

No. 867,967.

PATENTED OCT. 15, 1907.

J. E. GEE.
DEVICE FOR CLEANING FLOORS.
APPLICATION FILED MAY 31, 1906.

2 SHEETS—SHEET 1.

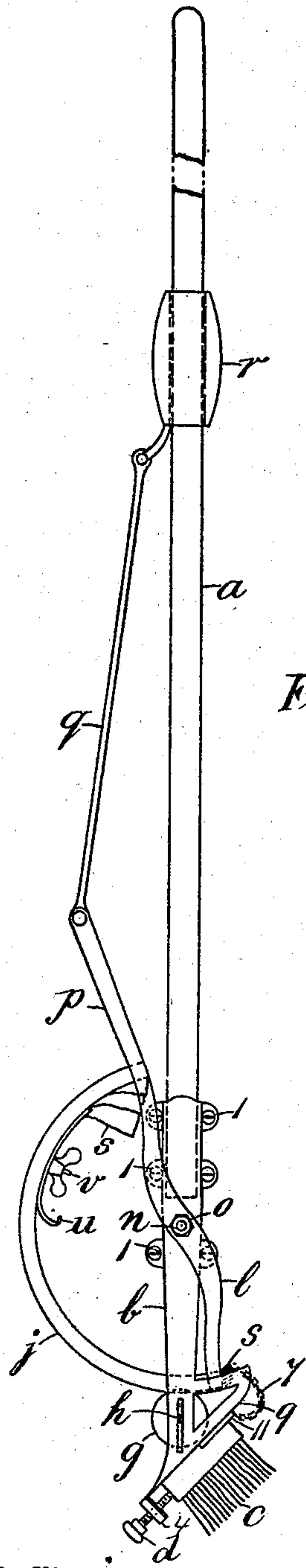


Fig. 1

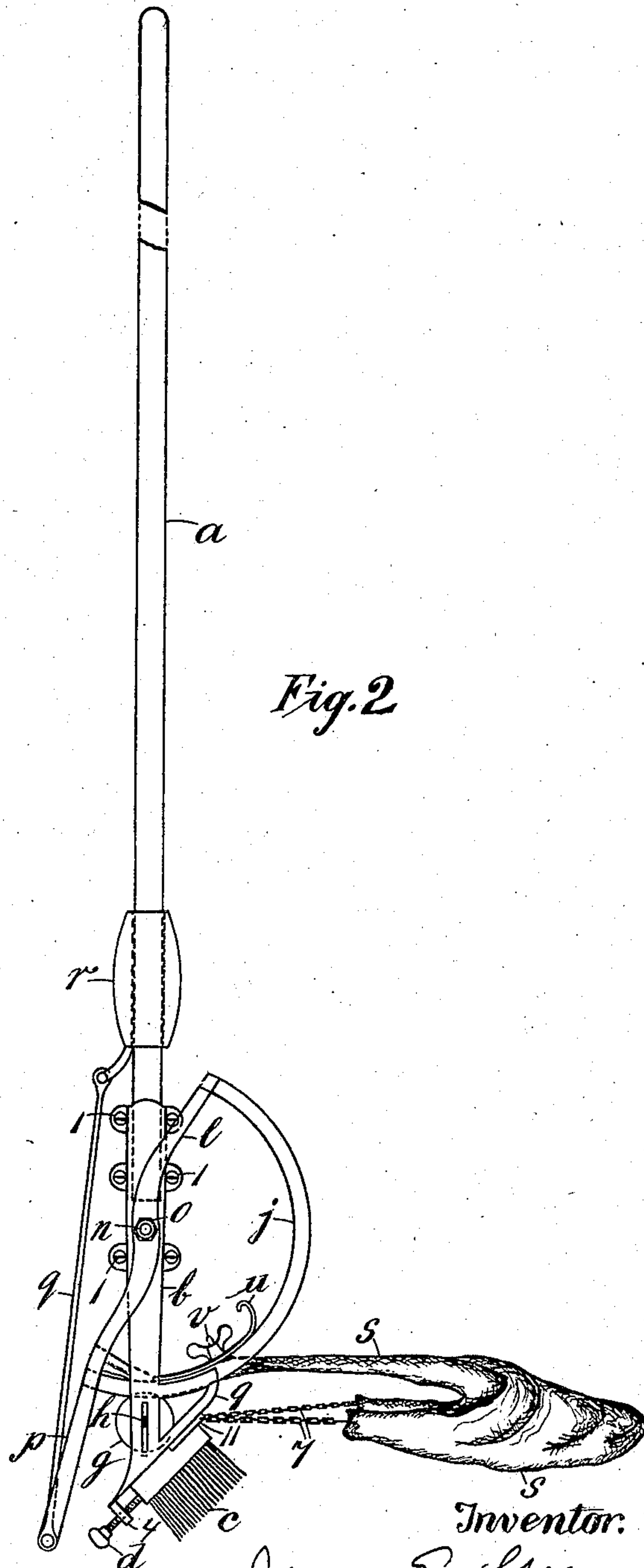


Fig. 2

Witnesses.

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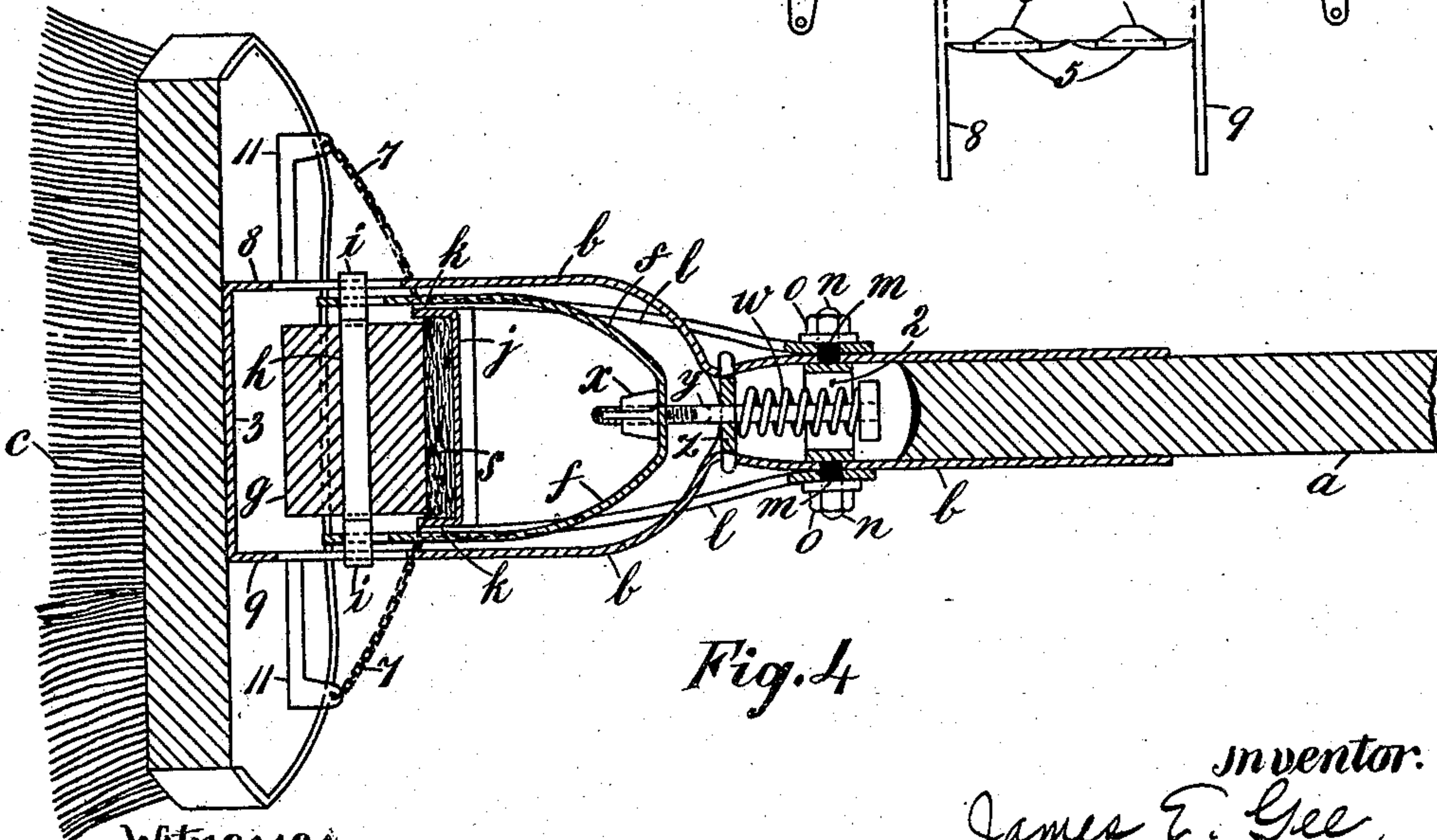
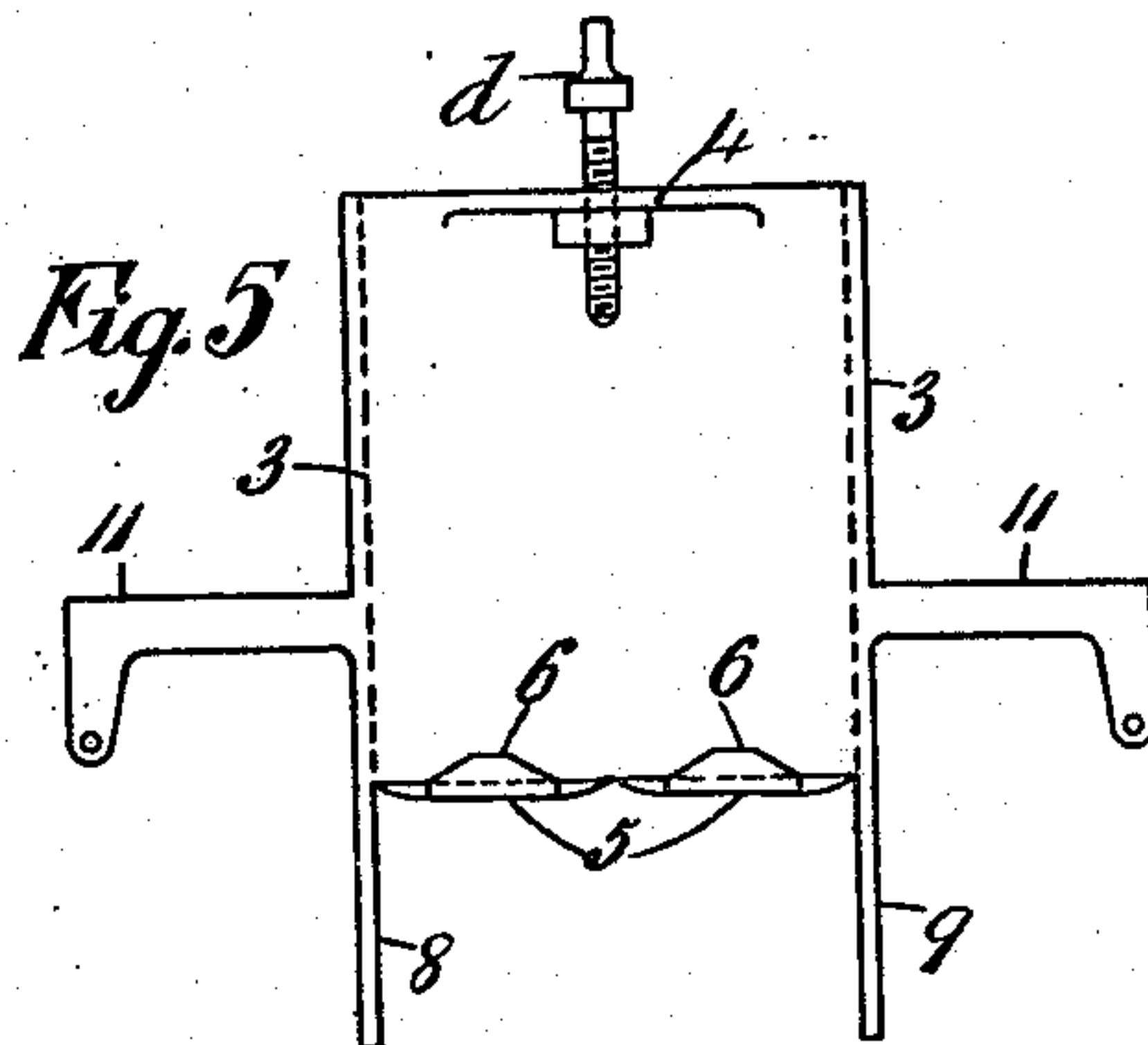
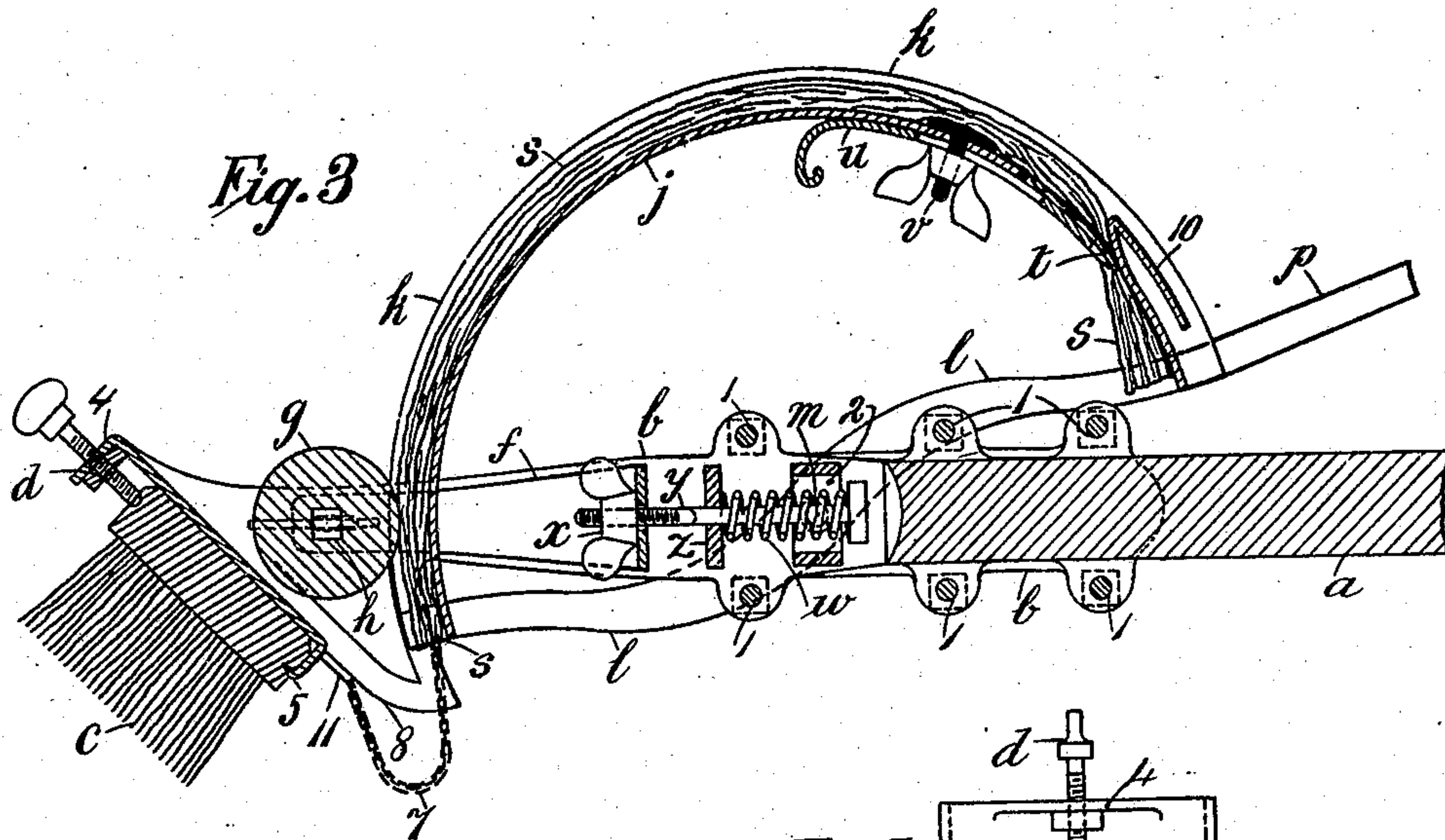
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UNITED STATES PATENT OFFICE.

JAMES EDWIN GEE, OF LONDON, ENGLAND.

DEVICE FOR CLEANING FLOORS.

No. 867,967.

Specification of Letters Patent.

Application filed May 31, 1906. Serial No. 319,592.

Patented Oct. 15, 1907.

To all whom it may concern:

Be it known that I, JAMES EDWIN GEE, a subject of the King of Great Britain, of 37 Queen Victoria street, in the city of London, England, have invented a new and useful Device for Cleansing Floors and the Like, of which the following is a specification.

My invention relates to improvements in devices for cleansing floors and the like, in which the floor is washed, scrubbed, and cleansed by a brush, in conjunction with a cloth or swab by which the floor is swabbed and the slop and dirt are collected and removed; and the objects of my improvements are, first, to provide a scrubbing brush rigidly fixed in the proper position at the lower end of a handle of such length that an operator can scrub a floor without kneeling; and second, to provide a cloth or swab by which he can swab up and collect the wet slop and dirt; and thirdly, to provide a mechanism for effectually and rapidly drying the cloth or swab. I attain these objects by the mechanism illustrated in the accompanying drawings, in which:

Figure 1 is a side view of the entire device showing the swabbing and drying mechanism out of action. Fig. 2 is a similar view showing the swabbing and drying mechanism in a position to operate. Fig. 3 is a vertical section on a larger scale, through the lower part of Fig. 1. Fig. 4 is a similar vertical section at right angles to Fig. 3. Fig. 5 is a bottom plan view of the brush holding means.

Similar letters refer to similar parts throughout the several views.

a is the wooden handle, or stave, resembling an ordinary broomstick, by which the apparatus is held and used.

b is a bracket or frame firmly fixed upon the lower end of the handle *a* and carrying a removable scrubbing brush *c* at the desired angle with respect to the handle *a*, and also suitably designed to support or contain the wringing or mopping mechanism.

The lower part of the bracket *b* is forked, and between its sides fits freely a smaller fork *f* in which is arranged a roller *g* turning upon an axle *h*, the ends of which at *i* are guided in holes in the sides of the inner smaller fork *f*, and are also continued through corresponding holes in the outer fork *b*, all the holes being elongated so that the axle and roller can move for a short distance longitudinally.

j is a half-wheel, or segment, of considerable diameter, and of a width somewhat greater than that of the roller *g* which can enter freely between side flanges *k* of the half wheel *j*, (see Fig. 4).

l, l are side arms fixed upon the sides of the half wheel or segment *g*, and these arms are pivoted at *m*, corresponding with the center of the half wheel *g*, upon a bolt *n* passing transversely through the bracket *b*, and held by nuts *o* at its ends.

p is a forked lever formed by a prolongation of the arms *l, l*, and *q* is a light connecting rod pivoted at one end to the forked lever *p*, and at the other to a tubular sliding sleeve *r*, sliding freely upon the handle *a* so that by sliding it up and down the half wheel or segment *j* is made to make part of a revolution round the center *n* (see Figs. 1 and 2).

One end or edge of a cloth or swab *s*, compressed together so that it will lie round the half-wheel *j* between the flanges *k* is brought down through a slot at *t* in the periphery of the half-wheel *j* to which it is attached by any convenient means. In the drawings a sliding piece *u* is shown inside the periphery of the half wheel *j*, the end of the sliding piece being provided with teeth which are pressed against and into the cloth or swab *s*, the sliding piece being then firmly secured by a screw and thumb nut at *v*.

The inner smaller fork *f*, together with the roller *g* which turns in it, is drawn up by a spring *w* adjustable by a nut *x* upon a screw *y* so that the cloth may be held with any desired pressure between the roller *g* and the periphery of the half wheel *j*, and the water is squeezed out leaving the cloth sufficiently dry. The spring *w* is shown supported between the head of the screw *y* and a transverse bar *z* held between the sides of the bracket *b*, which is shown made in two parts (as shown in Fig. 3) firmly held together by bolts 1. The bolt *n* upon which the half-wheel *j* turns, is shown provided with a central eye 2 through which the spring *w* passes.

By moving the sliding sleeve *r* in one direction, the half wheel or segment *j* draws the cloth *s* round its own periphery, pressing it against the roller *g*, and squeezing out the wet or slop and dirt from the cloth *s* by rolling pressure.

The cloth *s* is of sufficient length, so that after moving the half wheel or segment *j* as far as it will go the extreme edge still remains pressed against the roller *g*, and by moving the sliding sleeve *r* in the opposite direction the cloth *s* is re-passed back between the half wheel or segment *j* and the roller *g*, and is again ready for use.

A flat transverse plate 3 connects the lower ends of the outer fork *b*, and the back of the brush *c* is held against this plate, the back and front edge of the plate being turned down to form flanges as shown at 4 and 5, and an adjustable screw *d* is screwed against the front of the brush through the flange 4, while the back flange 5 is provided with two angular points 6 which are forced into the back edge of the brush when the screw *d* is screwed up, so that the brush *c* is firmly and immovably held. Instead of one, two or more brushes may be used.

Light bars or brackets 11 are fastened to the transverse plate 3, to the ends of which chains 7 are sus-

pended, the free ends of which are fastened to the loose corners of the cloth or swab *s*, so as to insure the latter being expanded to its proper width when delivered from the roller.

- 5 Side guides 8, 9, forming part of the outer fork *b* are used to guide the cloth *s* with certainty between the half wheel *j* and the roller *g*.

- 10 In using the apparatus the cloth *s* is dipped into water or cleansing liquid; the sliding sleeve *r* is then pulled up, causing the water held in the cloth to be squeezed on to the floor and the cloth being taut round the half-wheel or segment *j* the brush *c* may be unrestrictedly used. The sliding sleeve *r* is then pushed down, when the cloth *s* forms a mop under the brush *c*. After mopping the floor one movement of the sliding sleeve *r* wrings the cloth and one movement in the other direction forms the cloth into a mop, as previously set forth.

- 20 To prevent the cloth from buckling when being drawn back a raised piece or platform 10 is provided (see Fig. 3) on the back end of the periphery of the half wheel or segment, upon which the bottom roller rests free of the cloth each time it is in use on the floor.

- 25 What I claim as my invention, and desire to secure by Letters Patent, is:—

1. In a device for cleansing floors and the like, the combination of a handle provided with a bracket, a roller mounted on said bracket, and a movable half wheel or segment pivoted in said bracket and provided with means for fastening a mop thereto, a sleeve, and means attached to the sleeve for moving said segment in contact with said roller, thereby squeezing the mop, substantially as described.

- 35 2. In a device for cleansing floors and the like, the combination of a handle, a spring controlled bracket thereon carrying a roller, a movable half wheel or segment pivoted in said bracket and provided with means for fastening a mop thereto and a sleeve sliding on said handle and connected to said segment, substantially as described.

- 40 3. In a device for cleansing floors and the like, the combination of a handle, a bracket supported thereon, a roller journaled therein, a pivotally supported half-wheel or segment having means for securing a mop thereto, said segment being provided with edge flanges between which said roller is adapted to enter, a sliding sleeve on said handle, and connections between said sleeve and said segment, substantially as described.

- 45 4. In a device for cleansing floors and the like, the combination of a handle, a bracket secured to said handle, a squeezing roller loosely journaled in said bracket, a half-wheel or segment pivotally mounted on said bracket and having means for securing a mop thereto, said half-wheel being provided with side flanges or edges between which said roller is adapted to enter, and also with a slot for receiving one edge of the mop, a sleeve adapted to slide on said handle, and pivoted connections between said sleeve and half-wheel, substantially as described.

- 50 5. In a device for cleansing floors and the like, the combination of a handle a bracket, a movable half-wheel or segment having means for securing a mop thereto and pivotally supported in said bracket, a second bracket mounted within said first named bracket, a roller having an axle projecting through slots in both of said brackets, and means for operating said half-wheel or segment to squeeze the mop carried thereby, substantially as described.

- 60 6. In a device for cleansing floors and the like, the combination of a handle, a bracket carried thereby, a movable half-wheel or segment pivotally mounted on said bracket and having means for securing a mop thereto, a second bracket mounted within said first named bracket, spring

supports for said second named bracket, means for adjusting the tension of the spring in said supports, a roller loosely journaled in both of said brackets, and means for operating said half-wheel, substantially as described.

- 75 7. In a device for cleansing floors and the like, the combination of a handle, a bracket, a roll a movable half-wheel or segment pivotally mounted on said handle and adapted to carry a mop, said half-wheel being provided with side flanges and also with a slot for receiving the mop, a movable toothed portion adapted to be moved along said half-wheel to engage and hold the mop, means for securing said movable part in any desired position, and means for operating said half-wheel, substantially as described.

- 80 8. In a device for cleansing floors and the like, the combination of a handle, a bracket carried thereby, a roller journaled in said bracket, a movable half-wheel or segment pivotally supported on said bracket and provided with side flanges, and a slot through which the mop may be passed, means for securing the mop in said slot, said half-wheel being wider than said roller so that the latter may come in between the flanges of said half-wheel, and means for operating said half-wheel, substantially as described.

- 85 9. In a device for cleansing floors and the like, the combination of a handle, a bracket supported thereon, a half-wheel or segment pivotally mounted on said bracket, said half-wheel being provided with side flanges, a slot to receive the mop, and a raised piece, means carried by said segment for securing a mop in said slot and against said raised piece, a spring supported bracket located within said first named bracket, a roller loosely journaled in both of said brackets, and means for operating said half-wheel, substantially as described.

- 90 10. In a device for cleansing floors and the like, the combination of a handle, a bracket supported thereon, and a movable half-wheel or segment pivotally mounted on said bracket and provided with side flanges, a slot, a raised piece, and means for securing a mop to said half-wheel, a second spring supported bracket located within said first named bracket, a roller loosely journaled in both of said brackets and of such a length that it may enter between the side flanges of the said half-wheel, chains each adapted to be supported by said first named bracket at one end, and to be fastened to the mop at the other end, and means for operating said half-wheel to squeeze the mop carried thereby, substantially as described.

- 95 11. In a device for cleansing floors and the like, the combination of a handle, a bracket carried thereby, a movable half-wheel or segment pivotally supported by said bracket and provided with means for securing a mop thereto, and with side flanges, a spring supported bracket located within said first named bracket, a roller loosely journaled in both of said brackets of such a length that it will pass between the side flanges of the half-wheel, a sleeve slidably mounted on said handle, and rigid pivoted connections between said sleeve and said half-wheel, substantially as described.

- 100 12. The combination in a device for cleansing floors and the like, of a handle having at its lower end a forked bracket to the lower end of which a brush is removably secured, with a swabbing and drying device consisting of an inner forked bracket, a roller turning on a bearing movable in slots in the outer and inner forked brackets, and a half-wheel or segment turning upon a center passing through the outer forked bracket, and a sleeve sliding upon the handle and connected by a rod with an arm upon the half-wheel or segment, a cloth or swab one end of which is attached to the half wheel or segment, while its loose part is compressed between the circumference of the segment and the roller, all substantially as set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JAMES EDWIN GEE.

Witnesses:

ARTHUR E. EDWARDS,
ALFRED T. BRATTON.