

J. HASTREITER & N. BLEILEVENS.

MACHINE FOR MAKING WIRE GLASS.

APPLICATION FILED DEC. 17, 1908.

944,861.

Patented Dec. 28, 1909.

2 SHEETS-SHEET 1.

Fig. 1.

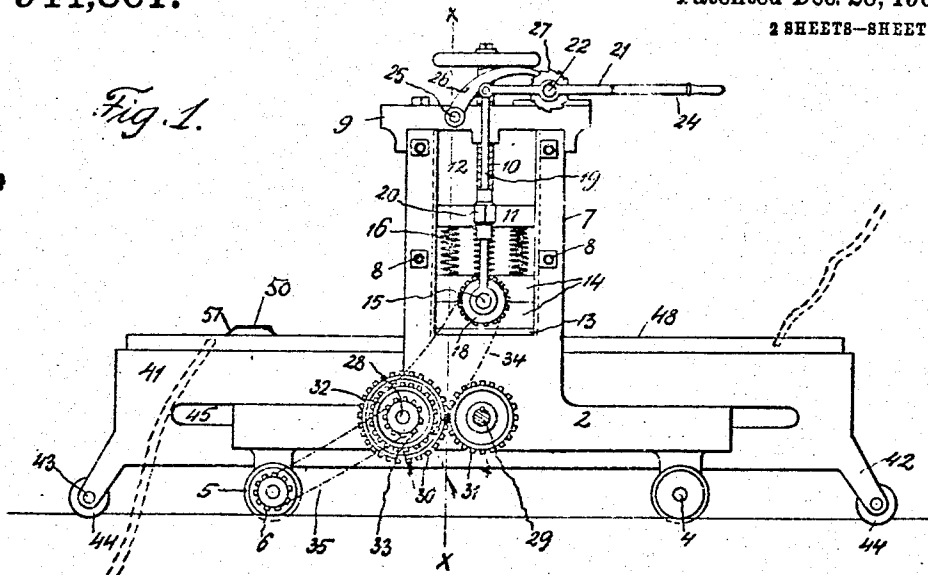
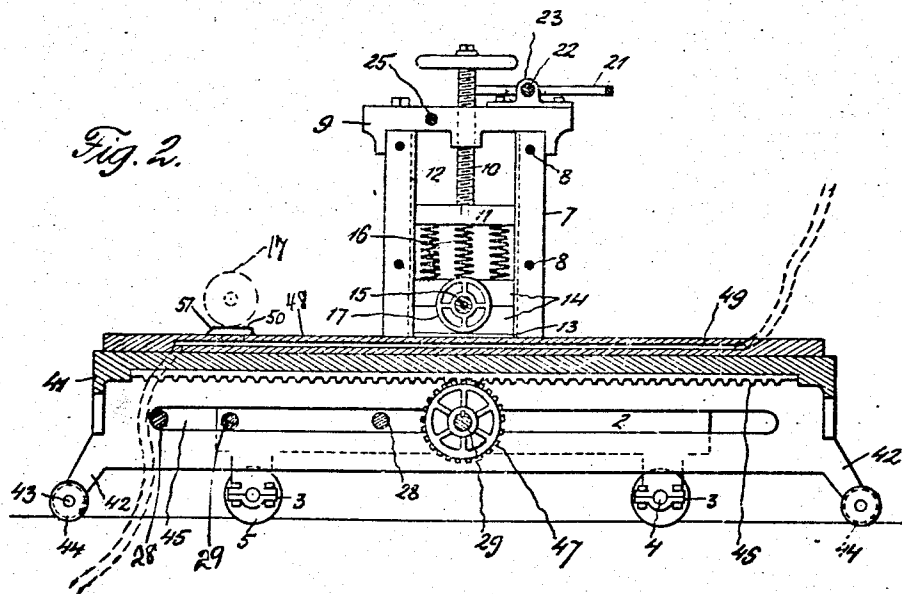


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

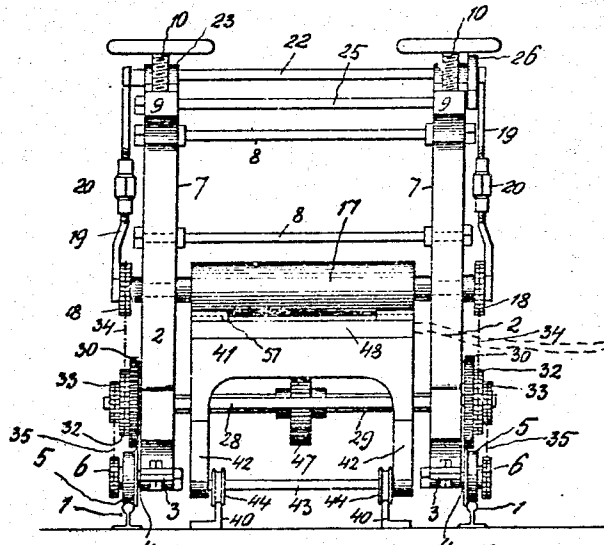
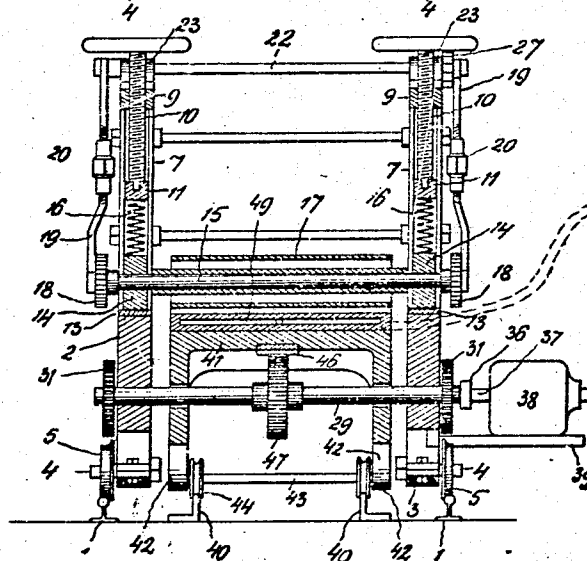


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOSEPH HASTREITER, OF MORGANTOWN, WEST VIRGINIA, AND NICKLES BLEILEVENS,
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MACHINE FOR MAKING WIRE-GLASS.

944,861.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, (1) JOSEPH HASTREITER and (2) NICKLES BLEILEVENS, (1) a subject of the Emperor of Germany, (2) a citizen of the United States of America, residing at (1) Morgantown, (2) Dunbar, in the counties of (1) Monongalia, (2) Fayette, and States of (1) West Virginia, (2) Pennsylvania, have invented certain new and useful Improvements in Machines for the Making of Wire-Glass, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to machines for making wire glass, and the primary object of our invention is to provide a machine by which reinforced glass plates can be expeditiously produced and a high grade of wire glass obtained.

Another object of our invention is to provide a machine for making wire glass that can be easily operated, the machine embodying certain mechanisms whereby the forming and pressing roll of the machine will be automatically adjusted to produce a plate of wire glass of a prescribed thickness.

A further object of our invention is to provide a durable machine wherein a single roll is employed in connection with a movable table for flattening a batch of glass and placing the same in condition to receive a wire screen reinforcement.

With the above and other objects in view, which will more readily appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts to be presently described and then claimed.

In the drawings, Figure 1 is a side elevation of a machine constructed in accordance with our invention, Fig. 2 is a longitudinal sectional view of the same, Fig. 3 is an end view of the machine, and Fig. 4 is a vertical cross sectional view of the machine taken on the line X--X of Fig. 1.

In the accompanying drawings 1 designates parallel rails constituting a track for a movable carriage comprising side frames 2 provided with depending members 3 for revoluble axles 4, said axles having flanged wheels 5 adapted to travel upon the rails 1 and sprocket wheels 6 upon one set of axles for a purpose that will hereinafter appear.

Upon the frames 2 are arranged housings

7 connected by transverse tie rods 8. The housings 7 are provided with cross heads 9 and adjustably mounted in each cross-head is a screw 10 for moving a spring block 11 arranged in the window 12 of each housing.

Arranged within the windows 12 of the housings 7 are liners 13 and resting upon said liners are bearings or brasses 14 of a transverse revoluble shaft 15. Interposed between the uppermost bearing 14 and the spring block 11, are coil springs 16 adapted to normally maintain the bearings upon the liners 13.

Mounted upon the shaft 15 between the housings 7 is a flattening roll 17, and upon the protruding ends of said shaft are mounted sprocket wheels 18. Loosely connected to the protruding ends of said shaft are links 19 having turnbuckles 20, said links connecting with the ends of a yoke 21 mounted upon a shaft 22 journaled transversely of the machine, in bearings 23 provided therefor upon the cross heads 9. The yoke 21 is provided with a central projecting arm or lever 24 for lifting the yoke 21 and elevating the shaft 15 and the roll 17 carried thereby. For holding the shaft 15 in an elevated position, a shaft 25 is mounted transversely of the machine in the cross heads 9 and loosely mounted upon said shaft is a gravity pawl 26 adapted to engage a ratchet wheel 27 mounted upon one end of the shaft 22.

Journaled in the side frames 2 are transverse shafts 28 and 29 provided upon the outer sides of said frames with meshing gear wheels 30 and 31 respectively. The shaft 28 adjacent to the gear wheels 30 is provided with sprocket wheels 32 and 33. Passing over the sprocket wheels 32 and 33 are sprocket chains 34, and passing over the sprocket wheels 33 and 6 are sprocket chains 35.

To revolve the shaft 29 and impart a rotary movement to the roll 17 and the axles 4, said shaft 29 is coupled, as at 36 to the armature shaft 37 of an electric motor 38, carried by a bracket 39 secured to one of the side frames 2.

Arranged between the rails 1 are rails 40 constituting a track for a table 41. The table 41 is provided with legs 42 having fixed transverse axles 43 for revolubly flanged wheels 44 adapted to travel upon the rails

40. The sides of the table 41 are provided with longitudinal slots 45 providing clearance for the shafts 28 and 29, whereby the table can be moved in an opposite direction from the carriage of the machine. The bottom of the table 41 is provided with a central longitudinal rack 46 and mounted on the table is a slab 48 having a lateral compartment 49 for the circulation of air or water employed for maintaining the slab in a cool condition. Arranged at one end of the slab 48 to be hereinafter termed the rear end, are blocks 50 having beveled edges 51.

Operation: When the motor 39 is placed in operation, the carriage will be moved in one direction and the table 41 in the opposite direction, as is apparent from the manner in which these two elements are geared together. The batch of molten glass is placed upon the forward end of the slab 48, and by starting the motor 38 the batch of molten glass can be rolled upon the slab to a desired thickness, this thickness is determined by the liners 13, which are adapted to support the bearings 14 and consequently hold the flattening roll 17 at a desired elevation above the slab, whereby as said roll continues with the molten glass, the glass will be spread evenly and of a thickness corresponding to the liners 13. As the carriage travels rearwardly, and the table 41 forwardly, the roll 17 will eventually impinge the blocks 50, and ride upon said blocks. When the roll 17 is raised by the blocks 50, the pawl 26 engaging the ratchet wheel 27 holds the shaft 22 and maintains the shaft 15 at the elevation to which it is raised by the blocks 50. As the batch of molten glass is flattened upon the slab, a wire screen is placed upon the flattened glass, and immediately upon the flattening roll 17 ascending the blocks 50, another batch of molten glass is placed upon the rear end of the table, the glass, of course, resting upon the metallic reinforcement and the flattened sheet of glass. A forward movement of the carriage and a rearward movement of the table, causes the roll 17 to flatten and evenly spread a second batch of molten glass upon the metallic reinforcement and the flattened sheet of glass therebeneath.

The thickness of the second layer of glass is determined by the blocks 50, these blocks in reality representing the entire thickness of a completed piece of wire glass.

It will of course be understood, that the motor 38 is reversed, to obtain the desired movement of the table and carriage, and that the batch of molten glass is always placed in front of the roll 17. Water or air can be used for maintaining the roll 17 and the slab 48 in a cool condition.

When the bearings 14 are elevated by the blocks 50, the springs 16 are placed under tension, and the tension of these springs is

sufficient to maintain the roll 17 in engagement with the second batch of glass, to evenly spread the same over the metallic reinforcement and the flattened batch of glass.

While in the drawings forming a part of this application there is illustrated the preferred embodiments of our invention, we would have it understood that the details of construction can be varied or changed as to the shape, proportion and manner of assemblage without departing from the spirit of the invention.

Having now described our invention, what we claim as new, is:—

1. In a machine for making wire glass the combination of a motor driven carriage, housings carried thereby, an adjustable flattening roll revolvably mounted in said housings, a movable table arranged between said housings and beneath said roll and adapted to be actuated by the movement of said carriage, a slab carried by said table, blocks arranged at one end of said slab for raising said roll, means supported by said housings for temporarily holding said roll in a raised position, and means arranged in said housings for supporting said roll at a desired elevation relative to said table.

2. In a machine for making wire glass, the combination of a carriage, housings carried thereby, a revoluble flattening roll journaled in said housings, a table movable between said housings and beneath said roll, blocks supported upon said table for temporarily elevating said roll, means carried by said housings for holding said roll in the elevated position, and means carried by said carriage for simultaneously moving said carriage and table in opposite directions.

3. In a machine for making wire glass, the combination of a movable carriage, a revoluble adjustable flattening roll supported by said carriage, a table movable beneath said roll relative to said table, and means supported by said carriage for simultaneously moving said carriage and table in opposite directions.

4. A machine for making wire glass, comprising a movable carriage, an adjustable revoluble roll supported by said carriage and adapted to be driven by the movement thereof, a table movably mounted beneath said roll and adapted to be actuated by the movement of said carriage, and means supported by said table for adjusting said roll.

5. A machine of the type described, comprising housings, an adjustable revoluble flattening roll journaled in said housings, a table movable beneath said roll, means arranged in said housings for supporting said roll, means carried by said table for elevating said roll, and means carried by said housings for temporarily holding said roll in the elevated position.

6. A machine of the type described, comprising housings, an adjustable revoluble flattening roll journaled in said housings, a table movable beneath said roll, means carried by said table for elevating said roll, and means carried by said housings for temporarily holding said roll in the elevated position.

In testimony whereof we affix our signatures in the presence of two witnesses.

JOSEPH HASTREITER
NICKLES BLEILEVEN

Witnesses:

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