J. O. BROCK.

DRIER OR HEATER FOR TOBACCO BARNS.

APPLICATION FILED DEC. 16, 1919.

1,368,018.

Patented Feb. 8, 1921.

2 SHEETS—SHEET 1.

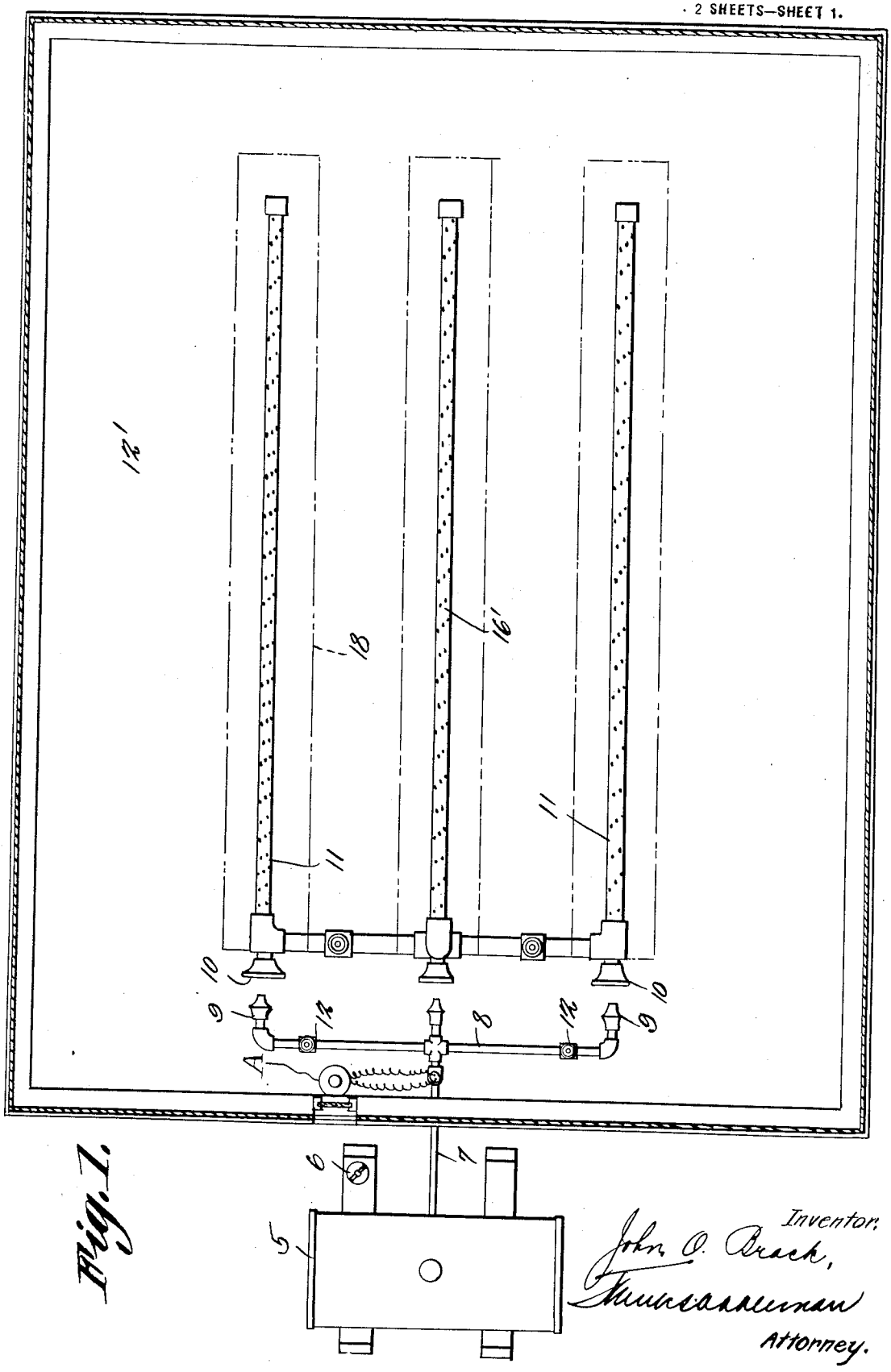


Fig. 1.

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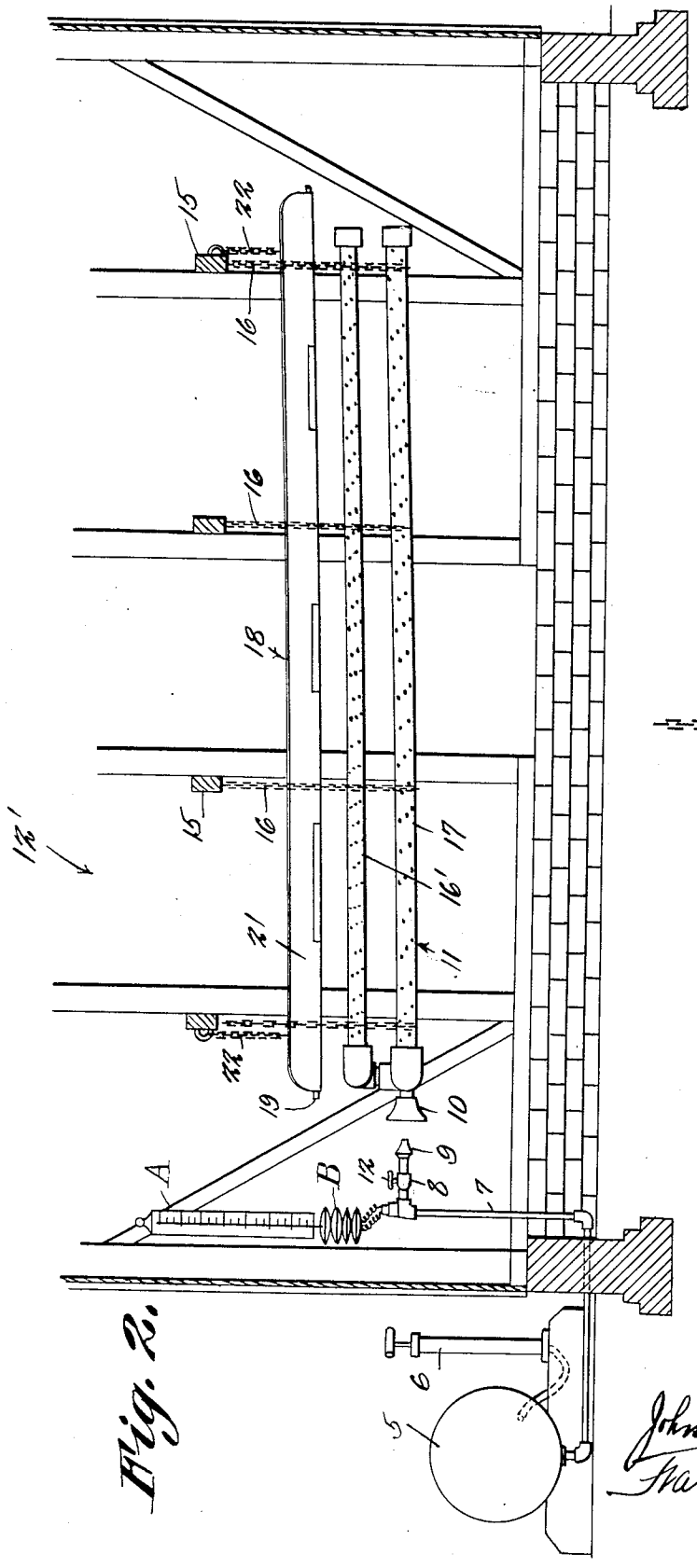


Fig. 2.

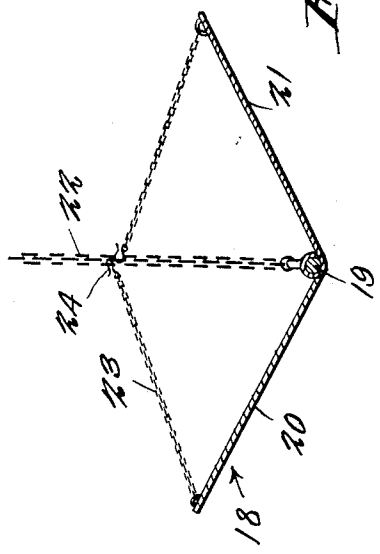


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOHN OWEN BROCK, OF WILSON, NORTH CAROLINA.

DRIER OR HEATER FOR TOBACCO-BARNS.

1,368,018. Specification of Letters Patent. Patented Feb. 8, 1921.

Application filed December 16, 1919. Serial No. 345,257.

To all whom it may concern:

Be it known that I, JOHN O. BROCK, a citizen of the United States of America, and resident of Wilson, in the county of Wilson and State of North Carolina, have invented certain new and useful Improvements in Driers or Heaters for Tobacco-Barns; of which the following is a specification.

This invention relates to methods of and apparatus for curing tobacco and more particularly to driers or heaters for tobacco barns and the said invention has for its object, the provision of novel means for uniformly heating the barns or storage houses where tobacco is being cured so that the curing process will be carried out to produce uniformity in the cured product.

As well known, the method and apparatus now being employed in curing tobacco is very crude, resulting in great loss on account of injury to the tobacco and also injury to the structure and stock therein, due to fires on account of the crude apparatus.

It is an object of this invention to provide novel means for conveying fuel to burners situated under the tobacco, so that the heat therefrom may radiate or circulate through the leaves and bunches of tobacco suspended in the structure; and furthermore to provide novel means whereby the heat may be caused to circulate through restricted passages or more open passages according to the requirements in practice, novel means being provided for deflecting the heat in the paths as desired.

With the foregoing and other objects in view, the invention consists in the details of construction, and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 is a plan view of the heating apparatus embodying the invention;

Fig. 2 is a view in elevation of the said apparatus; and

Fig. 3 is a detailed view of one of the deflectors.

In carrying out the invention, I may employ a storage tank 5 for gasolene, oil or other fluid and provide a pump 6 for delivering air to the tank for forcing the fuel from the tank. As shown in the illustration, the pipe 7 leads from the tank to a header 8 and this header has nozzles 9 discharging into a receiver 10, each of which is in communication with the perforated burner 11. Valves may be provided such as 12 for controlling the nozzles, so that the proper amount of fuel may be supplied to either burner. The burners are preferably of the Bunsen type, but I do not wish to be limited with respect to the form which mixing and consuming elements shall take, owing to the fact that several efficient mixing and consuming burners are known, any one of which may be employed in this connection. The main requirement of the device is that the burners shall be elongated so that they will project longitudinally or transversely of the structure or inclosure 12' which may be designed to hold the tobacco being cured and it is my purpose to have the devices so that they may be installed in structures which are now employed for curing tobacco, since no particular form of structure is necessary for receiving the apparatus.

Preferably, the structure will be supplied with posts or uprights to which rails 15 are attached, so that chains or other supporting devices 16 may be suspended from the rails and connected to the perforated pipes 16' and 17 which constitute the burners for consuming the fuel.

Of primary importance in this connection, is a deflector or shield 18 which is supplied and suspended over each burner to prevent flame from ascending beyond a predetermined degree and for preventing the heat from the flame from arising directly from the burner to the suspended tobacco.

To the end indicated, the shields are each preferably formed of a supporting rod or pintle 19 on which the wings 20 and 21 of the deflector are hinged so that the angles of these wings may be varied to deflect the heat to a greater or less degree as practice requires and when so used the wings would preferably be adjusted at the beginning of the curing process, so that the heat would be uniform throughout the heated area, in order that the leaves of tobacco would all receive the same degree of heat to insure uniformity of color and quality, whereas after the leaves have become treated and it is desired to more thoroughly dry the thicker portions or stems, the wings could be ad-

justed to direct the heat to those portions of the bundles which are thickest to more thoroughly dry those portions without to a great degree acting on the leaves.

In order to effect the adjustment of the wings I provide a series of supporting devices 22 suspended from the rails 15 and connected to the rods or pintles 9 and the edges of the wings may have chains 23 connected to them at their edges, the said chains preferably having hooks 24 which may be hooked into the links of the supporting chain 22 so that the angle of inclination of the wings may thus be changed and they may be supported in their changed positions. The arrangement for supporting the deflectors and holding the wings at different positions of adjustment, may of course, be modified within the scope of the claims without departing from the spirit of the invention and an apparatus constructed in accordance with this invention would prove comparatively inexpensive, while at the same time it will be efficient and satisfactory in use.

The heating apparatus may be provided with a thermometer A having any suitable thermostatic control B for controlling the supply of the heating agent through the medium of a valve, but as this is a well known provision for controlling the supply of fuel, details of construction thereof are believed to be unnecessary.

I claim:

1. The herein described method of curing tobacco consisting in producing heat under the suspended tobacco of practically uniform temperature in the area occupied by the tobacco, and deflecting the heated air after its discharge from the heating system to portions of the area occupied by the tobacco thereafter.

2. In a heater for curing tobacco, elongated burners, means for supplying fuel thereto, means for suspending the burners under the tobacco, and deflectors guarding each of the burners.

3. In a heater for curing tobacco, elongated burners, means for supplying fuel thereto, means for suspending the burners under the tobacco, and deflectors guarding each of the burners, said deflectors each comprising a central supporting member and adjustable wings.

4. In a heater for curing tobacco, elongated burners, means for supplying fuel thereto, means for suspending the burners under the tobacco, deflectors guarding each of the burners, said deflectors each comprising a central supporting member, wings pivotally connected thereto, and means for adjustably holding the wings with relation to the support.

5. In a heater for curing tobacco, elongated burners, means for supplying fuel thereto, means for suspending the burners under the tobacco, deflectors guarding each of the burners, said deflectors each comprising a rod, wings pivotally connected to the rod, members supporting the rod and means attached to the wings and connected to the support for holding the wings at different positions of adjustment.

6. In a heater for curing tobacco, elongated burners, means for supplying fuel thereto, means for suspending the burners under the tobacco, deflectors guarding each of the burners, said deflectors each comprising a rod, wings hingedly connected to the rod, chains connected to the rod for suspending it, members connected to the edges of the wings, and devices carried thereby engageable with the rod support for holding the wings at different positions of adjustment.

JOHN OWEN BROCK.