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K. BECKER.

COOKING APPARATUS.

No. 471,374. Patented Mar. 22, 1892.

Fig. 1.

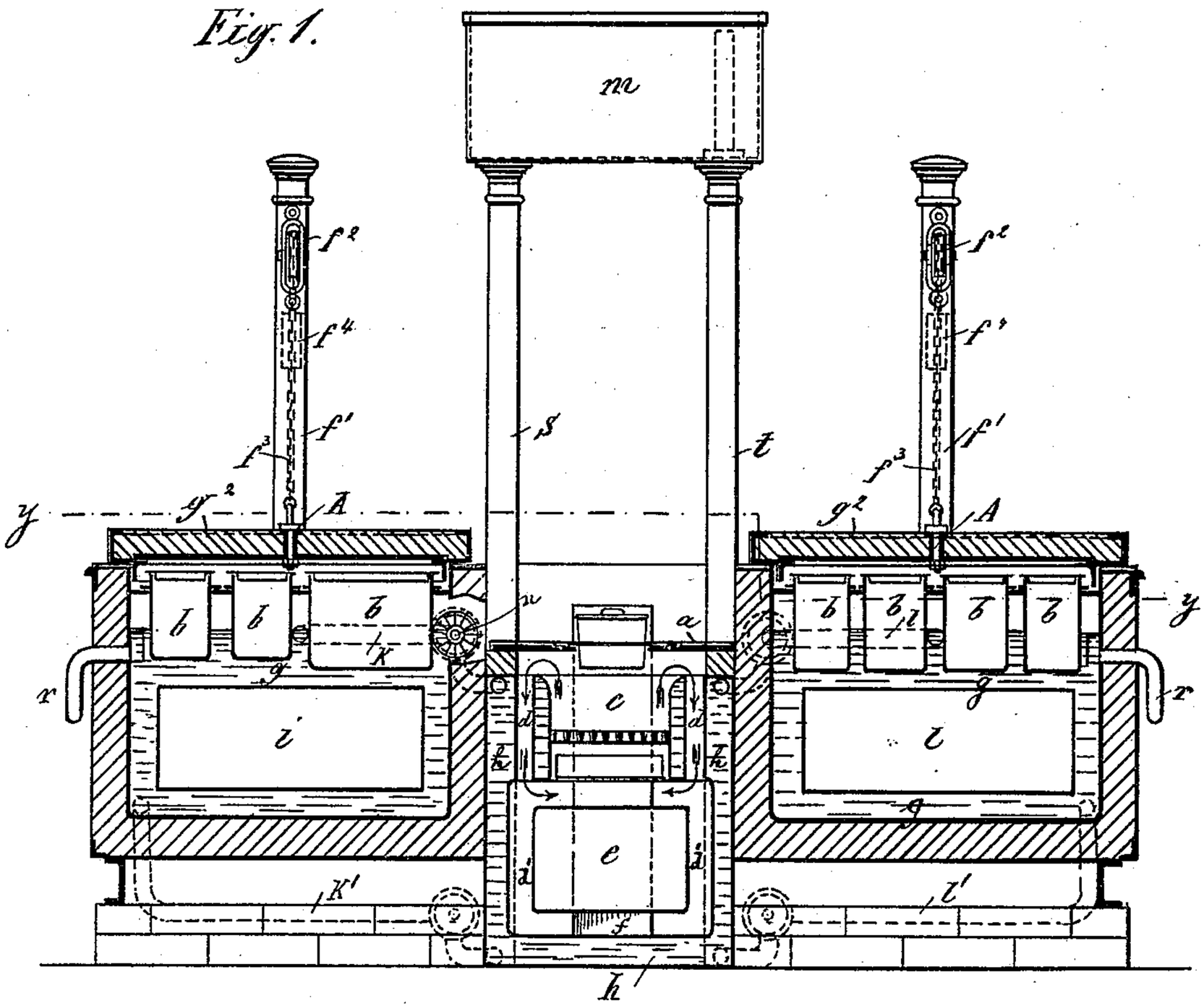
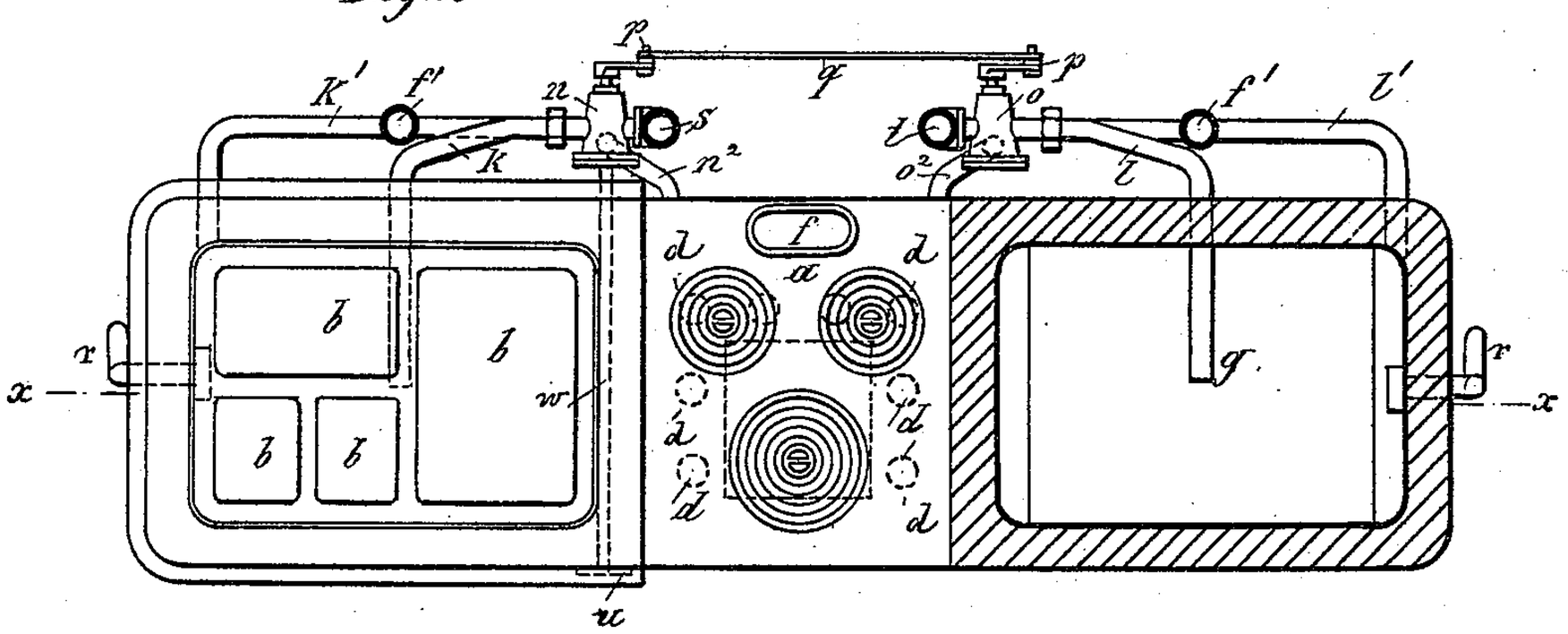


Fig. 2.



Witnesses:
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A. Boughmans.

Inventor:
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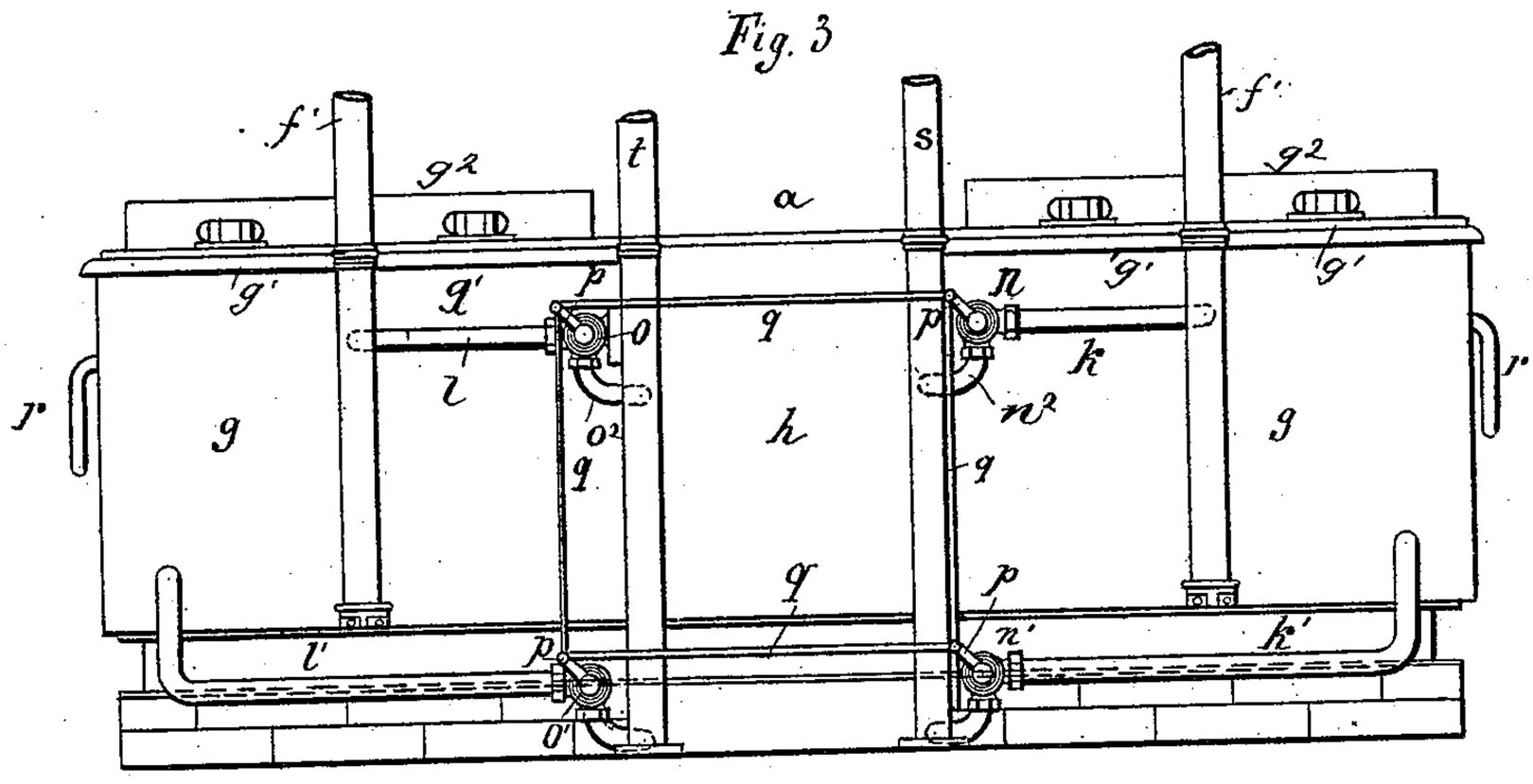
Fig. 3



Witnesses:
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Ed. P. Weldon

Karl Becker Inventor
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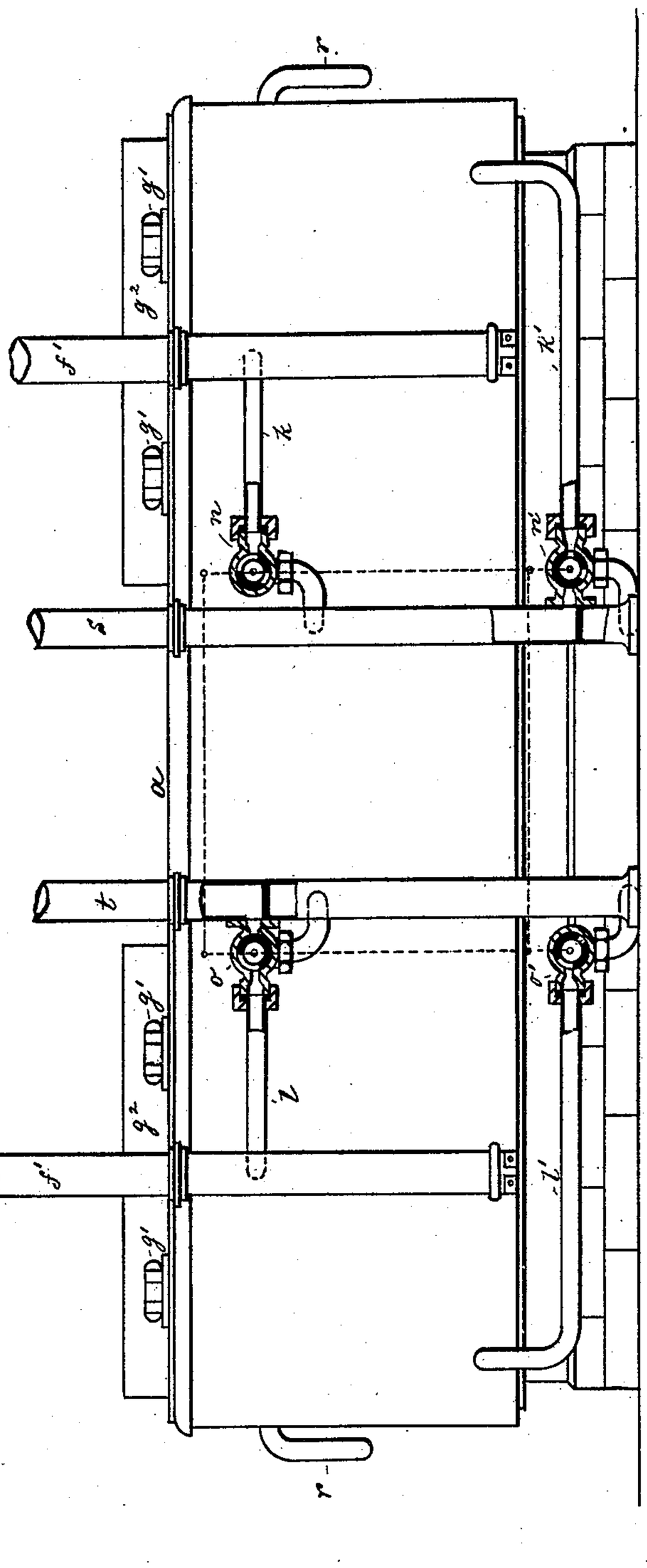

Fig. 4.

Witnesses:
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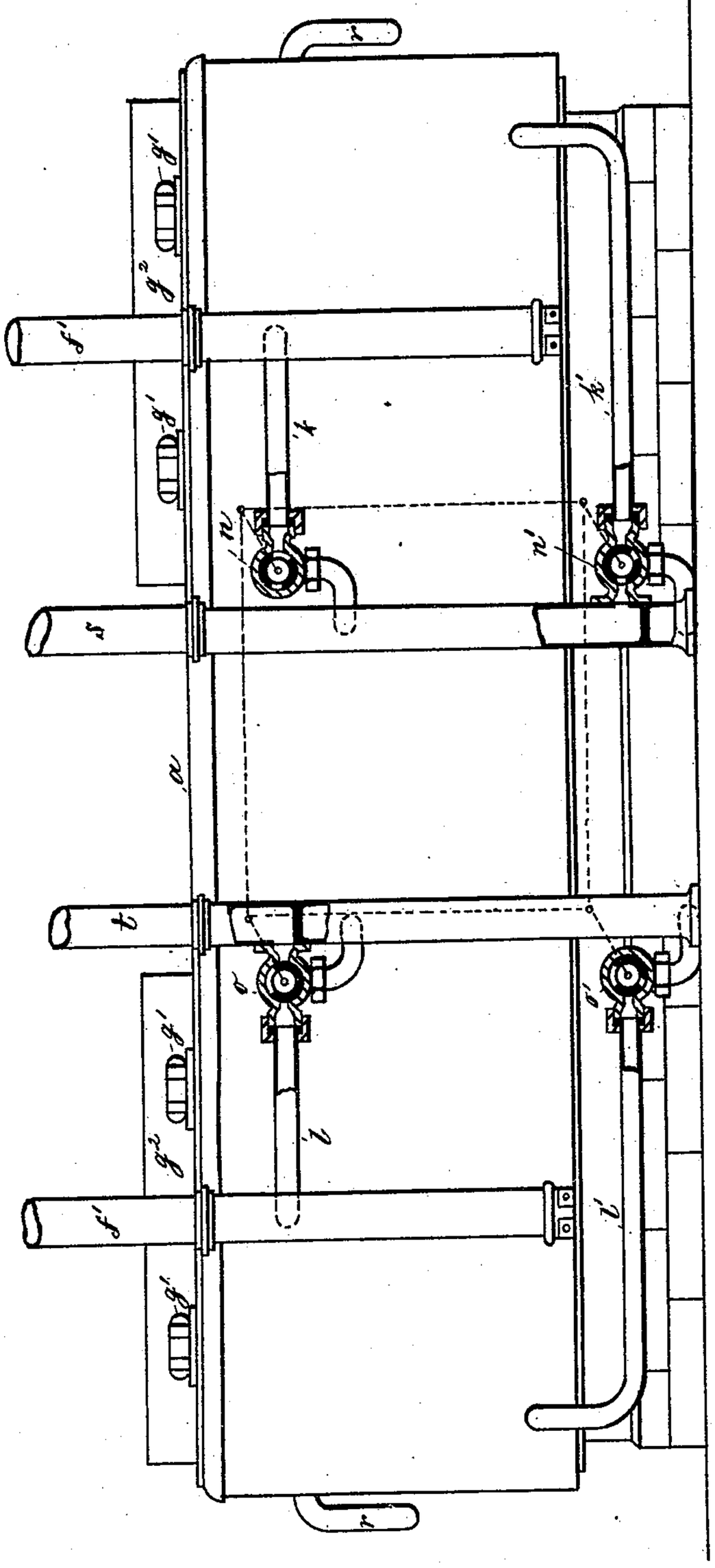

Fig. 5.

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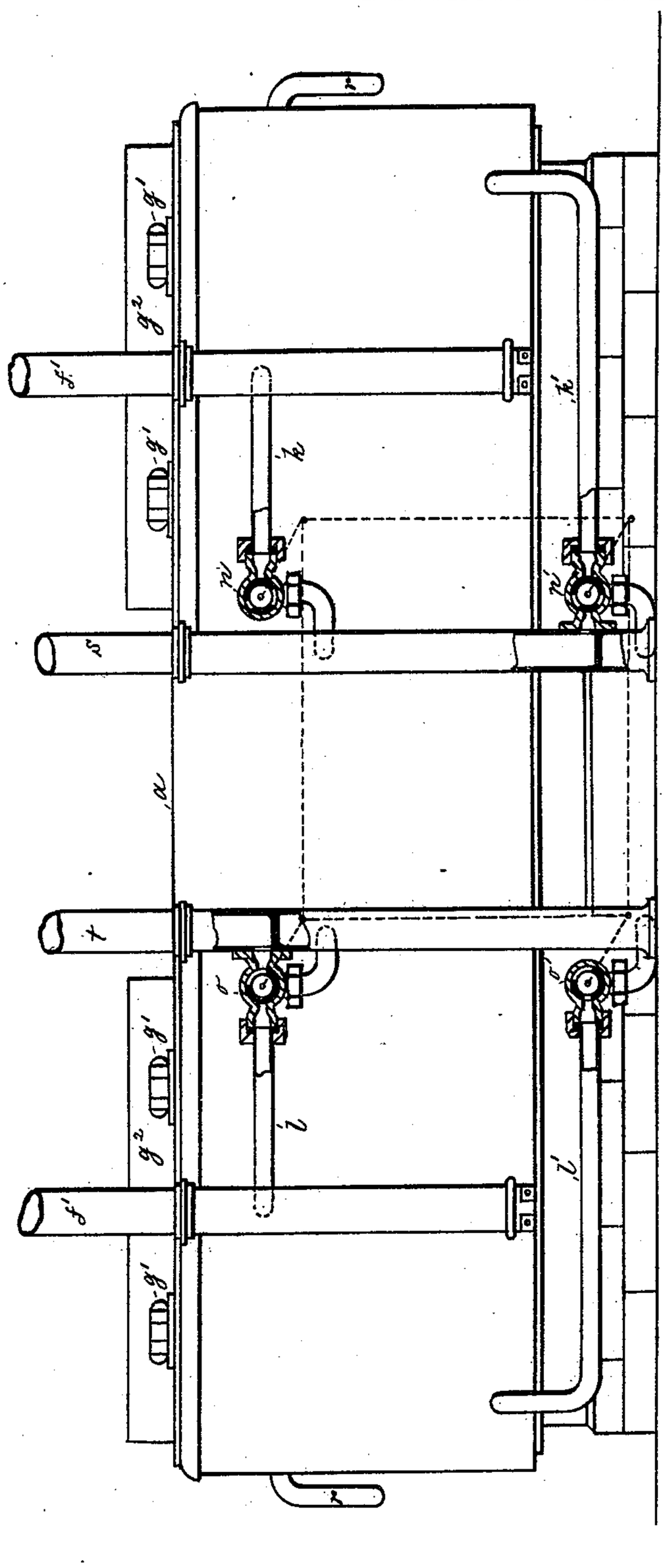

Fig. 6.

Witnesses:
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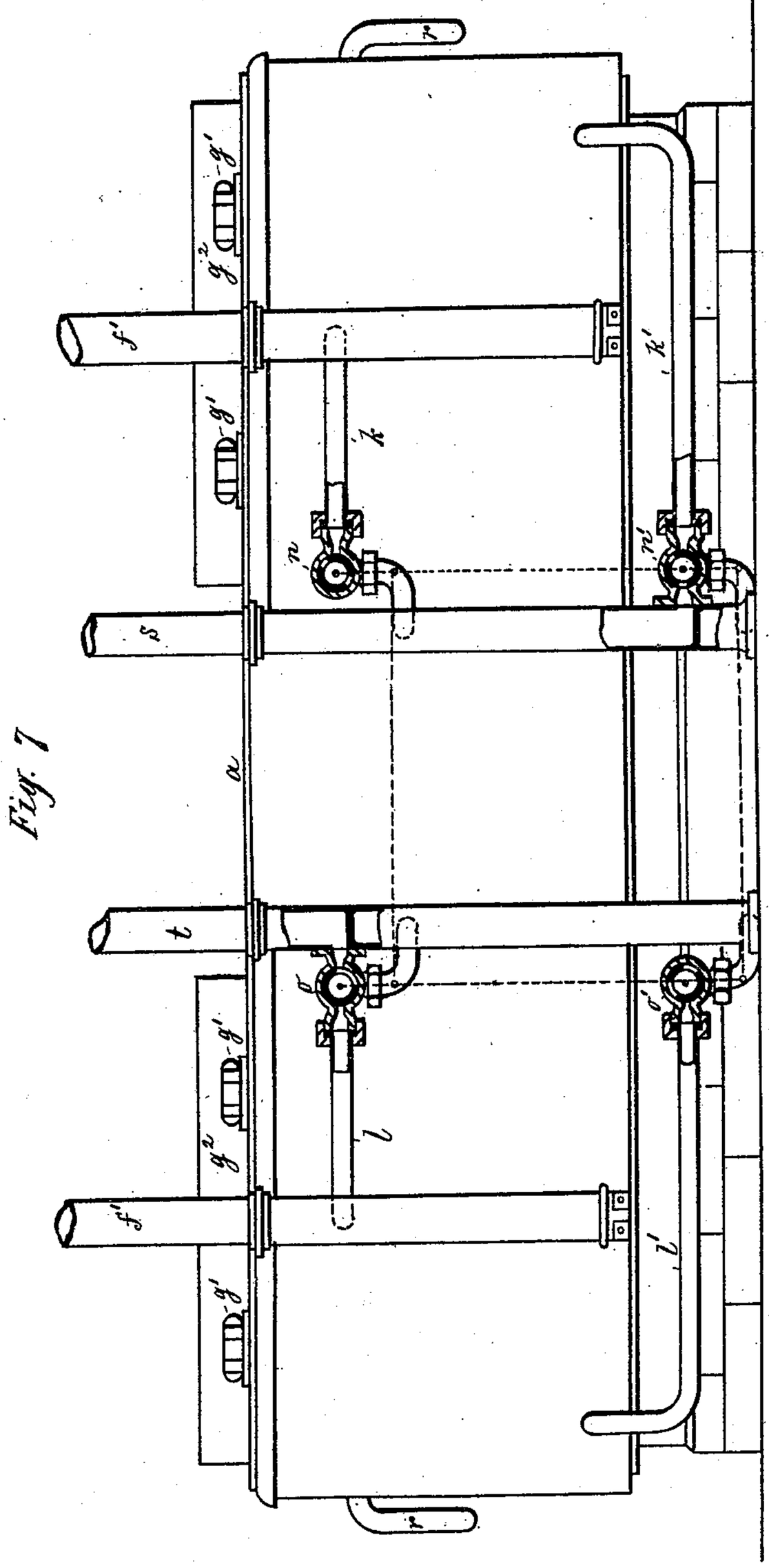

Fig. 7

Witnesses:
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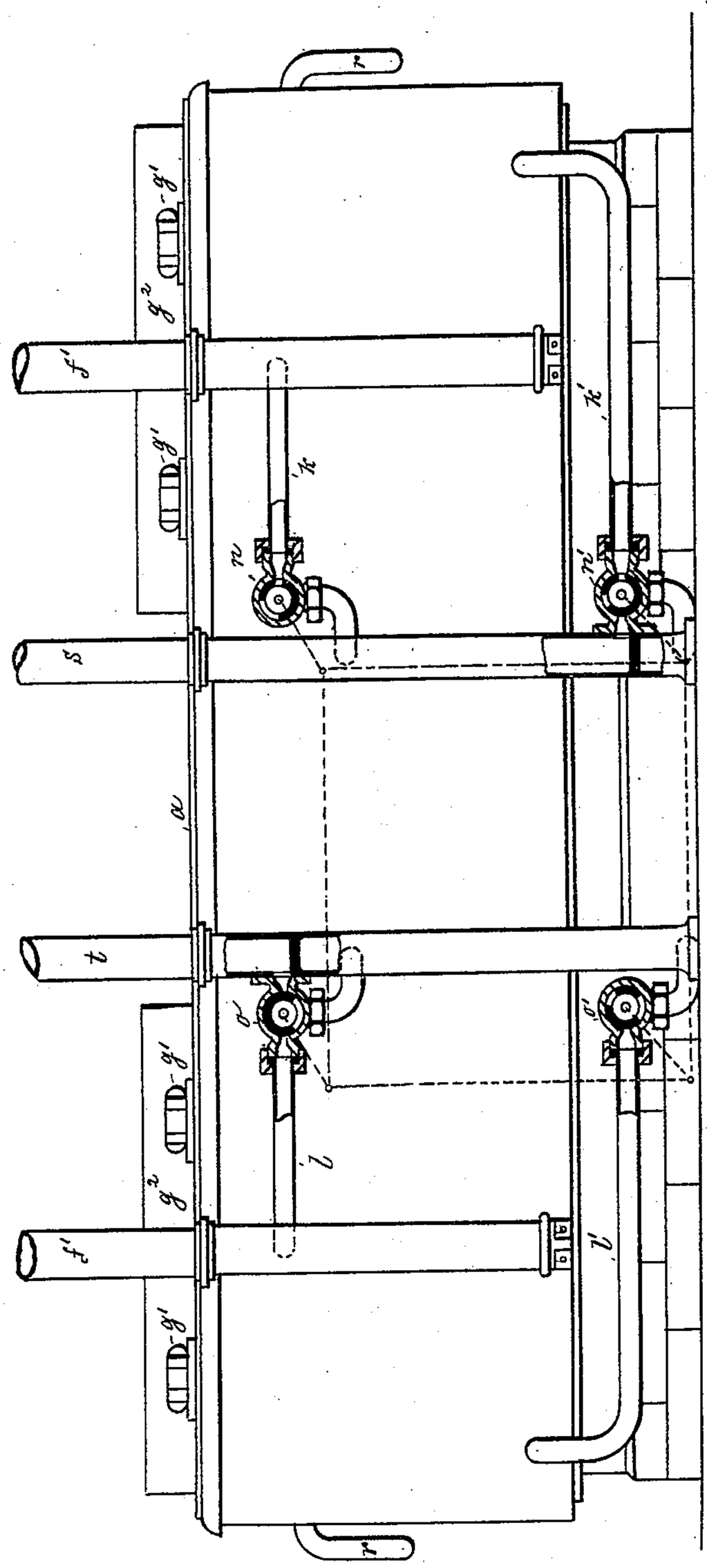

Fig. 8.

Witnesses:
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Roeder & Brienen

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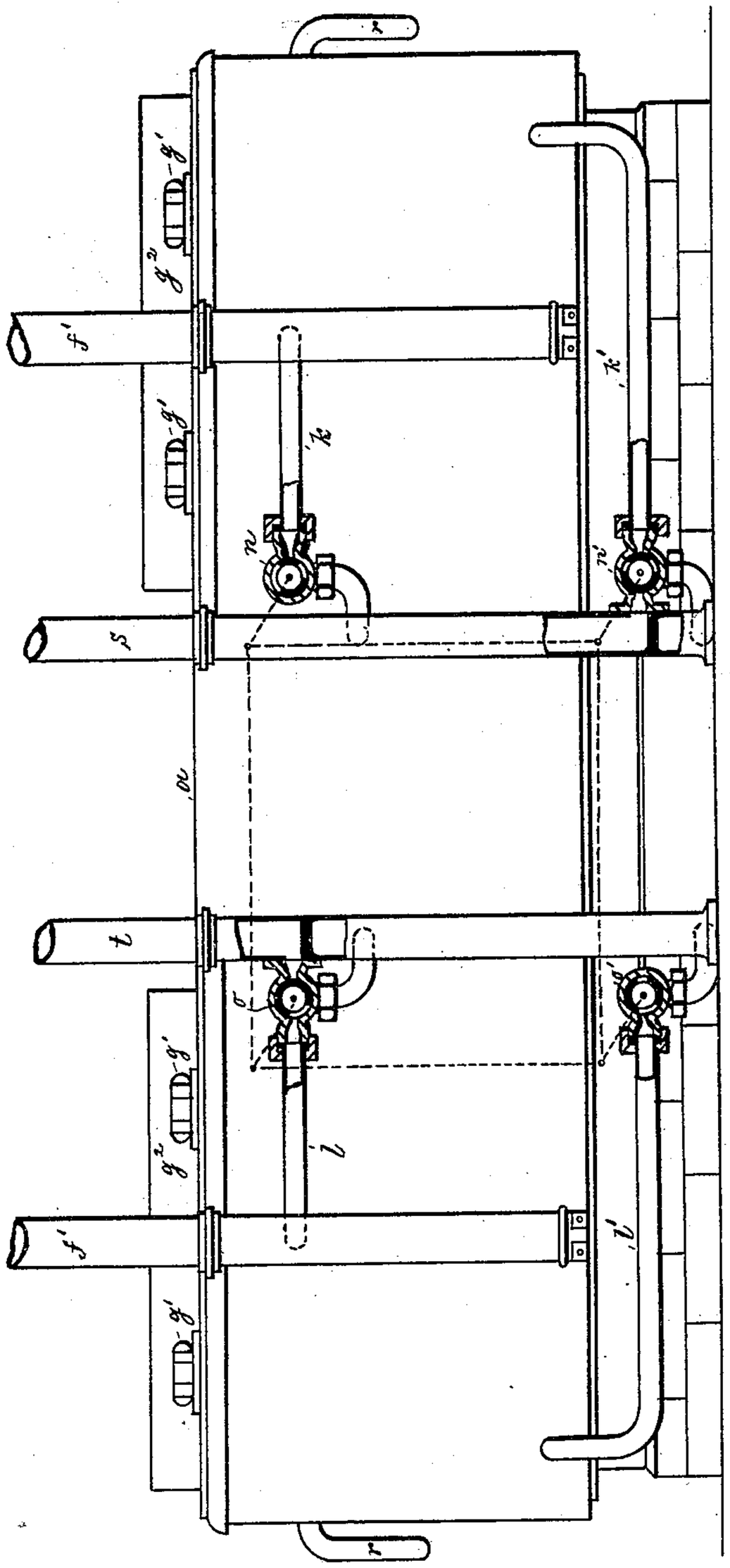

Fig. 9.

Witnesses:
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Inventor:
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(No Model.) 9 Sheets—Sheet 9.

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COOKING APPARATUS.

No. 471,374. Patented Mar. 22, 1892.

Fig. 12.

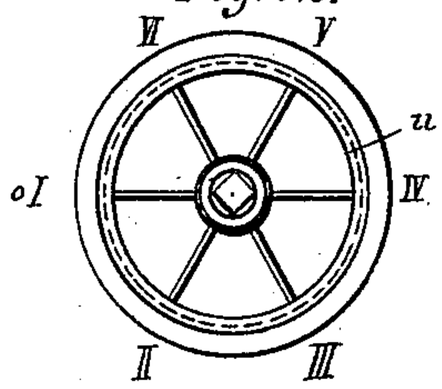


Fig. 11.

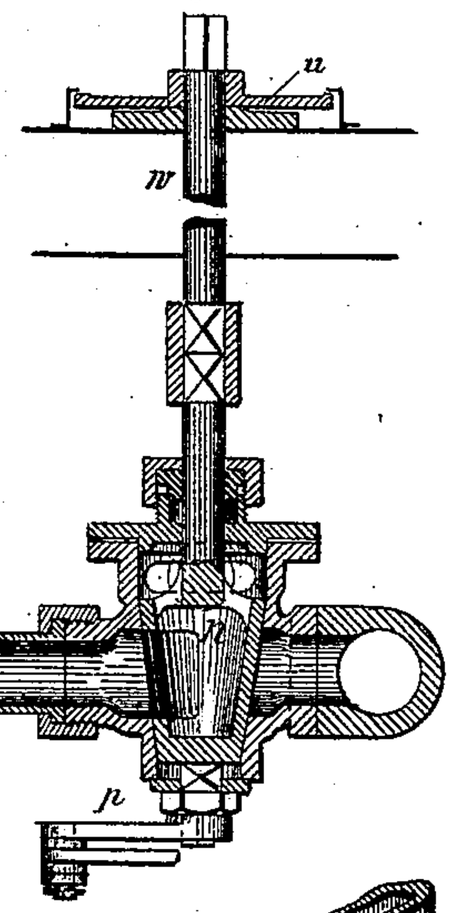
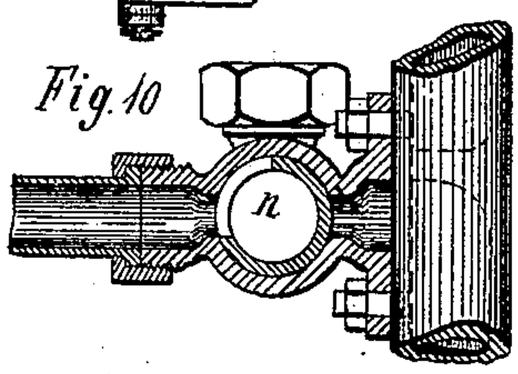


Fig. 10



Witnesses:
Janet Patterson
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UNITED STATES PATENT OFFICE.

KARL BECKER, OF BERLIN, GERMANY.

COOKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 471,374, dated March 22, 1892.

Application filed June 4, 1888. Serial No. 276,057. (No model.)

To all whom it may concern:

Be it known that I, KARL BECKER, of Berlin, Germany, have invented an Improved Cooking Apparatus, of which the following is a specification.

This invention relates to an improved cooking apparatus in which the cooking is effected by steam or water bath.

The invention consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of my improved cooking apparatus on line *x x*, Fig. 2; Fig. 2, a horizontal plan, partly in section, on line *y y*, Fig. 1, but with the right-hand cover g^2 and vessels *b* removed; Fig. 3, a rear view of the apparatus. Figs. 4 to 9 are sections through the water-controlling cocks, showing them in different positions. Figs. 10 to 12 are details of the graduated disks *u* and the cocks.

The letter *h* represents a boiler placed centrally in a range and having both a water-supply and a water-discharge, which are hereinafter more fully described. The water-discharge carries the water to a pair of water-boxes *g*, inclosing ovens *i* and provided on top with flanged or plain pot-holes for the reception of the cooking utensils *b*. To the boxes *g* there are connected by hinges *g'* lids or weighted covers g^2, that may be swung down upon the vessels *b*, so as to hold them down in the water.

From the rear of the apparatus there projects upwardly at the center of each lid a hollow post *f'*, carrying a pulley f^2. Over this pulley runs a rope or chain f^3, that is attached at one end to the lid g^2 and carries at its other end a weight f^4, inclosed within hollow post *f'*. The weight f^4 thus constitutes a counter-weight for the lid and facilitates the raising and lowering of the same. Within the boiler *h* there is inclosed the fire-place *c*, and also an oven *e* beneath the fire-place.

At each side of the fire-place *c* and at the back thereof there are placed three (more or less) downtakes or flues *d*. Two of these flues are shown in section in Fig. 1, while all the flues are indicated by dotted circular lines in Fig. 2. The flues *d* enter on top the hot-air space beneath the top plate *a* of the stove, and thus communicate with the fire-place *c*. At the bottom the flues *d* communicate with a heating-space *d'*, encircling oven *e* and communicating in turn with a flue *f*, that passes through the boiler *h* and enters the chimney. The products of combustion travel from the fire-place *c* first under the top plate *a*, thence down the flues *d* into the heating-space *d'* to heat oven *e*, and thence to the exit *f* into the chimney.

The water is fed into the boiler *h* from an elevated tank *m*. Into this tank enter two pipes *s t*, the former opening at the bottom and the latter near the top of the tank. At its lower end the pipe *s* communicates with the socket of a three-way cock *n'*, while the pipe *t* communicates with the socket of a similar three-way cock *o*. Vertically above the cock *n'* there is a two-way cock *n*, while vertically below the cock *o* is a two-way cock *o'*. The sockets of the two upper cocks communicate by pipes n^2 o^2 with the boiler *h*, and the sockets of the two lower cocks communicate with the boiler by similar pipes. (Dotted lines, Fig. 1.) Moreover, the sockets of all four cocks are coupled to laterally-extending pipes *k k' l l'*, Fig. 3, that carry the water from the boiler to the cooking-boxes. All four cock-plugs carry cranks *p*, connected by rods *q*. One of the cocks *n* is connected to a handle *w*, that projects to the front of the stove and by which all four cocks may be simultaneously operated. In order to regulate the position of the cocks, the handle *w* carries a graduated disk *u*, co-operating with a fixed index-finger on the stove. It will be seen that water is from tank *m* admitted through cocks *n' o* into the boiler. Here the water is heated and passes through all four cocks into the cooking-boxes. When, however, by a turn of the cocks the water-boxes *g* are cut off from boiler *h*, then a circulation of hot water will take place through pipes *s t*, cocks *n' o*, and the elevated tank *m*.

The position of the cocks to create the different circulations is shown in Fig. 4 to 9. In Fig. 4 the boiler *h* is connected to the water-boxes *g*, but the tank *m* is cut off. In Fig. 5 the cock *n'* is connected to the tank *m*, but the cock *o* is cut off. In Fig. 6 the cock *o* is connected to the tank *m*, but the cock *n'* is cut off. In Fig. 7 the boiler is connected to the tank *m* alone, while the water-boxes are

cut off. In Fig. 8 the boiler is connected with the left-hand cooking-box *g*, and in Fig. 9 the boiler is connected with the right-hand cooking-box. Above the level of the two uppermost cocks *n o* there enter into the boxes *g* a pair of overflow-pipes *r*. When the water in the boxes has risen to the top or inlet openings of said pipes, it flows out and prevents the apparatus from becoming flooded.

It is evident that in this apparatus a continuous circulation may be kept up, owing to the heating of the water in the boiler and the pressure of the water in the tank. Thus the cooking utensils *b* may be subjected to the heat radiated from a continuously-circulating body of water. The cocks should be opened only sufficiently far to cause the circulation to supply evaporation. Thus the water-level will remain uniform in the water-boxes and flooding will not take place. Should, however, the cocks be opened too far, the water will run out of the overflow, which will be a notice to the attendant to shut the cocks.

What I claim is—

1. The combination of boiler *h* with cocks *n n′ o o′*, pipes *s t*, communicating with a pair of said cocks, cooking-boxes communicating with all of said cocks, and a raised tank communicating with the pipes, substantially as specified.

2. The combination of boiler *h* with the water-boxes *g*, elevated feed-tank *m*, pipes *s t*, and valves *n n′ o o′*, substantially as specified.

3. The combination of boiler *h* with a pair of three-way cocks *n′ o*, pipes *s t*, connected thereto, a pair of two-way cocks *n o′*, pipes *k k′ l l′*, connecting with the cocks and with a tank *m*, and water-boxes *g*, connected to pipes *s t* and *k k′ l l′*, respectively, substantially as specified.

4. The combination of boiler *h* with cocks *n n′ o o′*, cooking-boxes *g*, raised tank *m*, communicating with the boiler, cranks *p* and rods *q* for connecting the cock-plugs and with a handle *w*, and a graduated disk *u* for adjusting said plugs, substantially as specified.

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

KARL BECKER.

Witnesses:
B. ROI,
G. HÜLSMANN.