No. 732,610. PATENTED JUNE 30, 1903.

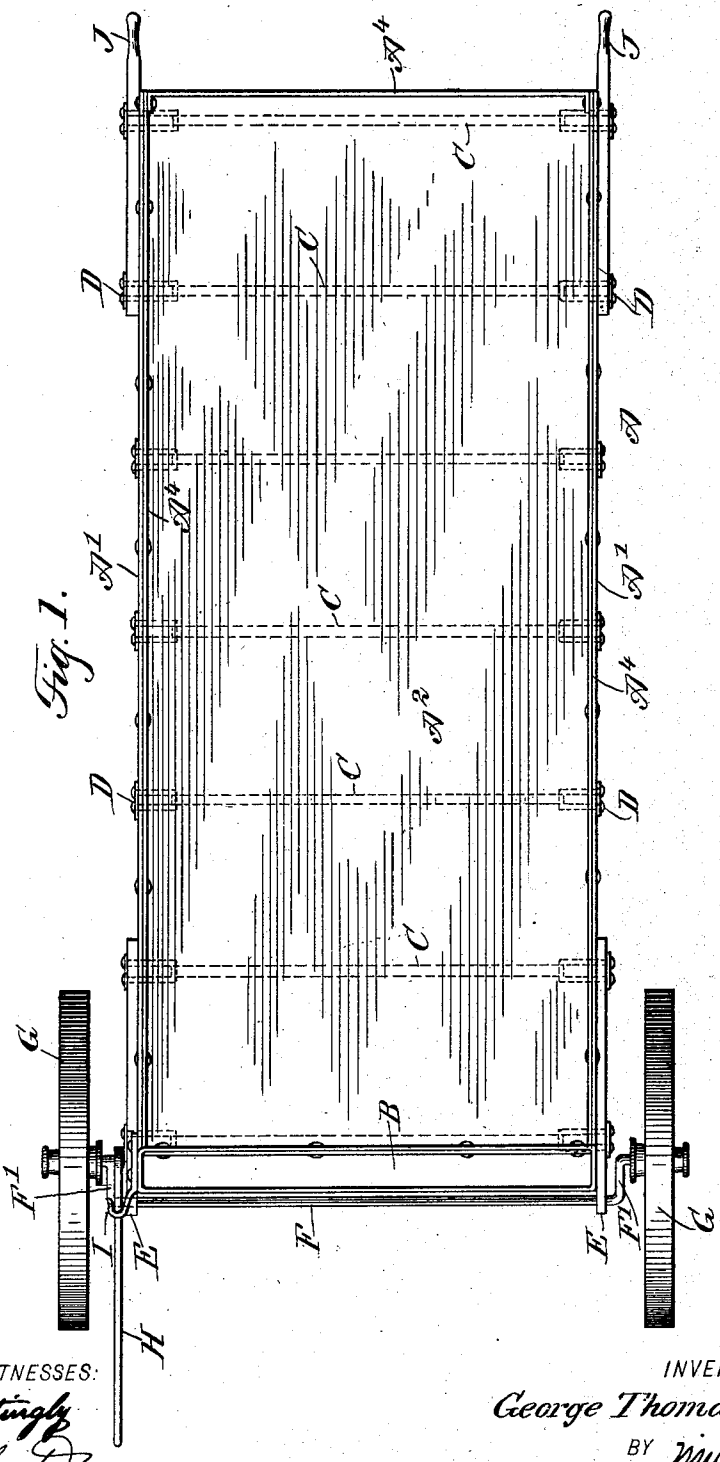
G. T. WYATT.

FURNACE.

APPLICATION FILED APR. 17, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

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Geo. G. Woodward

INVENTOR

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ATTORNEYS.

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NO MODEL. 2 SHEETS—SHEET 2.

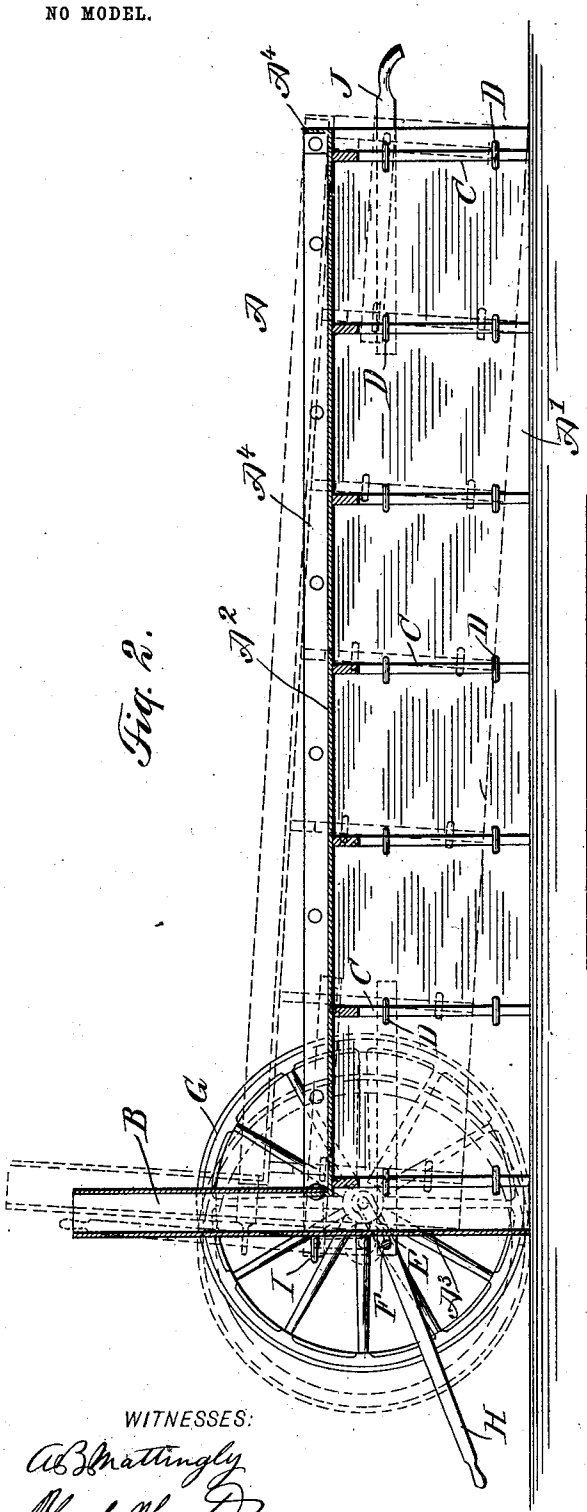


Fig. 2.

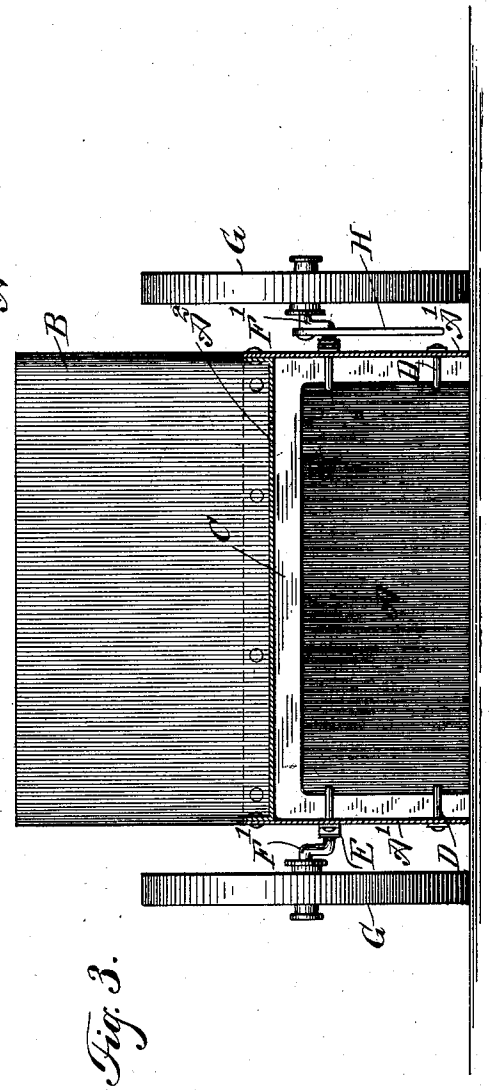


Fig. 3.

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No. 732,610. Patented June 30, 1903.

UNITED STATES PATENT OFFICE.

GEORGE THOMAS WYATT, OF OLMSTEAD, KENTUCKY.

FURNACE.

SPECIFICATION forming part of Letters Patent No. 732,610, dated June 30, 1903.

Application filed April 17, 1903. Serial No. 153,028. (No model.)

To all whom it may concern:

Be it known that I, GEORGE THOMAS WYATT, a citizen of the United States, and a resident of Olmstead, in the county of Logan and State of Kentucky, have invented a new and Improved Furnace, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved furnace more especially designed for use on the plot of ground used as a hotbed or plant-bed in tobacco-growing districts to thoroughly heat the ground and destroy weeds, undesirable seeds, and the like preparatory to sowing the tobacco-seed, the furnace being simple and durable in construction, easily moved about over the plot of ground, very economical in the use of fuel, and arranged to allow of burning trash and other cheap fuel.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is a longitudinal sectional side elevation of the same, and Fig. 3 is a cross-section of the same.

The bottomless shell A of the furnace is preferably made of sheet metal and comprises sides A′ A′, a top or roof A^2, and one end A^3, the other end being open for the entrance of the air necessary for the combustion of the trash or other fuel placed on the ground within the shell, the lower edges of the sides A′ A′ and the end A^3 being in contact with the ground during the heating operation. The roof A^2 at the end A^3 is provided with a smoke-stack B, extending throughout the width of the shell and serving to produce the necessary draft and to form an escape for the smoke and gases rising from the burning fuel inclosed within the shell. The roof A^2 is provided at its sides and at the open end of the shell with upwardly-extending retaining-flanges A^4, and the roof is reinforced and strengthened at its under side by U-shaped braces or supports C, extending transversely and having their side members fastened to the sides A′ A′ of the shell by clips D or other suitable fastening devices. By this arrangement the roof is capable of sustaining a heavy load of ground for the purpose presently to be described.

When the apparatus is located over a plot of ground, as shown in the drawings, then the fuel on the ground within the shell is ignited throughout the length and width of the shell to heat the underlying ground uniformly to a suitable depth to destroy weeds, foreign seeds, and other vegetation in the ground. At the same time while this is going on the ground to the left or to the right side of the shell or the ground on both sides at the same time is shoveled up to the depth of a few inches and placed onto the roof A^2 to be heated thereon by the fuel burning within the shell, so that this ground is freed of foreign seed and other obnoxious matter. When this has been done, the ground is removed from the roof and replaced on the ground at the sides of the shell, and then the apparatus is moved forward a distance corresponding to its own length, and the above-described operation is then repeated.

In practice I prefer that the ground on one side of the shell of an area corresponding to that of the roof be first shoveled onto the roof A^2 and heated and then removed and replaced on the ground at the spot from where it was removed, and then the ground on the other side is similarly treated, and during this time the heat of the buring fuel heats the ground under the apparatus, so that ground of an area three times the size of the shell is cured or prepared at each position of the furnace, and hence a large amount of fuel is saved, and it requires shifting of the furnace but a few times over the plot to treat the ground thereof to the desired depth for the purpose mentioned.

In order to permit of conveniently shifting the furnace from one place to another, the following device is provided: On the end A^3 of the shell A are secured bearings E for a transverse crank-shaft F, carrying at its ends crank-arms F′, on which are journaled wheels G, and on the said shaft F is secured an arm

H under the control of the operator for turning the said shaft F. The arm H is adapted to be locked in place when in a vertical position on the end A^3 by engaging the said arm with a hook I or like retaining device fastened to the end A^3. The sides A' A' at the open end of the shell A are provided with suitable handles J for lifting this end of the shell off the ground by the operator whenever it is desired to move the apparatus from one place to another—that is, at the time the other end of the shell is likewise lifted off the ground by the operator swinging the arm H upward and engaging it with the hook I. Now it will be seen that when the arm H is swung upward and the shaft F is turned then the crank-arms F' swing downward, and thereby move the wheels G in firm contact with the ground and finally lift the forward end of the shell off the ground, as plainly indicated in dotted lines in Fig. 2. Now when the operator takes hold of the handles J and lifts the open end of the shell then the shell is above the ground, and the apparatus can be readily pushed forward onto another plot of ground, to be treated as above explained.

It is expressly understood that the furnace is specially designed for use on hotbeds or plant-beds in which the tobacco-seed or other seed is sown and the plants allowed to grow until they are in condition for transplanting to the field. It is essential for the proper propagation of the plants in the hotbed that no weeds or the like shall grow up with the plants, and in order to thoroughly destroy the weed-seeds and other vegetable growth previous to the sowing of the tobacco-seed it is desirable to treat the ground by the use of the furnace as above described.

The device is very simple and durable in construction, comparatively cheap to manufacture, and arranged to allow burning of cheap fuel—such as brush, trash, and the like; but more substantial fuel, such as wood or coal, may be used, if desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A portable furnace comprising a bottomless shell, having a roof provided with retaining-flanges for dirt, as set forth.

2. A portable furnace comprising a bottomless shell having a roof provided with retaining-flanges for dirt, one end of the shell being open and the other closed, and a smoke-stack leading from the closed end of the shell, as set forth.

3. A portable furnace comprising a bottomless shell, having a roof provided with retaining-flanges for dirt, and transversely-extending reinforcing-braces engaging the under side of the said top, to strengthen the latter, for sustaining the load, as set forth.

4. A portable furnace comprising a bottomless shell, having a roof provided with retaining-flanges for dirt, transversely-extending reinforcing-braces engaging the under side of the said top, to strengthen the latter, for sustaining the load, the said braces being U-shaped, and clips for securing the sides of the braces to the sides of the shell, as set forth.

5. A portable furnace comprising a bottomless shell having a roof provided with retaining-flanges for dirt, one end of the shell being open and the other closed, a smoke-stack leading from the closed end of the shell, a crank-axle journaled on the closed end of the shell, wheels journaled on the said axle, manually-controlled means for turning the axle, and handles on the sides of the shell at the open end thereof, as set forth.

6. A portable furnace comprising a bottomless shell having a roof provided with retaining-flanges for dirt, one end of the shell being open and the other closed, a smoke-stack leading from the closed end of the shell, a crank-axle journaled on the closed end of the shell, wheels journaled on the said axle, an arm on the axle, for turning the same, a locking device on the shell, for the said arm, and handles on the sides of the shell, at the open end thereof, as set forth.

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

GEORGE THOMAS WYATT.

Witnesses:
W. M. HUGHES,
R. M. GILL.