

- (Shuttle box motion)-

. (shuttle box motion)

1)

가

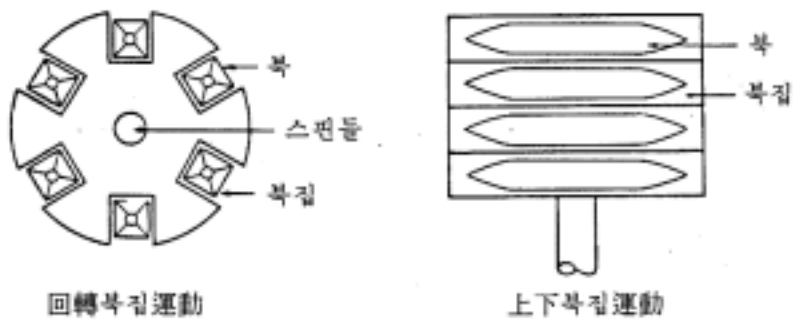
(race board)

(drop box motion)

(rotary box motion)

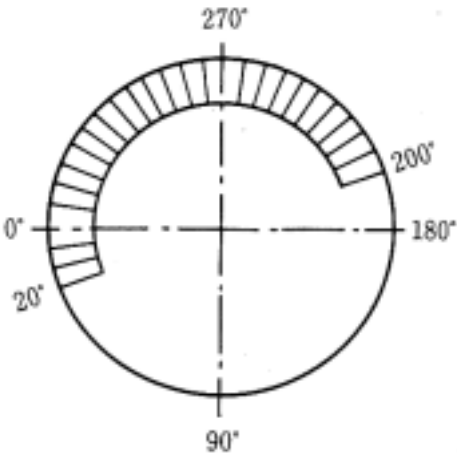
(negative drop box motion)

(positive drop box motion)



, < 2>

.



< 2>

2

가 ,

,

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1

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가 가

,

. < 3> < 4>

. < 3> 2 × 2

4-

1=3

a, b, c

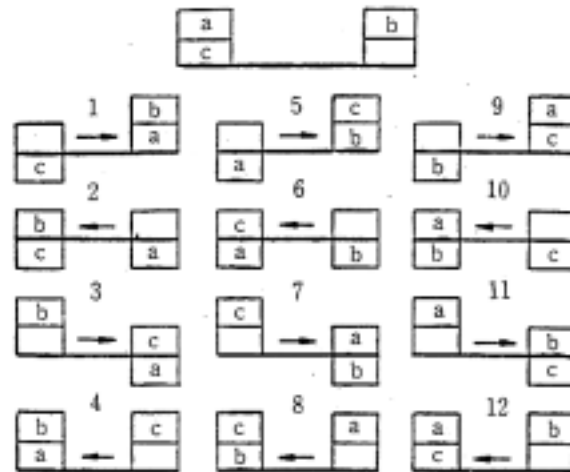
12

1

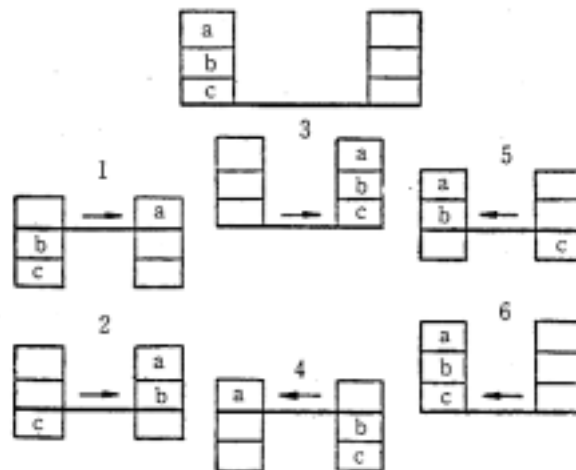
, < 4> 3×3 6/2=3

6 1 ,

가 .



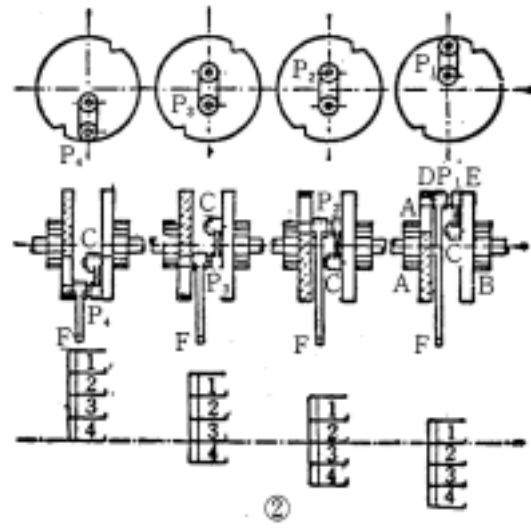
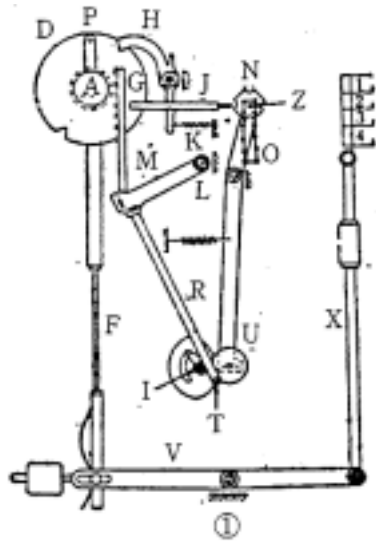
< 3> 2×2



< 4> 3×3

2) (drop box motion)

< 5> 1×4



< 5> 1 × 4

I :		G :	(rack)	D :	(disc)
P :	(crank pin)	H :	(catch)	K :	(spring)
A :	(pinion)	J :	(needle)	O :	(card)

< 5> 2 D E P
4 < 5> F, V, X

2 ,

O

J, G, A (A D), 2 D E
, P

E . <

6> .

P가 1 → 2 2 → 1

P가 3→4 4→3

D . <

6> .

P가 1→3 3→1

P가 2→4 4→2

D E가 .

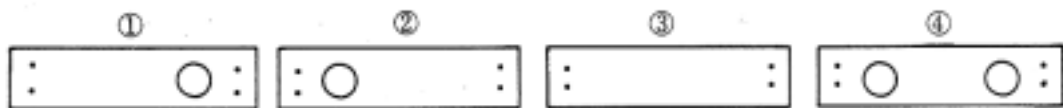
< 6> .

P가 2→3 3→2

P가 1→4 4→1

2 가 . <

6> .



< 6>

3) (rotary box motion)

(over-pick motion)

(loose-

reed motion)

가 .

가

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가

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가

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