



US005771734A

United States Patent [19] Robbins

[11] Patent Number: 5,771,734
[45] Date of Patent: Jun. 30, 1998

[54] REPLACEABLE RING FOR DUMMY BLOCK

[76] Inventor: Paul H. Robbins, 5 Springmaple
Chase, Aurora, Ontario L4G 6X1,
Canada

[21] Appl. No.: 683,268

[22] Filed: Jul. 18, 1996

[51] Int. Cl.⁶ B21C 25/00

[52] U.S. Cl. 72/273

[58] Field of Search 72/273, 273.5,
72/272, 253.1, 264, 265, 478

[56] References Cited

U.S. PATENT DOCUMENTS

3,282,074	11/1966	Gardner	72/273
3,303,684	2/1967	Starr et al.	72/273
3,630,064	12/1971	Mahas	72/273.5
3,831,418	8/1974	Bogdanov et al.	
3,919,873	11/1975	Biswas et al.	72/273
3,977,226	8/1976	Mann et al.	
4,024,743	5/1977	Decours et al.	
4,550,584	11/1985	Degen	72/273
4,714,423	12/1987	Hattori et al.	72/273
5,272,900	12/1993	Robbins	
5,311,761	5/1994	Robbins	

FOREIGN PATENT DOCUMENTS

4132810	8/1988	Germany	
0137514	6/1988	Japan	72/273.5
569354	8/1977	U.S.S.R.	
593766	2/1978	U.S.S.R.	72/273

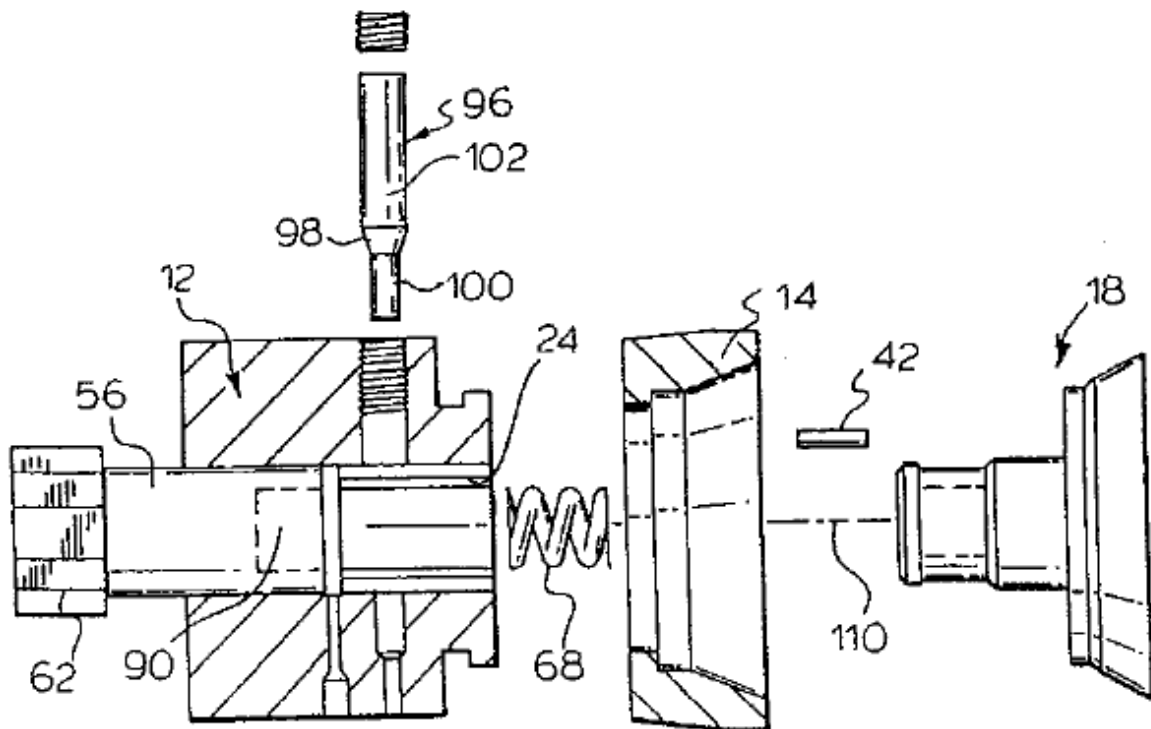
0668738	7/1979	U.S.S.R.	72/273
0852400	8/1981	U.S.S.R.	72/273
0897361	1/1982	U.S.S.R.	72/273.5
0946714	7/1982	U.S.S.R.	72/273

Primary Examiner—Lowell A. Larson
Assistant Examiner—Ed Tolan
Attorney, Agent, or Firm—Young & Basile P.C.

[57] ABSTRACT

In a dummy block construction for use in extruding an extrudable metal, the dummy block having a dummy block base; a connector for connecting said dummy block base to a stem of an extruder; a replaceable wear ring connected to a forward circumferential portion of said dummy block base; a device for releasably securing said wear ring to said dummy block base; a device for expanding said ring to engage a billet container inside wall of an extrusion press during extrusion of a billet of extrudable metal through such extrusion press, the improvement being characterized in the wear ring being a metal collar having a conical interior surface converging towards said dummy block base; and the device for expanding the ring comprising a metal plunger having a plunger head with a conical surface for engaging the collar conical surface to expand the collar as said plunger head is forced into the collar during extrusion; the plunger head having a planar face and the collar having a forward planar face; the converging surfaces of the collar and the plunger head extending a sufficient distance to permit telescoping of the plunger head into the collar to an extent whereby the plunger head face is essentially planar with the face of said collar.

10 Claims, 7 Drawing Sheets



es
ix
m
e-
le
re
of