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TYPE HAMMER MECHANISM FOR HIGH SPEED PRINTER

Filed June 3, 1959

Fig. 1

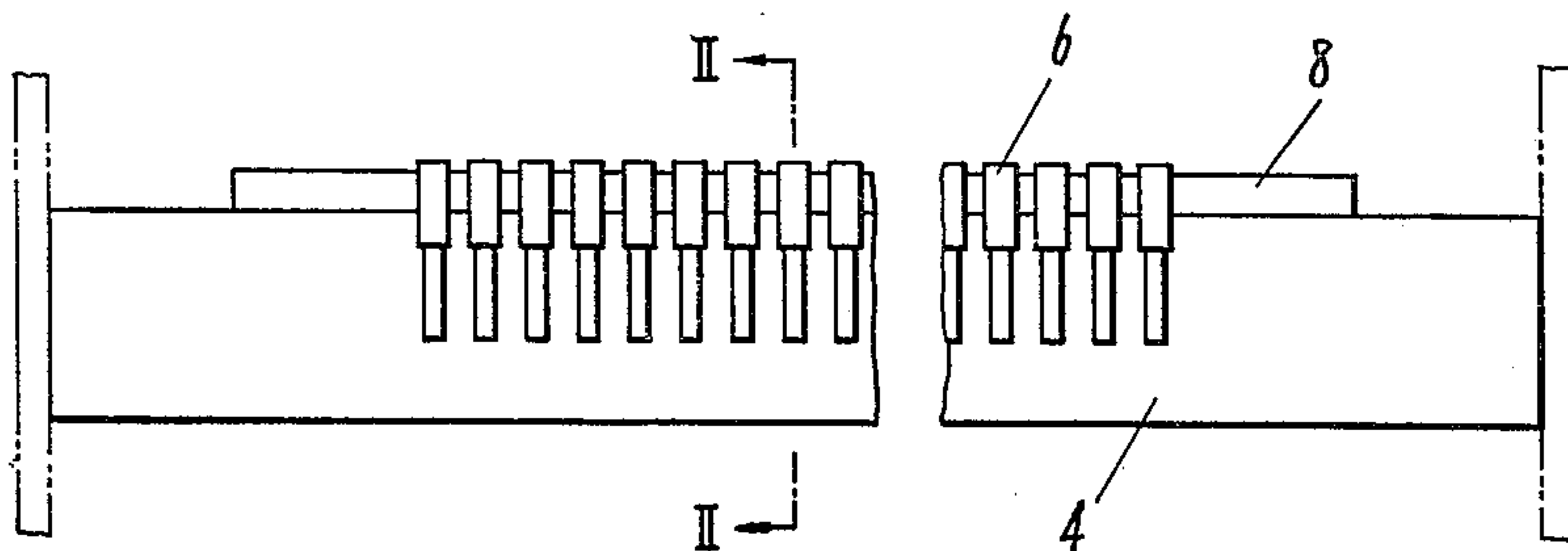


Fig. 2

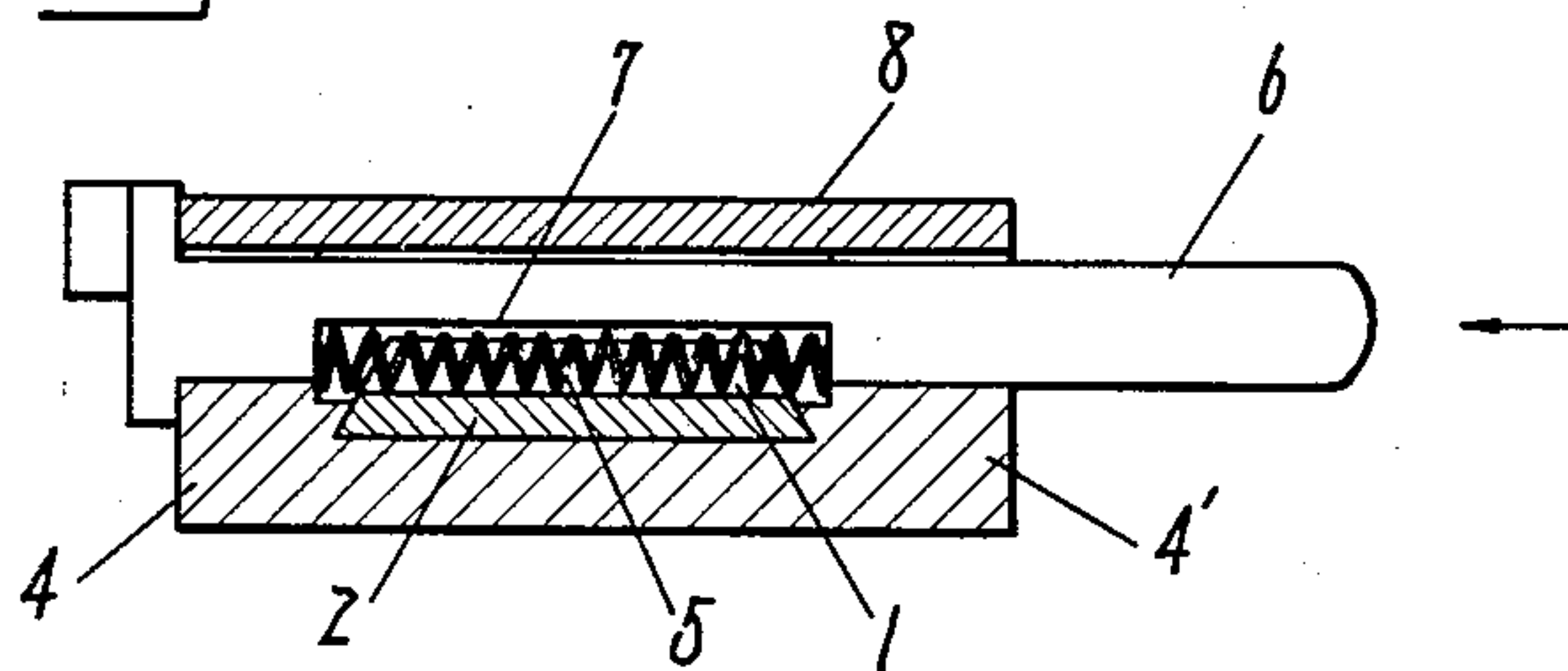
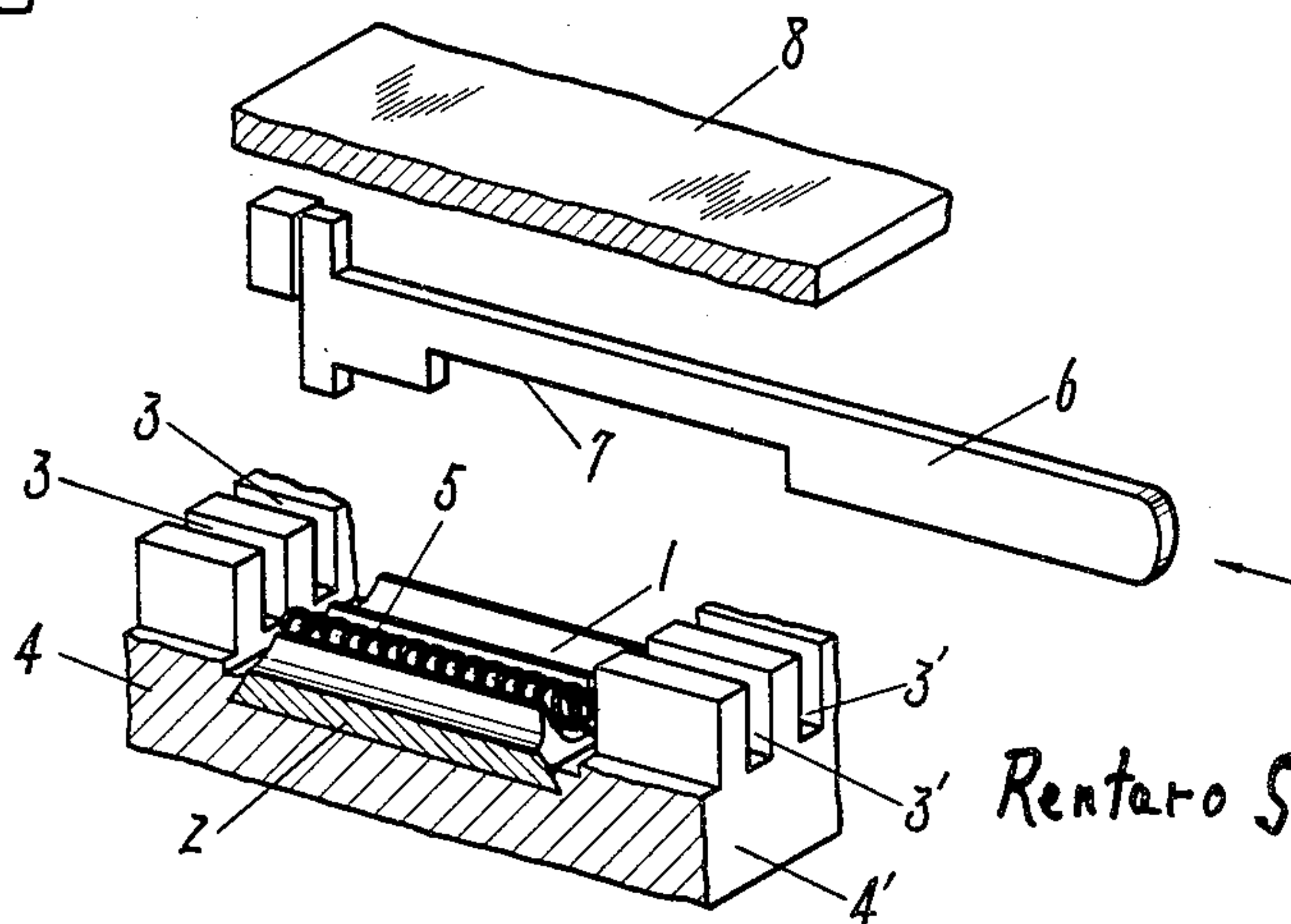


Fig. 3



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TYPE HAMMER MECHANISM FOR HIGH SPEED PRINTER
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1 Claim. (Cl. 101—109)

The present invention relates to the type hammer mechanism of high speed printers, e.g. for printing information issuing from electric computers and in which the printing types are secured to an endless belt rotating at high speed. It more particularly relates to improvements in the type hammer mechanism of high speed printers of the kind described and claimed in our co-pending application, Serial No. 796,583, filed March 2, 1959, wherein the printing hammers corresponding to these types are arranged in suitable number, for instance that of the letters to be printed, in a line and the letters for one line are printed during one rotation of the belt.

In a conventional printer, the spacing of the type is usually 2.5 mm. and if the printing hammers, one of which is provided at each printing point along the chosen line of type, are arranged so that the printed letters maintain this spacing, the cross sectional width of each hammer becomes very small and in consequence the cross sectional length thereof has to be relatively large in order to maintain its mechanical strength. Furthermore, such hammers are normally spring loaded by means of helical springs inset into the hammers and since the outer diameter of these springs is generally greater than the cross sectional width of the said hammers, adjacent springs tend to come into contact with one another and interfere with the working of the hammers.

The object of the present invention is to provide an arrangement which will facilitate the close spacing of the hammers without risk of adjacent springs coming into contact or fouling one another, and which will give a suitable mechanical strength to the hammers while employing helical springs of small diameter.

Accordingly, there is provided, according to the present invention, a type hammer mechanism comprising a series of hammers mounted for guided longitudinal movement with respect to support means providing guide grooves for the hammers and a series of coil springs which will be energized by the movement of the hammers and serve to return the hammers to their initial position, the hammers each having a longitudinal recess and the springs being seated in separate grooves in an under-

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lying support therefor so as to be partially accommodated in the said recesses.

The invention will hereinafter be described by way of example with reference to the accompanying drawings, in which:

FIG. 1 is a front elevation of the type hammer mechanism according to the present invention; FIG. 2 is a cross sectional view taken on line II—II of FIG. 1; and FIG. 3 is an enlarged fragmentary view of part of the mechanism in perspective.

Referring to the drawings, the said mechanism comprises a channel-shaped container or block, the side walls 4, 4' of which are grooved at 3, 3' to provide comb-like guides for the hammers 6. Between the said side portions there is inset a plate 2 which is provided with a series of semi-cylindrical grooves 1 which extend between each pair of opposed slots, 3, 3' and which form seats for the helical springs 5. Hammers 6 are each provided with undercut recesses 7, which fit over and partially contain the ends of springs 5. The arrangement is accordingly such that, when the hammers are moved axially in the direction of the arrows (FIGS. 2 and 3), the recoil spring 5 will be guided and compressed and will serve to return the hammers to their normal position.

The hammers 6 are retained in the grooves 3, 3' by cover plate 8.

What is claimed is:

A type hammer mechanism for high speed printers or the like, comprising a channel-shaped container having upstanding opposed side walls formed with pairs of opposed slots located at spaced intervals, type hammers, each being supported by said container, said type hammers each being guidingly retained in a pair of said opposed slots, the interior of said container beneath each type hammer being formed with a semi-cylindrical groove extending between each pair of slots, the underside of each type hammer being provided with an undercut recess, and a recoil spring for each type hammer, each spring being partially retained in one of said semi-cylindrical grooves and partially in said undercut recess of each type hammer.

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