

H. F. HITNER.
 BAIT FOR DRAWING GLASS ARTICLES.
 APPLICATION FILED SEPT. 14, 1910.

1,057,056.

Patented Mar. 25, 1913.

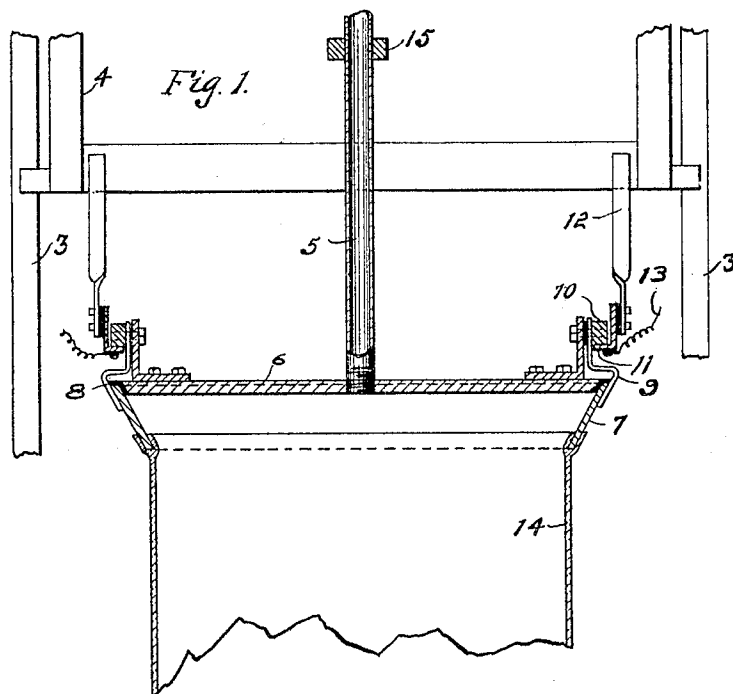
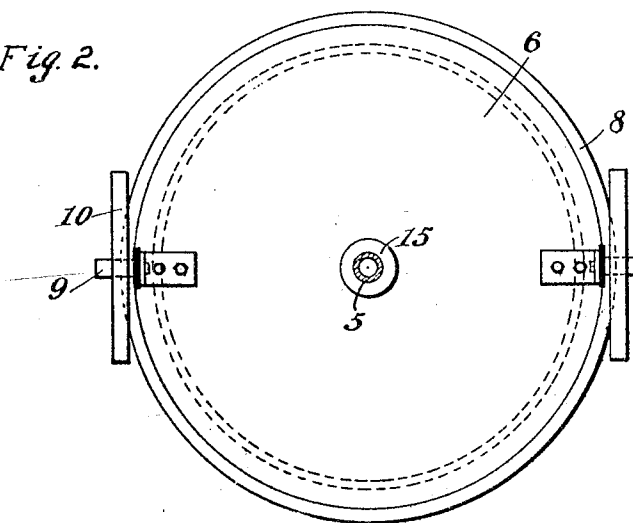


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

HARRY F. HITNER, OF MOUNT VERNON, OHIO, ASSIGNOR TO PITTSBURG PLATE GLASS COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BAIT FOR DRAWING GLASS ARTICLES.

1,057,056.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed September 14, 1910. Serial No. 582,077.

To all whom it may concern:

Be it known that I, HARRY F. HITNER, a citizen of the United States, residing at Mount Vernon, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Bait for Drawing Glass Articles, of which the following is a specification.

This invention has reference to an improved means for electrically heating the bait which is used for drawing glass articles, such for example as cylinders which are formed in the manufacture of window glass.

The first of the objects of my present invention is the construction of a bait of this character which will be practically operative, which will be cheap to construct, and not liable to be put out of order by the intense heat of the glass or the unfavorable conditions of service with which devices of this character are surrounded.

Another object of my present invention is the provision of a bait of the type specified which will not be liable to suffer from corrosive action as is the case with devices of like character heretofore proposed, and which can be raised to a sufficiently high temperature without excessive cost or great difficulty in the practical operation of the mechanism.

In order that my invention may be better understood, I have illustrated the same in preferred form in the accompanying drawing, wherein,—

Figure 1 is a vertical sectional view indicating a bait constructed in accordance with my invention, and

Figure 2 is a plan view of the same.

In Figure 1 I have indicated the upright guides 3 which are commonly employed for holding the drawing frame 4 in proper position as it is being raised by the usual hoisting mechanism common in this class of devices, and at 5 I have indicated a downward extension of a pipe such as the ordinary air supply or blow-pipe which is commonly connected with some tank or other source of fluid pressure, said air supply pipe 5 entering at the center of a top plate 6 forming the upper portion of my improved bait.

Around the periphery of the top plate 6 I arrange a strip 7 which projects downwardly as shown, and preferably is inclined inwardly at an angle as indicated, and is

secured to the top plate 6 by any suitable securing devices, but insulated therefrom electrically, by means of the insulation material 8.

As a means for supplying current to the strip 7, I arrange a conducting piece 9 at each side of the plate, such conducting piece being preferably of copper or other like material and connected to a horizontal bar 10 that is adapted to slide on or off a supporting bracket 11 which in turn is supported by, but insulated from the depending hangers 12, and is connected with supply wires 13 for supplying current to the brackets 11 so that it will then travel through the horizontal bars 10 and the conducting strip 9 down to the bait 7, entering said bait proper at one side and passing around both sides of the circular portion and out of the other side. If preferred, of course, the strip 7 can be severed transversely, and the current passed entirely around from one side of said slot to the other side, thus giving a longer path of resistance.

The top plate 6 or body portion of the bait may be made of any preferred metal, and I employ in practice ordinary cast iron or wrought metal for this purpose, but within the allowable size of devices of this character ordinary metals would not answer for the part 7 to secure practical results, and I have discovered that a practical construction can be made by the employment of what is known as a nichrome metal, that is, metal composed generally of a certain combination of nickel, chromium and iron, and that in certain instances, metal of this character running in the neighborhood of fifty times the resistance of copper can be made to answer the purpose by affording the requisite degree of resistance if the voltage used be low. I find I get about the right heating effect by the use of in the neighborhood of 15 volts, and large amperage, so as to secure on a bait approximately 18 inches in diameter, about 2½ kilowatts.

As a convenient means for removing the bait and attached cylinder I provide a collar 15 fixed to the pipe 5, which, as in the case of the ordinary bait construction, can be raised through the collar 15 by the take-down mechanism, the horizontal bars 10 sliding off the supporting brackets 11, and when put in place again, making good contact by sliding in along the brackets 11 so as to make

a rubbing of the surfaces that will give sufficient conductivity for the amperage that must be carried. The weight, of course, aids in making such contact, as the entire weight of the cylinder is supported on the brackets 11 by the arrangement shown, during the drawing operation, the brackets 11 forming a part of the drawing carriage which may be raised or lowered by any preferred means—that generally used being an electrically-actuated hoisting cable.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:—

1. In combination in glass drawing apparatus, a carriage provided with a pair of laterally extending contact guides, means for supplying current therethrough, and a bait of material of relatively high resistance provided with contact members slidably mounted upon the said guides, whereby the bait is supported thereby and detachable by lateral sliding movement.

2. A bait for drawing glass articles, comprising in combination a conical ring of material of high electrical resistance taper-

ing inwardly and downwardly for engagement with the glass cylinder and a body portion or framework supporting said ring and means for supplying electrical current to said ring so as to pass through the same and maintain the temperature thereof, substantially as described.

3. A bait for drawing glass articles, comprising in combination, a strip of material of high electrical resistance arranged with a depending lower edge for engagement with the glass cylinder, and means for supplying electrical current to said strip of material so as to pass through the same and maintain the temperature thereof, and contact means connected with said electrical supply means, arranged to support the weight of the cylinder to be drawn, substantially as described.

In testimony whereof I have hereunder signed my name in the presence of the two subscribed witnesses.

HARRY F. HITNER.

Witnesses:

DOERING BELLINGER;

JULIAN H. KENDIG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."