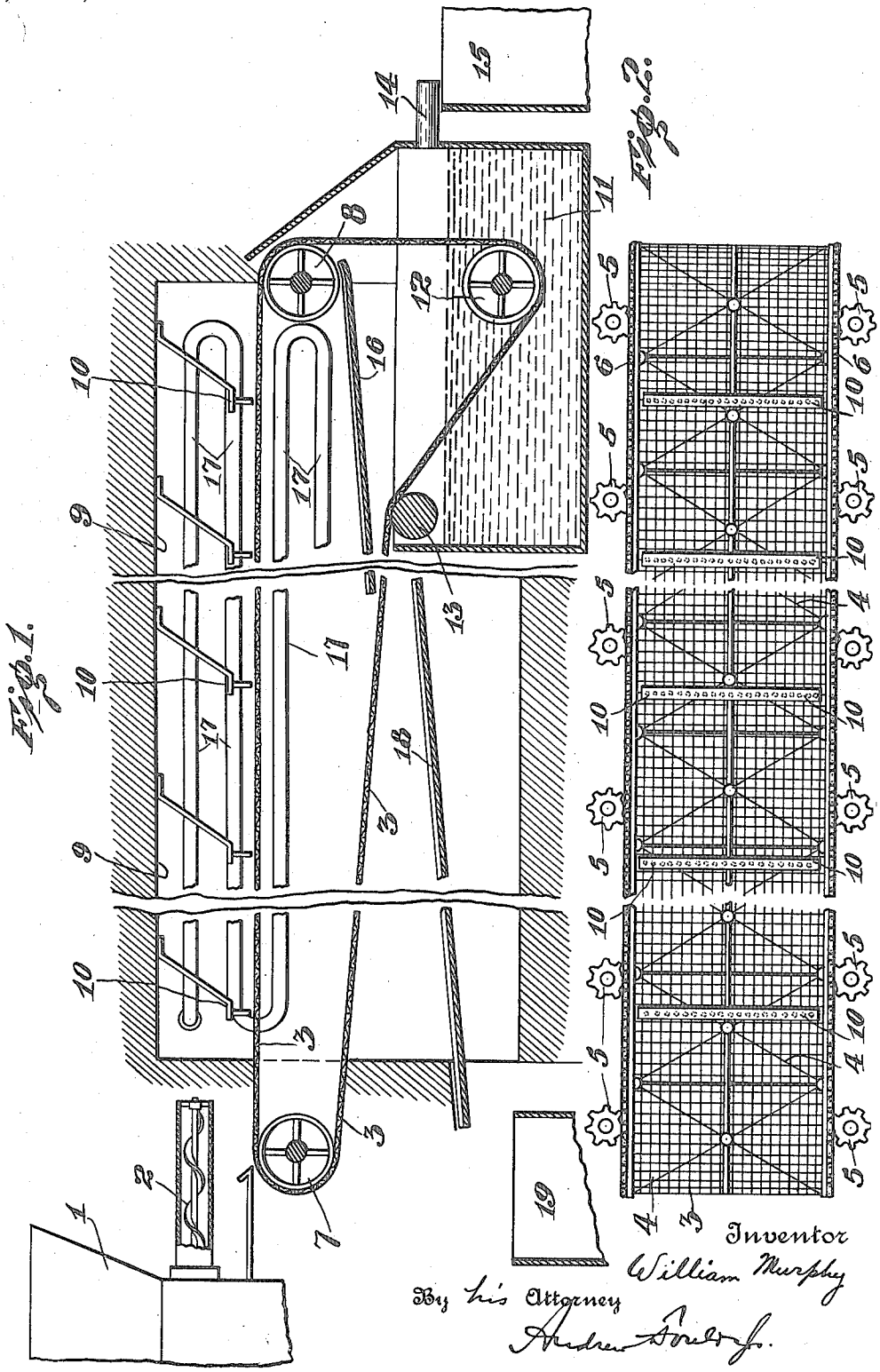
W. MURPHY.

SYSTEM FOR SWEATING WAX.

APPLICATION FILED APR. 27, 1915.

1,180,599. Patented Apr. 25, 1916.



# UNITED STATES PATENT OFFICE.

WILLIAM MURPHY, OF NEW YORK, N. Y.

## SYSTEM FOR SWEATING WAX.

1,180,599. Specification of Letters Patent. Patented Apr. 25, 1916.

Application filed April 27, 1915. Serial No. 24,340.

*To all whom it may concern:*

Be it known that I, WILLIAM MURPHY, a citizen of the United States, residing in the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Systems for Sweating Wax, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a process for sweating of slack wax produced by the first pressing of the distillate in the process of manufacturing paraffin wax and known also as foots or like products and has for its object to render the process of sweating same more expeditious and considerably cheaper than processes now in use, by doing away with one operation of melting, pumping and cooling.

In sweating slack wax it has been heretofore customary to convey the same as it comes from the press chilled, into a melting tank to boil or melt the same for the purpose of getting it into a condition in which it may be purified and treated and pump it thence to a settling tank, from which it is afterward pumped up on mesh wire arranged in pans partly filled with water underneath the mesh which serves to float the wax and where it is chilled down to a temperature of 75° or 80° Fahrenheit by passing cold water or cold oil through pipes in the pans. The oven or building which contains the wax is then closed up and heated to a given temperature and from that point the sweating of the slack wax begins, but this is an expensive process requiring considerable time. By my improved process, the wax is conveyed from the press to an endless belt continually passing through a heated tunnel with great saving of time, labor and expense.

I accomplish the object stated by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the device, and Fig. 2 is a view of the conveyer.

Similar characters refer to similar parts throughout the several views.

The slack wax is removed from a press 1 by a screw conveyer 2 or the like, and deposited upon an endless belt 3. This endless belt is preferably formed of wire mesh supported by cross stay wires or braces 4 and is driven by sprockets 5 engaging sprocket chains or links 6 carried on the side margins of the belt 3. The belt 3 is carried by pulleys 7 and 8 and passes through an oven 9. In practice I have found it desirable to have this oven 9 about 300 feet in length and to have the belt propelled at a speed to carry the wax through the oven in about two hours. At suitable intervals in the oven 9 I provide rakes or teeth 10, 10 depending from the roof of the oven 9 and supported at a slight distance above the surface of the belt 3. At the rear of the oven 9, and below the belt 3, I provide a tank 11. A pulley 12 in the tank 11 and under which the belt 3 is carried, will cause the belt 3 to be depressed into the tank 11. A pulley 13 is also arranged in the tank 11 to carry the belt 3 up out of the tank. My device being thus assembled, the slack wax is carried from the press 1 at a temperature of about 30° or 32° Fahrenheit and deposited upon the belt 3, by which it will be conveyed through the oven or tunnel 9. I have found it preferable to have this oven or tunnel heated in its upper part to a temperature of about 140° Fahrenheit, and at the floor to 120° Fahrenheit. This is preferably accomplished by means of steam pipes 17 or in any other desired manner. The wax upon the belt 3 in its passage through the oven 9, will be broken up and spread by means of the teeth 10 arranged, as above described, at suitable intervals in the tank above the belt 3. In the tank 11 I provide a water bath, the temperature of which is maintained at approximately the boiling point by means of steam pipes, or in any other desired manner. The wax upon the belt 3, after passing through the tunnel 9 will be carried down by the belt 3 into the boiling water bath in the tank 11 where it will be melted, and by reason of its relatively light specific gravity will float upon the boiling water and be drawn off through a duct 14 into a tank or the like 15. In its slow passage through the tunnel 9 the oil will be "sweated" out of the wax and will drop down on the floor of the oven, where it may be run off in a gutter 18 below the belt 3 to a suitable tank or receptacle 19 or disposed of in any desired manner. I prefer to place over the tank 11 a drip pan 16, whereby the oil which drips from the belt at the rear end of the oven, will be diverted and will be conveyed to the gutter 18 or to

the floor of the oven and the oil be kept from dropping into the tank 11.

Having thus described my invention, what I claim is:

1. The process of sweating wax, consisting in depositing the wax upon a mesh belt and conveying it by means of said belt through an oven at a temperature above the melting point, and thence immersing the wax in a bath of boiling water, substantially as shown and described.

2. The process of sweating wax, consisting in depositing the wax upon a mesh belt and conveying it by means of said belt through an oven at a temperature above the melting point, raking up the wax in said belt, and thence immersing the wax in a bath of boiling water, substantially as shown and described.

3. In a device for sweating wax, the combination of an oven, an endless belt therein, and a hot water bath adjacent the oven in which the endless belt is immersed, substantially as shown and described.

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

WILLIAM MURPHY.

Witnesses:

CHARLES J. CARROLL,

ANNA J. TIERNEY.