indicating the direction of motion of the cleaner. Fig. 3 is a view in side elevation of the cleaner on its closed or advanced end. Fig. 4 is a view looking directly at the front side of a body of a cleaner provided with spiral fluting.

In the drawings, 9 represents the body of the cleaner, having a smooth cylindrically-concave front side 1, with its lower marginal portion 4 beveled down or sharpened, the body of the cleaner when in operative position bearing on the ground only along the under side of said marginal portion.

The rear side of the cleaner may be of any preferred form which affords clearance from the ground save along said front margin or edge; but to obtain strength with lightness the body is preferably made of a sheet of suitable material, either wood or metal or the like. To avoid excessive wear, the marginal portion 4 should consist of a hardened metal strip either secured to or integrally formed with the body to present an unbroken continuation of the front side 1 and is preferably vertically yieldable, as of spring metal, to conform to irregularities in the surface of a walk.

The body of the cleaner is provided with a handle 6, of suitable form and material, whose lower end is secured by any preferred means to the back of the body, said handle extending obliquely up and back therefrom in a plane transverse to the forward margin 4. Where the body is formed of thin sheet metal or the like, as herein illustrated, the handle may be conveniently attached by means of a socket 7, of metal, molded to conform to the handle and to the back of the body, so as to stiffen the latter, and secured by rivets 8 or the like.

To avoid holding the handle at an angle to the direction of motion of the cleaner when in use, the parts are preferably so disposed that the forward margin 4 is obliquely transverse to the vertical plane of the handle 6.

In order to obviate the tendency of the cleaner to lead off to one side when pushed forward, the front end 2 is cut obliquely to the margin 4 and practically parallel to the vertical plane of the handle in the preferred form. To stiffen the body and to prevent snow, &c., escaping around the forward end, a cross-partition or end wall 3 may be provided.

The rear end of the body may be cut off parallel to the front end, if desired, and where the body is made of thin sheet metal or the like its margin 5 may be rolled or flared to stiffen the body, as well as afford good clearance for snow.

To prevent clogging, the degree of curvature of the face 1 may be gradually lessened from the front to the rear end, so that the roll of snow readily moves across the cleaner.

In operation the cleaner is pushed along the walk with its lower edge bearing thereon, held obliquely transverse to the direction of motion. The sharp margin underruns the snow, &c., and lifts it up and breaks any caked mass, so that it rolls up and works diagonally across the curved face and is discharged at the outer or rear end, the increased radius of curvature, if that feature be added, readily accommodating the increase of load as the rear portion of the body scoops up and adds snow to that taken up by the first or advanced part.

The cleaner thus clears a strip of walk equal to its own width, which may be widened by pushing the cleaner back along the uncleaned part.

The main feature of the device is the fact that it does its work without any lifting of the snow, &c., bodily from the walk, the force or power used being exerted only to push it along. It turns up and readily rolls off

packed snow and may be used for clearing crossings of thin mud.

Where it is desired to make the body of very light material or where the climatic conditions make the snow liable to stick and not work readily across the face of the body, it is preferable to provide the front side with a plurality of spiral grooves or flutes 10, extending from near the lower bearing edge to the upper margin, these flutes being pressed out or struck up in the lighter form, so that they act as stiffening-ribs to hold the body true, while at the same time they lead the snow, &c., to the rear open end of the blade or body.

I claim as my invention—

1. A walk-cleaner comprising a body of thin sheet material, in form the segment of a cylinder, whose length from end to end is considerably greater than its width, one of whose side margins is adapted to bear on its extreme edge and throughout its length, on the convex face, along the ground, one of the ends being closed by a thin sheet cross-partition secured at its margins to the end margin, and the other end being provided with an outwardly-flaring margin, and a handle secured at its lower end tangentially against the convex side of the body by a shield.

2. A walk-cleaner comprising a body of thin sheet material, in form the segment of a cylinder, whose length from end to end is considerably greater than its width, one of whose side margins is adapted to bear on the convex side and at its extreme edge on the surface of the ground, and a handle secured tangentially against the convex side of the body between the ends, in a plane approximately parallel to the planes of the ends, oblique to the bearing edge, said body being stiffened by a thin sheet cross-wall closing the forward end of the body, by ribs rolled transversely in the body, and by a shield pressed to conform to the lower end of the handle and the convex side of the body and permanently secured thereto.

3. A walk-cleaner comprising a shallow, sheet-metal body, in form a segment of a cylinder, having a handle secured at its lower end tangentially against its lower, convex side between the ends of the body, said body being set obliquely across the handle, and being secured thereto by a shield molded to conform closely to the lower end of the handle and to the convex side of the body, the lower side margin of the body being adapted to bear on its edge only on the surface of the ground, the forward end of the body being closed by a thin, sheet-metal cross-partition within the body and the other end being stiffened by an outwardly-rolled margin, said body being provided with a series of parallel, spirally-disposed flutes struck up in the sheet, extending back and up from the bearing edge.

In witness whereof I have hereunto set my name in the presence of the subscribing witnesses.

GEORGE F. CONNER.

Witnesses:
H. SCOTT,
L. MCBEANE.