	(19) (12)	(KR) (Y1)	
(51) 。Int. Cl. ⁷ F16L 19/03		(45) (11) (24)	2003 12 11 20-0336025 2003 12 03
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1 2 3 4 5 6 8 < 100: 200: 300: 400: / S1,S2: 410: 420: 420a: 420b: 420c:

가 가 2002 01 11 2002 901 , 2002 20-270031 가 3 27 , (10) (12) (30) 2 (11) (10) (20) (21) (22)(22a) (23) (31)

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(32) (10)
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                                                                  (10)
(11)
                            (32)
                                                                            (21)
              (22)(22a)
                            (30)
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    (21)
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                                                           (100)
                             (200) ,
                                            (200)
                                                                                (300)
                                                                (100)
                                                           (400)
                             가
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(400)
                                                         가
가
                                                                (100)
                                                                                   (200)
                         (400)
                                   (300)
                                           (S1)(S2) ;
                                                                  (S)
                    (410) ;
                                  (410)
                                                                (200)
                         (410)
     (420a)
                                                                  (420a)
       (420c)
                      (420)
                           (420)
                                                (410)
               (420)
                         (410)
                                             2
             (410)
                         (420)
                                                                 (410)
                                                                                 (420c)
                 가
                (420a)
                                   (420c)
                                                        (410)
                                                                                   (200)
     (100)
                                (420b)가
                                                                               (420b)가
                         (420c)
            (420b)
           가`
                                                  (420a)가
                                  (420)
                                                                               (420c)
             5
                                                                        (420a)가
            (420c)
           (410)
            (S1)(S2) (100)
                                            (200)
                                    (200)
                                                                          (120)(201)
                                              (100)
 (121)(202)가
                                              (420a)
                                                              (420b)
                                                                              (420c)
                   (420)
       (100)
                   (110)
                                                (S)
                                                          (420)
                                                                              (410)
                               (100)
                                           (110)
                                                                  (101)
         (200)
                                          가
                             , 6
                          (300)
                                                                (100)
                                          (200)
410)
                             (420a)가
                                                                      (300)
                                          (300)
100)
                          (102)
                                                          (420a)
                 (420a)가
                           (300)
                                                                                (410)
                                             (420b)
                                                                가
          (300)
         (420c)가
                                                                            (410)
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가 7 (200)(200)(S2) (410)가 (420)(420b)가 (200)(100)(420a) 8 가 (420C) (300)(300)(410) 가 가 (57)1. (100) , (100)(200) , 가 (200) (300)(100)(400)(400) , (300)(100)(200)(S1)(S2) ; (S) (410); (410)(200)(420a) (420) 410) (420a) (420c) 2. (420a) (420c) (410)(100) (200)(420b)가 3. 2 (420b) (420c) 1 3 (410)1 3 (S) (120)(201) (121)(202)가 6. 3 (420a) (420b) (420c)

7. 6 , (420a) ?? , (420b) . (420b)

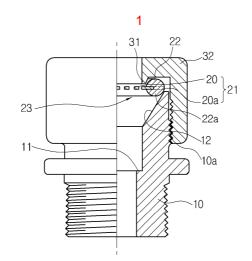
8. 6 (420a) , (420b) (420c)가 .

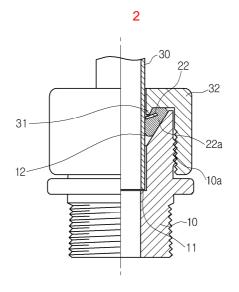
9. 4 ,

(410) (420)

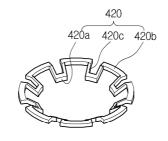
10. 4

(410) (420c)

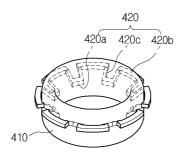




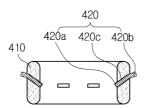
3



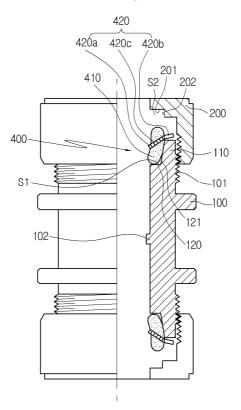
4



5







7

