

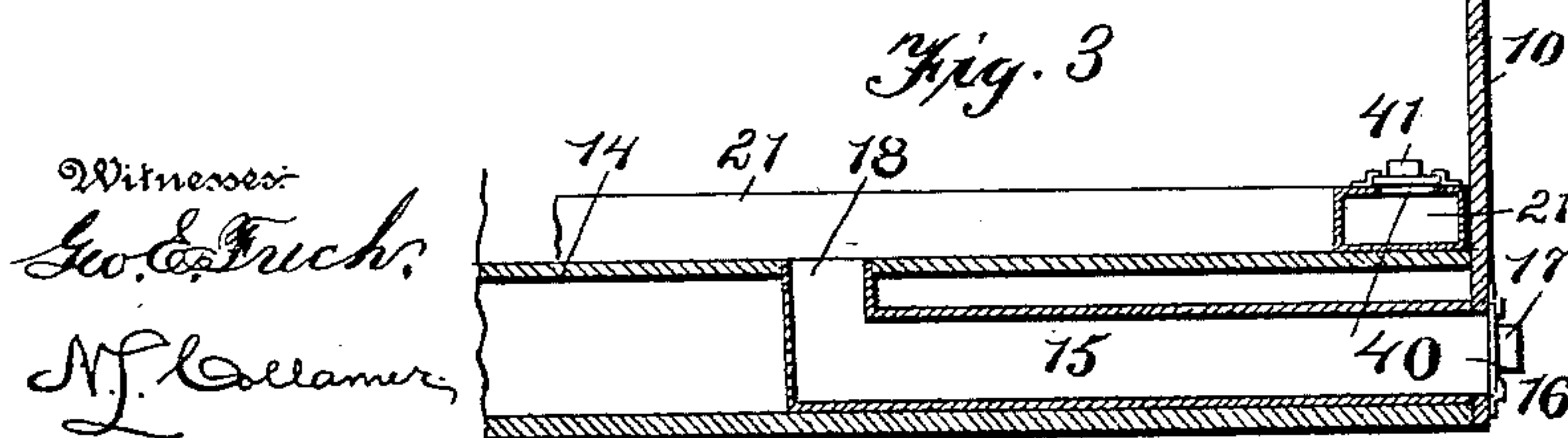
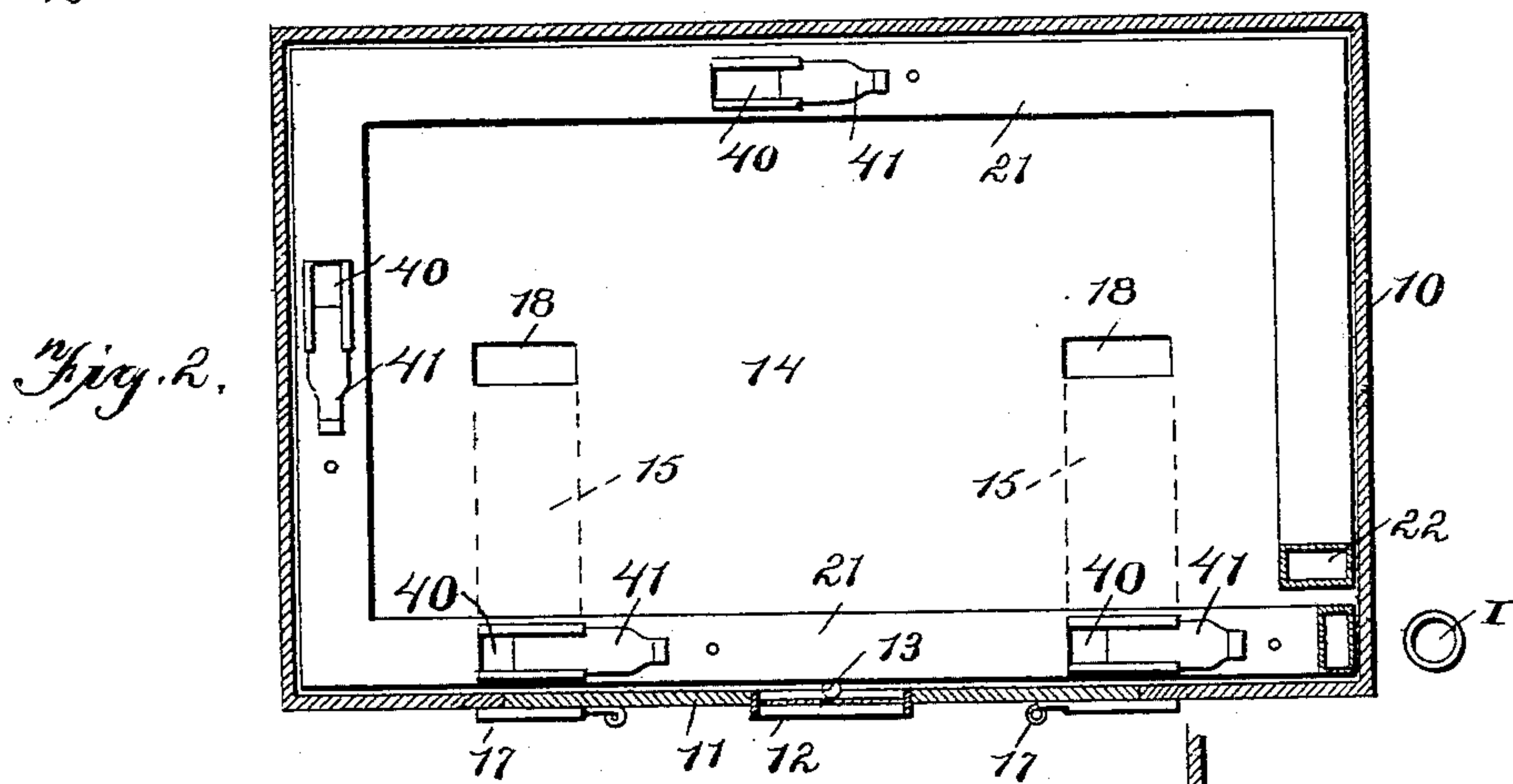
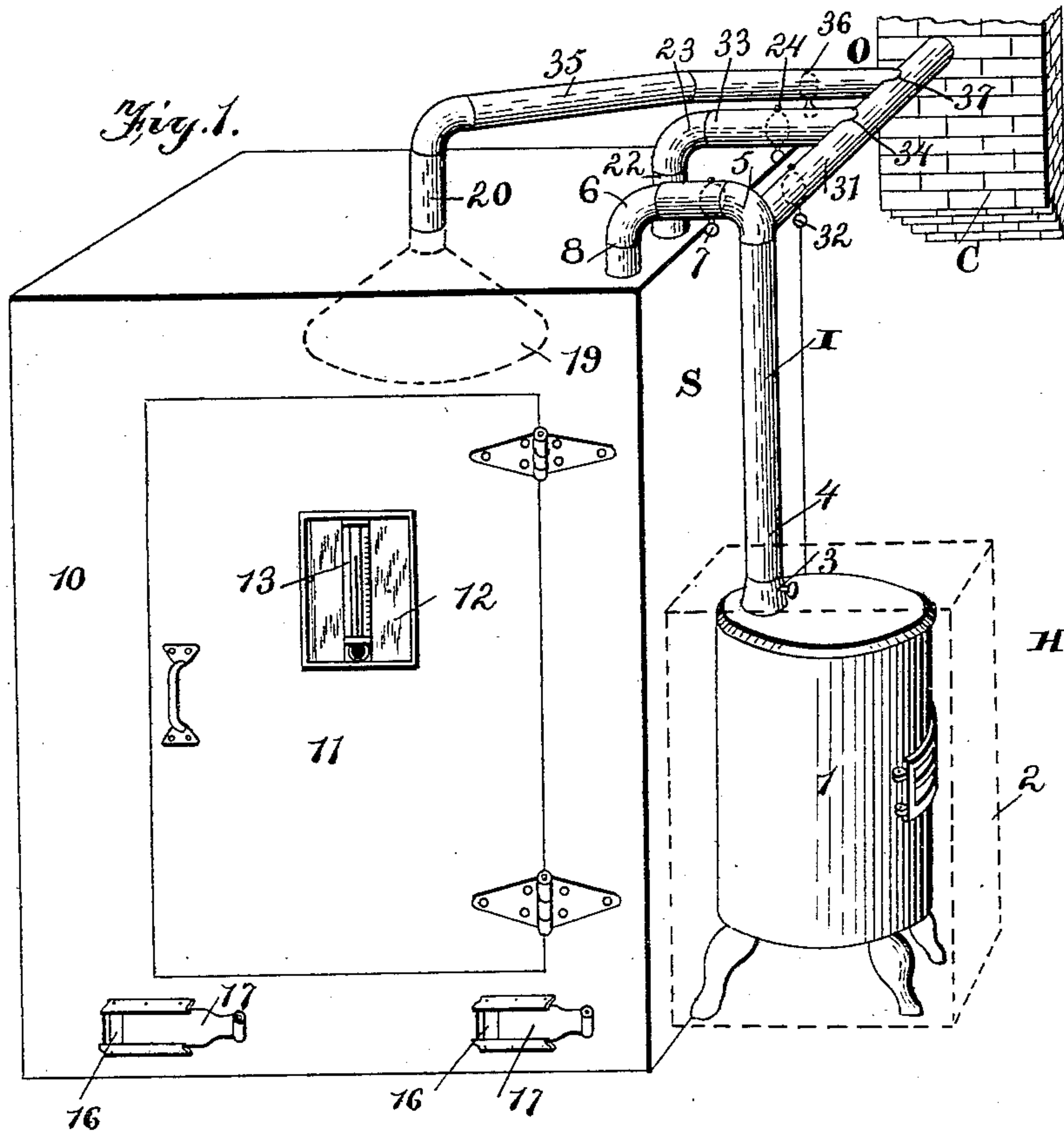
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Patented Sept. 12, 1899.

A. WULFF.
PORTABLE SMOKE HOUSE.

(Application filed Mar. 29, 1898.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

ADOLPH WULFF, OF ST. PAUL, MINNESOTA.

PORTABLE SMOKE-HOUSE.

SPECIFICATION forming part of Letters Patent No. 632,955, dated September 12, 1899.

Application filed March 29, 1898. Serial No. 675,588. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH WULFF, a citizen of the United States, residing at St. Paul, Ramsey county, Minnesota, have invented certain new and useful Improvements in Portable Smoke-Houses, of which the following is a specification sufficiently full, clear, and exact to enable others to understand the same.

This invention may be said to relate to the art of butchering, and more especially to the scalding and singeing of meat, although as a smoke-house or smoke-chamber it is adapted for the treatment of any article or thing which it is desired to impregnate with smoke. Furthermore, it will be clear from the description below that by a proper extension of the inlet-pipe and the outlet-pipes this device may be used as a drum for heating a room or apartment remote from the stove or heater proper, as upstairs or in another room.

Various other uses may be discovered for this device, and I lay claim to all of such as come within the scope of the invention, which latter consists in the details of construction hereinafter described, and as more fully illustrated in the drawings, wherein—

Figure 1 is a general perspective view of this improved smoke-house and connections complete, showing the bonnet in dotted lines. Fig. 2 is a horizontal section through the smoke-house proper. Fig. 3 is a vertical section through one side of the lower portion of the smoke-house.

Referring to the said drawings, H is a heater, I is an inlet-pipe leading from this heater to the smoke-house S, O are the outlet-pipes, and C is the chimney or flue with which said outlet-pipes connect, these parts being arranged relatively in substantially the manner shown in Fig. 1.

The heater may be a stove 1, or any other suitable source of heat, possibly surrounded by an asbestos casing 2 in warm weather or at times and places when and where it is undesirable that this device should give off heat to the apartment in which it is situated.

3 is a damper controlling the exit of the products of combustion from the stove 1 into a pipe 4, which passes through the casing 2, if it is employed, and forms the inlet-pipe I to the smoke-house proper. This pipe may be of any suitable and proper length, shape,

and size, but is here shown as leading upward from the heater, passing through two elbows 5 and 6, between which is a damper 7, and leading down at 8 into the upper end of the smoke-house.

The chimney or flue C is of any ordinary or approved construction. In fact it could be omitted entirely, and the outlet-pipes O instead of leading into a chimney could deliver the smoke from the smoke-house into the open air.

No claim is laid to the details of construction thus far described.

Coming now more particularly to my present invention the smoke-house S herein shown comprises a rectangular casing 10, in whose front is preferably located a hinged door 11 with a glass panel 12, behind which is supported a thermometer 13, in order that the interior temperature may be seen from the outside, even when the door is closed. Above the true bottom of this casing is a false bottom 14, and draft-flues 15 enter at 16 at proper points through the sides of the casing, (their inlets being controlled by sliding dampers 17,) pass along beneath the false bottom, turn upward, and open into the interior of the casing near its center, as at 18. 19 is a hood or bonnet supported by a pipe 20, which extends upward through the top of the casing 10 and connects with one of the outlet-pipes. The means for heating the interior of this casing or for delivering the smoke thereinto consists of a series of specially-arranged pipes and dampers, which in the present instance are constructed as follows:

21 is a coil or feed pipe connected with the lower end 8 of the inlet-pipe I and leading thence vertically downward, preferably at and within one corner of the casing 10, thence above the false bottom 14 along the angle between one side and said bottom, thence across the end, thence along the other side, and finally across the other end to nearly the point of starting, where it turns upward into the exit-pipe 22, preferably standing in or near the same corner as the feed-pipe or coil 21, all as best seen in Fig. 2. This exit-pipe passes upward through the top of the casing, turns through an elbow 23, is valved, as at 24, and communicates with one of the outlet-pipes O. Said outlet-pipes O in the present in-

stance are shown as three in number, 31 preferably leading from the elbow 5 of the inlet-pipe through a damper 32 into the chimney C, 33 leading from the elbow 23 and forming a junction, as at 34, with the outlet-pipe 31, and 35 leading from the bonnet-pipe 20 through a damper 36, and forming a junction, as at 37, with the main outlet-pipe 31. By this construction it will be clear that by closing the damper 7 and opening the damper 32 the products of combustion from the heater can be passed directly into the chimney without traversing the feed-pipe or coil at all. By a reverse setting of these two dampers the smoke can be passed into the feed-pipe or coil, as at 8. By closing the damper 36 and opening 24 the smoke passes out the exit-pipe 22 and into the chimney, or by closing 24 and opening 36 the smoke must pass from the interior of the casing 10 outside the feed-pipe 21, out the outlet-pipe 35 and into the chimney. Thus it will be seen that these various dampers completely and thoroughly control the flow of the smoke or products of combustion, in addition to which the regulating-damper 3 and the inlet-damper to the stove 1 can be set for proper manipulation of the fire as usual.

As seen in Fig. 3, the coil 21 (and it will be clear that it could be carried several times around within the casing 10) is formed of a pipe preferably rectangular in cross-section, and, as shown in both Figs. 2 and 3, openings 40 are formed at intervals in the upper side of this pipe, here closed by slide-dampers 41. The inner ends 18 of the draft-flues 15 need not be closed by dampers, as their outer ends are so provided, as seen in Fig. 1, although such dampers could be located inside, if desired. It will also be obvious that the dampers 41 might readily be controlled from the exterior of the casing 10 by the provision of suitable mechanism, (not shown herein,) as it forms no part of the present invention. As illustrated, the flue-dampers and all the dampers in the outlet-pipes may be controlled without opening the door 11, but the dampers in the feed pipe or coil 21 can only be set by opening said door.

In operation a fire is built in the stove or the inlet-pipe 1 is connected with a suitable source of heat or smoke, which latter passes in at 8 and around the feed pipe or coil 21, as will be clear. By opening the dampers 41 the smoke passes from the coil directly into the interior of the casing 10, permeates whatever is sustained or supported therein, and finds its exit through the bonnet 19 and pipe 20, the dampers 36 being open and 17 and 24 closed, or the dampers 17 can be partially opened when it is desired to mix some air with the smoke, or, if considerable air is so admitted, the damper 24 can be partially opened so as to allow some of the smoke to pass out the exit-pipe 22, or the dampers 41 can be adjusted so as to reduce the size of the outlet-openings from the coil, and this will admit still less smoke to the interior.

Finally, either the dampers 41 may be entirely closed and 7 and 24 entirely opened, or 7 may be closed and 32 and 36 opened, in either of which cases the smoke from the stove would not pass into the interior of the casing 10. In the first instance it would pass around the coil and heat said interior, which heat could be regulated by passing more or less cold air in at 16 and out at 19, and in the latter case it would pass directly from the inlet-pipe 1 into the chimney. Thus it will be seen that the greatest facility for regulating the flow of heat or smoke is provided, and it will be clear that the smoke-house S could be used as such or could be used for various other purposes which will readily occur to those skilled in the art.

What is claimed as new is—

1. In a device of the character described, the combination with a source of heat, a chimney, a closed casing, draft-flues opening into the latter near its bottom, dampers for said flues, a draft-outlet opening from said casing near its top and leading to the chimney, and a damper in this outlet; of an inlet-pipe leading from said source into the casing, a main outlet-pipe leading from an elbow in the inlet-pipe to the chimney, a damper 7 in said inlet beyond its elbow, a second outlet-pipe leading from within the casing and forming a junction with the main outlet beyond said elbow, dampers 24 and 32 in said outlet-pipes between the casing and said junction, and a coil within the casing connected at its ends with said inlet and outlet pipes, as and for the purpose set forth.

2. In a device of the character described, the combination with a stove, a chimney, a closed casing having a false bottom, air-flues passing under said false bottom and opening therethrough to the interior of the casing, dampers 17 at the outer ends of said flues, an outlet 35 leading from said casing to the chimney, and a damper 36 therein; of an inlet-pipe leading from the stove into the casing; a damper 7 in this pipe, an outlet-pipe leading from the casing and communicating with the chimney, a damper 24 in this pipe, a coil 21 located within the casing upon said false bottom and connected at its ends with said inlet and outlet pipes, and dampers 41 in the coil on the interior of the casing, as and for the purpose set forth.

3. In a device of the character described, the combination with a stove, a chimney, a closed casing, an inlet-pipe leading from the stove through an elbow into the top of the casing, a damper 7 between said elbow and casing, a main outlet leading from said elbow to the chimney, a damper 32 in this outlet, an outlet-pipe leading from the top of the casing and forming a junction 34 with said main outlet, a damper 24 in this outlet between the casing and junction, a bonnet 19 within the casing, a pipe leading thence through the top of the casing and forming a junction 37 with the main outlet, and a damper 36 in this

pipe between the casing and junction; of a coil within the casing connected at its ends with the inlet and outlet pipes, means for admitting a regulated supply of the products of combustion from said coil to the interior of the casing, air-flues leading to the interior of the casing near its bottom, and dampers therefor, all as and for the purpose set forth.

4. In a smoke-house, the combination with a closed casing 10, a false bottom 14 therein, air-flues 15 entering at 16 through the sides of the casing, passing along beneath said bottom, and opening upward through it at 18, dampers 17 closing the outer ends of said flue, a hinged door 11 in the front of the casing, a glass panel 12 therein, and a thermometer 13 supported by the door in rear of said panel; of a feed-pipe or coil 21 leading down one

corner of the interior of the casing, thence making a coil around said casing on its false bottom, said coil having openings 40 closed by dampers 41, and finally rising in an exit-pipe 22 adjacent said feed-pipe, a source of heat connected with said feed-pipe, a bonnet 19 within the casing, a pipe leading thence through its top and to the chimney, an outlet leading from said exit-pipe to the chimney, and dampers in all said pipes on the exterior of said casing, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ADOLPH WULFF.

Witnesses:

C. L. RATHKE,
L. FEESER, Jr.