(No Model.)

G. WINDING.

MACHINE FOR MIXING ASPHALT.

No. 295,707. Patented Mar. 25, 1884.

Fig. 1

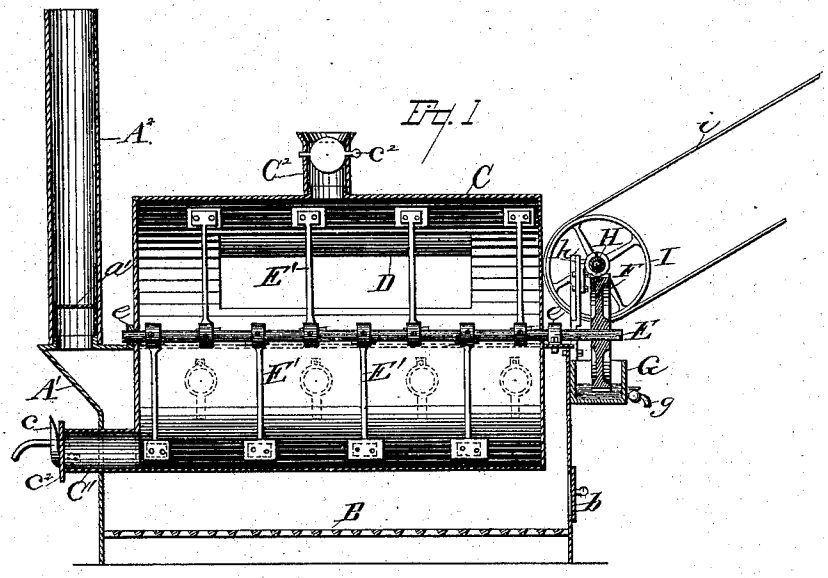


Fig. 2.

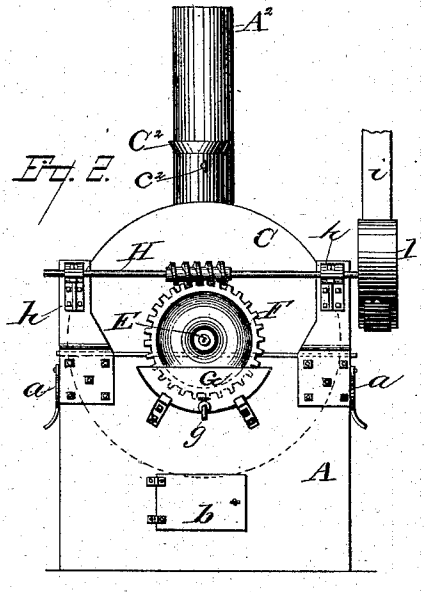
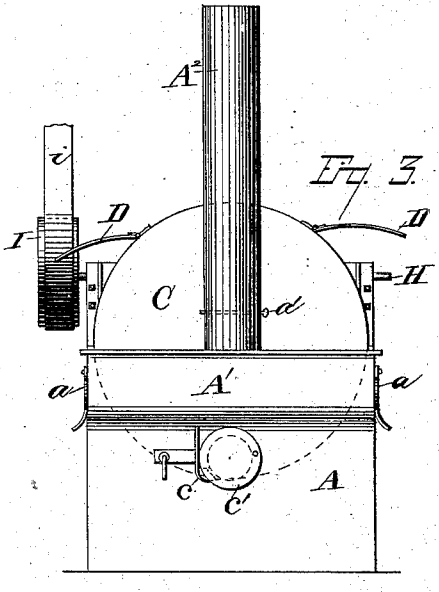


Fig. 3.



Witnesses:
E. G. Spruce
R. Platz.

Inventor:
George Winding
By
Stout & Underwood
Attorneys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

GEORGE WINDING, OF MILWAUKEE, WISCONSIN.

MACHINE FOR MIXING ASPHALT.

SPECIFICATION forming part of Letters Patent No. 295,707, dated March 25, 1884.

Application filed January 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WINDING, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Machines for Mixing Asphalt; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to machines for mixing asphalt; and it consists in certain peculiarities of construction, as will be more fully set forth hereinafter.

In the drawings, Figure 1 is a vertical central longitudinal section of my device. Fig. 2 is an elevation of one end, and Fig. 3 an elevation of the other end, of the said machine.

A is the lower part of my device, and contains the grate or fire-bed B, supplied with fuel through door *b*, and also serves as a support for the stationary cylinder C, within which the asphalt, &c., is placed to be melted and mixed, the said material being inserted through the doors D D, hinged on opposite sides of the upper part of the said cylinder.

E is the stirrer-shaft, extending longitudinally through the center of the cylinder C, and supported in suitable bearings, *e e*, outside of the same, rising from the top of the furnace part A, and to this shaft are secured, by keys or set-screws, the shanks of the stirrer-blades E′ E′.

C′ is the outlet for the mixed and melted asphalt, &c., and consists of a pipe leading from the lower part of the front end of the cylinder C, out through the front face of the furnace part A, and which is closed by a suitably-pivoted gate, *c′*, with shank secured back of a stop, *c*. Above this outlet-pipe the furnace part A extends outward and forward, as at A′, to receive the smoke-stack A^2, which latter may be provided with a suitable damper, as at *a″*. Each side of the furnace part A is provided with a series of openings or cooling-ports covered by pivoted gates *a a*, so as to regulate the temperature at any part of the furnace at will, while the temperature of the mixing-cylinder C is regulated by means of a ventilating-pipe, C^2, on top, controlled by a damper, c^2.

On the end of the shaft E that projects out through the rear end of the cylinder, there is secured a worm-wheel, F, and below this is a trough, G, which is kept filled with greasy water, so that the worm-wheel, as it revolves, will pass through the said greasy water, and thus be kept cool, as well as be constantly lubricated; and when the water becomes too hot it may be drawn off by means of cock *g*, and a fresh supply of greasy water be substituted therefor.

H is a shaft bearing a worm which meshes with the worm-wheel F, and supported in bearings *h h*, secured to and rising from the furnace part A, and this shaft also bears at one end the pulley I, by means of which power is communicated, through a belt, *i*, to revolve said shaft, and thence, through the worm and its gear-wheel, to the stirrer-shaft E and stirrers E′.

The operation of my device will be apparent from the foregoing description of its construction, and by its use a great saving in time, labor, and expense is effected over the old method of separate melting and hand-mixing, and it is extremely useful in laying road-beds or sidewalks, in roofing, and wherever asphalt or similar material is to be used.

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

1. In a machine for mixing asphalt, &c., the combination, with a stationary cylinder and furnace, of a horizontal stirrer-shaft having stirring-blades attached thereto, a worm-shaft, an exterior water-trough, and a worm-wheel adapted to revolve in said trough, substantially as set forth.

2. In a machine for mixing asphalt, &c., the combination of the stationary cylinder C, having ventilating-pipe C^2, with damper c^2 and outlet-pipe C′, horizontal shaft E, with stirrers E′, attached thereto, and furnace A, below the cylinder, having fire-bed and series of cooling-ports controlled by gates *a a*, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

GEO. WINDING.

Witnesses:
STANLEY S. STOUT,
H. G. UNDERWOOD.