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(56) Documents cited

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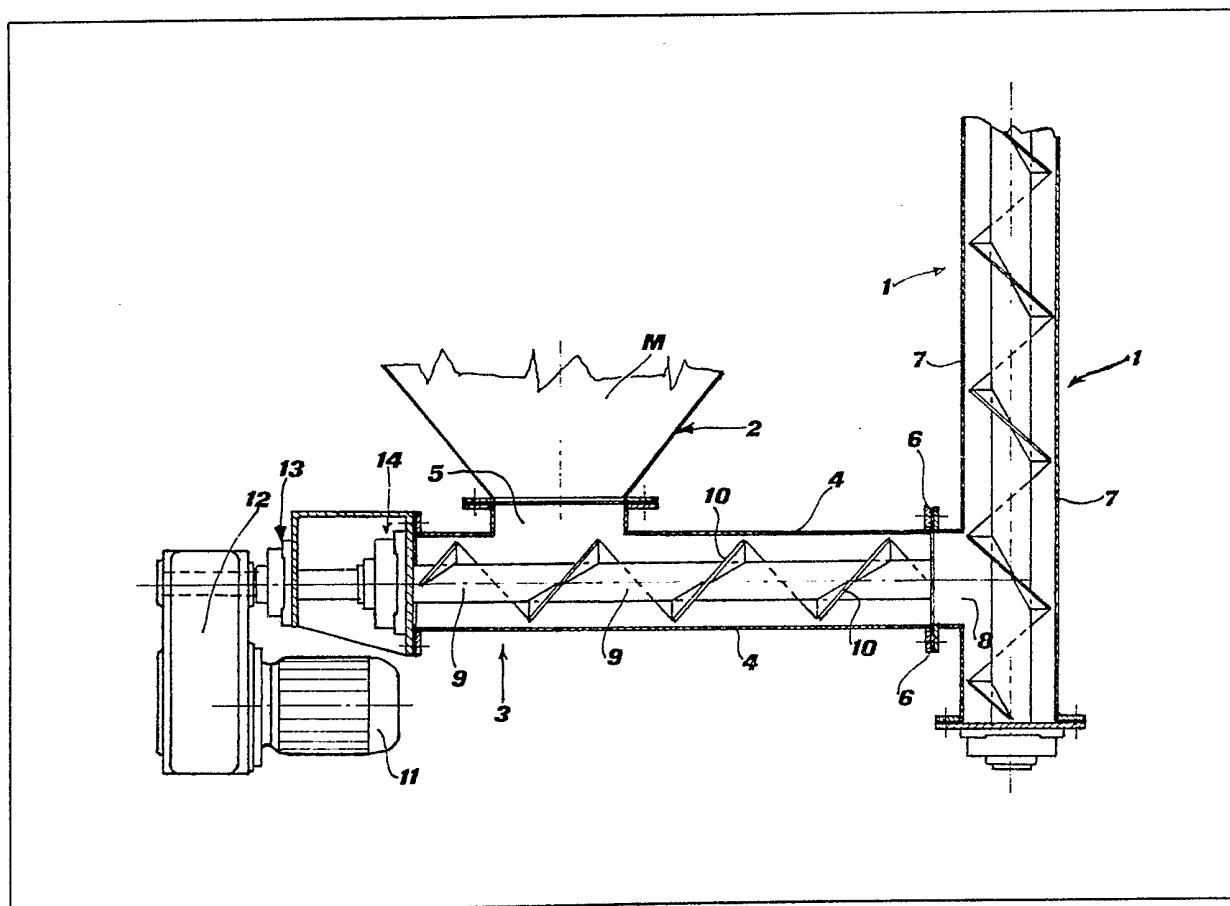
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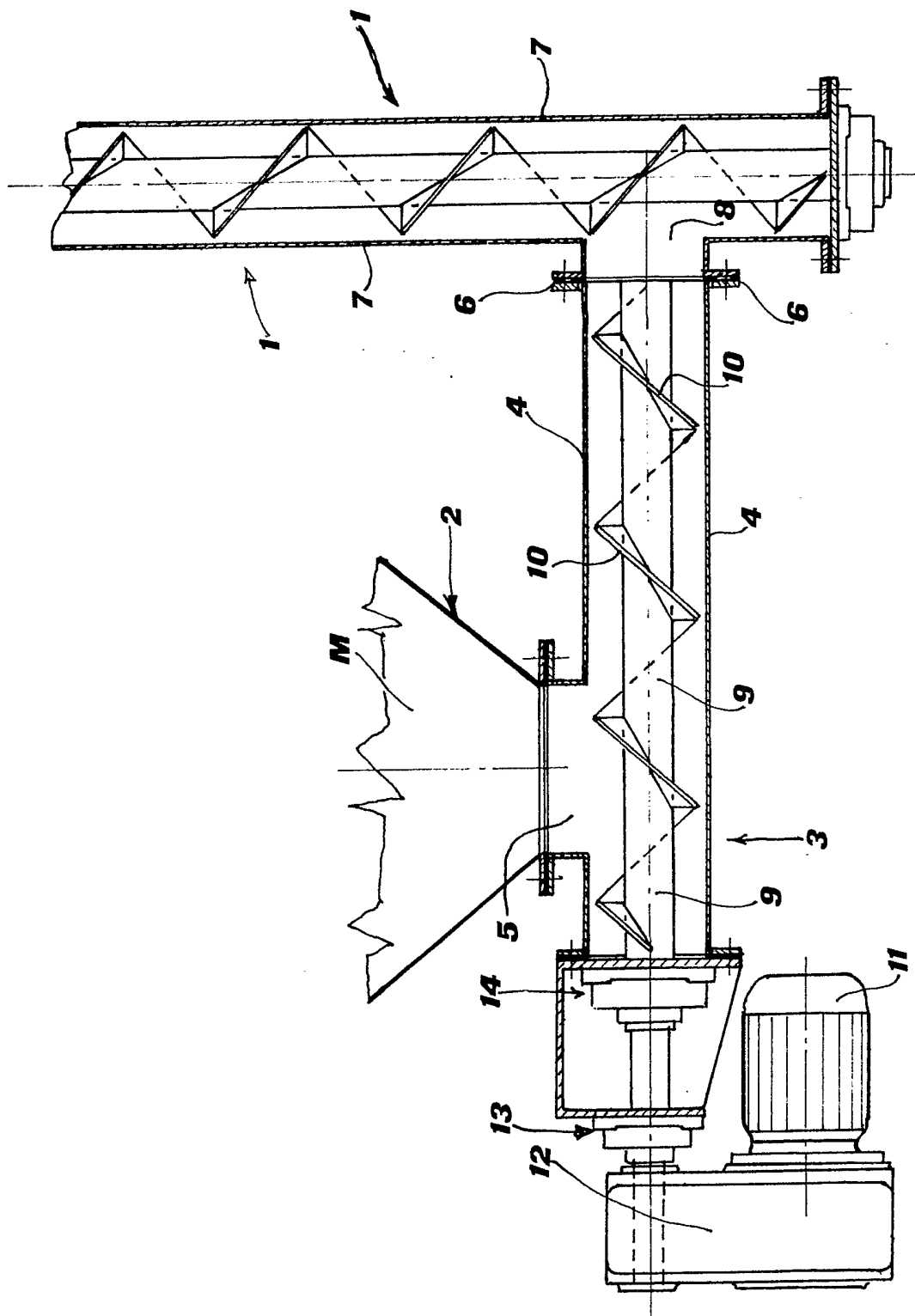
**WC1X 8PL**

(54) **Screw device for feeding  
vertical screw feeders**

(57) In a horizontal screw device 4 for feeding pasty or powdery material from a hopper 2 to a vertical screw feeder 1, the shaft 9 is supported in a cantilevered fashion by bearings 13 and 14 at the end remote from the vertical feeder 1, thus avoiding any interference with the conveying of the material. The shaft 9 is driven by motor 11 through gearing 12.



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## SPECIFICATION

## Screw device for feeding vertical screw feeders

The present invention relates to an improved screw device, apt to feed in a most efficient and rational manner the vertical screw feeders for conveying pasty and powdery materials.

Various devices for feeding vertical screw feeders are already known, among which the horizontal screw devices being fed with the material to be conveyed through a hopper discharging into an opening of the casing of the screw device itself.

Nevertheless, the hitherto known constructions of such horizontal screw devices have always had the drawbacks of presenting obstacles to the inflow of the material being conveyed inside the screw of the device and/or of feeding said material in a position not centered in respect of the axis of the vertical screw feeder to be fed.

These drawbacks — which have a negative effect on the efficiency and continuity of the conveyance — are essentially determined by the presence of supports for the shaft of the screw device, being placed at the end of said device close to the vertical screw feeder to be fed, or at an intermediate position within the device itself.

With the present invention, the above drawbacks are efficiently and entirely eliminated thanks to the fact that the shaft of the horizontal screw device, for feeding a vertical screw feeder, is supported right at the end of the device being far from the vertical screw feeder to be fed, in a cantilevered condition.

The invention is illustrated by way of example in the single figure of the accompanying drawing, which shows an axial section view of part of the

vertical screw feeder to be fed, and of the whole screw feeding device.

With reference to the drawing, a vertical screw feeder 1 is fed with material M contained in a hopper 2 through a horizontal screw feeding device 3. For this purpose, the bottom of the hopper 2 opens onto an upper opening 5 of the casing 4 of the device 3, the end of which is in turn connected, through connecting flanges 6, to a side opening 8 of the casing 7 of the vertical screw feeder 1.

The horizontal screw which forms the essential part of the feeding device 3, comprises a shaft 9 with screw 10, driven by a motor 11 through a gearing 12. The shaft 9 is supported only at its end far from the vertical screw feeder 1, by means of a pair of supports 13 and 14 which are apt to provide sufficient bearing to guarantee the support of the shaft 9 in a cantilevered condition.

By this arrangement, the feeding of the material from the hopper 2 to the vertical screw feeder 1 takes place without its inflow being hampered in any way, as besides clearly evidenced also in the drawing. The same arrangement clearly allows to feed the vertical screw feeder according to its axis.

## CLAIMS

1. Horizontal screw device for feeding a vertical screw feeder conveying pasty or powdery materials, characterized in that the shaft of the horizontal screw device is supported, in a cantilevered condition, right at the end of the device far from the vertical screw feeder to be fed.

2. A horizontal screw device for feeding a vertical screw feeder conveying pasty or powdery materials, substantially as hereinbefore described with reference to the accompanying drawing.