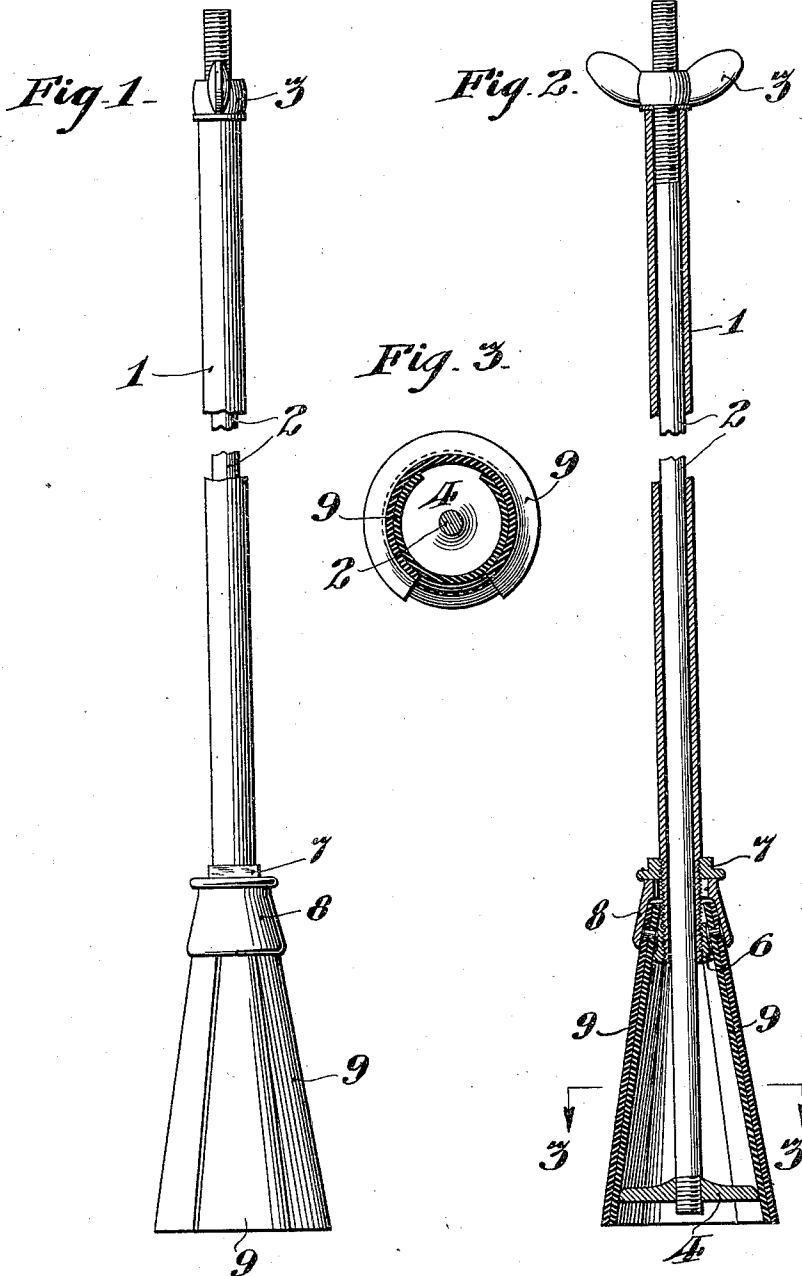


N. B. GRIFFITH.
 CLEAN-OUT PLUNGER.
 APPLICATION FILED AUG. 2, 1910.

990,977.

Patented May 2, 1911.



Inventor
 Nathan B. Griffith,

Witnesses
 Thomas W. Kerr, Jr.
 R. H. Krenkel

By Joshua R. Fotts,
 Attorney

UNITED STATES PATENT OFFICE.

NATHAN B. GRIFFITH, OF PHILADELPHIA, PENNSYLVANIA.

CLEAN-OUT PLUNGER.

990,977.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed August 2, 1910. Serial No. 575,062.

To all whom it may concern:

Be it known that I, NATHAN B. GRIFFITH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Clean-Out Plungers, of which the following is a specification.

My invention relates to improvements in clean-out plungers, which is designed for cleaning out drain pipes, sewer pipes and the like, and is so constructed that the sucker portion may be collapsed so as to pass through any restricted opening such as the outlet from an ordinary hopper, and then expanded in the drain pipe or sewer pipe so as to form a perfect plunger or sucker and effectually dislodge the stoppage in the pipe.

A further object is to provide an improved device of this character which may be readily repaired as it becomes worn, which is of extremely inexpensive construction, strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a view in side elevation illustrating my improvements. Fig. 2, is a view in longitudinal section, and Fig. 3, is a view in cross section on the line 3—3 of Fig. 2.

1, represents a tubular handle and 2 is a rod projecting through the tubular handle 1, screw-threaded at its upper end for the reception of a wing nut 3 screwed against the end of the handle, and on the other end of this rod 2 a disk-like spreader 4 is secured. The end of the handle 1, adjacent the spreader 4 is externally screw-threaded, and receives a conical ring 6 and back of this conical ring an adjusting nut 7. Outside of the first-mentioned conical ring 6, a larger conical ring 8 is located, and the nut 7 serves to move this larger ring 8 over the smaller conical ring 6, and clamp between said rings 6 and 8 a plurality of sheets 9 of flexible material, preferably of rubber, canvas, or other such material having a sufficient body to form a good suction when distended. The edges of these sheets 9 overlap and I am in no wise limited to the par-

ticular number, two being illustrated as one form.

In operation, when the spreader 4 is moved downward beyond the free edges of the sheets 9, the sheets may be collapsed into small circular formation sufficiently reduced in diameter to pass in any restricted opening such as usually found in hoppers. The operator then turns the wing nut 3 to move the rod 2 longitudinally and pull the spreader 4 up into the space between the sheets 9, spreading the sheets into conical form forming, in effect, a conical sucker, and the spread of this sucker is only limited by the length of the sheets. When this sucker is spread, a reciprocating movement of the handle will dislodge any obstruction in the pipes, when the spreader 4 may be again moved downward so as to allow the plunger to be removed.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the character described, comprising a tubular handle, a rod in the handle screw-threaded at one end, a ring nut on said screw-threaded end of the rod located against the end of the handle, and a disk-like spreader on the opposite end of said rod, a plurality of sheets of flexible material secured on the end of said handle adjacent said spreader and having overlapping edges, substantially as described.

2. A device of the character described, comprising a tubular handle, a rod in the handle screw-threaded at one end, a ring nut on said screw-threaded end of the rod located against the end of the handle, and a disk-like spreader on the opposite end of said rod, a plurality of sheets of flexible material secured on the end of said handle adjacent said spreader and having overlapping edges, means for removably clamping said sheets onto said handle and holding them in conical formation, substantially as described.

3. A device of the character described,

comprising a tubular handle screw-threaded
at one end, a rod projecting through said
handle and screw-threaded at one end, an ad-
justing nut on the threaded end of said rod
5 against the end of said handle, a conical ring
screwed onto the threaded end of the handle,
a larger conical ring over the first-mentioned
ring, a plurality of sheets of flexible materi-
al located between said conical rings, a nut
10 on the threaded end of the rod clamping
said sheets between said rings, and a disk-

like spreader on the end of said rod adapted
to be moved into and out of between said
sheets, substantially as described.

In testimony whereof I have signed my 15
name to this specification in the presence of
two subscribing witnesses.

NATHAN B. GRIFFITH.

Witnesses:

R. H. KRENKEL,
C. E. POTTS.

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