

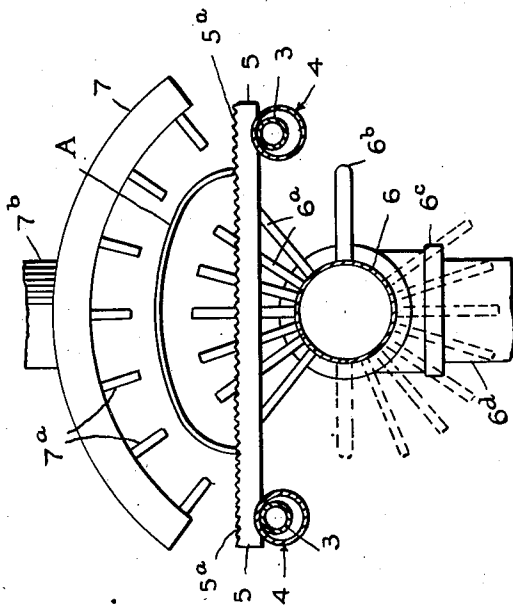
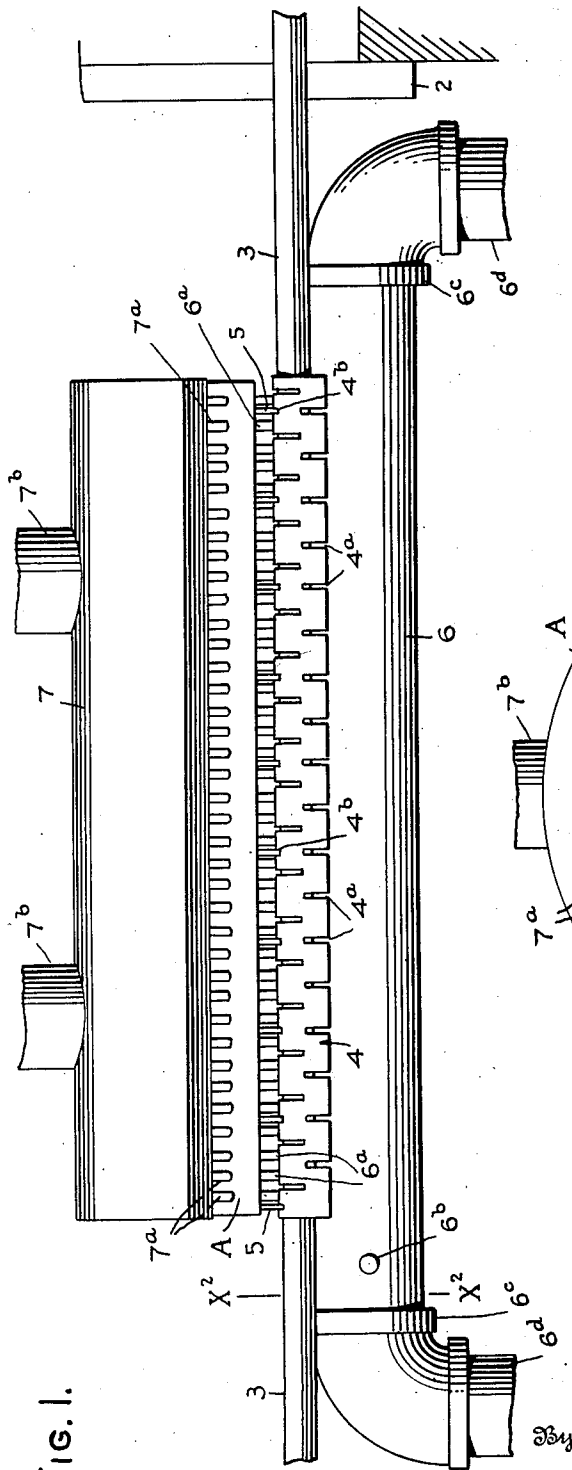
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APPARATUS FOR TEMPERING CURVED GLASS SHEETS

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APPARATUS FOR TEMPERING CURVED
GLASS SHEETS

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This invention is directed to an apparatus for tempering curved sheets of glass and involves means for preventing the distortion or flattening of the curved sheet during heating and during tempering, as well as means for applying jets of

For the purpose had in mind the curved sheet is supported at its straight edges during the heating and cooling and air nozzles to direct air jets on the curved side of the sheet are mounted for movement around a center located below and on the concave side of the sheet so as to be capable of being oscillated out of the way of the sheet supports during the movement of the sheet into cooling position.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding marks of reference—

Figure 1 is a side elevation of an apparatus embodying and adapted to carry out my invention.

Figure 2 is a vertical cross section on lines X²—X² of Figure 1.

The heating furnace may be of any improved construction and has located therein and projecting through the charging door 2 thereof the rails 3 formed by hollow pipes which may be cooled by air or water circulating therethrough. Each rail is loosely surrounded by a sleeve 4 slidable thereon and of at least the length of the sheet to be treated. The sleeves for the purpose of giving them flexibility have cuts 4a formed at intervals around their periphery and are provided at intervals with notches 4b on their upper surfaces.

The sleeves are bridged at short intervals by the rest 5 of metal having serrations 5a on their upper edges, the rest being partially seated at their ends in the notches 4b of the sleeve.

Located centrally below the rest 5 and outside of the heating furnace is the blast trunk 6 having nozzles 6a projecting radially from one segment thereof at intervals along its length. The trunk may be oscillated by the handle 6b around its axis, this being permitted by the packed joint 6c and is fed by air supply pipe 6d.

Located above the blast trunk is the curved blast hood 7 having the downwardly projecting blast nozzles 7a and being fed by air supply pipes 7b.

In the use of my invention the curved sheet A is laid on the rest 5, with its edges caught in the serrations thereof, whereupon the sheet, together with the rests and the sleeves are shoved into the furnace. When the sheet is brought to the proper temperature it is, together with the rests and

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sleeves moved along the rails to the outside of the furnace to the tempering station, i. e., to above the rotating blast trunk, it being stopped at a position where the rests are located vertically above the spaces between the blast 6a, the trunk being at such time rotated to a position shown in dotted lines in Figure 2. The trunk is then rotated to the position shown in full lines and air is turned on and caused to issue through the blast nozzles to chill and therefore temper the sheet.

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

1. In an apparatus for tempering curved glass sheets, the combination with a heating furnace, rails extending from within the furnace to the exterior thereof, sleeves loosely fitting and movable lengthwise of the rails horizontal, transverse members carried by the sleeves having serrated upper edges adapted to receive the edges of the curved sheet resting thereon and having means for preventing the separation of the edges of the sheet and means located on the outside of the furnace for directing air on the heated sheet when removed from the furnace.

2. In an apparatus for tempering curved glass sheets, the combination with a heating furnace, rails extending from within the furnace to the exterior thereof, sleeves moving on the rails, horizontal transverse members carried by the sleeves and extending from sleeve to sleeve, a rotatable air trunk below the transverse members when outside of the furnace having nozzles thereon projecting when the trunk is in one position above the level of the said members and jets located above the sheet when on the outside of the furnace.

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