(No Model.)

J. OSBORN.

TOBACCO CURING HOUSE.

No. 332,621. Patented Dec. 15, 1885.

Fig. 1.

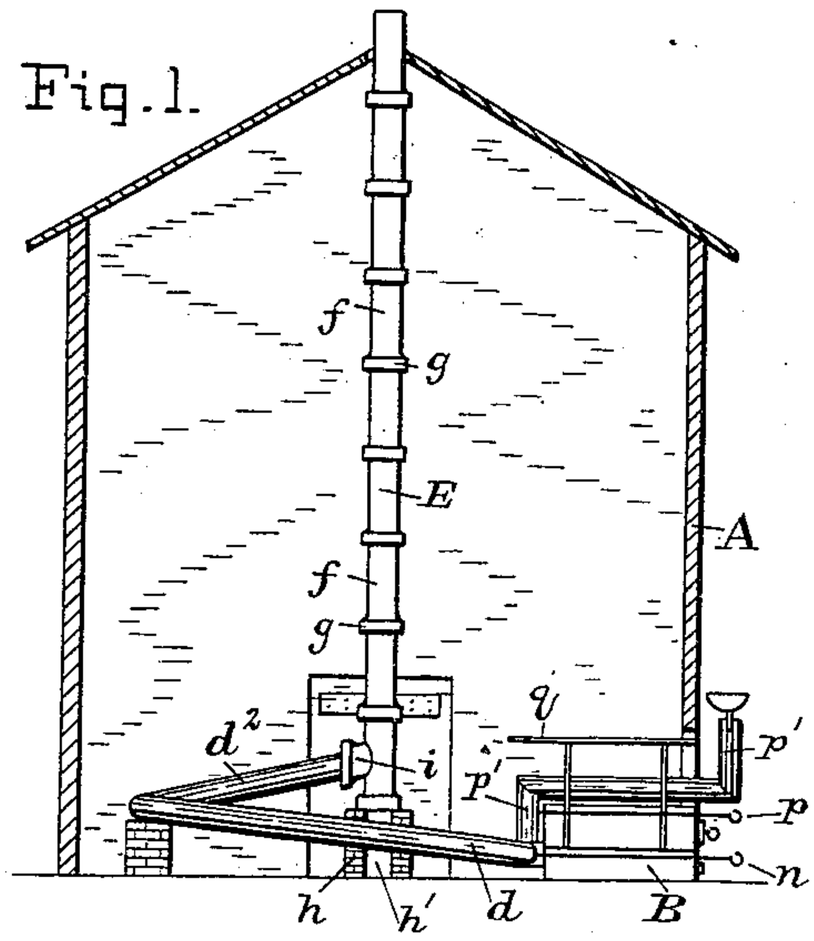
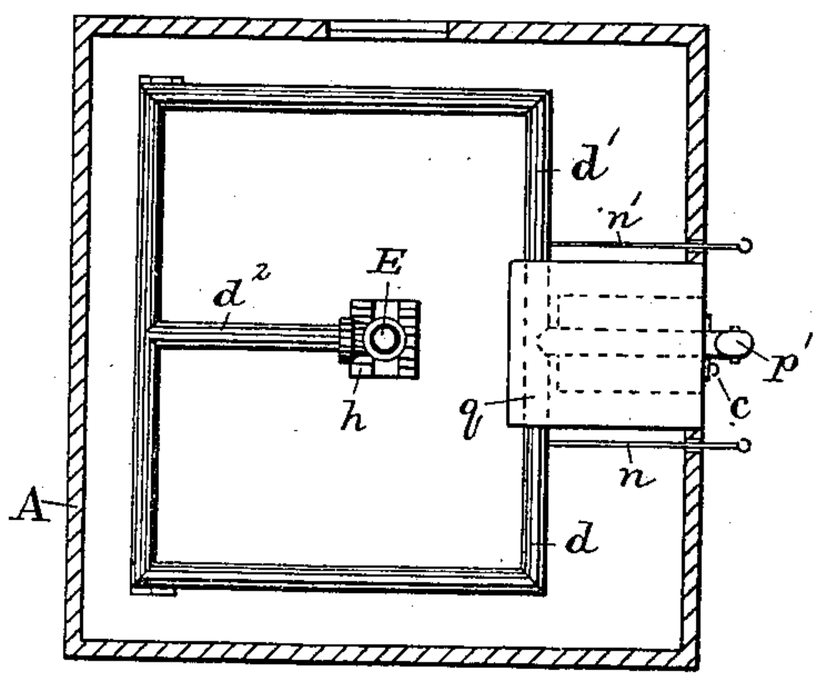


Fig. 2.



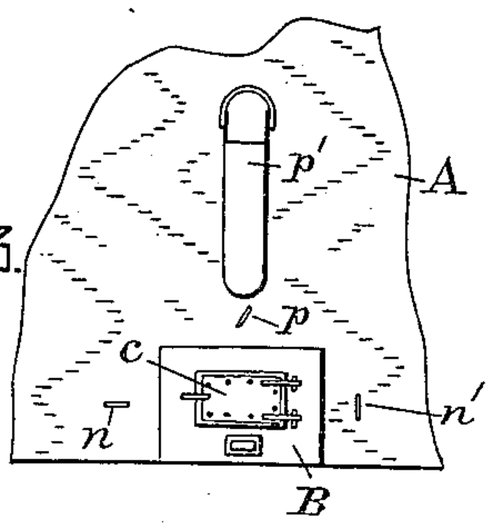


Fig. 3.

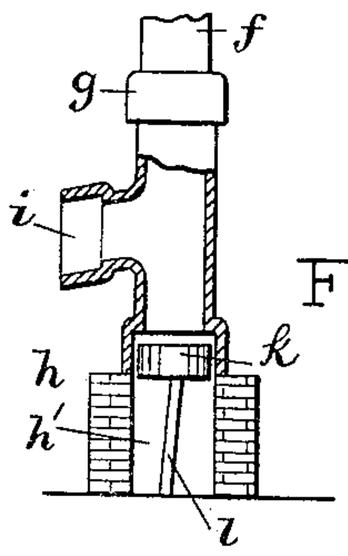


Fig. 4.

Fig. 5.

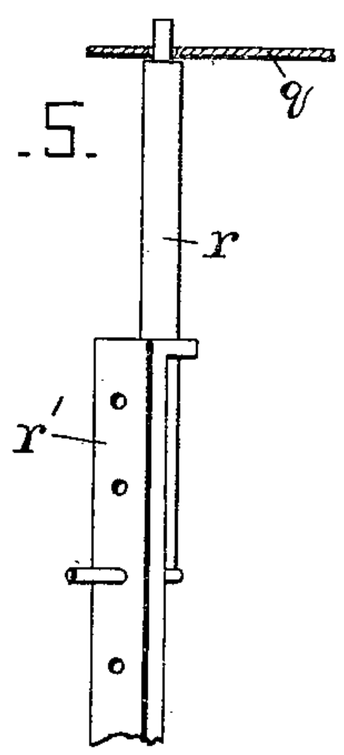
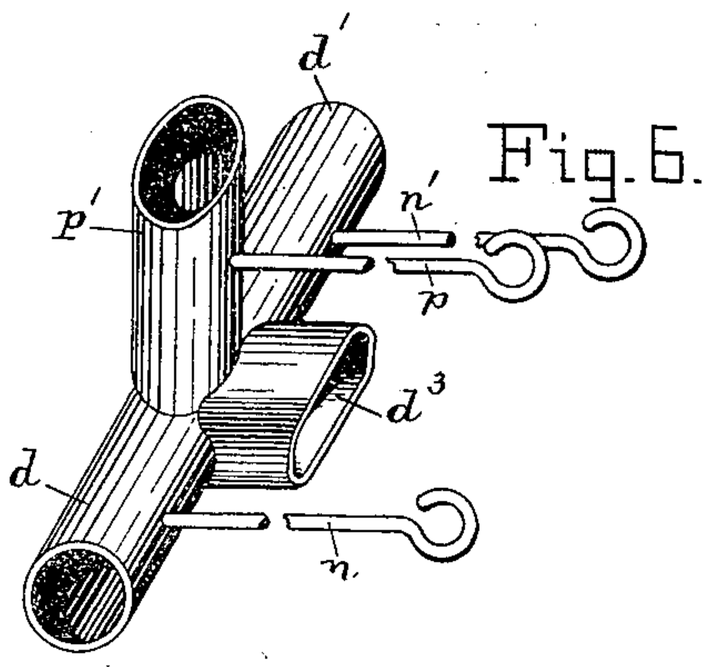


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOB OSBORN, OF RALEIGH, NORTH CAROLINA.

TOBACCO-CURING HOUSE.

SPECIFICATION forming part of Letters Patent No. 332,621, dated December 15, 1885.

Application filed April 2, 1885. Serial No. 160,987. (No model.)

To all whom it may concern:

Be it known that I, JOB OSBORN, a citizen of the United States, residing at Raleigh, in the county of Wake and State of North Carolina, have invented certain new and useful Improvements in Tobacco-Curing Houses, of which the following is a specification.

My invention relates to an improved combination of iron furnace, metal smoke-flues, and jointed or yielding fire-clay flue for tobacco-curing houses.

One object of my invention is to provide an improvement adapted for the class of tobacco houses and barns commonly existing in North Carolina and Virginia. These houses are frame structures or buildings made of light logs, and are generally so unstable in their character as to yield somewhat or be shaken during the blow of an ordinary high wind, and for this reason brick chimneys or permanent chimneys of any kind inside the house are inadmissible. Such chimneys, when built inside of the house, are soon cracked and unfitted for service, either in consequence of smoke or sparks issuing from the cracks, to the damage or destruction of the tobacco, or of the fact that the chimney is liable to fall. In consequence of this difficulty with brick chimneys, upright flues of sheet-iron have been tried; but these are found to become very hot, and the tobacco near them is thereby often "scalded" or burned. The difficulties therefore, where inside chimneys are used, of maintaining a uniform heat are great. All of these difficulties are obviated by the special construction and arrangement of parts hereinafter described.

This invention is illustrated in the accompanying drawings, in which Figure 1 is a vertical sectional elevation of a tobacco-curing house, showing the improvements. Fig. 2 is a plan view of the same. Fig. 3 is a front end view of the furnace and dampers. Fig. 4 is a detail view of the supporting-base of the fire-clay flue. Fig. 5 is a view of the adjustable supports for the shield. Fig. 6 is a view of the flues and dampers.

The letter A designates the walls of the house or barn; B, an iron furnace situated within the house, but having its fuel-supply door *c* exposed on the outside of the wall, whereby to admit of replenishing the fuel without entering the house. This furnace has a grate and draft-openings, and two sheet-iron smoke-flues, *d* and *d'*, lead from its rear in opposite directions. These smoke-flues, as shown in the drawings, are supported just above the ground, and in a horizontal or nearly horizontal position pass around near the walls of the house. At the side of the house diametrically opposite the furnace these flues unite, and from this point a branch flue, d^2, leads to the middle of the house and connects with the upright fire-clay flue E, which stands wholly inside and passes up through the roof. The upright flue E is made of fire clay, and is porous, like fire-brick, and is made in sections *f* and then fitted together. The end of each lower section enters the enlarged end *g* of the one next above it. By having the upright flue inside all the heat is utilized, and by having it of the material and the construction described, there is an avoidance of liability of excessive heat adjacent to the flue, and said flue, differing from sheet-iron flues, will absorb and dry out the moisture given off from the tobacco without danger of scalding or burning it. From the fact that the flue is in sections, jointed, it will yield laterally to accommodate any shakes or vibrations to which the frame-house structure may be subjected. The fire-clay flue is suitably supported on a foundation, *h*, of brick or other material. The lowermost section, *f*, has a branch, *i*, to which the sheet-iron branch flue d^2 is connected. The foundation *h* is open at *h'*, to give access below the flue to a stopper, *k*, which enters the enlarged end of the lowermost section. This stopper is kept in position by a brace or standard, *l*. This construction of upright fire-clay flue, foundation, and stopper enables the said flue to be quickly heated in cold, damp weather, and thereby put in condition at once for creating a good draft by simply removing the stopper and applying in the flue a bunch of straw or paper and then setting fire to the same; also, by this construction the upright fire-clay flue can be readily cleaned out without being taken down. The flue connects at d^3 with the rear end of the furnace, and the sheet-iron flue *d* inside the building has a damper with a rod, *n*, extending through the wall A to the outside, and the other flue, *d'*, has a damper with a rod, *n'*,

similarly arranged on the outside. By means of these dampers the heat can be regulated. It can be divided so as to have effect on both sides. It can be cut off from either side without disturbing it on the other, and by means of the damper and damper-rod *p* and escape-flue *p'*, leading directly from the furnace through the front wall, the heat can be cut off from both flues *d* and *d'*, and the smoke directed at once from the furnace. A shield, *q*, of sheet metal, is supported above the furnace B on standards, which are adjustable. These standards have two parts, *r r'*, connected together by the bent end of one fitted within one of a series of holes on the other. By this means the shield may be elevated or lowered. The shield causes the hot air rising from the furnace to spread out laterally.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of an upright sectional fire-clay flue, a supporting-foundation open below the flue, and a flue-stopper entered in the end of the flue at said opening in the foundation, as set forth.

2. A tobacco-curing house having in combination the walls, an upright yielding fire-clay flue inside the house, an iron furnace, two horizontal iron smoke-flues, each leading from the furnace in an opposite direction and each provided with a damper, and an escape-flue, *p'*, leading directly from the furnace through the wall and provided with a damper, as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JOB OSBORN.

Witnesses:
JOHN E. MORRIS,
JNO. T. MADDOX.