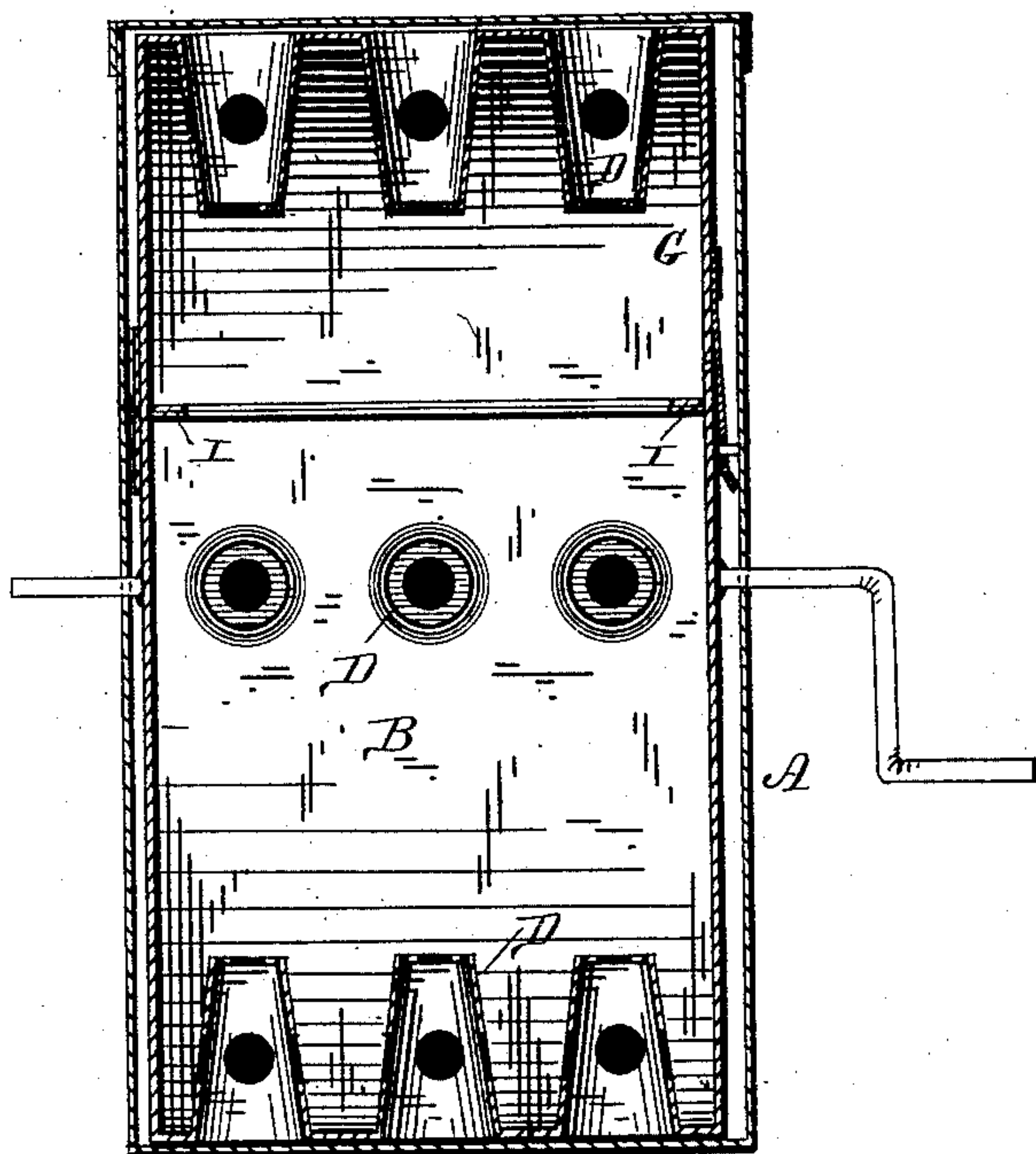


(No Model.)

N. W. CHAIN.  
BOILER WASHING MACHINE.

No. 327,136.

Patented Sept. 29, 1885.



—Witnesses.—

L. J. Gardner  
J. W. Garner

—Inventor.—

N. W. Chain  
per  
J. A. Lehmann,  
Atty

# UNITED STATES PATENT OFFICE.

NEWTON WILLIAM CHAIN, OF COLUMBIA, MISSOURI, ASSIGNOR OF ONE-HALF TO FRANCIS E. NORWOOD, OF SAME PLACE.

## BOILER WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 327,136, dated September 29, 1885.

Application filed July 30, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, NEWTON W. CHAIN, of Columbia, in the county of Boone and State of Missouri, have invented certain new and  
5 useful Improvements in Boiler Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and  
10 use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in boiler washing-machines; and it consists in a  
15 rotary shell or casing which has a number of perforated tubes projecting inward toward its center, which tubes extend across the inner side of the cylinder in straight lines, so as to form projections to catch the clothes and carry  
20 them up and around as the cylinder revolves, as will be more fully described hereinafter, and particularly pointed out in the claim.

The accompanying drawing represents a vertical cross-section of a boiler embodying  
25 my invention.

A represents an ordinary wash-boiler, and B the revolving shell which is placed therein. Projecting inward from the side of this shell toward the center are a suitable number of  
30 pipes, D, which are entirely separate from each other, and which are perforated at their sides and ends, so as to freely admit the water and steam. These pipes serve to raise the clothes from against the side of the boiler, so as  
35 to permit the steam to freely enter and pass up through the clothes while the water is boiling. These pipes also serve as a means upon which the clothes will catch, so as to carry them up and around when the shell is made to revolve  
40 in either direction. Each pipe being separate

and distinct, the ends serve as a means upon which the clothes will catch, and thus be carried up to a greater height than where a mere ridge or rim is formed across the boiler.

The cover G is hinged to the shell in the  
4 usual manner, and is kept closed by means of a spring catch. All around the top of the shell, where the cover is united to it, and around the lower edge of the cover itself, are formed the flanges I, which also serve to catch  
50 the clothes as the shell is made to revolve, and help to carry them up and around. These flanges, projecting inward, serve to contract the shell very materially at this point, and to  
55 such an extent that the clothes will lift in one mass or body, and carry them around until in nearly a vertical position, when the weight of the clothes causes them to pull out and drop back into the water. These pipes and these  
60 flanges, co-operating together in this respect, cause a greater movement of the clothes inside of the shell than could be accomplished by either one alone. The more movement the clothes have the greater the friction among themselves, and the more freely the water  
65 passes through them.

Having thus described my invention, I claim—

The revolving shell provided with the flanges I and a series of short pipes, D, which  
70 are perforated at their inner ends and sides, and which project toward the center of the shell, substantially as shown and described.

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

NEWTON WILLIAM CHAIN.

Witnesses:

W. S. PRATT,

JNO. C. SCHWABE.