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**Matsumoto et al.**

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(54) **ENGAGING MEMBER FOR TOOL CHANGER**

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(\*\*) Term: **15 Years**

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(52) **U.S. CL.**  
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(58) **Field of Classification Search**  
USPC ..... D8/70, 71, 354, 394; D15/124, 126, 138  
CPC ..... B23Q 3/15513; B25J 15/0425; B25J  
15/0466; B25J 15/04  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,044,063	A *	9/1991	Voellmer	.....	B23Q 3/15553 294/86.4
D347,159	S *	5/1994	Crocker, III	.....	D8/331
5,993,365	A *	11/1999	Stagnitto	.....	B25J 15/0491 414/736
6,116,966	A *	9/2000	Little	.....	B25J 19/0025 439/700
6,491,612	B1 *	12/2002	Kurup	.....	B23K 9/20 285/268
6,533,594	B1 *	3/2003	Kurup	.....	B23K 11/362 439/191
D547,637	S *	7/2007	Blacker	.....	D8/354

D548,571	S *	8/2007	Bigelow	.....	D8/349
D564,343	S *	3/2008	Zakowski	.....	D8/363
D685,623	S *	7/2013	Lewis	.....	D8/331
D741,690	S *	10/2015	Collins, IV	.....	D8/354
D747,780	S *	1/2016	Swan	.....	D22/110
D765,156	S *	8/2016	Matsumoto	.....	D15/138
D765,157	S *	8/2016	Matsumoto	.....	D15/138
D765,158	S *	8/2016	Taniguchi	.....	D15/138
D801,164	S *	10/2017	Powers	.....	D8/394
D801,797	S *	11/2017	Powers	.....	D8/394
2014/0256527	A1 *	9/2014	Liu	.....	B23Q 3/15706 483/54
2016/0279806	A1 *	9/2016	Kikuchi	.....	B25J 15/0425
2016/0294092	A1 *	10/2016	Kikuchi	.....	H01R 13/2492
2017/0355049	A1 *	12/2017	Matsumoto	.....	B25J 15/0425

\* cited by examiner

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(57) **CLAIM**

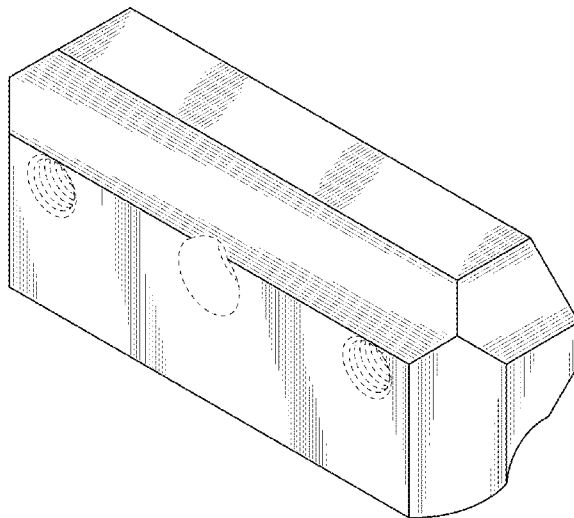
The ornamental design for an engaging member for tool changer, as shown and described.

**DESCRIPTION**

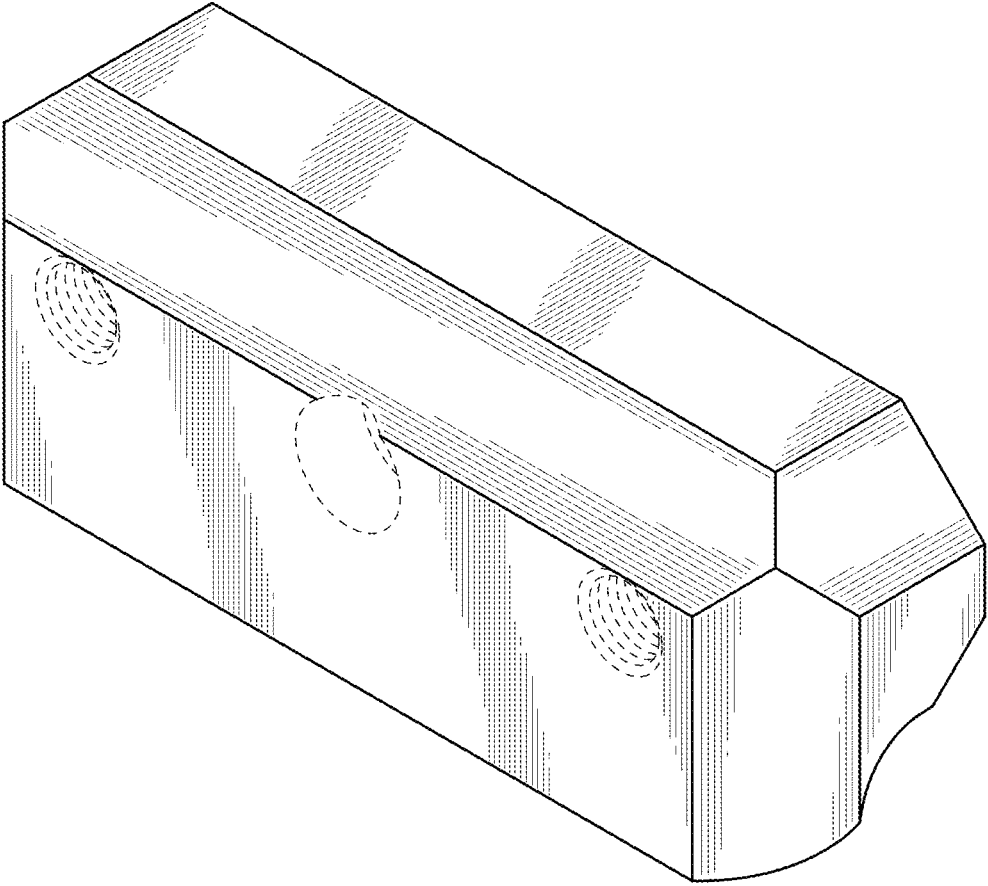
FIG. 1 is a front perspective view of an engaging member for tool changer showing our new design; FIG. 2 is front elevation view thereof; FIG. 3 is a rear elevation view thereof; FIG. 4 is a top plan view thereof; FIG. 5 is a bottom plan view thereof; FIG. 6 is a right side elevation view thereof, to which the left side elevation view is a mirror image; and, FIG. 7 is a cross-sectional view thereof taken along line 7-7 in FIG. 2.

The broken lines in the drawings illustrate portions of the engaging member for tool changer that form no part of the claimed design.

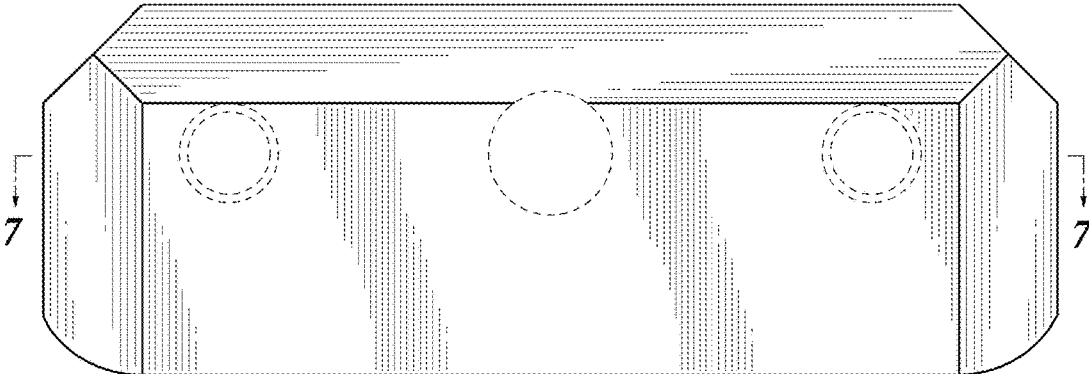
**1 Claim, 7 Drawing Sheets**



**FIG. 1**



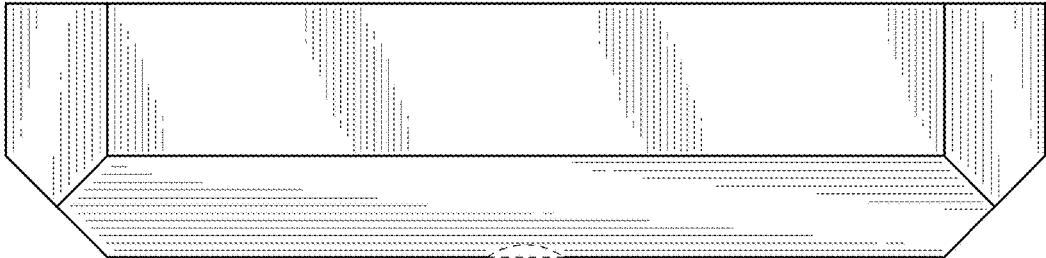
*FIG. 2*



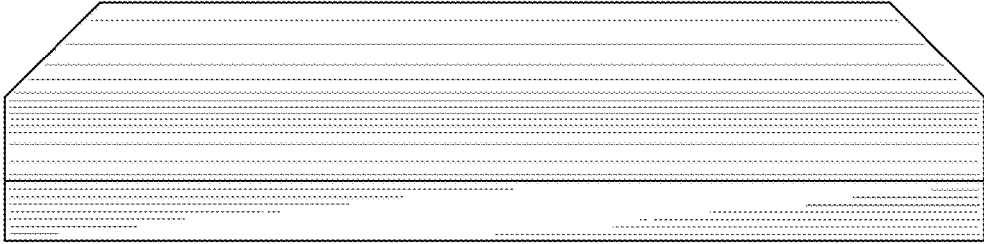
*FIG. 3*



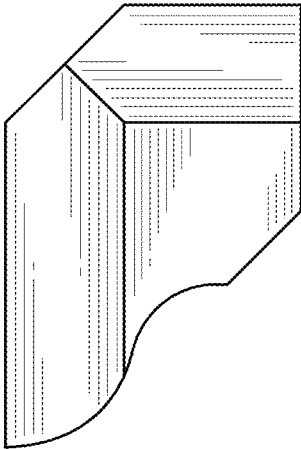
*FIG. 4*



*FIG. 5*



**FIG. 6**



**FIG. 7**

