4 Sheets--Sheet 1.

B. EDGAR.

Improvement in Washing-Machines.

No. 130,848. Patented Aug. 27, 1872.

Fig. 1.

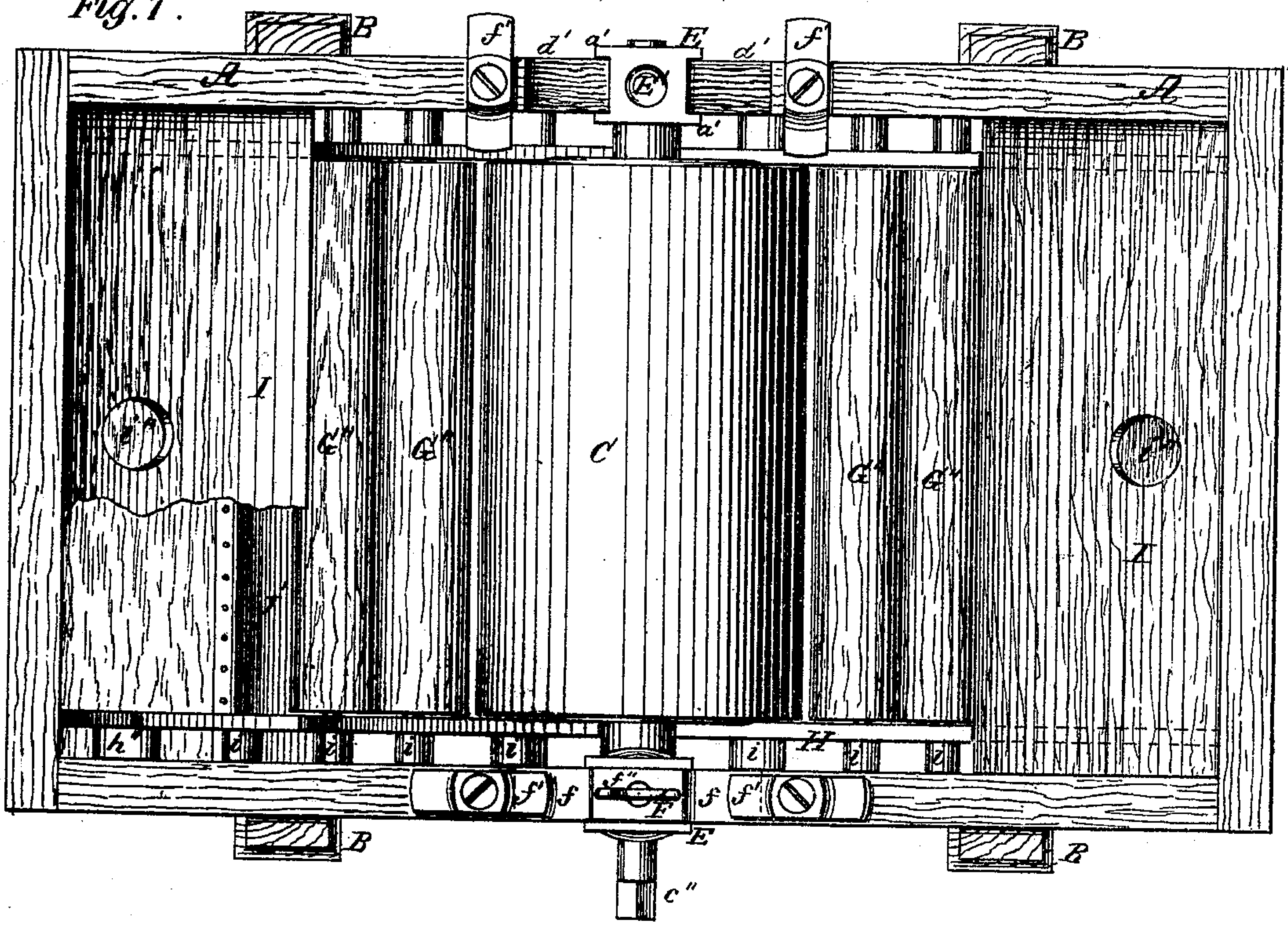
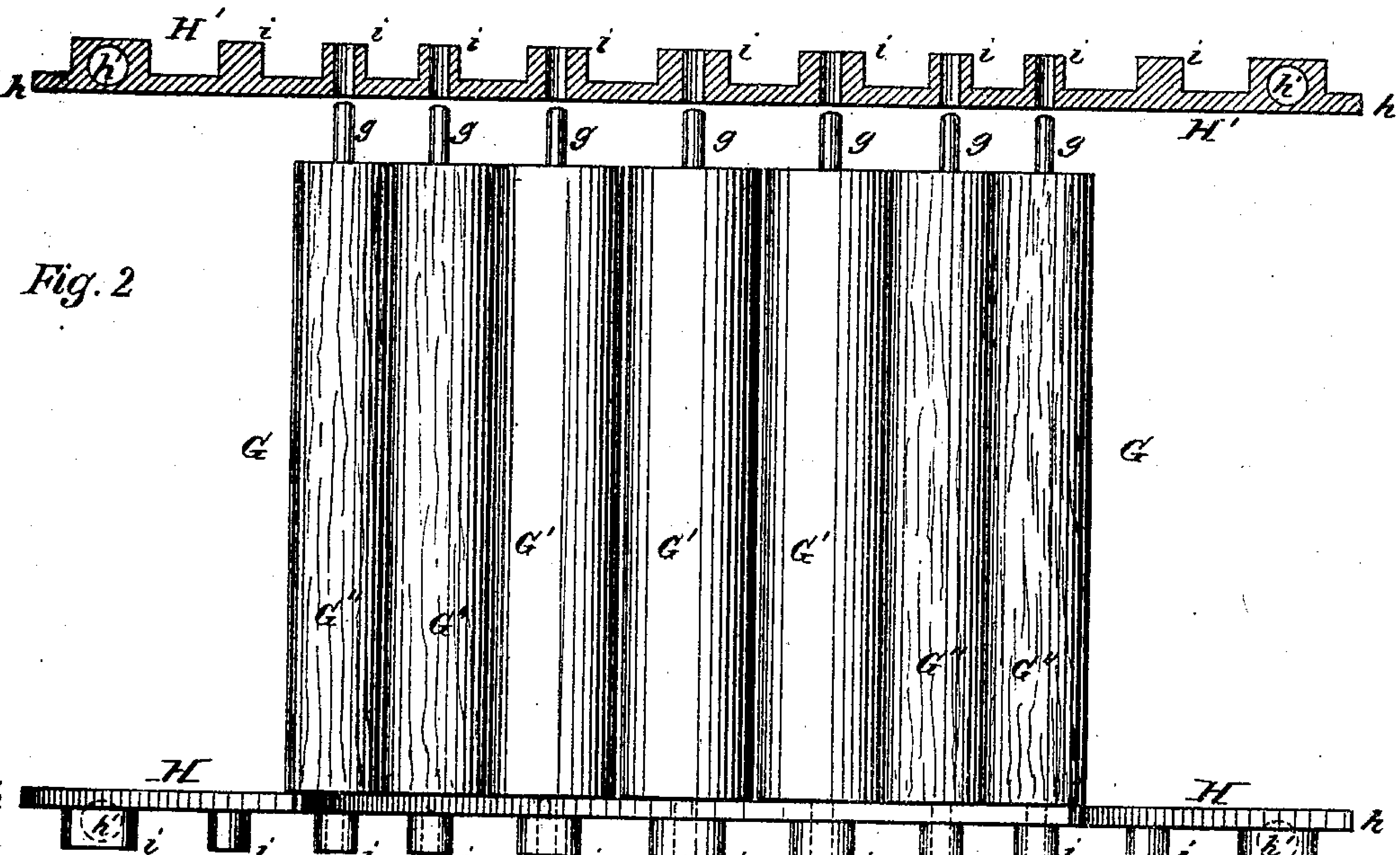


Fig. 2



Witnesses:

Inventor: by

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B. EDGAR.

Improvement in Washing-Machines.

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Fig. 3.

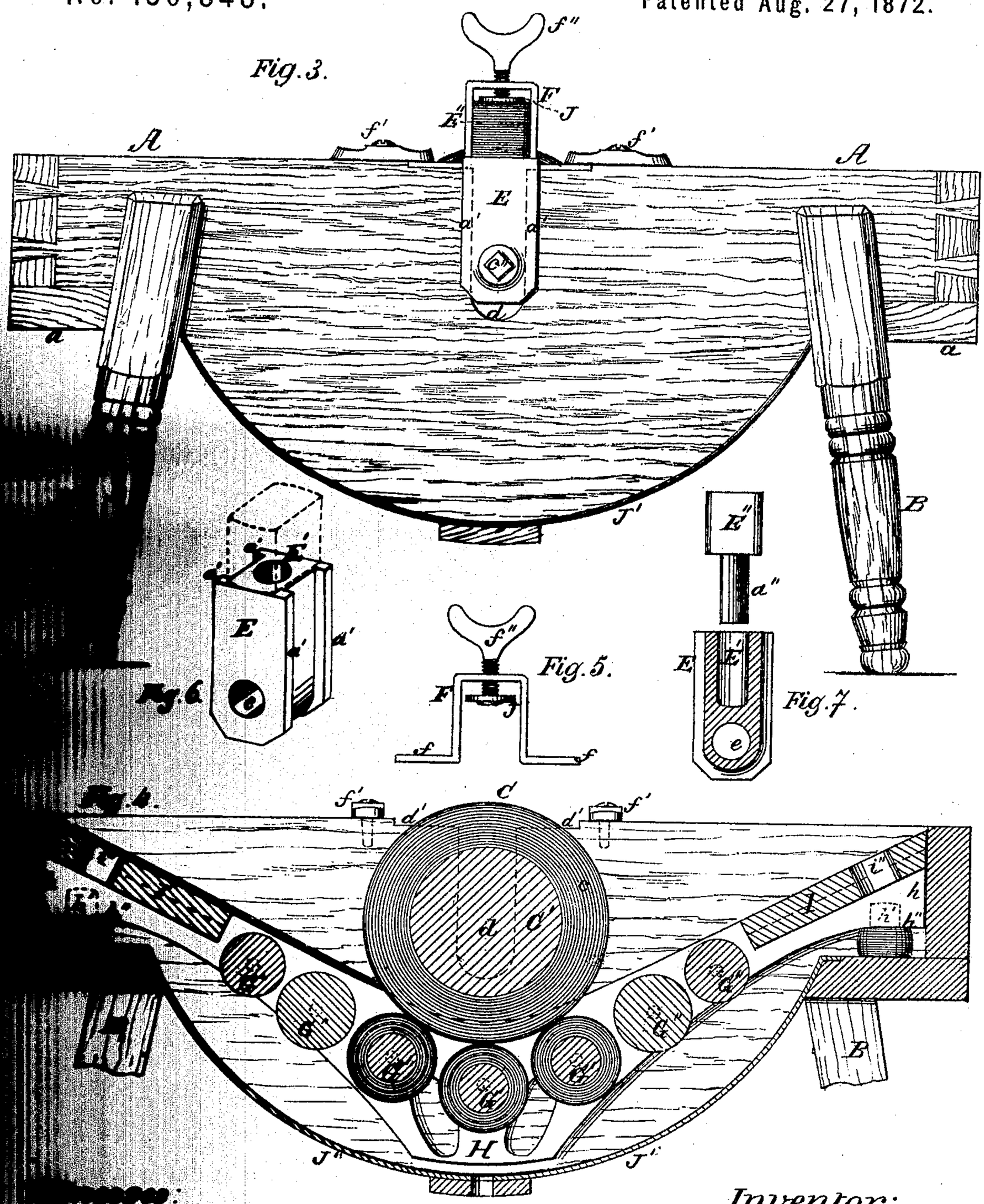

Fig. 4.

Fig. 5.

Fig. 7.

Fig. 6.

Witnesses:

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Frank Hurley

Inventor:

Butler Edgar by

Gunn his

Attorney

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B. EDGAR.

Improvement in Washing-Machines.

Patented Aug. 27, 1872.

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Fig. 12.

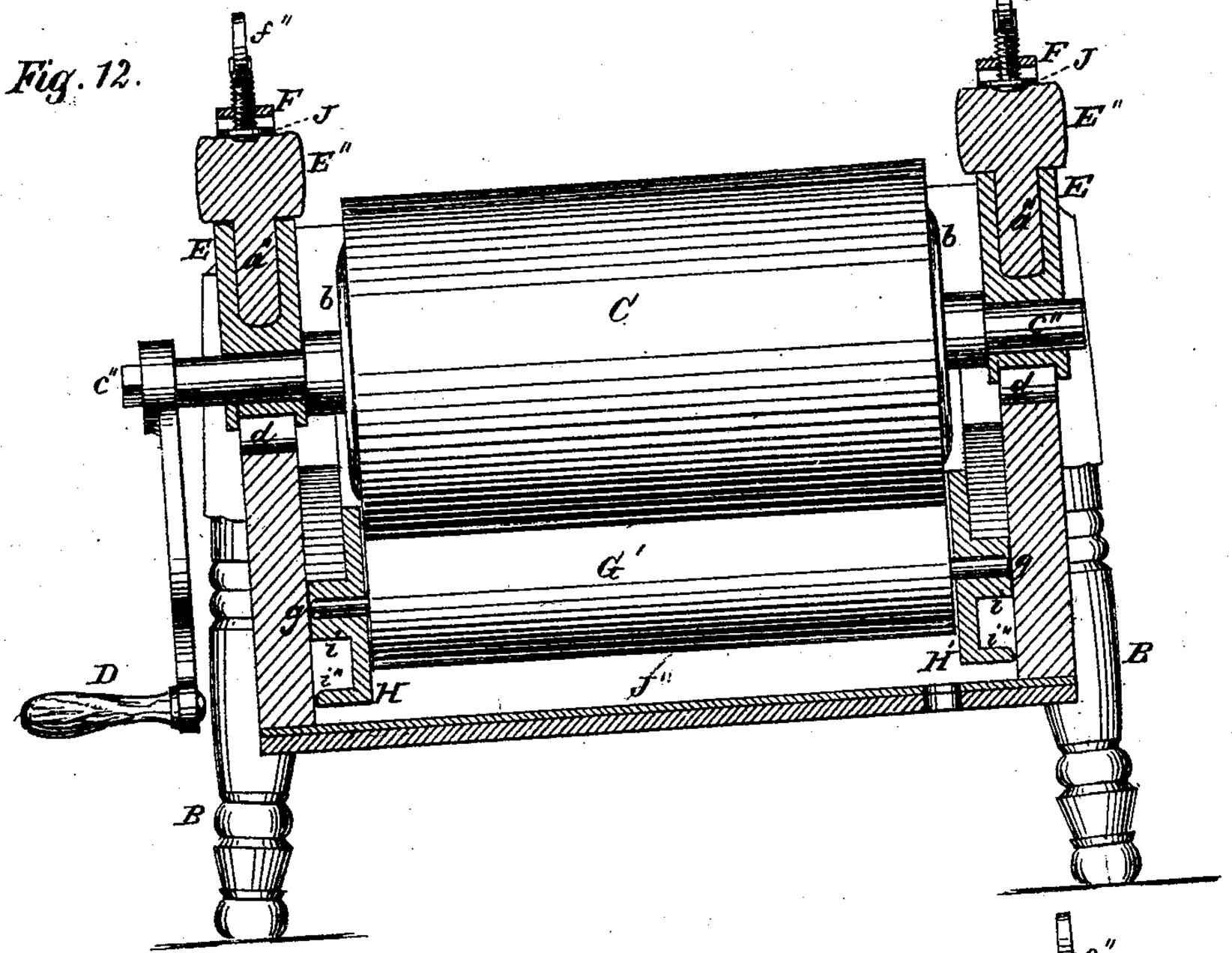

Fig. 13.

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B. D. Upham
Frank Hurley

Inventor:
Butler Edgar
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his Attorney

UNITED STATES PATENT OFFICE.

BUTLER EDGAR, OF ESPY, PENNSYLVANIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **130,848**, dated August 27, 1872.

I, BUTLER EDGAR, of Espy, Columbia county, State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification:

The object of my invention is: First, so to construct a machine that its action shall under all circumstances be vertical, uniform, and self-adjusting. Second, that whether the clothes or articles to be operated upon be run through it in large or small quantities of even or uneven surface, whether through the center or on the side of the machine, they shall be thoroughly cleansed. Third, so to construct a machine that, with the exception of the exterior frame or box, it shall be so put together, and its various parts so maintained in position, as not to be liable to get out of repair, yet can be taken apart, cleaned, and adjusted without drawing nails or screws. Fourth, it consists of vulcanized India-rubber and wooden rollers, rubber springs, metal concave frames or ribs, and metal sliding boxes, so combined as to produce the foregoing results, which will be more fully shown by the accompanying drawing.

Figure 1 is top view of a machine embodying my invention. Fig. 2 is a floor or system of rollers with the frames or ribs detached in which they work. Fig. 3 is a side view of the machine. Fig. 4 is a central longitudinal section of a machine when in working order, showing the positions of the large and small India-rubber rollers, the wooden rollers, the shape of the frames or ribs, and cushions or springs on which the frames or ribs rest. Figs. 5, 6, 7, 8, 9, 10, and 11 are details of Fig. 4. Fig. 12 is a cross-section of a machine in working order, showing the large roller in contact with the small rollers beneath, and crank by which the former is revolved. Fig. 13 is an end view, showing the ends or terminuses of the frames or ribs and cushions or springs on which they rest.

General Description.

A A, Fig. 3, is the exterior frame of the machine, constructed of cheap, sound boards, dovetailed at the ends, the upper surface straight, about three feet long, about eighteen inches wide, the lower surface concave in the direction of its length, with shoulders or extensions *a a* about six inches long in the same direction. The depth of the frame at the center or greatest depression of the concave about one foot. The inner and outer concaves of the machine are lined with some cheap metal. B B are common wooden legs about two and a half feet long, on which the machine rests, placed under the shoulders or extensions *a a*, and fastened to the frame A A at either corner, as shown in Fig. 3. C, Fig. 12, is the main roller, of straight surface, about seven inches in diameter, and, with the exception of a wooden center piece, hereafter described, is made of vulcanized India rubber, a transverse section of which, *c c*, is seen in Fig. 4, and a longitudinal section *c c* in Fig. 10. Through the center of this roller, as above, passes a center piece of wood, *c' c'*, Figs. 4 and 10, for the purpose, and to either end of which are fastened gudgeons *c'' c''* by means of the flanges *b b*, Fig. 10, on which the roller C is revolved by the crank D, as seen in Fig. 12. The gudgeons *c'' c''* are elongated on the inside of the flanges *b b*, and fitted into the sockets *b' b'* in the wooded center piece *c' c'* one-half or three-fourths of an inch, in order to preserve an exact central as well as firm motion to the main roller C, Fig. 10, and in case of strong pressure to prevent or resist the tendency to loose the fastenings of the gudgeons, whereby a wabbling unsteady motion would be given to the main roller C, thereby materially impairing, if not quite destroying, its utility, and consequently that of the machine. The gudgeons *c'' c''*, flanges *b b*, and elongations *b' b'* being of one piece and solid, may be manufactured of any suitable cheap metal. The length of the wooden center piece *c'* is somewhat shorter (*d''*, Fig. 10) than the surrounding rubber *c c*, so that the rubber *c c* is horizontally compressed, when the metal flanges *b b* are firmly fastened to the ends of the wooden center piece *c' c'*, whereby the full power of the elastic flexible nature of the said rubber is obtained. Said center piece may be fluted or diamond-shaped on the surface covered by the rubber, to prevent the rubber from sliding. E E, Figs. 3, 6, and 7, are two sliding metal boxes about six inches long, two inches thick, and four inches wide,

ing the expense as well as the inconvenience of two machines; or, by the simplest conversion, making one machine do the work of two.

Claim.

I claim—

The main roller C and small rollers G′ G′ G′, as constructed, acting upon each other, as specified, in combination with the metal sliding boxes E E, rubber springs E″ E″, metal staples or stirrups F F, thumb-screws *f′ f′*, metal concave frames or ribs H H, rubber springs or cushions *h″ h″*, and end boards I I, embodying the construction of a machine whose action shall be vertical and uniform, however the power may be applied, as and for the purpose specified.

BUTLER EDGAR.

Witnesses:
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WILLIAM RUPERT.

G. EDWARDS.

Improvement in Apparatus for Feeding the Charge to Metallurgic Furnaces.

No. 130,849. Patented Aug. 27, 1872.

Fig. 1

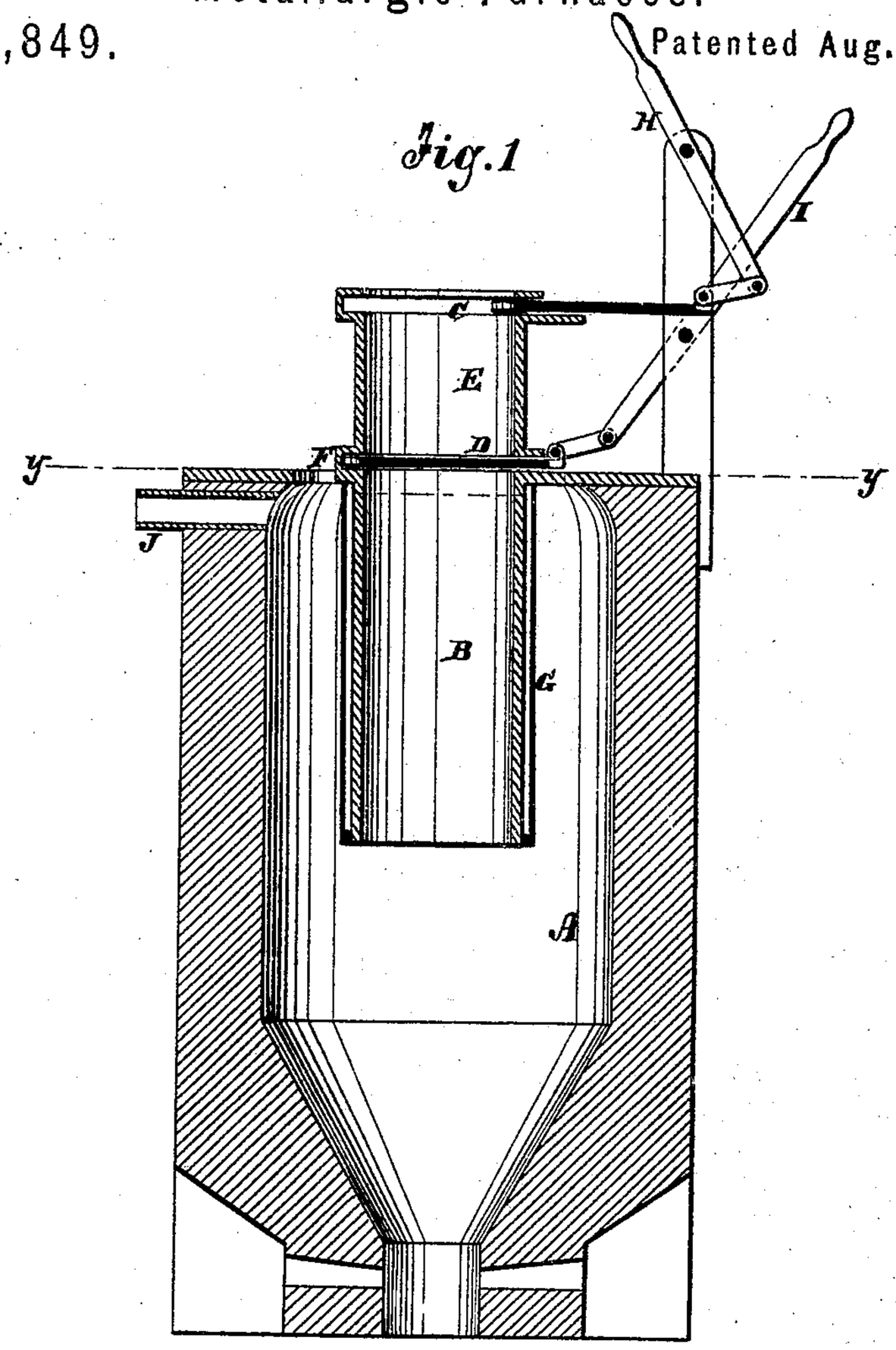
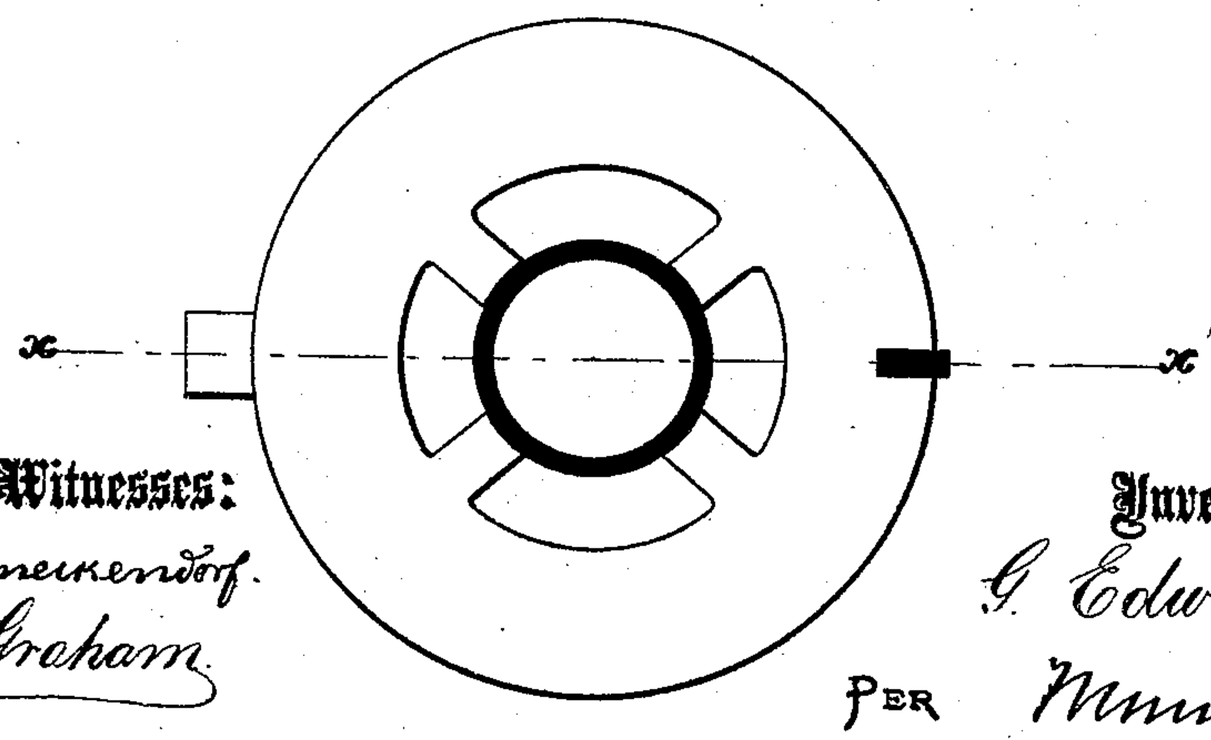


Fig. 2.



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