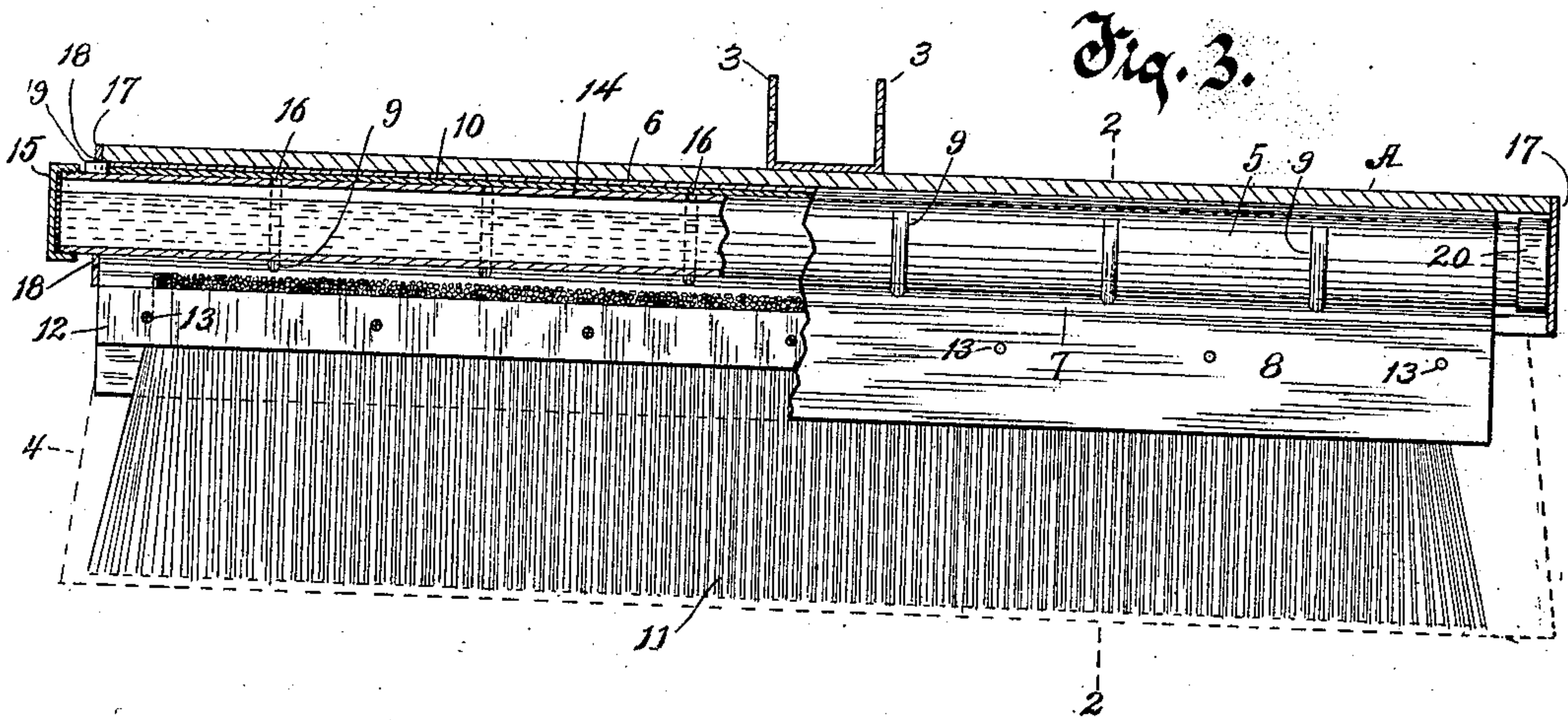
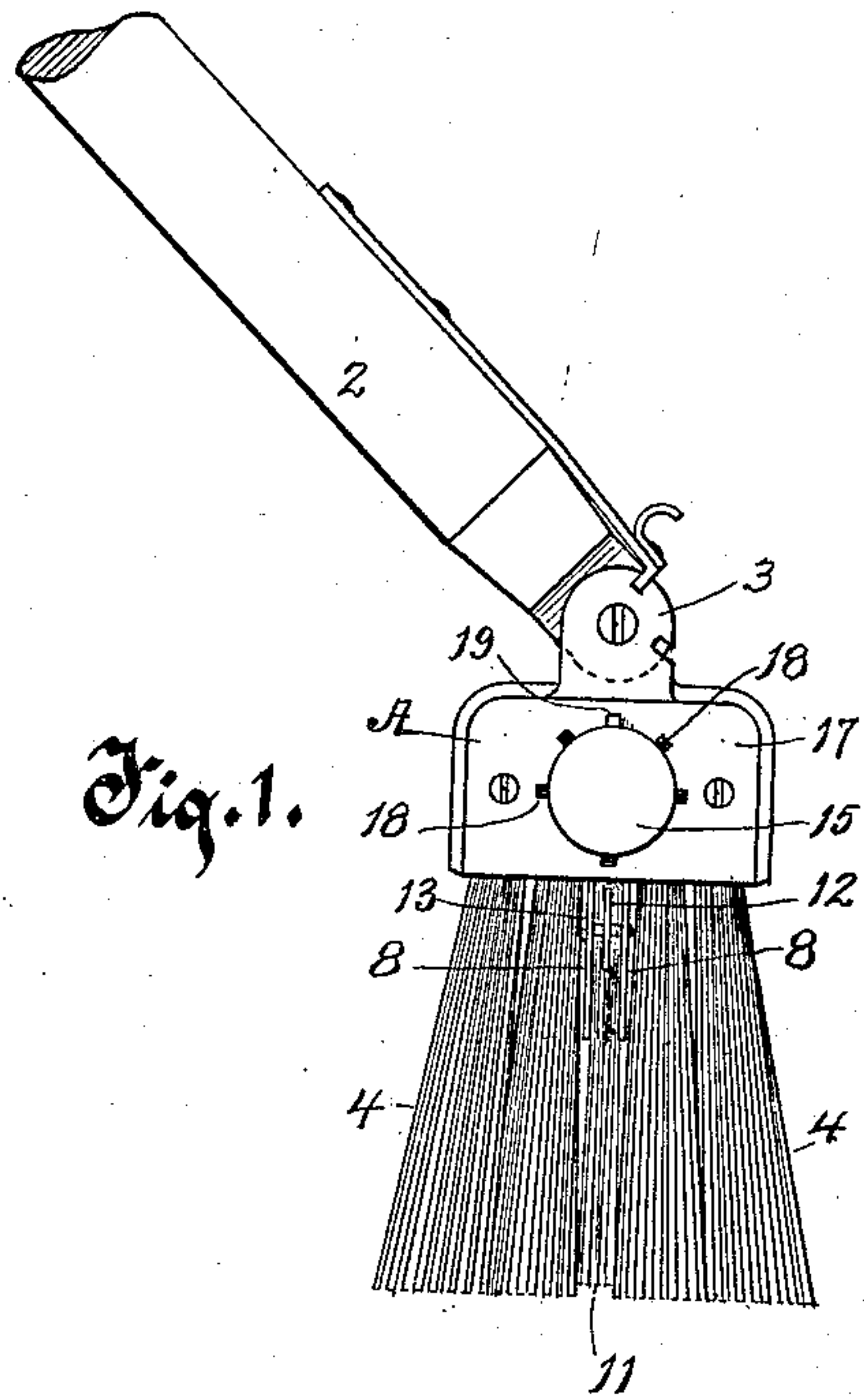
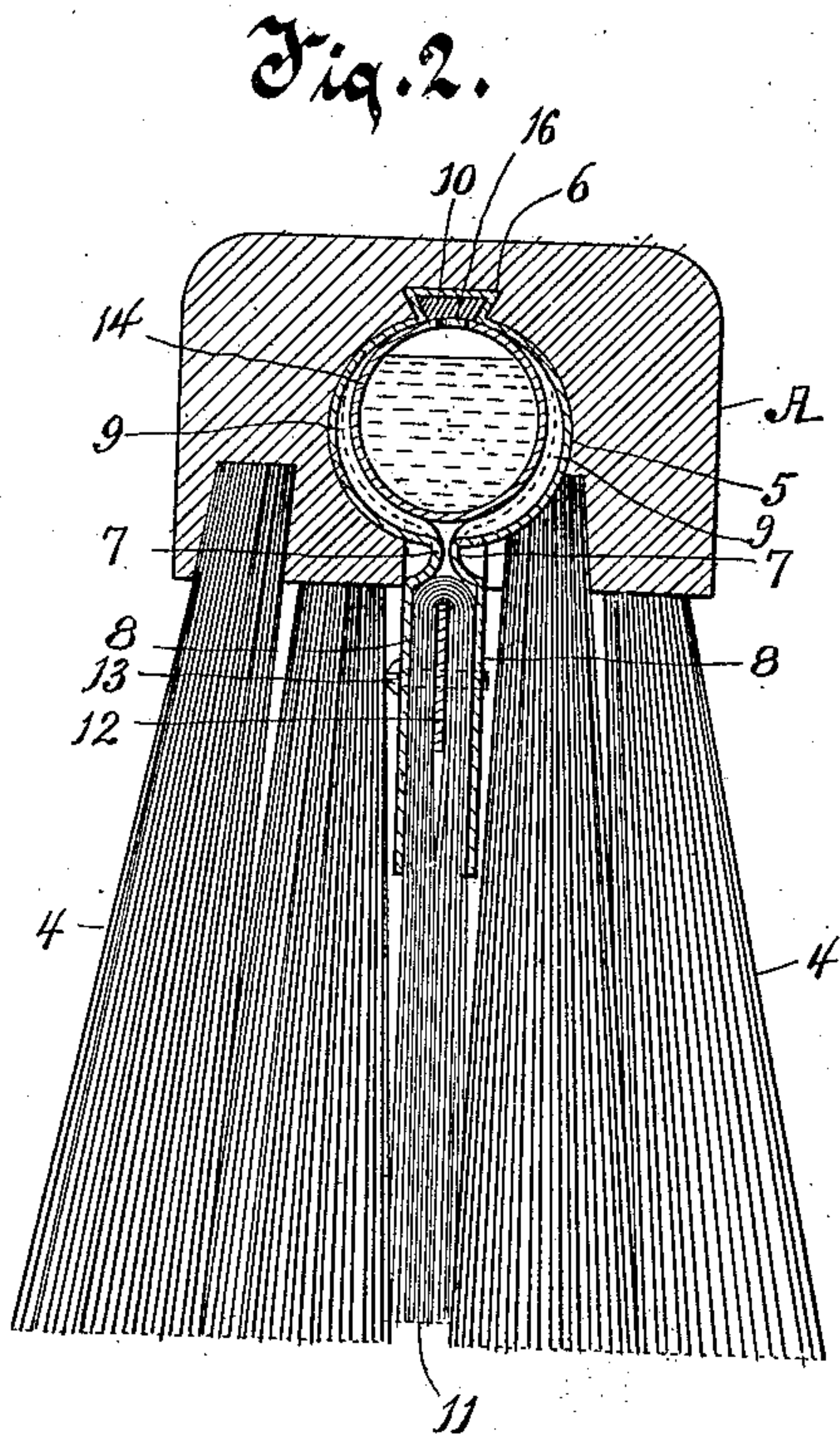


No. 845,387.

PATENTED FEB. 26, 1907.

F. D. WOLFGRAM.
DUSTLESS BRUSH.

APPLICATION FILED MAY 3, 1906.



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UNITED STATES PATENT OFFICE.

FRANK D. WOLFGRAM, OF MILWAUKEE, WISCONSIN.

DUSTLESS BRUSH.

No. 845,387.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed May 3, 1906. Serial No. 314,950.

To all whom it may concern:

Be it known that I, FRANK D. WOLFGRAM, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Dustless Brushes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to an improved dustless brush or dust-removing device especially adapted for sweeping carpets and similar work, the dustless feature of the brush being obtained by means for securing the presence in or in connection with the brush itself of a dust gathering and holding liquid, preferably kerosen-oil or an analogous liquid.

The invention consists of the improved brush, its parts and combinations of parts, as herein described and claimed, or the equivalents thereof.

In the drawings, Figure 1 is an elevation of the improved brush at the end thereof. Fig. 2 is a transverse section of the brush on line 2 of Fig. 3; and Fig. 3 is a longitudinal section of the brush, interior parts being broken away and shown in section for more complete illustration.

In the drawings, A represents the head of the brush, which is advisably made of wood and is in elongated form. This head is provided with a handle 2, which may be attached to the head in any suitable manner, conveniently by putting the end of the handle into the form of a tang that is inserted and fits between upright ears 3, that are secured directly to the head, the tang being connected to the ears by a screw or pin or in some similar manner. The head A of the brush is provided with a large number of tufts 4 of bristles inserted and fixed in the head and projecting downwardly from the under surface thereof, forming the brush proper of the article, these tufts of bristles being adapted at their free ends to contact with the carpet and do the sweeping or stirring up and gathering of the dust. These tufts are so disposed in the head as to provide a space or room medially and longitudinally of the brush for a liquid-holding wick, hereinafter described.

An elongated case 5, of a generally cylindrical form and having along its upper side a shallow extended part 6, preferably of dove-tailed form in cross-section, is inserted longitudinally in the head A in an aperture pre-

pared and suitable therefor. This case is formed of sheet metal, conveniently of tin, and at the lower side of the generally cylindrical case the two margins of the single piece of sheet metal of which the case may be made are turned downwardly near each other, yieldingly forming a narrow slot or passage for liquid therethrough downwardly, and these two margins extending further downwardly a distance below the head A form the leaves 8 8 of a clamp, in which a wick is placed and held. The cylindrical case 5 is provided with a series of liquid-ducts 9 9, formed in its inner surface by swaging the metal of which the case is formed outwardly, raising ribs on the metal, the inner sides of which ribs form the channels or ducts for the flow therein of the liquid. These several ducts extend from near the top of the case circumferentially downwardly to the bottom of the cylinder, where its sides merge into the walls of the slot-aperture. These ribs are so formed that the ducts are preferably shallow near the upper portion of the case and grow deeper radially downwardly to their lower ends. A closure cushion or packing 10, advisably of leather, is inserted in the recess 6, its lower surface being flush with or a little inside of the inner surface of the case 5.

A wick 11 is mounted in the brush by being placed between the wick-holding clamps 8 8 and secured thereto. This wick may consist of cotton cloth or wicking, though advisably the wick is formed of vegetable fiber, such as Manila or sisal, as shown in the drawings, and is conveniently and readily fastened in the clamps by being doubled about a strip or key 12, of sheet metal, which being placed between the leaves 8 8 of the clamp is secured therein by transverse screws 13. This wick extends substantially the entire length of the brush, and the wick is made a little shorter than the bristles of the brush or tufts, so that when the bristles rest and sweep on the floor the wick will not touch the floor, whereby the liquid in the wick is prevented from being deposited or rubbed off on the carpet.

An elongated cylindrical tank 14, that may be made of sheet metal, is of such diameter and length as to fit easily in the case 5, so that it may be slid endwise limitedly and rotated easily therein. The tank is provided at one end with a screw-threaded cap 15 for closing it liquid-tight. The tank is also provided with a series of apertures 16, arranged to

register with the transverse ducts 9 in the case 5 when the tank is in its seat in the case. Closure-plates 17, advisably of heavy sheet metal, are secured to the ends of the wood head A to close the aperture therein at one end and at the other end to close the aperture in the wood head and covering the end of the case 5 and having a circular aperture through which the cylindrical tank 14 may be moved endwise and revolubly. Around the tank 14 this plate 17 is provided with a series of radial notches 18, located at little distances apart, and a tooth or key 19, fixed on the outer surface of the tank, is adapted by the movement of the tank endwise limitedly in the case 5 to be pushed into a notch, so as to be in engagement revolubly with the plate 17 for to be withdrawn therefrom, so as to permit of the rotation of the tank. By this means the tank can be rotated and locked in such position that the apertures 16 will be opposite the packing 10, whereby the apertures are closed liquid-tight, or the tank can be pulled endwise so that the key 19 will be out of engagement with the plate 17, and the tank can then be rotated to such extent as to bring the apertures 16 opposite the ducts 9, either near their upper extremities or farther down, as desired, when the tank is again pushed into place in the case with the key 19 in one of the lower notches. By this means of adjustment of the location of the apertures in the tank and because of the varying depth of the ducts 9 the amount of the discharge of the liquid from the tank can be regulated. A slightly-enlarged collar 20, which may be a part of the cap of the tank at that end, prevents the withdrawal of the tank from the case 5, though by reason of the slightly-greater length of the tank than the length of the case a movement of the tank endwise is permitted, sufficient for withdrawing the key 19 from the notch in the plate 17 for the purpose of rotating the tank.

It will be understood from the foregoing description that the liquid discharged from the tank 14 will flow down the ducts 9 to the narrow slot at the bottom of the case 5, where its free flow downwardly being obstructed the liquid will spread out along the slot and will drip through it substantially or entirely its entire length down onto the wick 11 below and that it will run down on and in the wick in such amount and to such extent as is permitted by the amount allowed to be discharged from the tank and being in the wick will be discharged by contact onto the bristles of the brush and will there and on the wick itself serve as a medium for gathering and holding the dust raised by the bristles in the sweeping of a carpet, while because of the shorter length of the wick the liquid will not be discharged or rubbed onto the carpet by direct contact therewith.

What I claim as my invention is—

1. An elongated head for a dust-removing device, a brush fixed in the head, a cylindrical case longitudinally of and in the head provided with ducts in the walls of and curved about the case and with a discharge-passage downwardly therefrom, and a cylindrical liquid-holding tank provided along on one side with discharge-apertures adapted to register with said ducts, said tank being adjustable revolubly in the case.
2. A head for a dust-removing device, a brush fixed in the head, a cylindrical case provided with a plurality of ducts at little distances apart in the walls around circumferentially from near the top to the bottom and with a common longitudinal narrow passage for liquid from all the ducts downwardly through the bottom of the case, and a cylindrical tank fitted revolubly in said case and provided along one longitudinal side thereof with a series of discharge-apertures arranged to register with said ducts.
3. A head for a dust-removing device, a brush fixed in the head, a cylindrical case in the head provided with a closure-packing in and along the case at the top and a liquid-outlet at the bottom, a cylindrical tank fitted revolubly in the case, and means for locking the tank releasably against revolution in the case.
4. A head for a dust-removing device, a brush fixed in the head, a cylindrical case in the head provided with a closure-packing in and along the case at the top and a liquid-outlet at the bottom, a cylindrical tank fitted revolubly and slidable endwise in the case, a key-engaging plate on the head, and a projecting key on the tank adapted on sliding the tank endwise to take into and be released from the key-engaging plate.
5. In a dustless dust-removing device, a head, a substantially cylindrical case in the head provided with a series of circumferentially-disposed ducts in the walls thereof partially about the case leading down the side walls to the bottom, a cylindrical tank slidable endwise limitedly and revoluble in the case and provided with apertures arranged to register with said ducts, means on the tank for limiting its movement endwise, and other means for locking it releasably against rotation.
6. In a dustless dust-removing device, an elongated head, a brush fixed in and depending from the head, a liquid-holding tank, an elongated hollow liquid-controlling case in the head the case being of sheet metal the two side walls of which along the lower part of the case are turned downwardly near to but opposite each other forming a liquid-passage from the case to a wick and from the passage are continued downwardly opposite each other below the lower surface of the

head forming wick-clamps within the brush, a wick-plate, a flexible wick doubled medially over the plate, the wick and plate being inserted between the clamps, and means securing the wick and plate in position between the clamps.

7 In a dustless dust-removing device, an elongated head, brushes fixed in the head and projecting therefrom in two groups along the brush-head providing an intermediate wick-space, an intermediate wick depending

from the head between the groups of brushes and of less length than the brushes, and means for holding above and discharging a liquid seepingly on the wick.

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

FRANK D. WOLFGRAM.

Witnesses:

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ANNA F. SCHMIDTBAUER.