

ABSTRACT

“SYSTEM AND HEAT EXCHANGER FOR INCREASING THE TEMPERATURE OF A SUBSTANCE WHICH IS INITIALLY IN AN AT LEAST PARTLY SOLIDIFIED STATE IN A CONTAINER”

A system comprising: a container adapted for storing a partly solidified substance and a melted liquid substance; a heat exchanger arranged with an oblong cylindrical section adapted for heat exchange with the substances inside the container; and a guiding means adapted to guide the substance along the oblong cylindrical section of the heat exchanger said guiding means comprising a housing, said housing comprising a plurality of openings arranged in a pattern along the length of said housing for distributing said flow of the substances and recirculating the substances; a pumping means connected to said guiding means, said pumping means comprising a pump positioned external to the container; where said pumping means and guiding means, displace the heat exchanged melted liquid substance through the plurality of openings thereby stirring the substance and circulating the melted liquid substance; and increasing flow speed and increasing heat exchange between the at least one heat exchanger and the substances; and further increasing heat exchange between the heat exchanged melted liquid substance and the remaining substance in the container.

Fig: 6

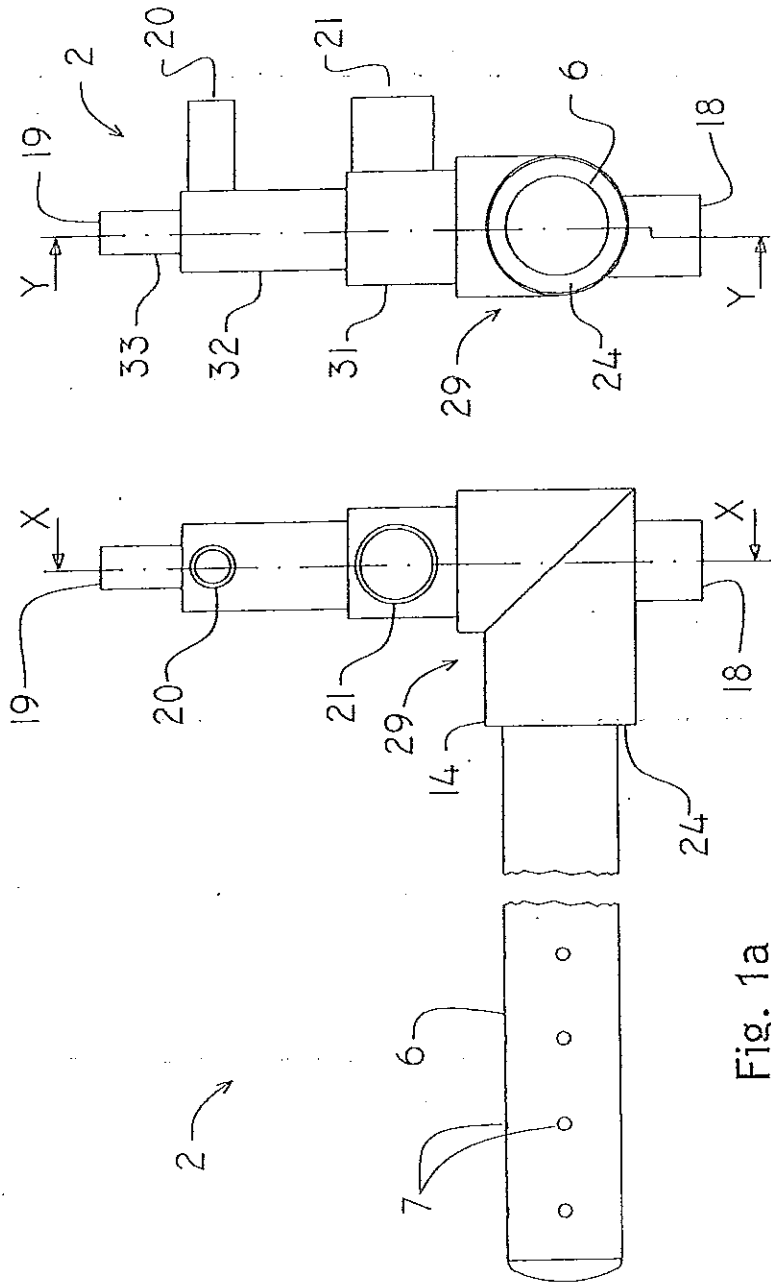
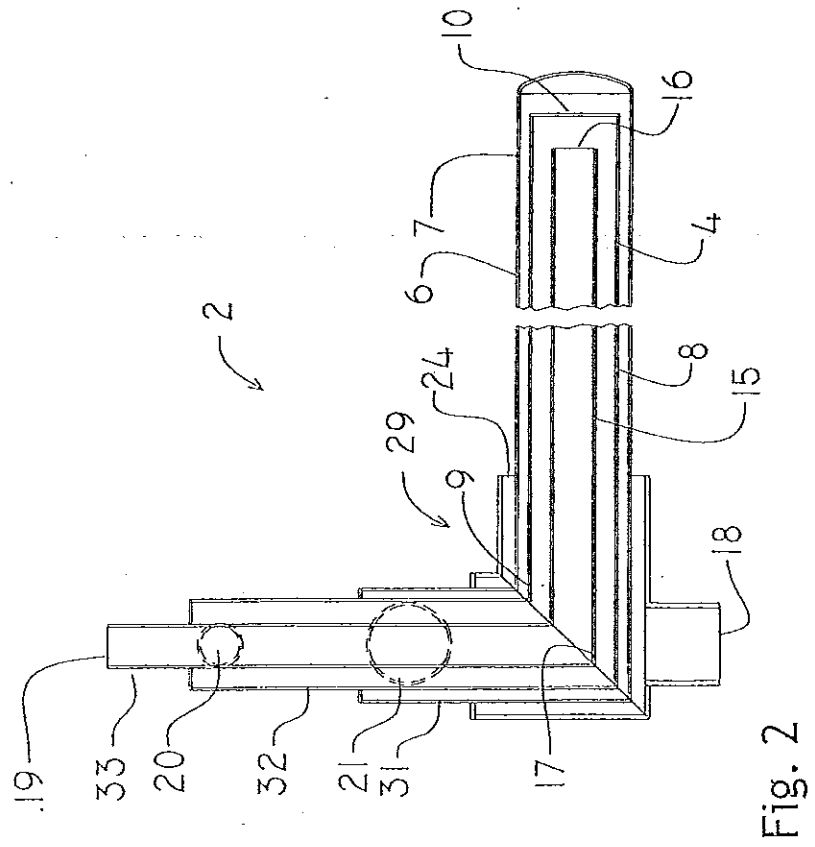
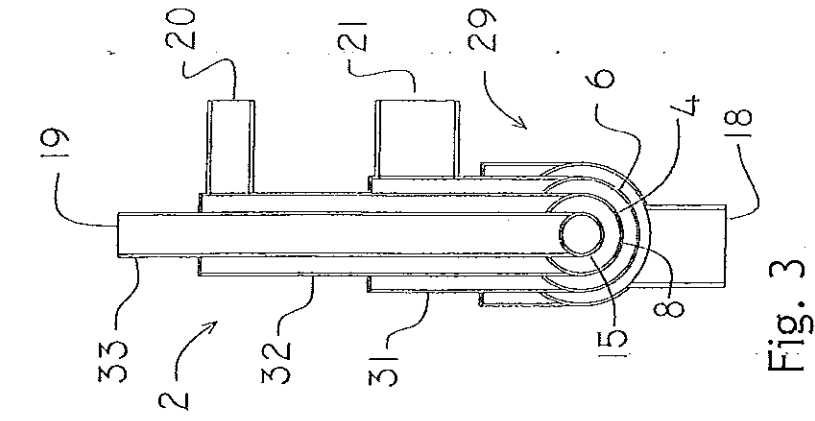
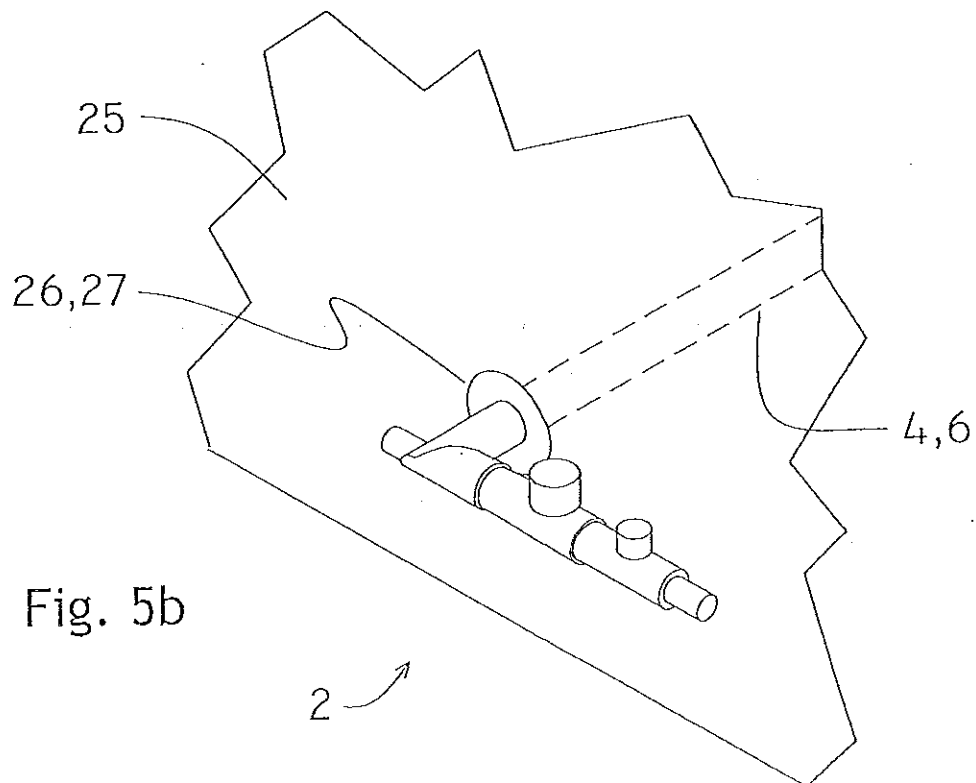
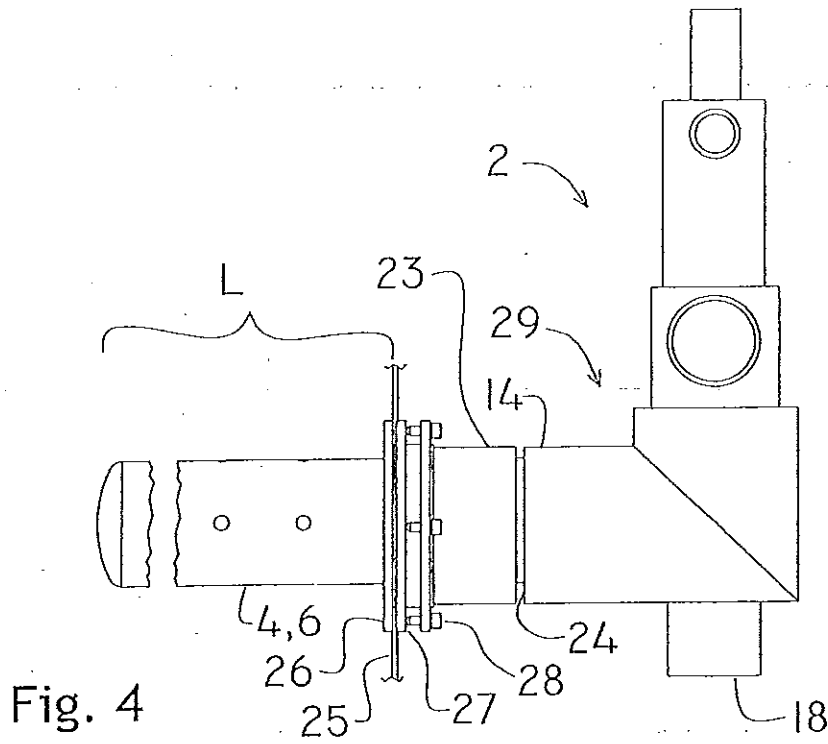


Fig. 1a

Fig. 1b





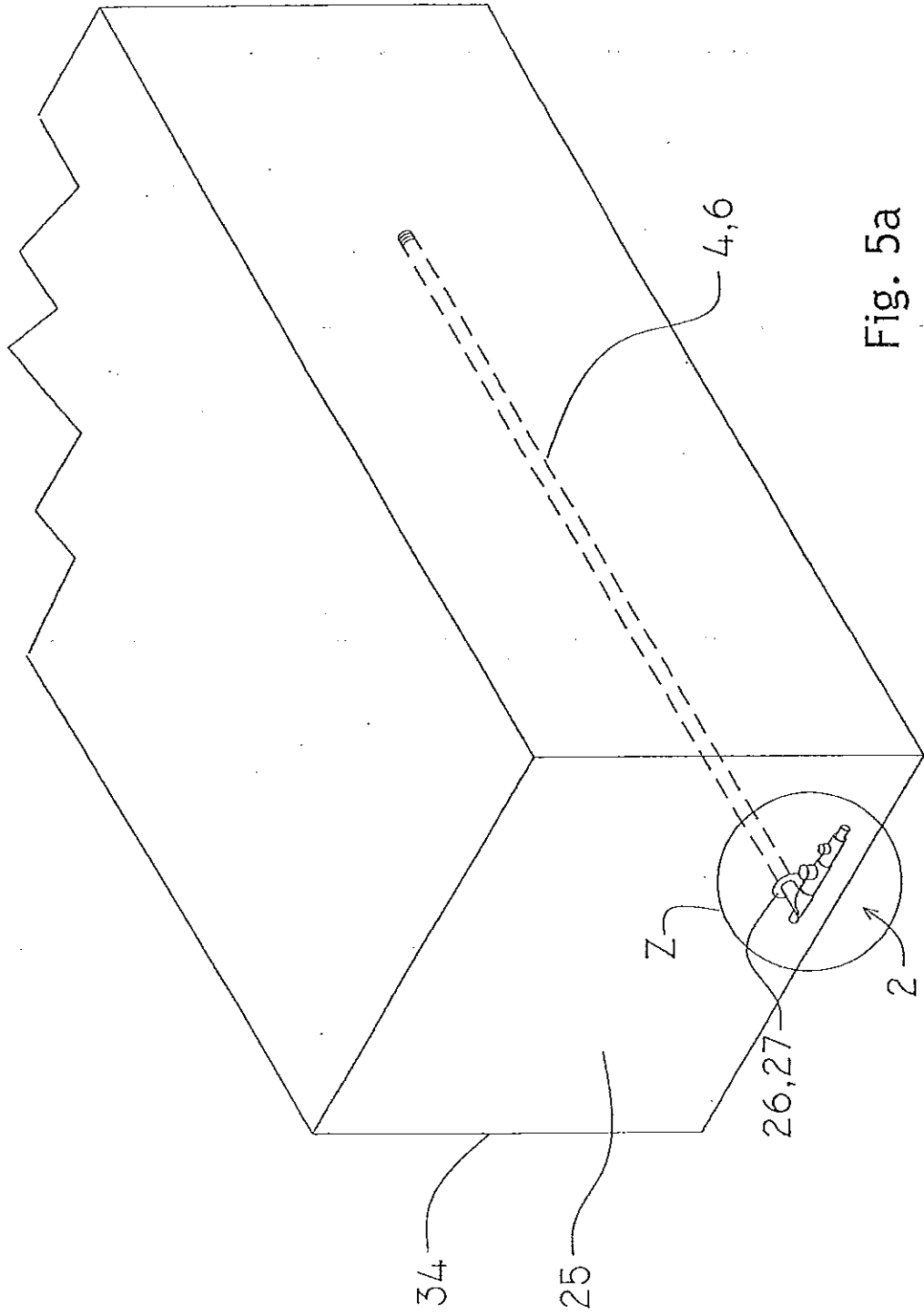
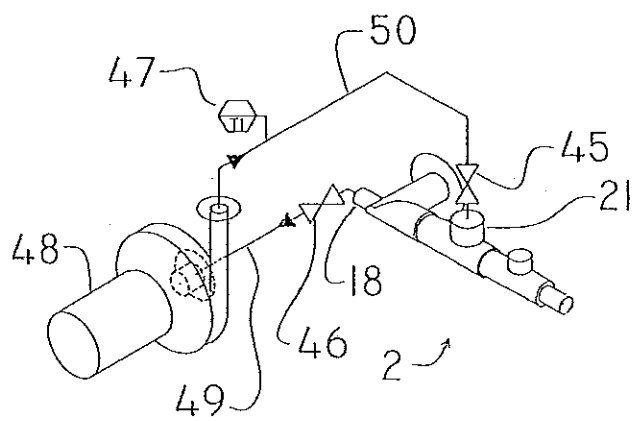
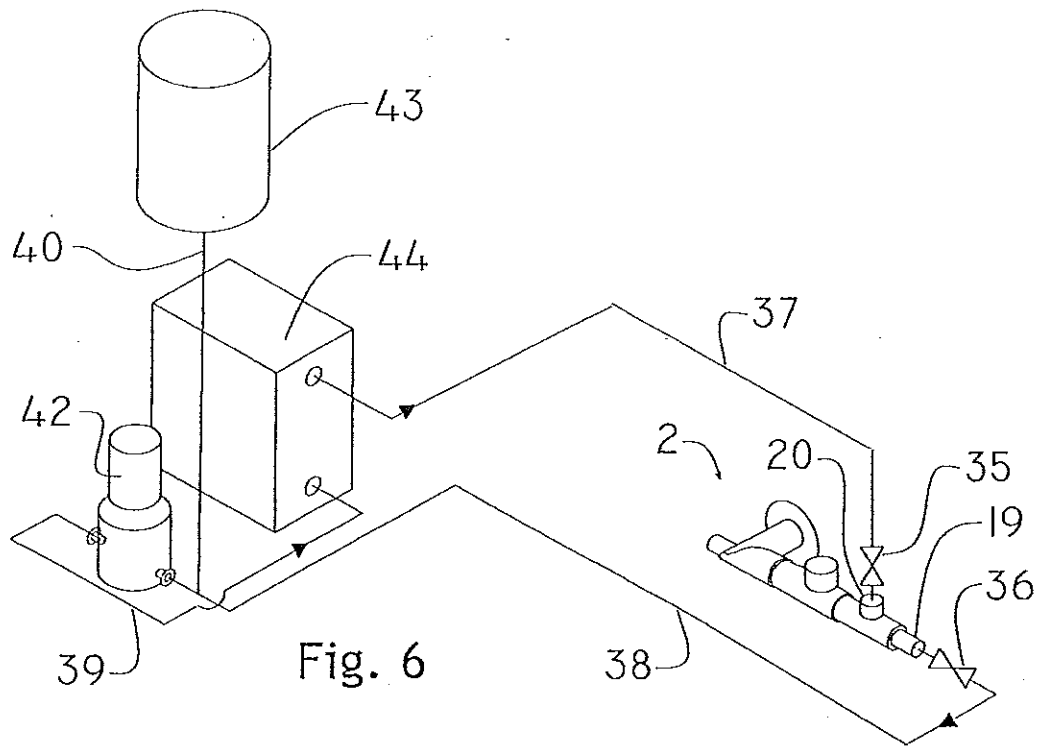
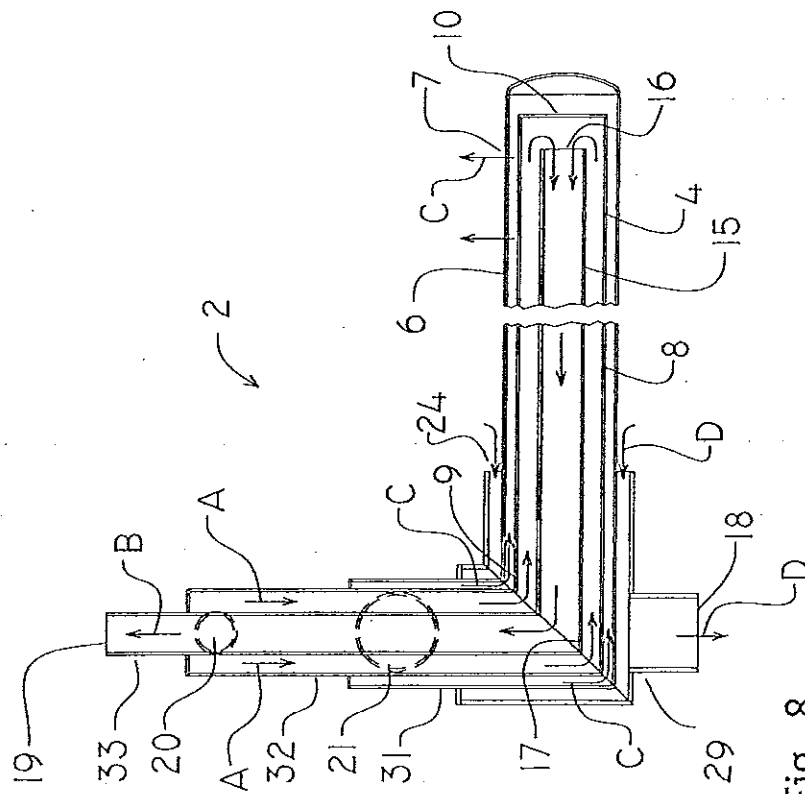


Fig. 5a





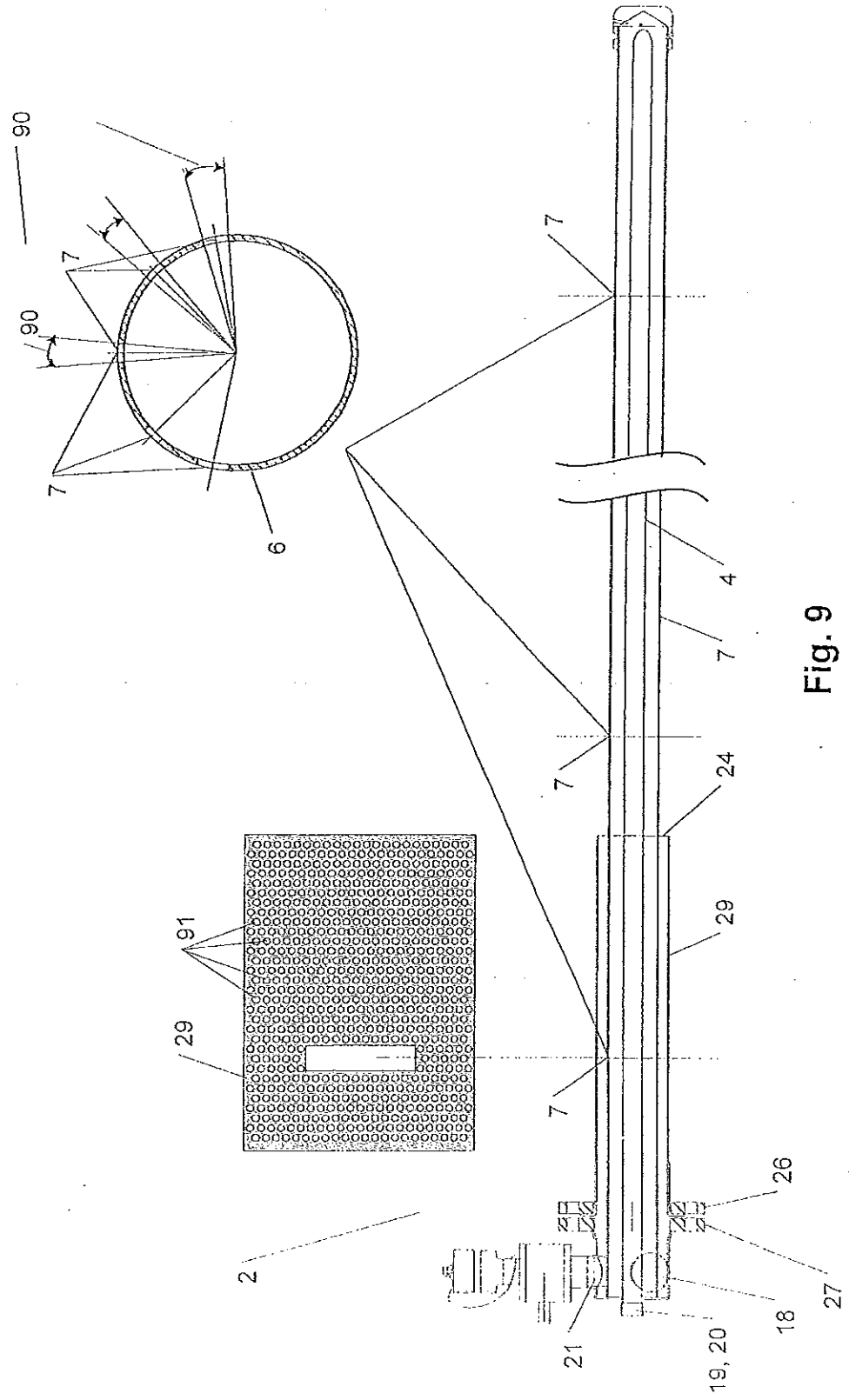


Fig. 9

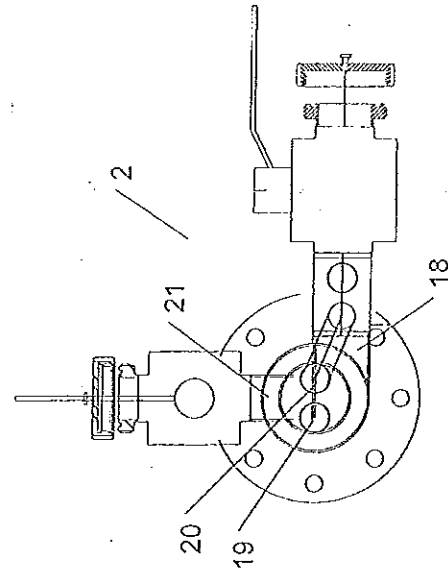


Fig. 10c

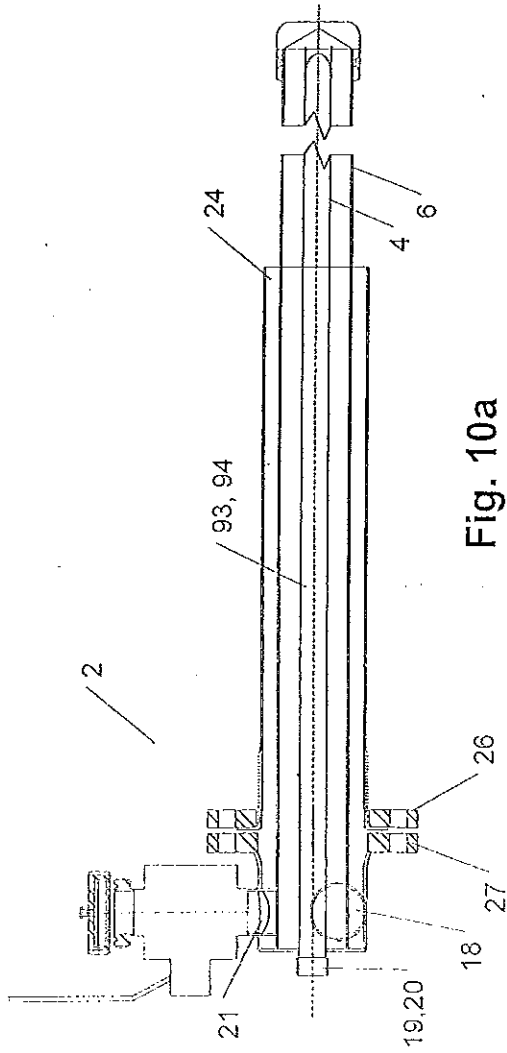


Fig. 10a

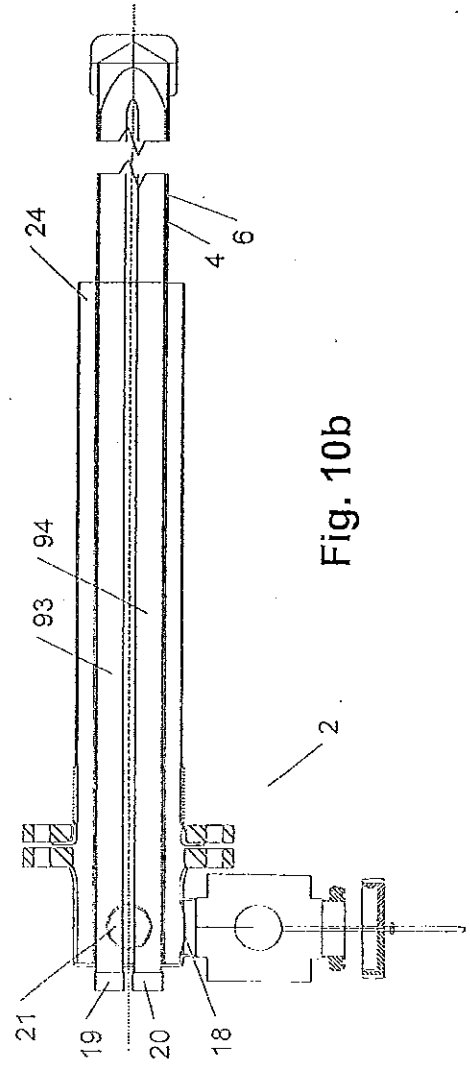


Fig. 10b