

Nov. 14, 1939.

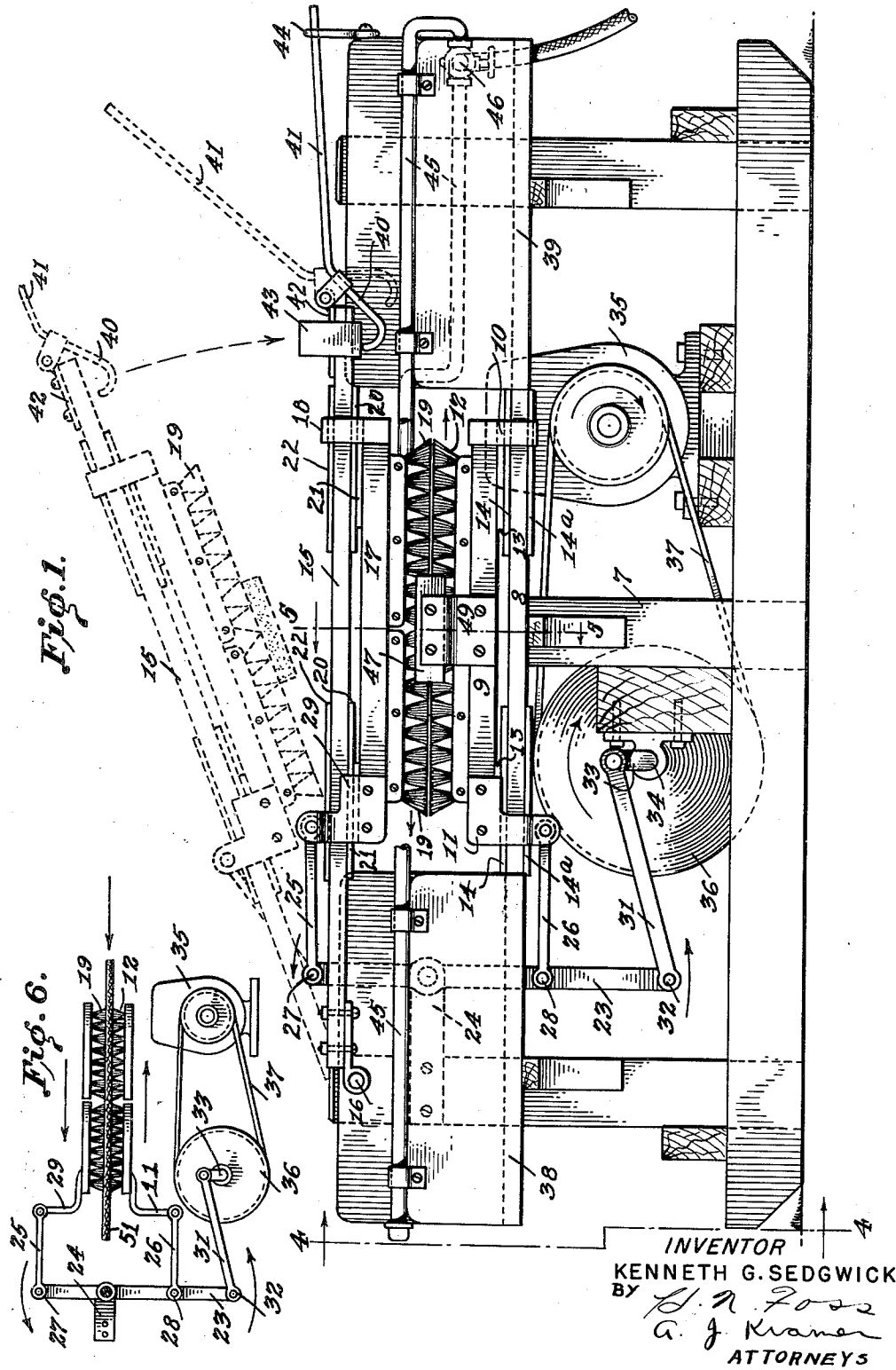
K. G. SEDGWICK

2,179,831

HOSE WASHING MACHINE

Filed June 14, 1938

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Fig. 2.

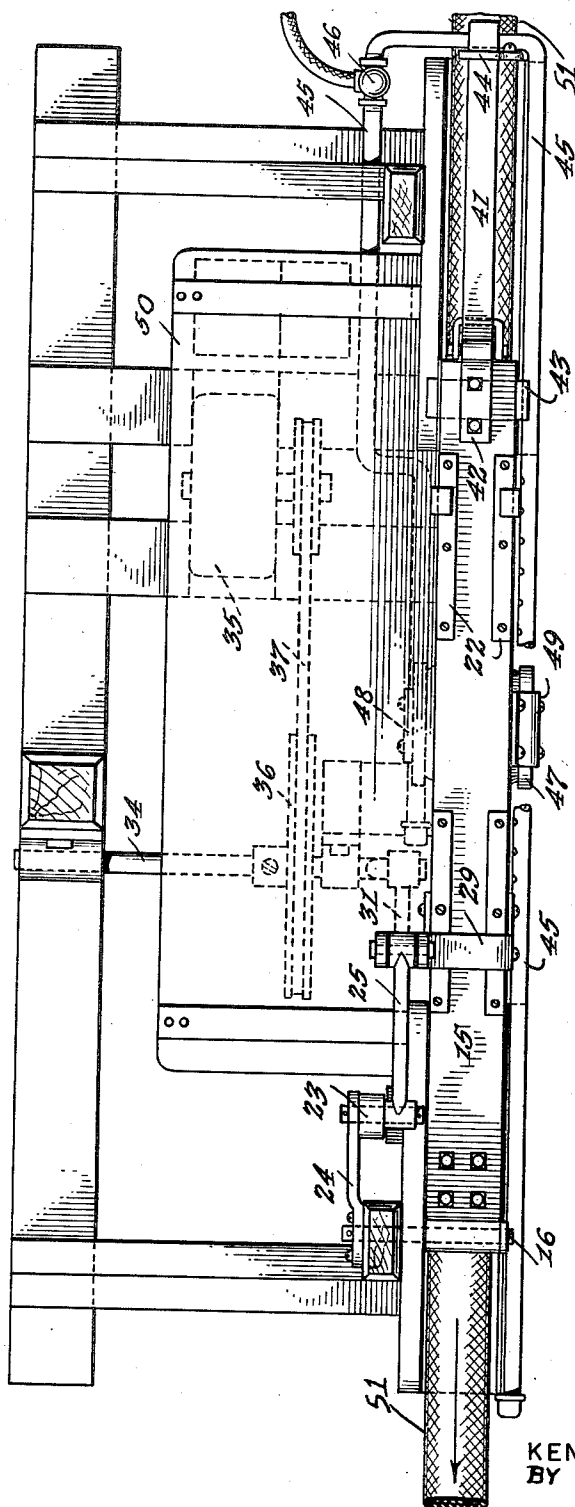
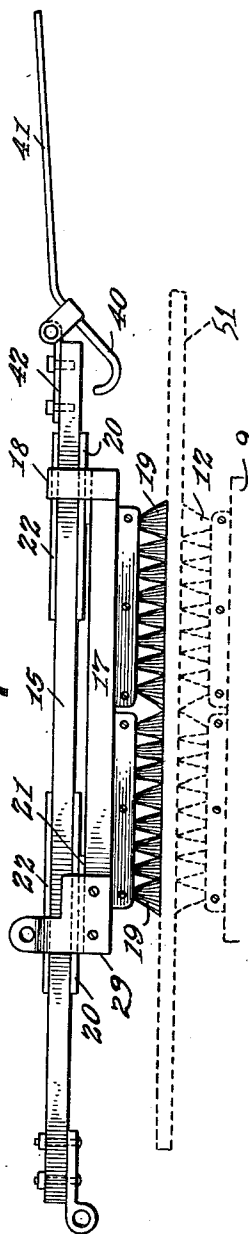


Fig. 3.



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*Fig. 4.*

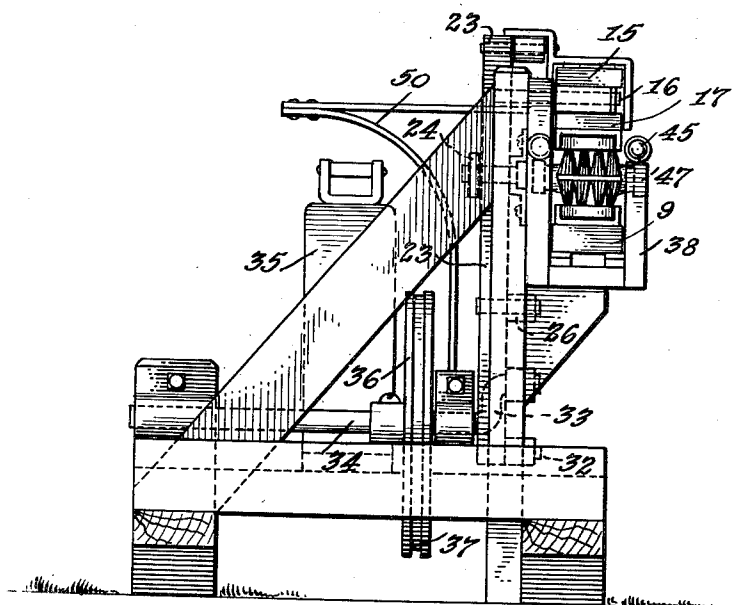
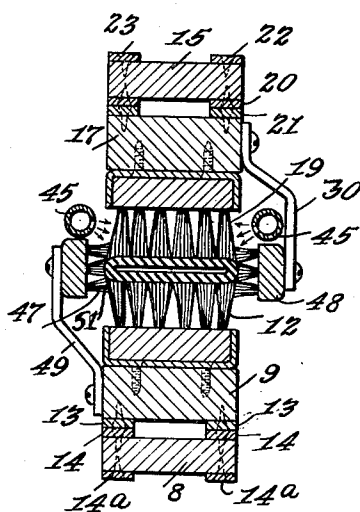


*Fig. 5.*



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## UNITED STATES PATENT OFFICE

2,179,831

## HOSE WASHING MACHINE

Kenneth G. Sedgwick, Cavour, Wis.; dedicated to  
the free use of the People of the United States  
of America

Application June 14, 1938, Serial No. 213,591

4 Claims. (Cl. 15—88)

(Granted under the act of March 3, 1883, as  
amended April 30, 1928; 370 O. G. 757)

This application is made under the act of  
March 3, 1883, as amended by the act of April 30,  
1928, and the invention herein described, if pat-  
ented, may be manufactured and used by or for  
the Government of the United States of America  
for governmental purposes without the payment  
to me of any royalty thereon.

I hereby dedicate the invention herein de-  
scribed to the free use of the people of the United  
States of America to take effect on the granting  
of a patent to me.

This invention relates to a machine for wash-  
ing hose, especially hose of the collapsible flat  
linen type, such as that used for fire extinguish-  
ing purposes.

One of the objects of this invention is to pro-  
vide such a machine that will automatically wash  
all sides of the hose at one time as it is fed  
through it, wetting the hose as it approaches the  
washing operation, and rinsing it after it leaves  
the washing operation.

The following description considered together  
with the accompanying drawings will disclose  
this invention more fully, its construction and  
operation of parts, and further objects and ad-  
vantages thereof will be apparent.

In the drawings:

Figure 1 is a side elevational view; and

Figure 2 is a plan view of this invention.

Figure 3 is a fragmentary side elevational view  
of the horizontal reciprocating brushes in wash-  
ing position.

Figure 4 is an end view of Figure 1 from the  
line 4—4.

Figure 5 is an enlarged end sectional view along  
the line 5—5 of Figure 1.

Figure 6 is a schematic diagram of the linkage  
employed to reciprocate the brushes.

Referring with more particularity to the draw-  
ings in which like numerals designate like parts, a  
lower guide bar 8 is bracketed to a suitable frame  
7 and a lower brush carrier 9 is slidably mounted  
on said bar by means of sleeve brackets 10 and  
11. One, two or more brushes 12 are removably  
secured on said brush carrier 9 with their bristles  
extending upward. Metal anti-friction plates  
13, 13 on said brush carrier and similar plates  
14, 14 on said bar 8 contacting said plates 13, 13  
may be provided to reduce sliding friction. Also  
anti-friction plates 14a, 14a may be provided to  
reduce friction between the brackets 10 and 11,  
and the bar 8. The upper brush bar 15 is hinged-  
ly mounted on the frame at 16 and upper brush  
carrier 17 is slidably mounted thereon (similar  
to the manner in which the lower brush carrier

9 is mounted on the lower brush bar 8) by means  
of sliding brackets 18, 18 beneath said member 15.  
The upper brushes 19, 19 are secured beneath  
said brush carrier 17, bristles down. Plates 20, 20  
secured to the bar 15, plates 21, 21 secured to the  
upper brush carrier 17 and plates 22, 22 secured  
to the member 15 between the sleeve brackets 18  
and 29 are provided to reduce friction. As shown  
by the drawings, the bristles of the brushes face  
each other.

Said brushes are oppositely reciprocated by  
means of a lever 23 fulcrumed to a bracket 24 se-  
cured to the frame of the machine. One end of  
each of the links 25 and 26 are pivotally con-  
nected at points 27 and 28 to the lever 23 sub-  
stantially equidistant from the said fulcrum. The  
other end of link 25 is pivotally connected to the  
bracket 29 of the upper brush carrier 17 and the  
other end of the link 26 is pivotally connected to  
a bracket 11 of the lower brush carrier 9. A con-  
necting rod 31 is disposed between the lower end  
of the lever 23 at 32 and a crank arm 33. Said  
crank arm is attached to the crank shaft 34 which  
is rotatably mounted in bearings conveniently dis-  
posed in the lower part of the frame of the ma-  
chine. Said crank shaft is actuated by a motor 35  
fixed to the base of the machine. Power is deliv-  
ered from a grooved pulley take-off of this motor  
to a grooved pulley 36 fixed to the crank shaft 34  
by means of a friction V-belt 37, substantially as  
shown. A trough 38 is mounted on the frame of the  
machine forward of the brushes and another trough  
39 is similarly mounted rearward of said brushes  
through both of which the hose to be washed slides.

In Figure 1 the upper brush assembly, consist-  
ing of the bar 15 and parts appurtenant thereto,  
is shown in dotted lines in its open position, re-  
volved about its hinged point 16. When the ma-  
chine is in operation this upper brush assembly  
must be held firmly against the top of the hose  
being washed and for this purpose a hook 40  
with a handle extension 41 is swiveled to a  
bracket 42 mounted on the rearward end of the  
upper brush bar 15. Said hook 40 is adapted to  
catch under a guide bracket 43 fixed to the frame  
of the machine. The handle 41 when the ma-  
chine is operated may be held in position by any  
suitable means such as a catch 44.

A water pipe line 45 is disposed across the  
top of the outer sides of the troughs 38 and 39,  
bridging the space therebetween, and thence  
around the opposite side of said troughs, sub-  
stantially as shown. The water intake connec-  
tion and valve assembly 46 is preferably posi-

tioned near or in the U-bend in the pipe. The pipe is positioned as closely as possible to the brushes and is provided with apertures at optimum points to permit sprays of water to play on the brushes and upon the hose as it passes through said troughs.

In order to provide for the cleansing of the sides of the hose which may escape the action of the horizontal brushes above mentioned, vertical brushes 47 and 48 are utilized, the vertical brush 47 being disposed on the bracket 49 fixed to the lower brush carrier 9 and the vertical brush 48 is mounted on a bracket 30 fixed to the upper brush carrier 17. The said vertical brushes 47 and 48 are mounted in such a way that they exert a pressure contact upon the sides of the hose as it passes through the machine. If desired a shield 50 may be bracketed to the frame of the machine to shield the motor from any water and dirt that may be thrown out of the machine.

The operation of this invention is as follows: The motor 35 is started and water is delivered through the pipe line 45 by opening the valve 46. The motor supplies power by means of the V-belt 37 to the pulley 36 which in turn rotates the crank shaft 34 and thus the crank arm 33 revolves carrying with it the link 31 connected to the end of the lever 23. This causes lever 23 to oscillate about its fulcrum, carrying with it the links 25 and 26 and in turn the brushes 19 and 12, respectively, are thus oppositely reciprocated. The upper brush assembly is then elevated in substantially the position shown by the dotted lines in Figure 1, the brushes being in motion meanwhile. The fact that this may be done with the machine running permits continuous operation, avoiding the necessity of stopping the machine while hose is being placed in or removed from it. The hose 51 to be washed is disposed lengthwise from the trough 38 over the brushes 12 and the trough 39. It is immaterial in which direction the hose is fed. This feeding is accomplished by operators stationed at the ends of the machine near the said troughs. The upper brush assembly is then lowered and fixed in position by means of the hook 40 which is held in position by catch 44, as above mentioned. The hose is then drawn through the machine by hand

by one of the operators. The water flowing through the pipe line 45 escapes through the holes provided thus spraying water upon the brushes and upon those parts of the hose passing through the troughs 38 and 39. The brushes being firmly pressed against the surface of the hose and being in motion as described above, scrub the dirt from the hose as it is drawn between them.

Having thus described my invention, I claim: 10

1. A hose washing machine comprising upper and lower sets of brushes slidably mounted on horizontal bars, one of said bars being rigidly secured to the frame of the machine and the other bar being hingedly mounted on the frame of the machine directly above the rigidly secured bar, each of said sets of brushes consisting of horizontally and vertically disposed brushes, and means for oppositely reciprocating said sets of brushes. 15

2. A hose washing machine comprising upper and lower sets of brushes slidably mounted on horizontal bars, one of said bars being rigidly secured to the frame of the machine and the other bar being hingedly mounted on the frame of the machine directly above the rigidly secured bar, and means for oppositely reciprocating said brushes on said bars. 20

3. A hose washing machine comprising upper and lower sets of brushes slidably mounted on horizontal bars, one of said bars being rigidly secured to the frame of the machine and the other bar being hingedly mounted on the frame of the machine directly above the rigidly secured bar, and a motor and a kinematic linkage system for oppositely reciprocating said brushes. 25

4. A hose washing machine defined by claim 3 in which the kinematic linkage system comprises a lever vertically fulcrumed to the frame of the machine, a link connected between a point above the fulcrum of said lever and a bracket fixed to the upper brush set, another link connected between a bracket fixed to the lower brush set and a point on said lever below the fulcrum, a crank arm secured to a rotatably mounted shaft adapted to be actuated by the motor, and a connecting rod disposed between said crank arm and said lever at the point below the fulcrum. 30

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