

(No Model.)

G. W. PETERS.  
SHEET METAL EDGING MACHINE.

No. 563,798.

Patented July 14, 1896.

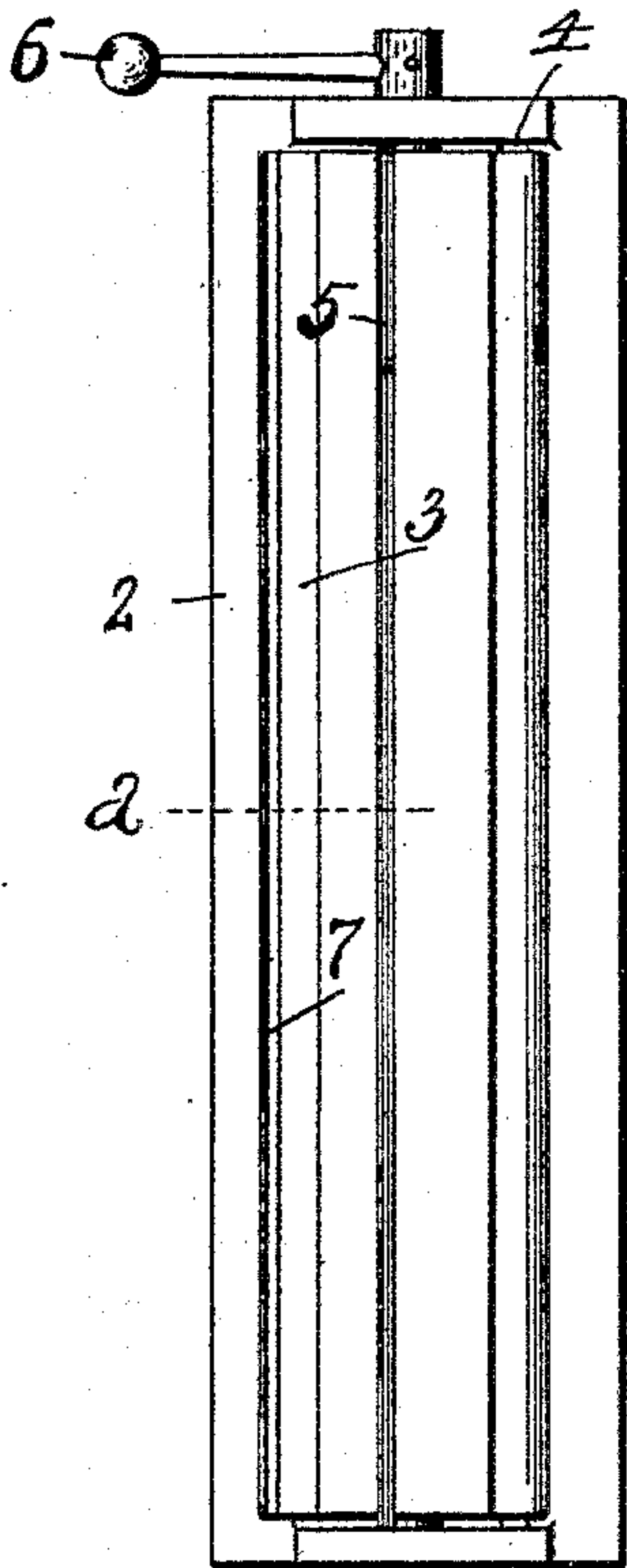
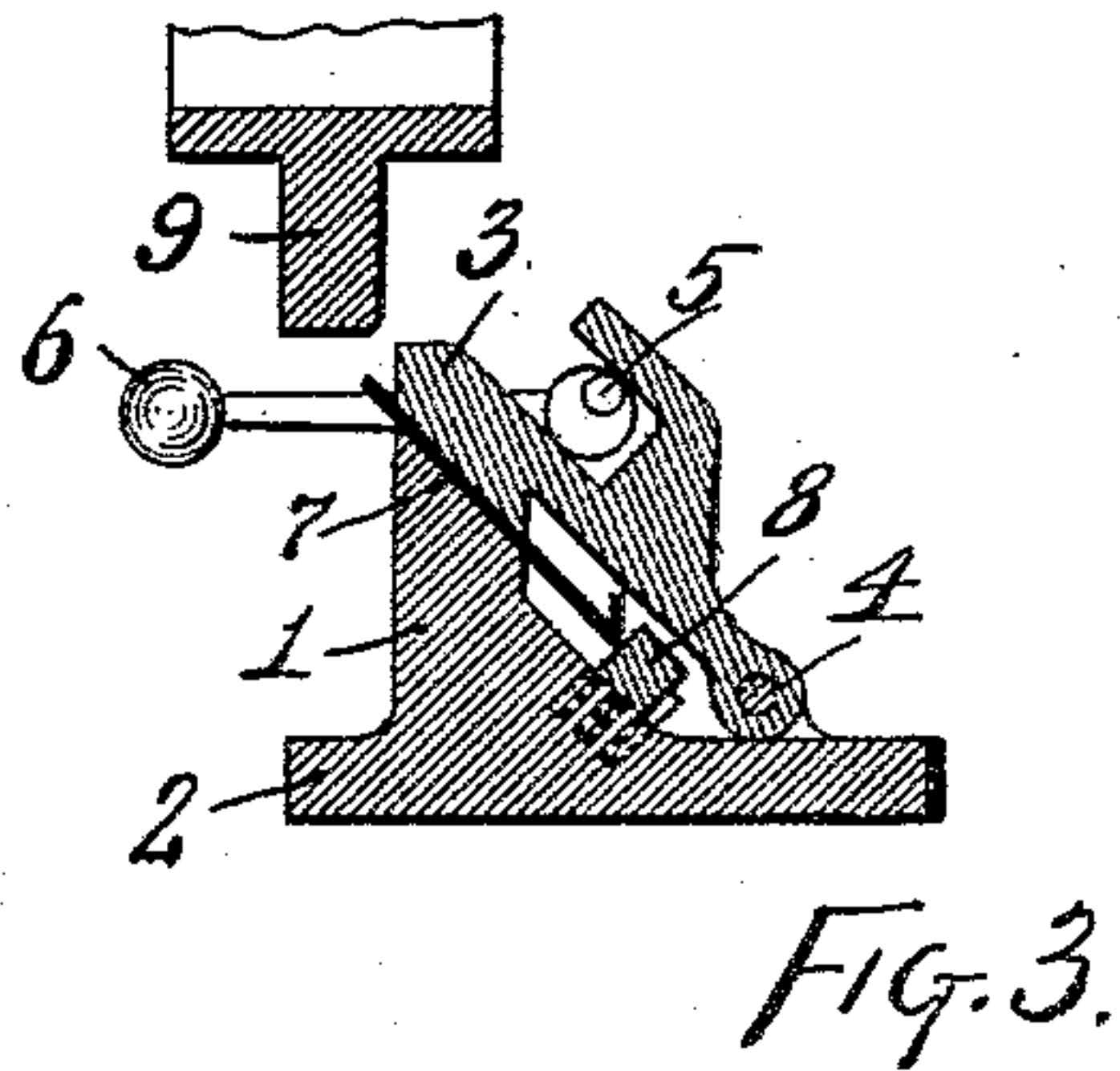
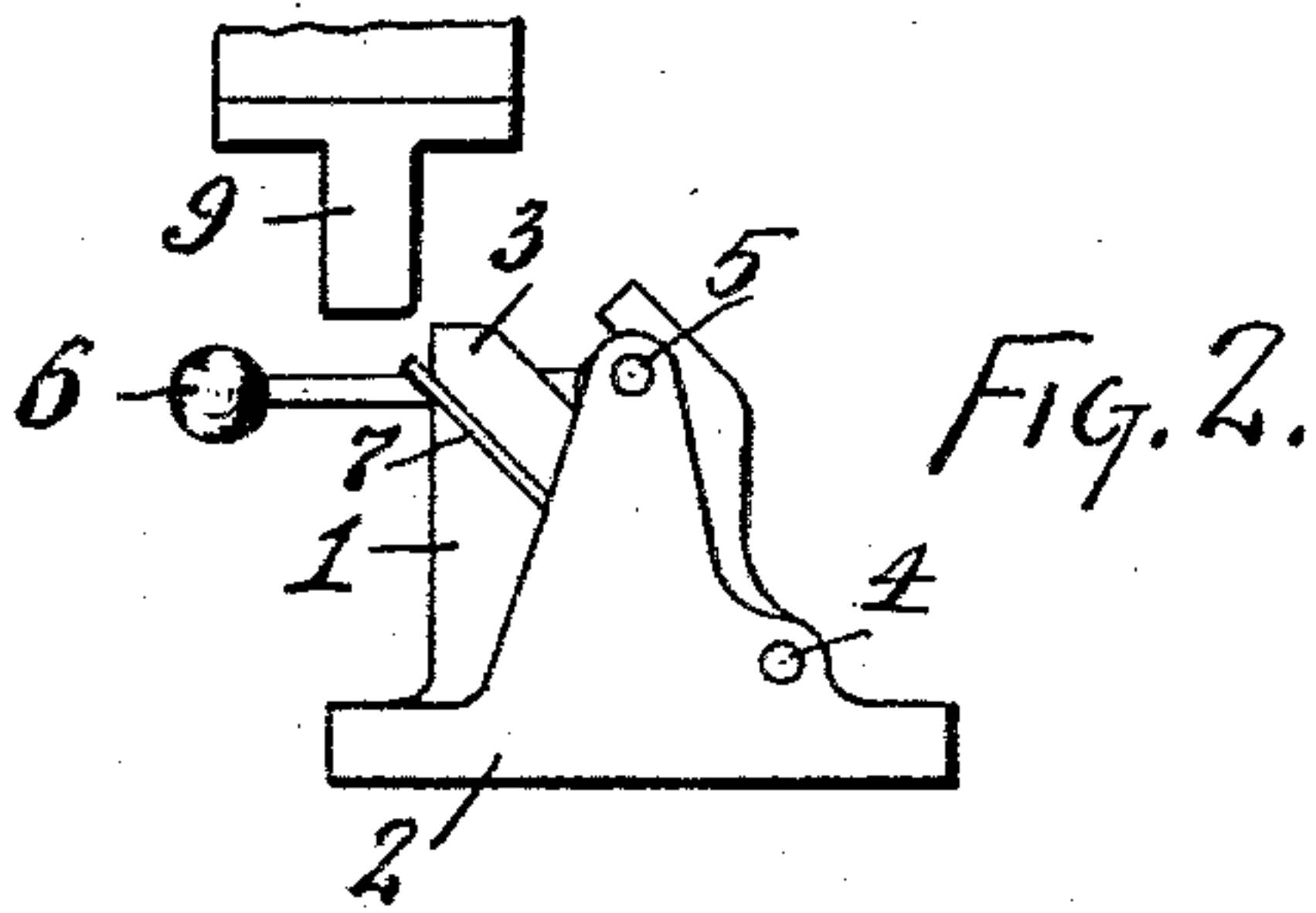


Fig. 1.

Witnesses:  
E. P. Shipley.  
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# UNITED STATES PATENT OFFICE.

GEORGE W. PETERS, OF HAMILTON, OHIO, ASSIGNOR TO THE HAMILTON  
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## SHEET-METAL-EDGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 563,798, dated July 14, 1896.

Application filed March 28, 1896. Serial No. 585,215. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. PETERS, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Sheet-Metal-Edging Machines, of which the following is a specification.

This invention pertains to improvements in machines for forming hooked edges upon sheet metal, such use being illustrated in the formation of sheet-metal tubes where the two opposite longitudinal edges of a blank are bent into hook form, the blank being then curved till the two edges can be hooked together and then treated to form a permanent seam. In thin metal the ordinary edging-machines, operating as mere benders, are all-sufficient, but in thicker metal, and particularly steel, as used in bicycle-tubing, now largely employed, the mere bending process is not satisfactory.

My invention will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a plan of a machine exemplifying my invention; Fig. 2, an end view of the same, and Fig. 3 a vertical transverse section of the same in the plane of line *a* of Fig. 1.

In the drawings, 1 indicates a die having a vertical front face and an inclined top, this die being as long at least as the blank to be edged, and the angle of the inclined top of the die with reference to the vertical representing the angle to which the edge of the blank is to be turned; 2, a base for this die, forming means by which the die may be secured to the lower jaw of an ordinary punching or shearing press; 3, an upper die with its front upper edge resting over the inclined upper surface of the lower die 1, the rear lower portion of the upper die 3 being pivoted to the lower die or its support, the contiguous front portions of the two dies forming a clamping-space with parallel walls when the metal to be dealt with is between the dies; 4, the pivot on which the upper die is supported; 5, an eccentric mounted in the structure which supports the dies and engaging the upper die and adapted to open and close the dies with reference to each other; 6, a handle

for operating the eccentric; 7, the sheet-metal blank clamped between the inclined surfaces of the dies and having its upper front edge projecting beyond the front face of the dies such distance as is represented by the metal to be turned on the edge; 8, an adjustable gage to serve in securing parallel setting of the blank in the machine and to resist the downward thrust of the blank while the edging operation is being performed, said gage being adjusted in any well-known manner, as, for instance, as shown in the drawings, by means of pins registering with a series of holes in the inclined top of the die. These pinholes are represented in the drawings by dotted lines.

9 is a plunger adapted to be attached to the ram of the punching or shearing machine employed, this plunger consisting of a horizontal bar disposed parallel with the dies and having its rear face such distance from the front face of the lower die as is represented by the thickness of metal to be dealt with, the lower rear corner of this plunger being slightly rounded, so as not to cut the metal.

In operation the eccentric is turned to open the dies. The sheet-metal blank, of proper width, is then placed between the dies with its lower edge resting against gage 8, the projection of the upper edge of the blank from the dies representing the extent of edge to be turned. The eccentric is then turned to close the dies and firmly clamp the blank. Plunger 9 now descends and forces the projecting edge of the blank downward into a vertical plane solidly against the front face of the lower die, the plunger in performing this operation acting on the projecting metal with a rubbing action similar to the action of the dies in a drawing-press. When the plunger rises, the dies are opened and the blank withdrawn, and the operation repeated on another blank, the result being blanks with one edge properly turned. Gage 8 is then to be adjusted for a narrower width of setting, and the blanks are to be again treated to turn the other edge, the previously-turned edge in the present case coming against the gage, as indicated in Fig. 3.

I claim as my invention—

In a sheet-metal-edging machine, the com-



ination, substantially as set forth, of a lower die having a face and top at an acute angle to each other, an upper die pivoted to the lower die and having a lower face adapted to  
5 cooperate therewith, means for forcing the upper die toward the lower one, a gage to support the lower edge of a blank clamped between the angular surfaces of the dies, and a plunger adapted for reciprocation past the angular clamping-space formed between the dies.

GEORGE W. PETERS.

Witnesses:

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