(No Model.) 2 Sheets—Sheet 1.

S. G. HATHAWAY.

WASHING DEVICE.

No. 559,977. Patented May 12, 1896.

Fig. 1.

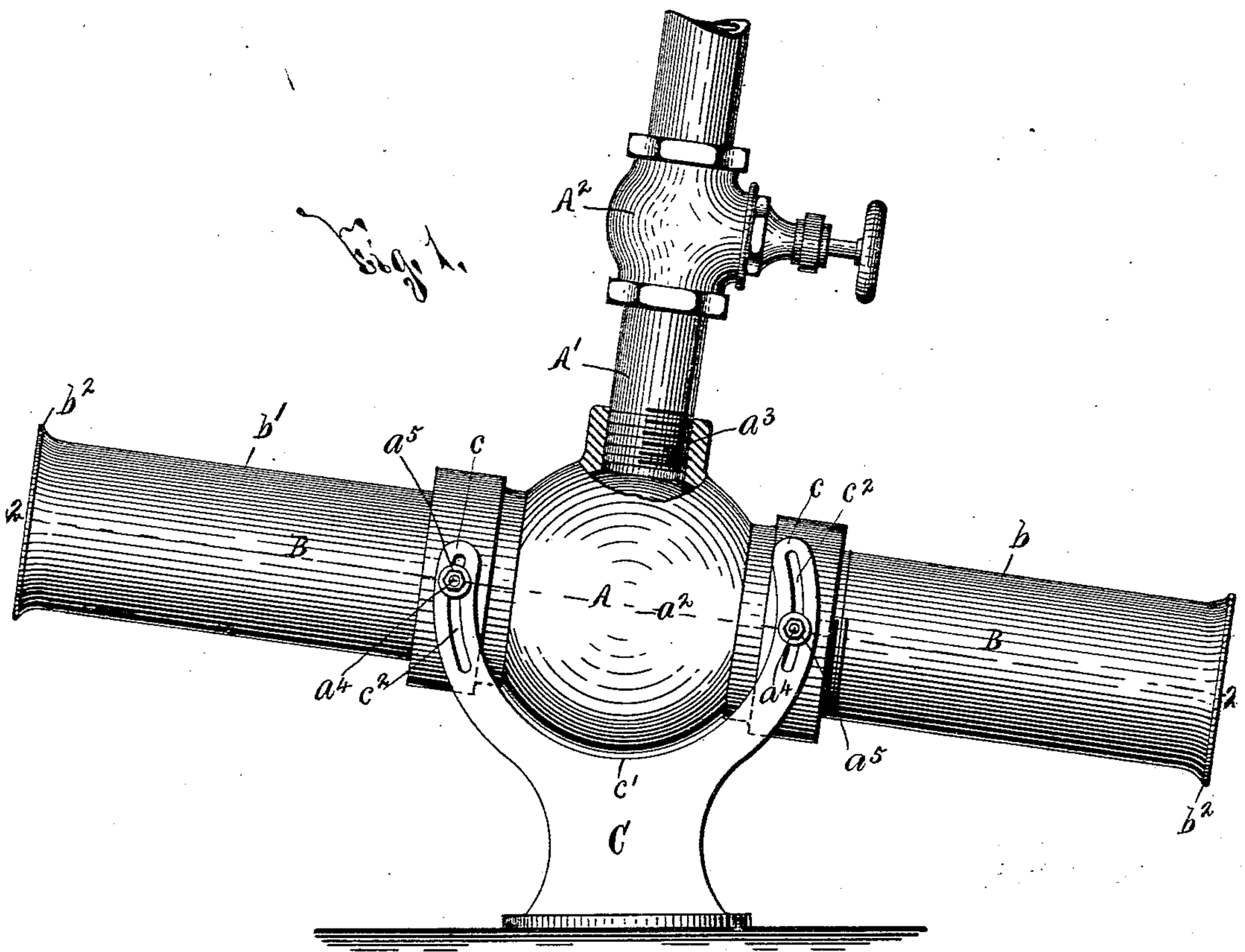
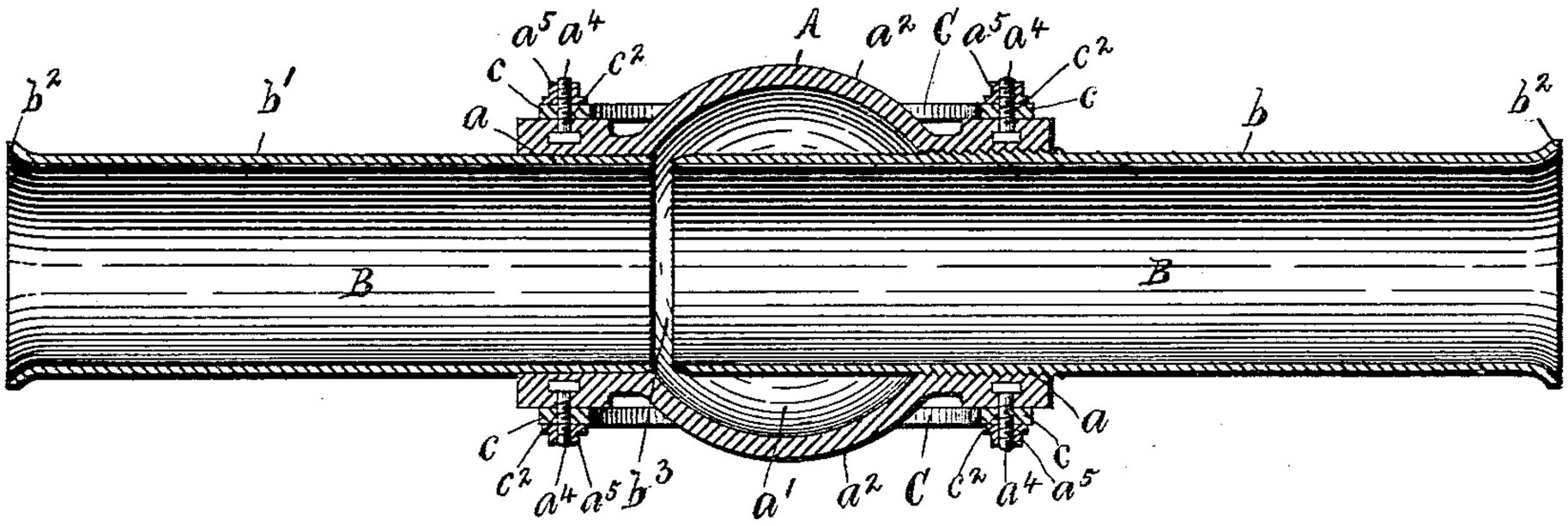


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4

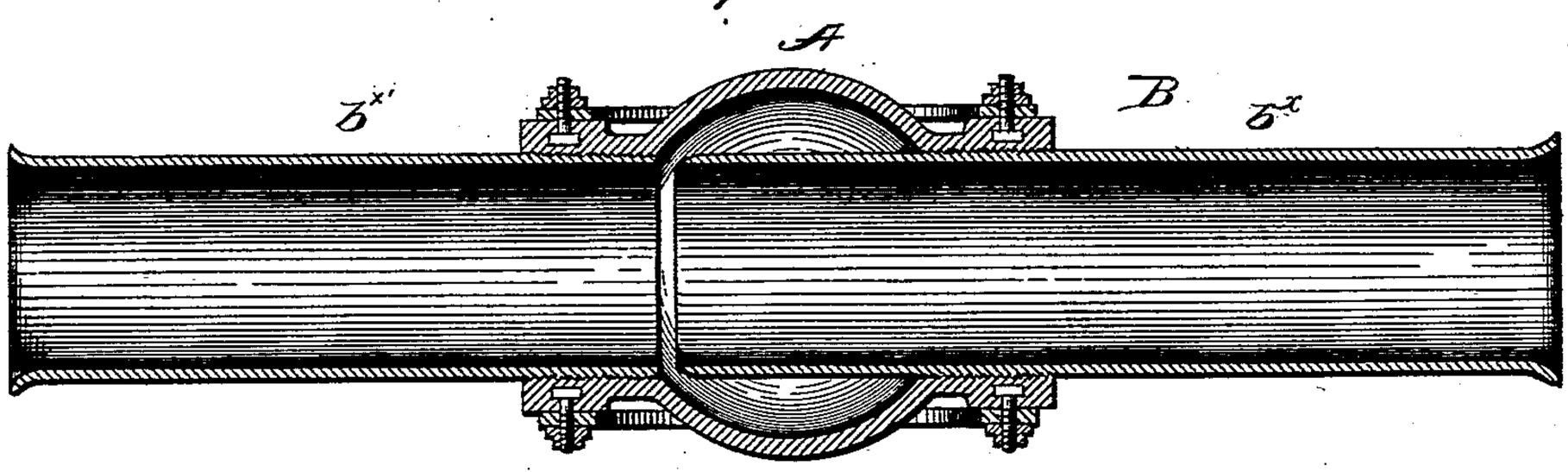
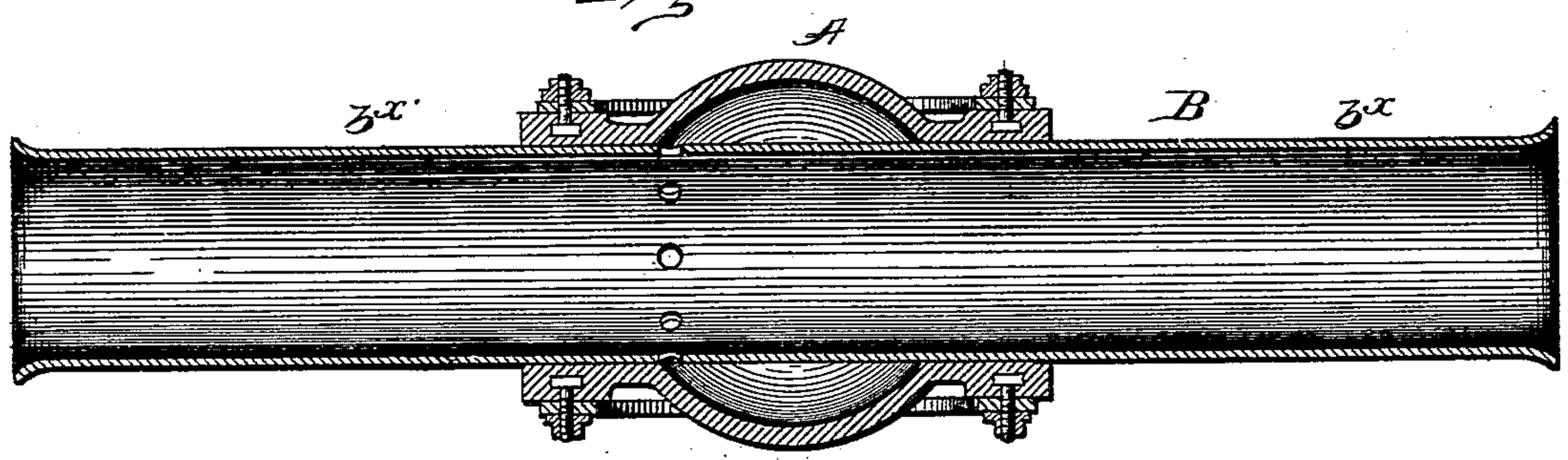


Fig. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL G. HATHAWAY, OF SYRACUSE, NEW YORK.

WASHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 559,977, dated May 12, 1896.

Application filed April 6, 1895. Serial No. 544,729. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL G. HATHAWAY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Washing Devices, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in washing devices particularly applicable for cleaning pipes or hose and other articles, and has for its object the production of a device which consists of a minimum number of parts, is economically manufactured, and highly efficient and durable in use; and to this end it consists, essentially, in the general construction and arrangement of the component parts of the cleaning device, all as hereinafter more particularly described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is an elevation, partly in section, of my improved cleaning device; and Fig. 2 is a longitudinal section taken on line 2 2, Fig. 1. Figs. 3 and 4 are longitudinal sectional views of modified constructions, the former showing a single tube with lateral openings to admit the cleansing fluid and the latter showing both tube-sections movable longitudinally.

A is an inclosing shell for the cleansing fluid provided with a lengthwise passage a extending therethrough and having its central portion formed with a receiving-chamber a' of greater diameter than the opposite ends of the passage a. The inclosing shell may be of any suitable form, but its central portion is preferably provided with a rounding outer face a^2 and an aperture a^3 in its wall. The opposite ends of the shell A are here shown as circular, but they may obviously be formed angular in cross-section, if desired. A suitable inlet-pipe A′ is inserted within the aperture a^3 for discharging the cleansing fluid under pressure within the chamber a', and this pipe is provided with a valve A^2 of any desirable form, size, and construction for regulating the passage of the cleansing fluid. Any suitable pressure device may be used for discharging the cleansing fluid under pressure within the inlet-pipe A′; but said device forms no part of my present invention, and I have deemed it unnecessary to illustrate the same.

B is a tubular conduit for the passage of the article to be cleaned, which preferably extends through the shell A and projects beyond its opposite ends. In Fig. 2 the tubular conduit is shown as composed of sections b b', having their outer ends b^2 slightly outturned, and the shell A is preferably so supported, as presently described, that said conduit is arranged in an inclined plane, although its exact position is immaterial. One tube-section, b, projects within the chamber a' and closely fits one end of the passage a. This tube-section may be connected to the shell in any desired manner, but is preferably secured thereto by screw-threads, Fig. 2, which permit of its lengthwise adjustment. The other tube-section, b', is arranged in the opposite end of the passage a, with its inner end in close proximity to the adjacent end of the tube-section b, and consequently an aperture b^3 is formed between the sections b b' for permitting entrance of the cleansing fluid from the chamber a'.

The tube-section b' is preferably fixed to the shell A by brazing or other suitable means, and it will be understood that as the tube-section b is moved lengthwise toward and away from the tube-section b' the width of the aperture b^3 is varied for regulating the flow of the cleansing fluid into the tube B. If desired, the conduit-section b may be fixed and the opposite tube-section adjustable lengthwise, or as shown at $b^\times$ $b^{\times\prime}$, Fig. 4, both tube-sections may be movable longitudinally. As shown in Fig. 3, the tubular conduit B may also consist of a single piece, formed with a series of apertures therein communicating with the chamber a'; but the flow of water into the conduit B could not then be as easily regulated as when the conduit consists of two separated sections, one of which is adjustable toward and away from the other.

My improved cleaning device may be secured to any suitable support; but it is frequently desirable to adjust the inclination of the conduit B, and consequently I preferably support the shell A by separated standards

C C, having their upper ends provided with projecting arms *c* and their lower ends secured to a suitable support, as a bracket, bench, or floor. The standards C are formed with curved upper faces *c'*, and the arms *c* are provided with curved inner faces arranged adjacent to the rounding outer face a^2 of the shell A and curved slots c^2, in which are movable lateral arms a^4, projecting from opposite sides of the ends of the shell A. The outer ends of the arms a^4 are screw-threaded, and movable thereon are clamps or nuts a^5, which engage the outer faces of the arms *c* and firmly hold the shell A in its adjusted position. Although I preferably use two standards C, it is obvious that one affords a very efficient support.

In the operation of my invention the valve A^2 is opened and the article to be cleaned is passed through the conduit B, and during this movement the cleansing fluid is discharged with great force from the chamber *a'* through the aperture b^3 into the conduit B and entirely encircles the article passed therethrough for effecting removal of all dirt, &c., therefrom. This device is particularly applicable for cleaning pipes and hose; but it is also suitable for cleaning other articles, as lace-curtains, carpets, &c., and may be readily adjusted to admit the desired amount of water to its interior by regulating the degree of separation between the adjacent ends of the tube-sections.

The operation of my improved cleaning device will be readily understood upon reference to the foregoing description and the accompanying drawings, and as it is obvious that the exact detail, construction, and arrangement of its component parts may be considerably varied without departing from the spirit of my invention I do not herein specifically limit myself thereto.

I am aware that devices have been used for raising water, mud, &c., consisting of a main chamber provided with a steam-inlet, an inlet for the water, mud, &c., to be raised, and an outlet conduit or tube for the passage of the steam-raised water, mud, &c., but I do not herein desire to claim such a construction.

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

1. In a washing-machine, the combination of a tubular conduit having open ends for the passage of the article to be cleaned and provided with an aperture for the entrance of the cleansing fluid, an inclosing shell surrounding the conduit and having its opposite ends secured thereto and its central portion provided with a chamber of greater diameter than the conduit communicating with the aperture, and an inlet-pipe for discharging the cleansing fluid under pressure within the chamber, substantially as and for the purpose described.

2. In a washing-machine, the combination of a tubular conduit for the passage of the article to be cleaned provided with an aperture for the entrance of the cleansing fluid, an inclosing shell surrounding the conduit and having its opposite ends secured thereto and its central portion provided with a chamber of greater diameter than the conduit communicating with the aperture, an inlet-pipe for discharging the cleansing fluid under pressure within the chamber, and a supporting-standard adjustably secured to the inclosing shell, substantially as and for the purpose specified.

3. In a washing device, the combination of an inclosing shell provided with a passage extending therethrough, having its central portion formed with a receiving-chamber for the cleansing fluid of greater diameter than the ends of the passage, a tube-section having one extremity open for the entrance of the article to be cleaned and its opposite extremity secured in one end of the passage and projecting within the chamber, a second tube-section having one extremity open for the withdrawal of the article to be cleaned and its opposite extremity secured in the opposite end of the passage and having its inner edge separated from the adjacent edge of the former tube-section to form an aperture between the tube-sections to receive the cleansing fluid, and an inlet-pipe for discharging the cleansing fluid under pressure within said chamber substantially as and for the purpose set forth.

4. In a washing device, the combination of an inclosing shell provided with a passage extending therethrough having its central portion formed with a receiving-chamber for the cleansing fluid of greater diameter than the ends of the passage, a tube-section having one extremity open for the entrance of the article to be cleaned and its opposite extremity adjustable lengthwise in one end of the passage and projecting within the chamber, a second tube-section having one extremity open for the withdrawal of the article to be cleaned and its opposite extremity fixed in the opposite end of the passage and having its inner edge separated from the adjacent edge of the former tube-section to form an aperture between the tube-sections to receive the cleansing fluid, and an inlet-pipe for discharging the cleansing fluid under pressure within said chamber, substantially as and for the purpose specified.

5. In a washing-machine, the combination of a tubular conduit for the passage of the article to be cleaned provided with an aperture for the entrance of the cleansing fluid, an inclosing shell surrounding the conduit and having its opposite ends secured thereto and its central portion provided with a chamber of greater diameter than the conduit communicating with the aperture, an inlet-pipe for discharging the cleansing fluid under pressure within the chamber, separated arms projecting from the inclosing shell and a sup-

porting-standard adjustably secured to said arms, substantially as and for the purpose set forth.

6. In a washing-machine, the combination of a tubular conduit for the passage of the article to be cleaned provided with an aperture for the entrance of the cleansing fluid, an inclosing shell surrounding the conduit and having its opposite ends secured thereto, and its central portion formed with a curved outer face and provided with a chamber of greater diameter than the conduit communicating with the aperture, an inlet-pipe for discharging the cleansing fluid under pressure within the chamber, separated supporting-standards provided with curved upper faces and upwardly-projecting arms formed with curved lengthwise slots and having their adjacent faces curved, lateral arms projecting from opposite sides of the ends of the inclosing shell, and clamps movable upon the outer ends of the arms for holding the shell in its adjusted position, substantially as and for the purpose described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 4th day of April, 1895.

SAMUEL G. HATHAWAY.

Witnesses:
E. A. WEISBURG,
K. H. THEOBALD.