Dec. 13, 1927. 1,652,959

E. ROLLAND

SPLITTING BUCK

Filed June 24, 1925

Fig. 1.

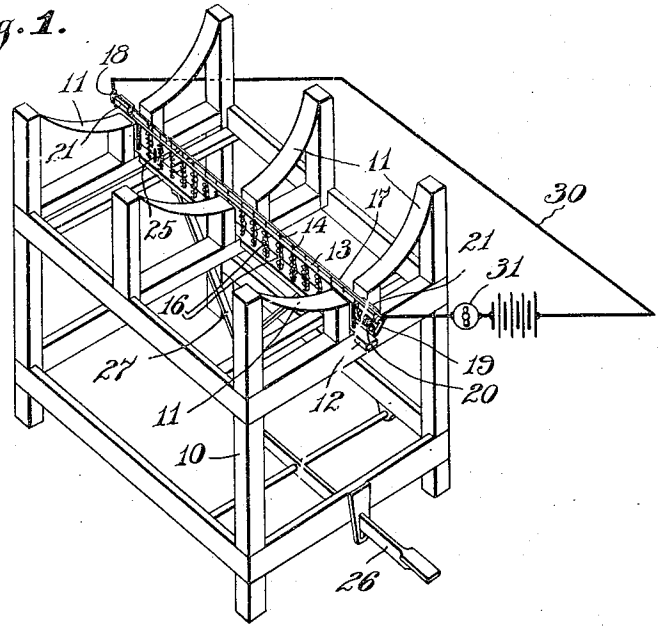


Fig. 2.

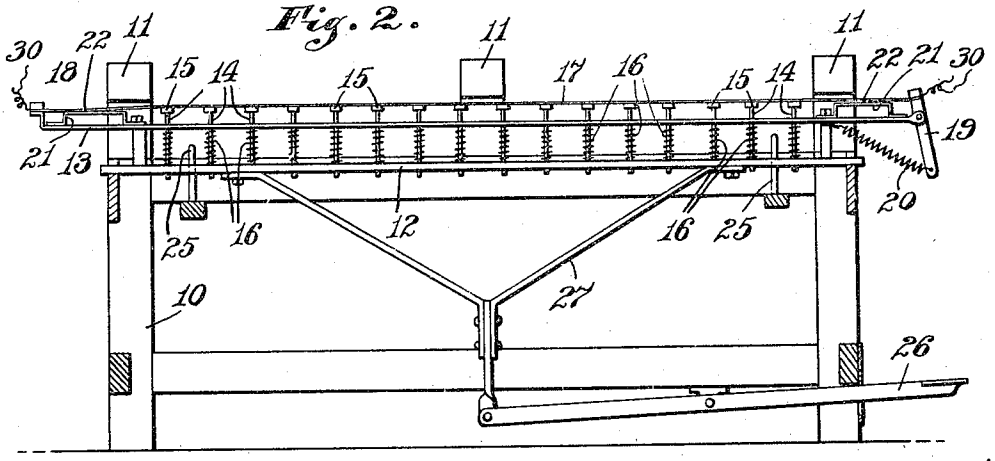


Fig. 3.

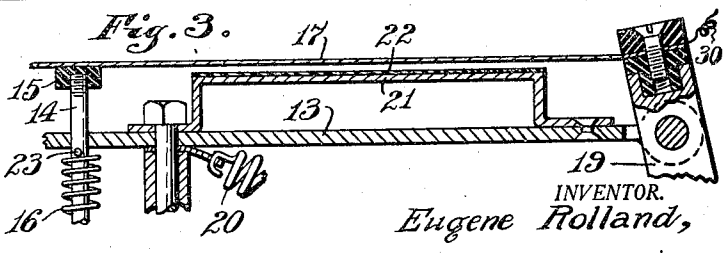
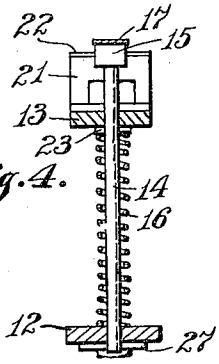


Fig. 4.



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UNITED STATES PATENT OFFICE.

EUGENE ROLLAND, OF CLARKSBURG, WEST VIRGINIA, ASSIGNOR TO ROLLAND GLASS COMPANY, OF CLARKSBURG, WEST VIRGINIA, A CORPORATON OF WEST VIRGINIA.

SPLITTING BUCK.

Application filed June 24, 1925. Serial No. 39,222.

One of the methods of producing window glass comprises the drawing of glass cylinders from a bath of molten glass, the cutting of said cylinders into desired lengths, the splitting of said lengths one or more times so as to form one or more sections of glass, and the flattening of said sections.

My present invention relates to a method of and means for splitting the cylinder sections by means of which such operation may be materially facilitated.

The accompanying drawings illustrate my invention.

Fig. 1 is a perspective view of my improved splitting buck;

Fig. 2 is a central vertical section;

Fig. 3 is an enlarged vertical sectional detail, and

Fig. 4 is a transverse sectional detail.

In the drawings 10 indicates a main frame or buck provided at its top with a series of cradle-like supports 11 arranged in laterally spaced pairs so as to form a support for glass cylinder sections, said supports being laterally spaced to receive my improved electric heating means by which the glass may be heated along a desired line as a preliminary to splitting.

My improved heating means comprises a vertically movable frame consisting of a lower bar 12 and an upper bar 13; a plurality of vertically movable plungers 14, each having an insulating head 15 and normally yieldingly urged upwardly by spring 16, and an electrical heating element 17, most conveniently in the form of a narrow tape of metal capable of acquiring a desired temperature under the application of an electric current.

Tape 17 is anchored at one end 18 to bar 13, being insulated therefrom, and at the other end is anchored, by suitable insulations, upon a lever 19 pivoted to bar 13 and acted upon by a spring 20 which serves to keep tape 17 under a constant tension.

At each end, just beyond the series of plungers 14, bar 13 is provided with a platform 21 the upper face of which is covered with a heat resisting head, such as asbestos 22, just beneath tape 17. The upward movement of each plunger 14 is limited by a pin 23.

The vertical movement of bar 12, and the parts carried thereby, is guided by guide pins 25 on the buck 10 and such vertical movement is accomplished by means of a foot treadle 26 connected by a yoke 27 with bar 12.

The tape 17 is connected to a suitable supply circuit 30 within which is a controlling switch 31.

In operation tape 17 normally lies just below and out of contact with a glass cylinder placed in the cradles 11. The operator then steps upon treadle 26 and raises the tape 17 into contact with the outer surface of the cylinder at its lowest point.

The plungers 14 yield independently so as to bring the tape 17 into intimate contact with the cylinder throughout its entire length irrespective of such variations in diameter as unavoidably occur in production. The tape is then heated by a proper flow of electric current and the cylinder is retained in place until a desired line of split has been determined by the local heating of the glass. Thereupon the cylinder is cracked either by application of a cool iron or wet finger to the heat line, or by scoring the cylinder externally for a short distance along the heated line.

At the present time cylinders of such diameter are produced that it is desirable to split the same two or more times so as to produce two or more "shawls" or cylinder sections and for this purpose my improved buck is very efficient because, when the first heat line has been established, the cylinder may be rotated in the cradle 180 degrees or 120 degrees, depending upon whether two or three "shawls" are desired, and a new heat line is being established while the scoring or other cracking manipulation is being accomplished along the previous heat line. I find that the time required in accomplishing a split, after a defined heat line has been turned to splitting position, is just about sufficient to permit the proper heating along a new line of desired split.

The platforms 13 are so placed that the ends of the cylinder lie thereover, thus insuring a proper contacting of the tape with the ends of the cylinder while at the same time preventing any cutting or burning out of the tape at said ends.

It will be readily understood that the treadle may be left in the position which elevates the tape and the glass cylinders laid

on the tape or that the treadle may be omitted and frame 12—13 mounted in an elevated position.

I claim as my invention:

1. A splitting buck comprising a cradle-like support for glass cylinders, an electric heating element arranged in the lower part of said cradle, and a series of upwardly acting plungers co-operating with said heating element and yieldable laterally of said element, to hold said element in intimate association with the entire length of the outer surface of a glass cylinder supported in the cradle.

2. A splitting buck comprising a cradle-like support for glass cylinders, an electric heating element arranged in the lower part of said cradle and movable into and out of contact with the under surface of a cylinder supported in said cradle, and a series of upwardly acting plungers co-operating with said heating element, to hold said element in intimate association with the entire length of the outer surface of a glass cylinder supported in the cradle.

3. A splitting buck comprising a cradle-like support for glass cylinders, an electric heating element arranged in the lower part of said cradle, and a plurality of independently acting separated means by which said element when heated may be held in intimate contact with the under outer surface of such cylinder throughout the entire length of the cylinder.

In witness whereof, I, Eugene Rolland, have hereunto set my hand at Clarksburg, West Virginia, this 19th day of June, A. D. one thousand nine hundred and twenty-five.

EUGENE ROLLAND.