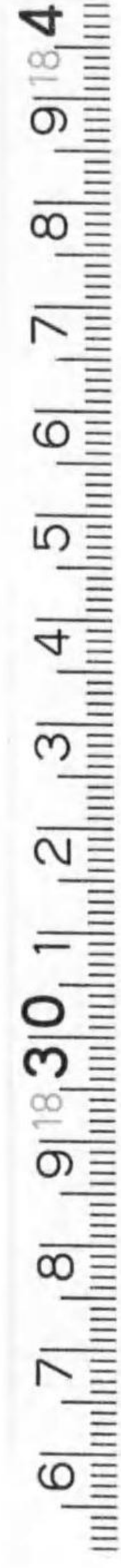




始



船用
往復動汽機學
附圖
(上卷)

臨時公立商船學校
教科書編纂委員會

393
252

特 205
516



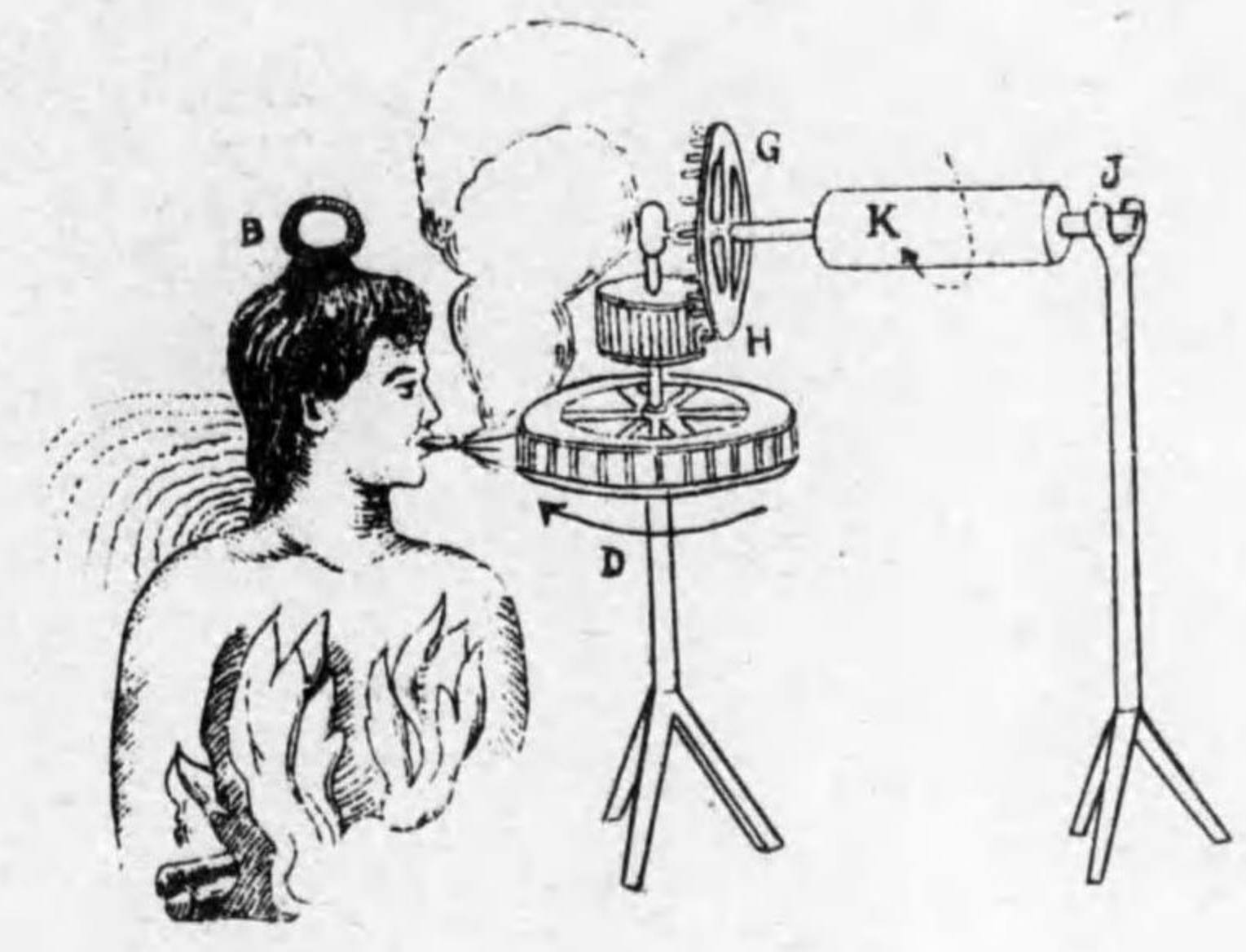
往復動汽機學

附圖

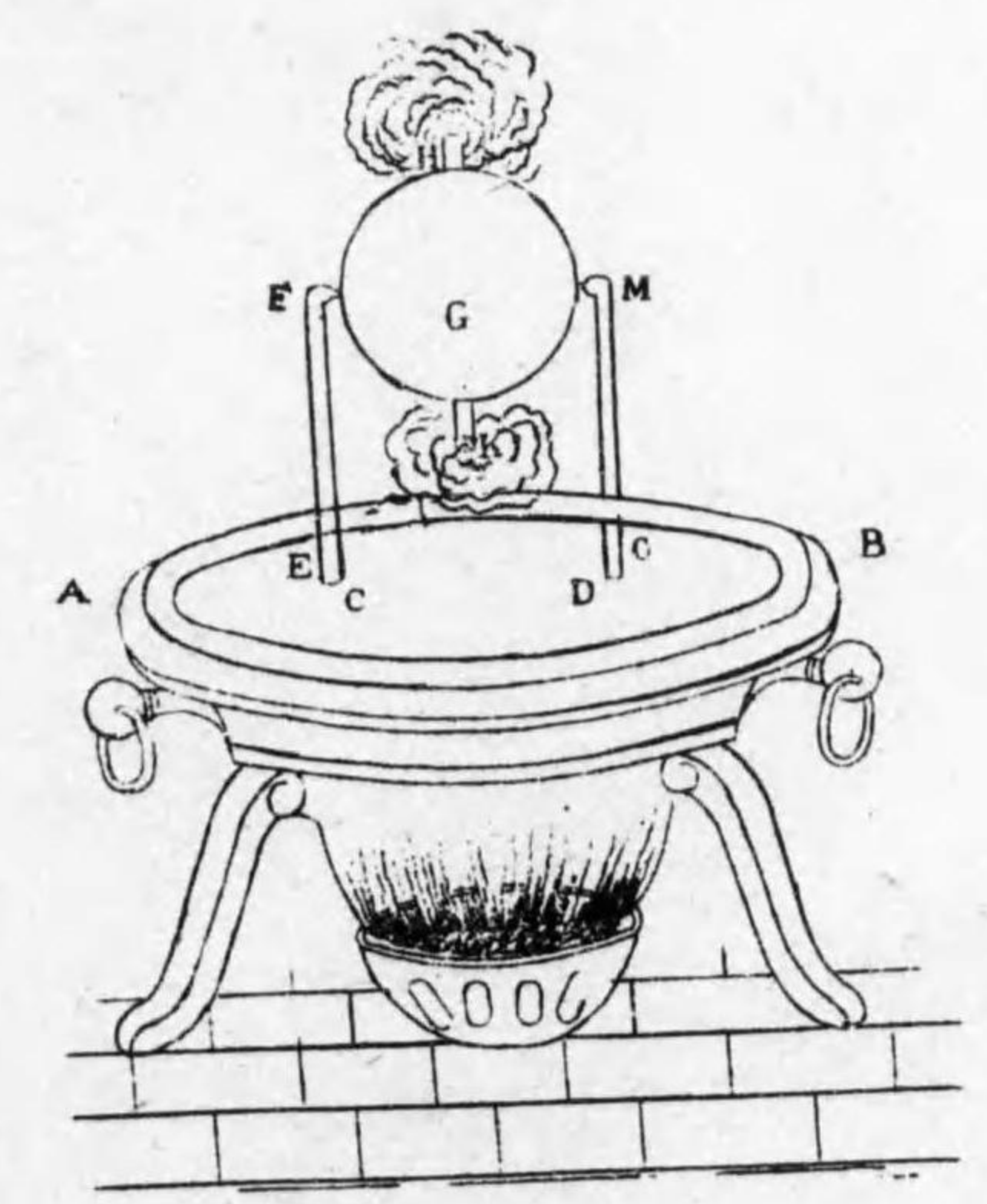
(上卷)

臨時公立商船學校
教科書編纂委員會

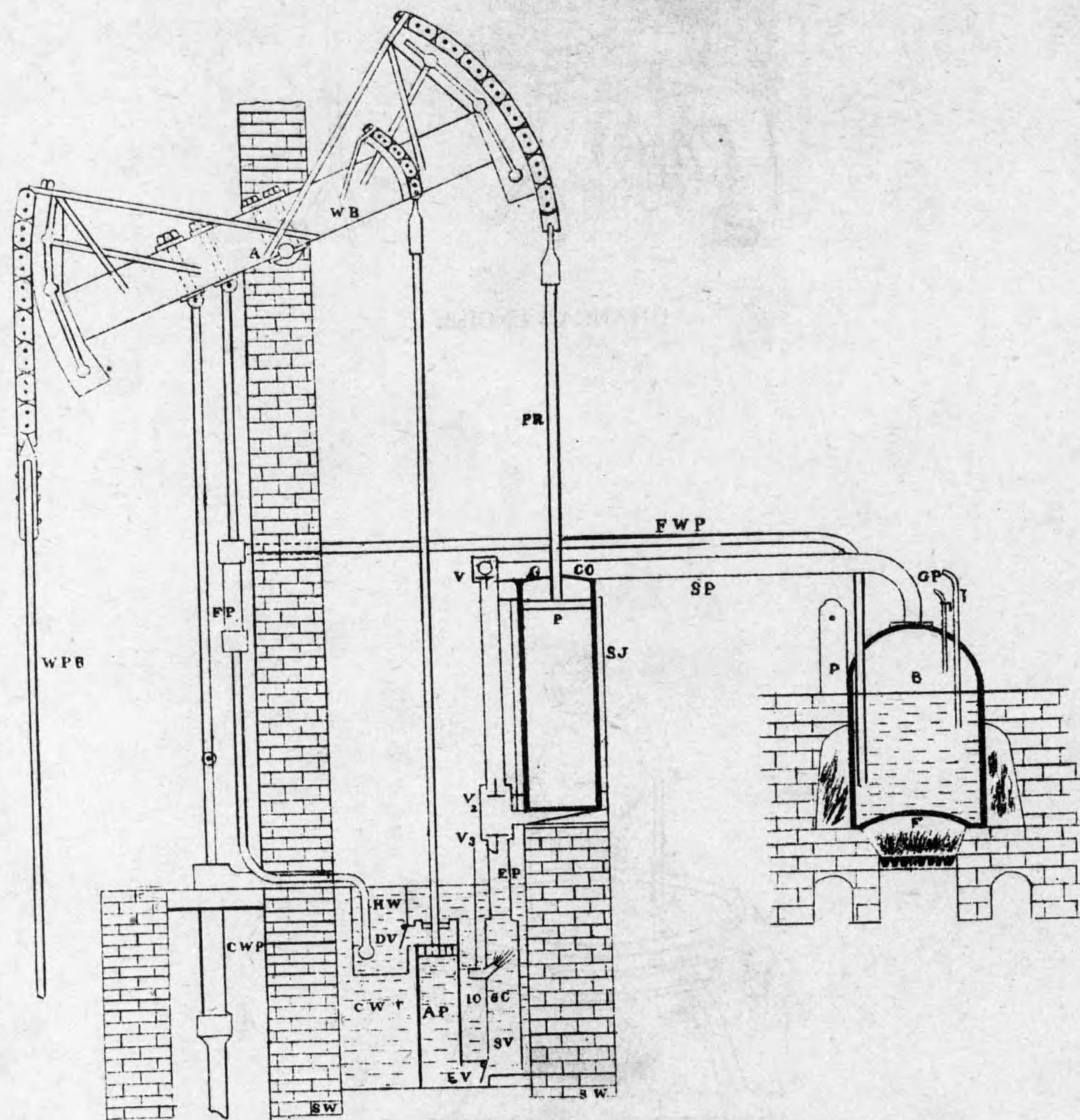




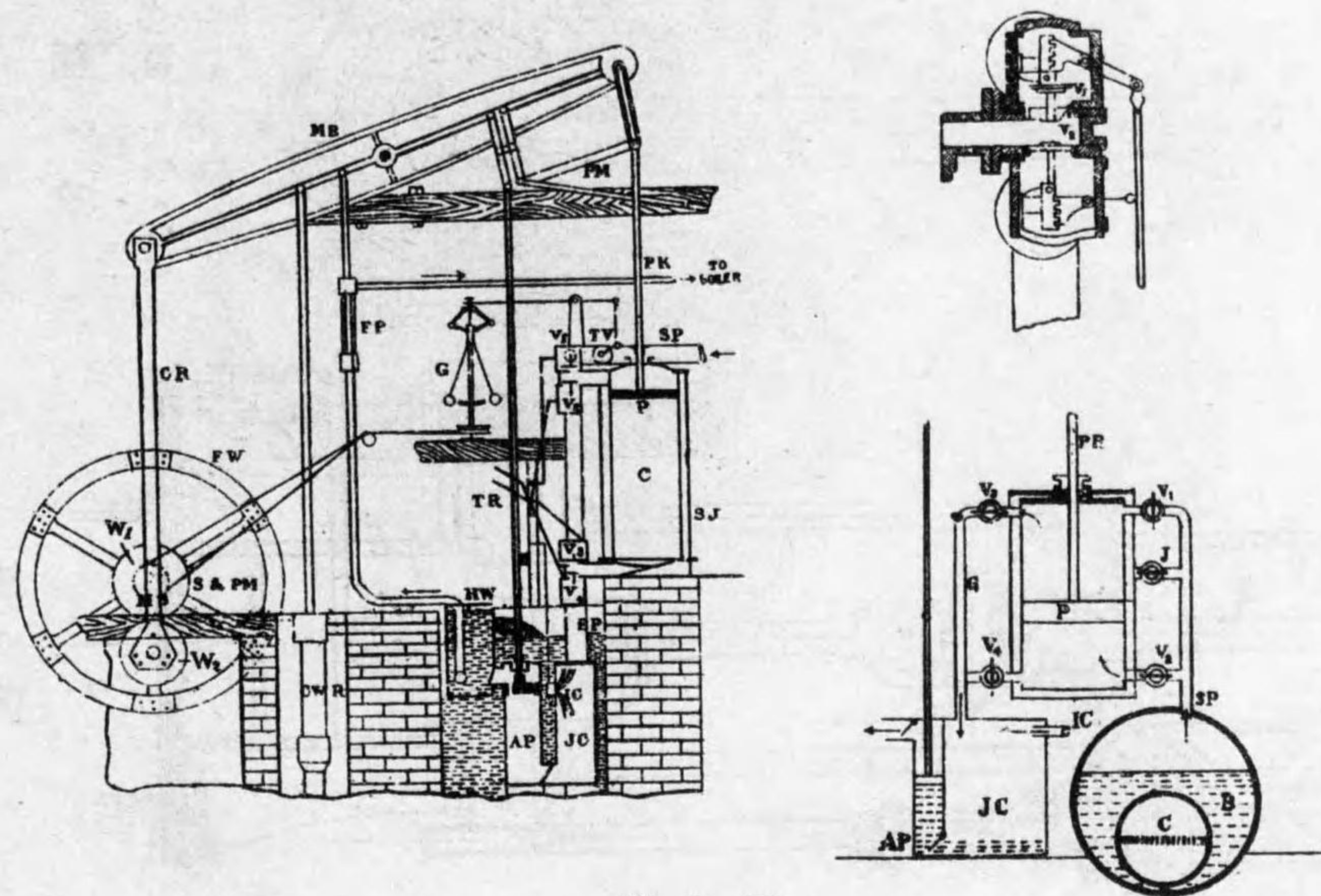
BRANCA'S ENGINE



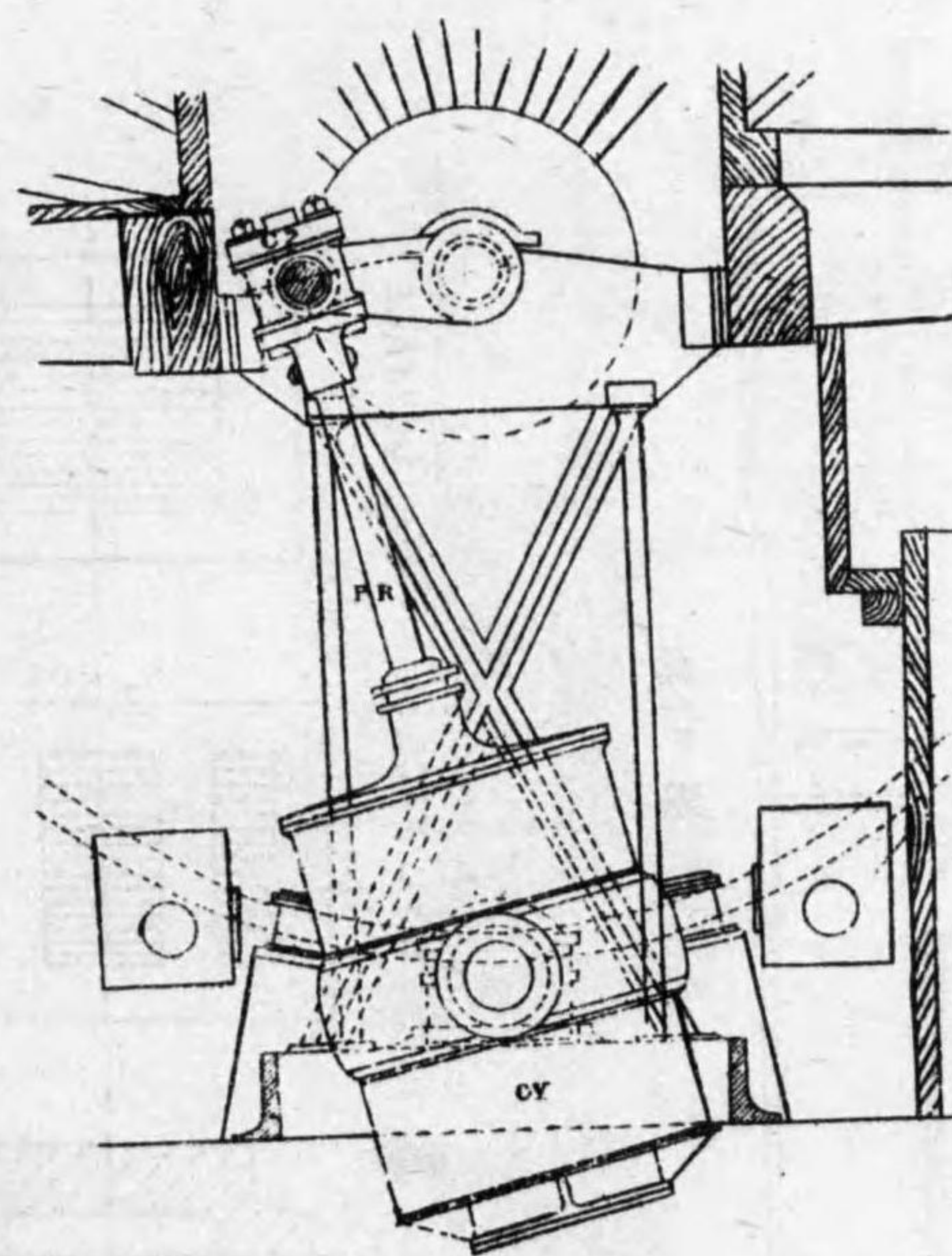
HERO'S ENGINE



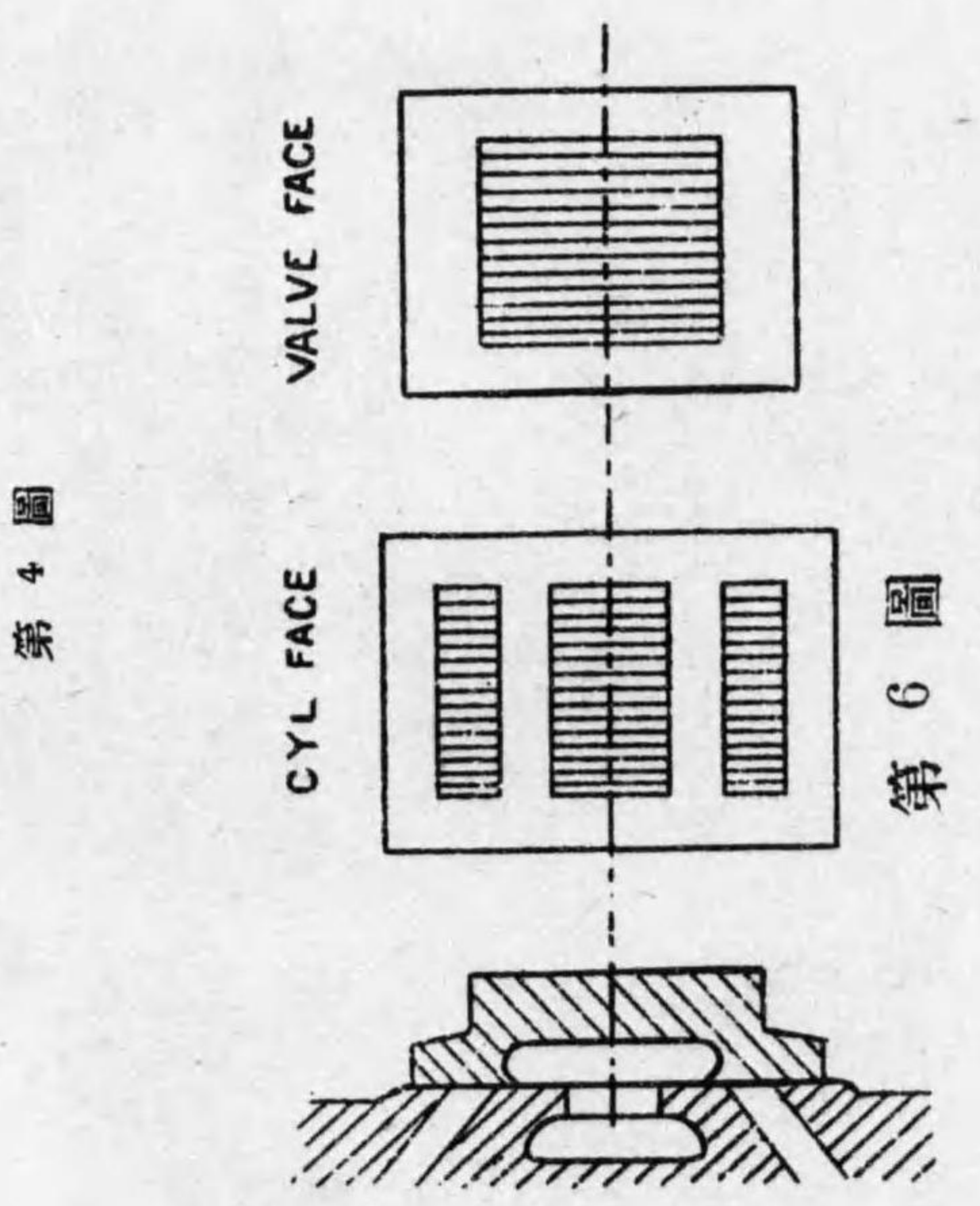
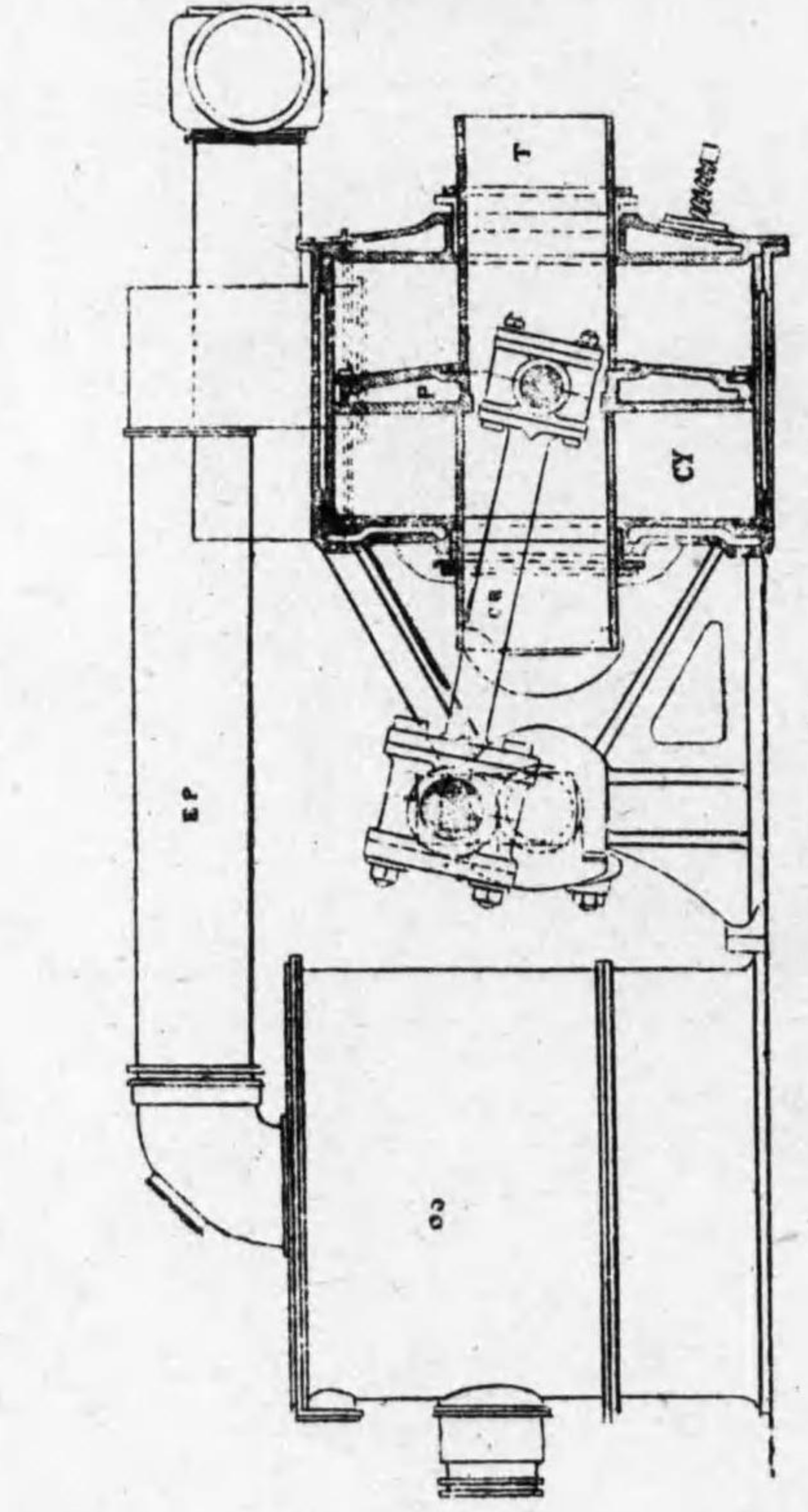
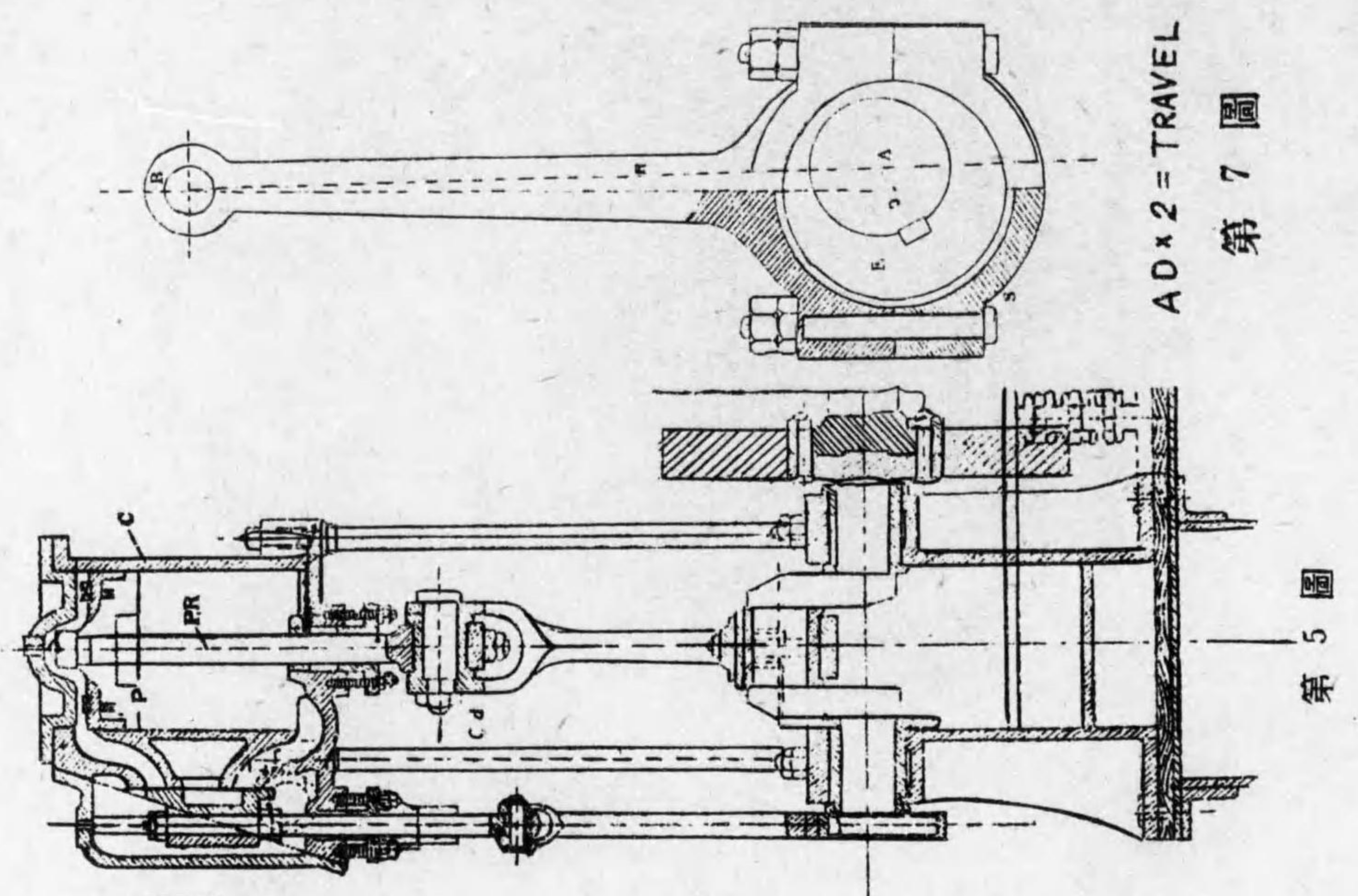
第 1 圖



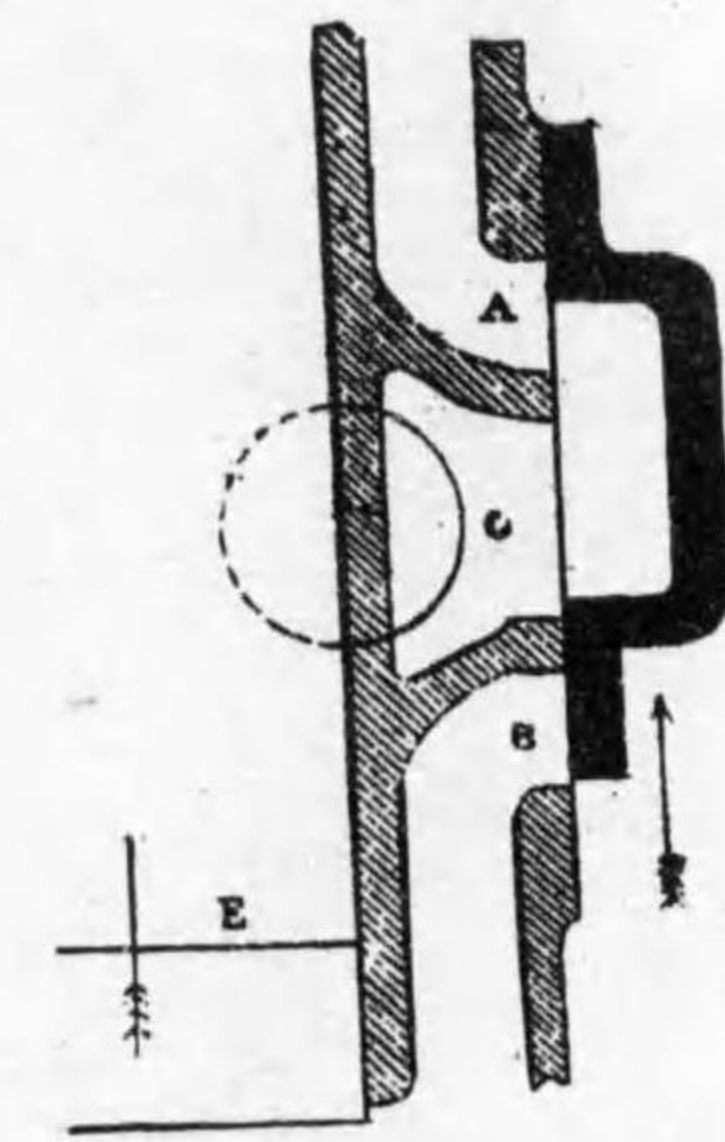
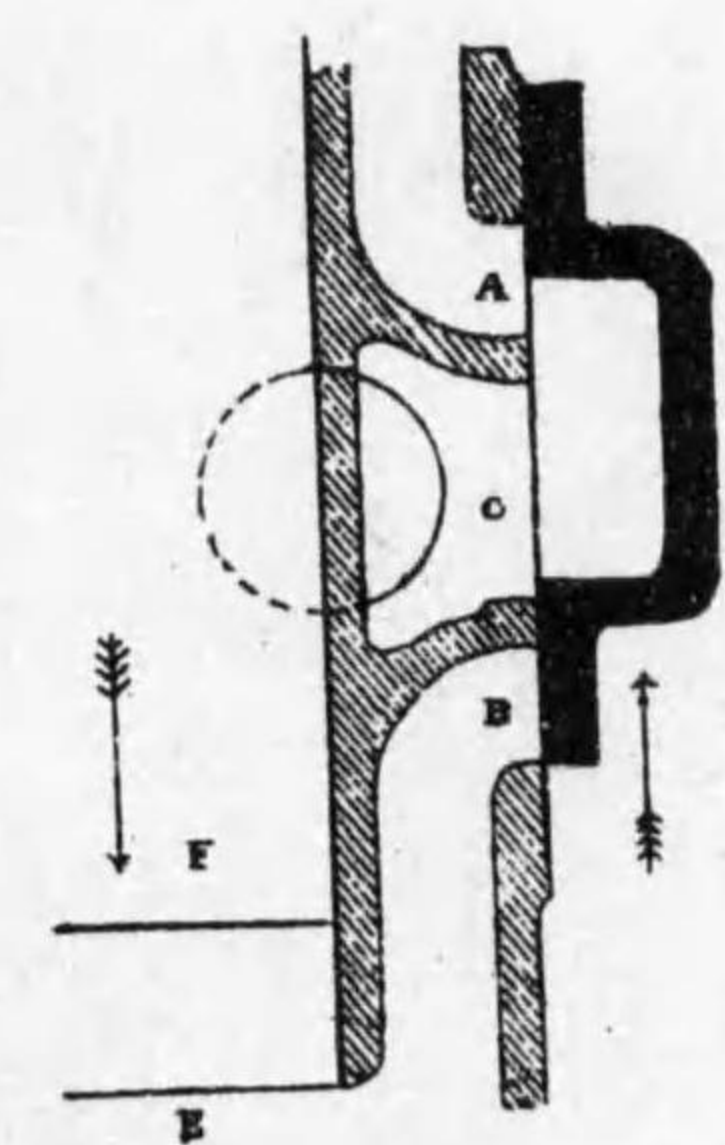
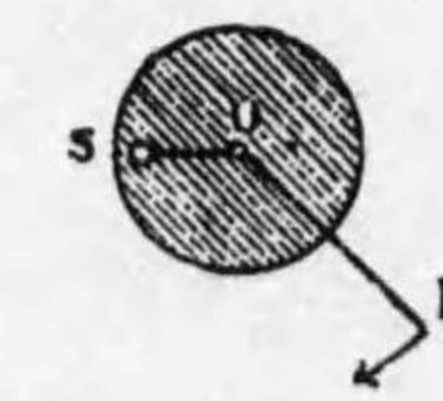
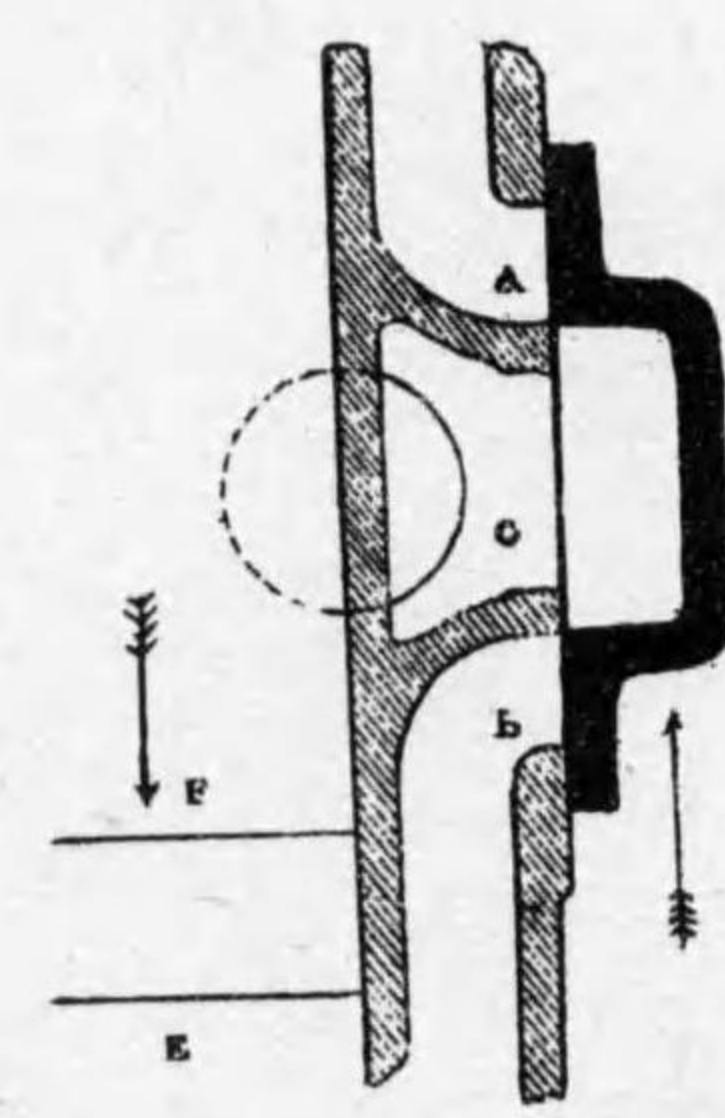
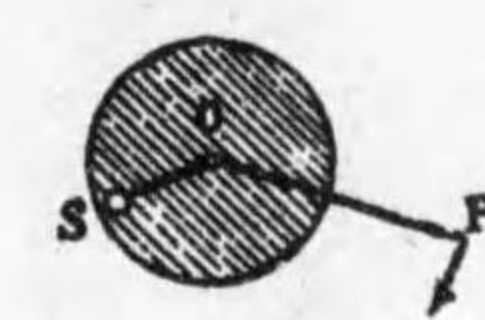
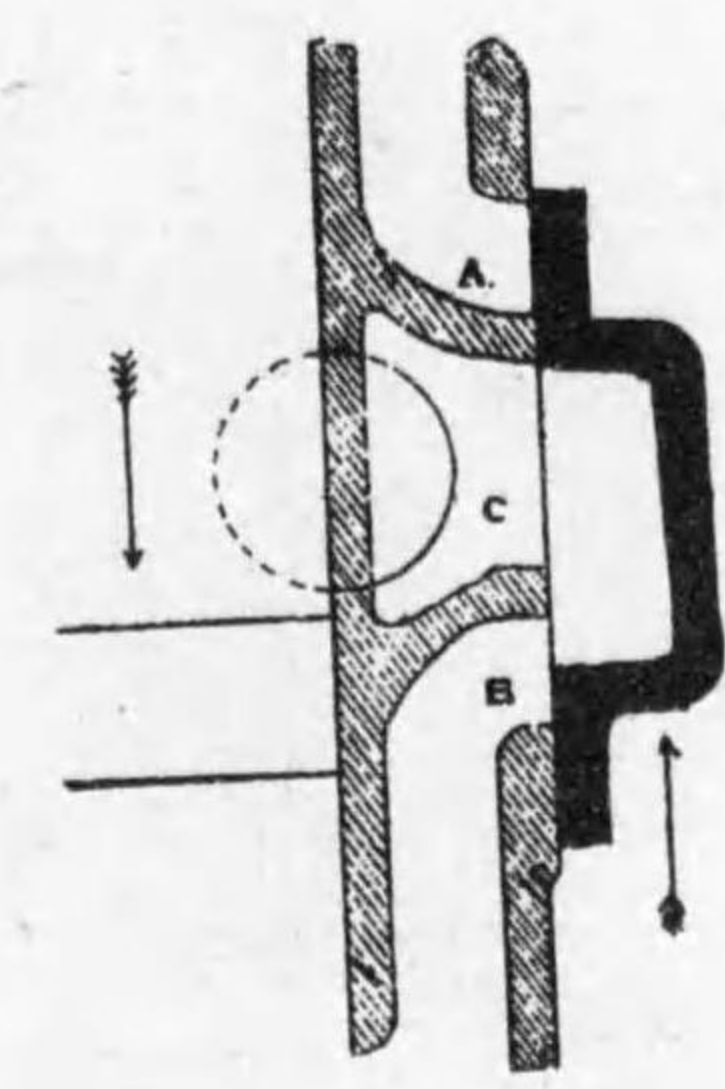
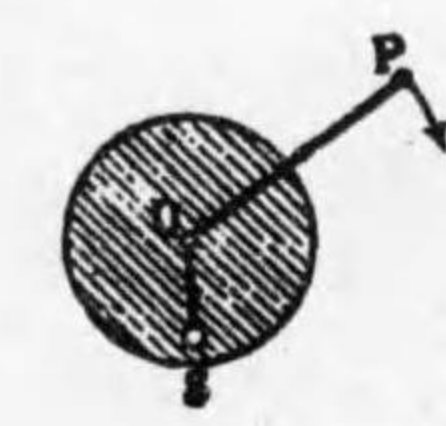
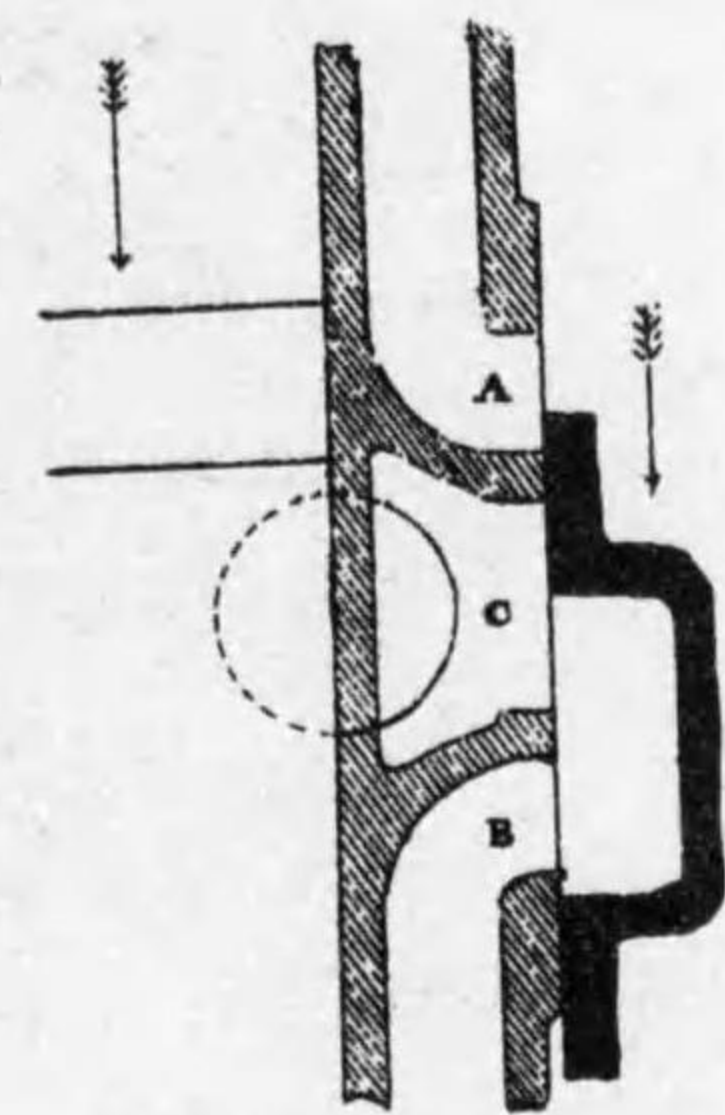
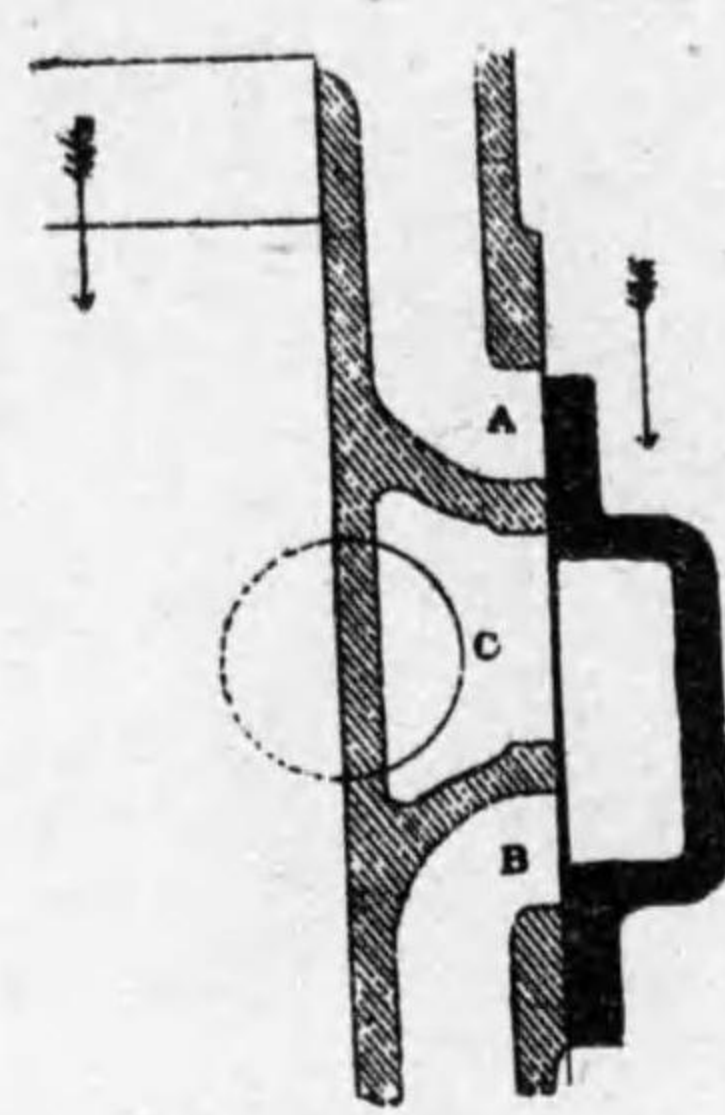
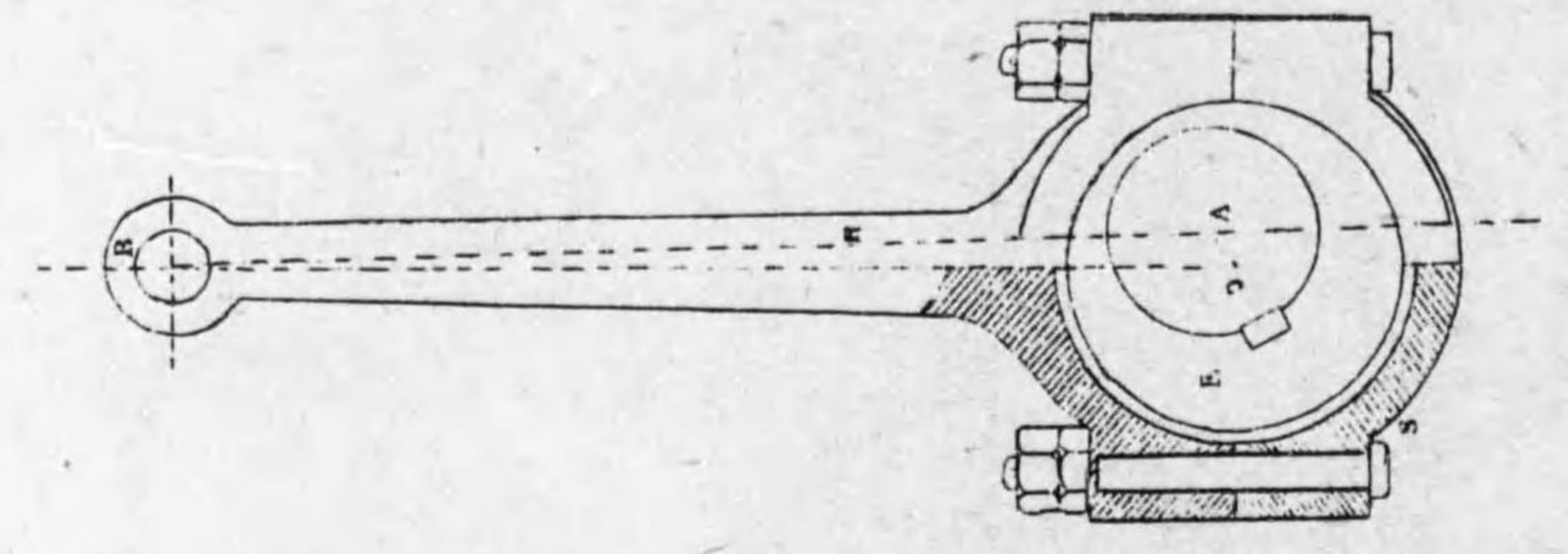
第 2 圖

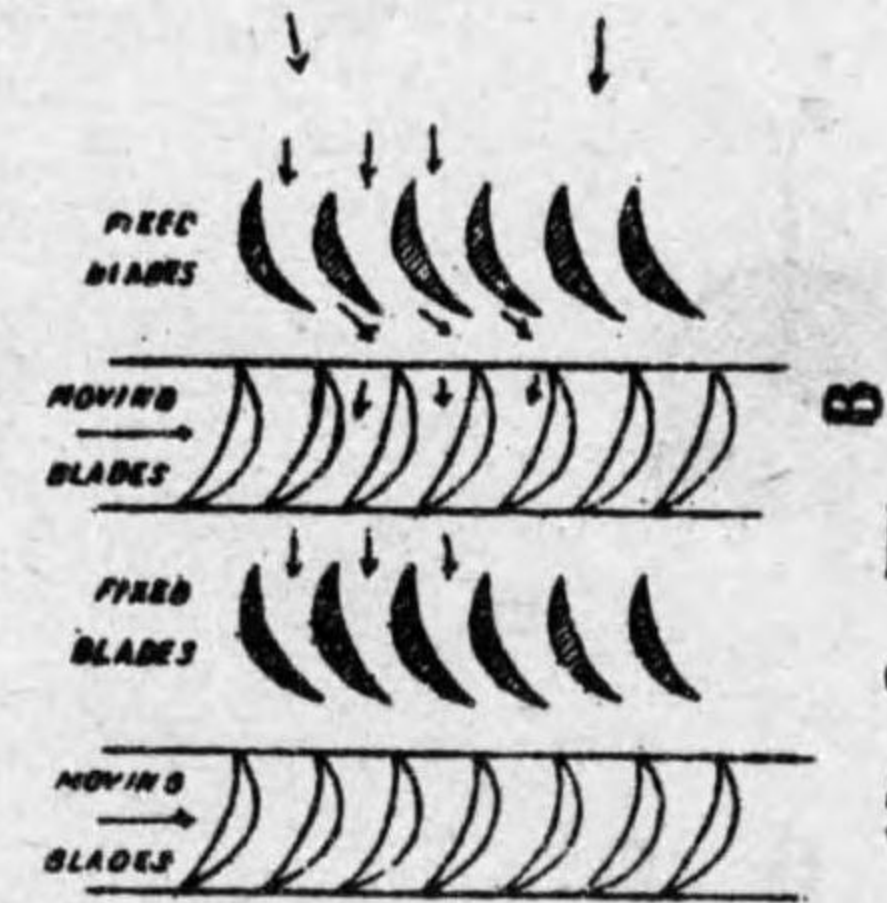
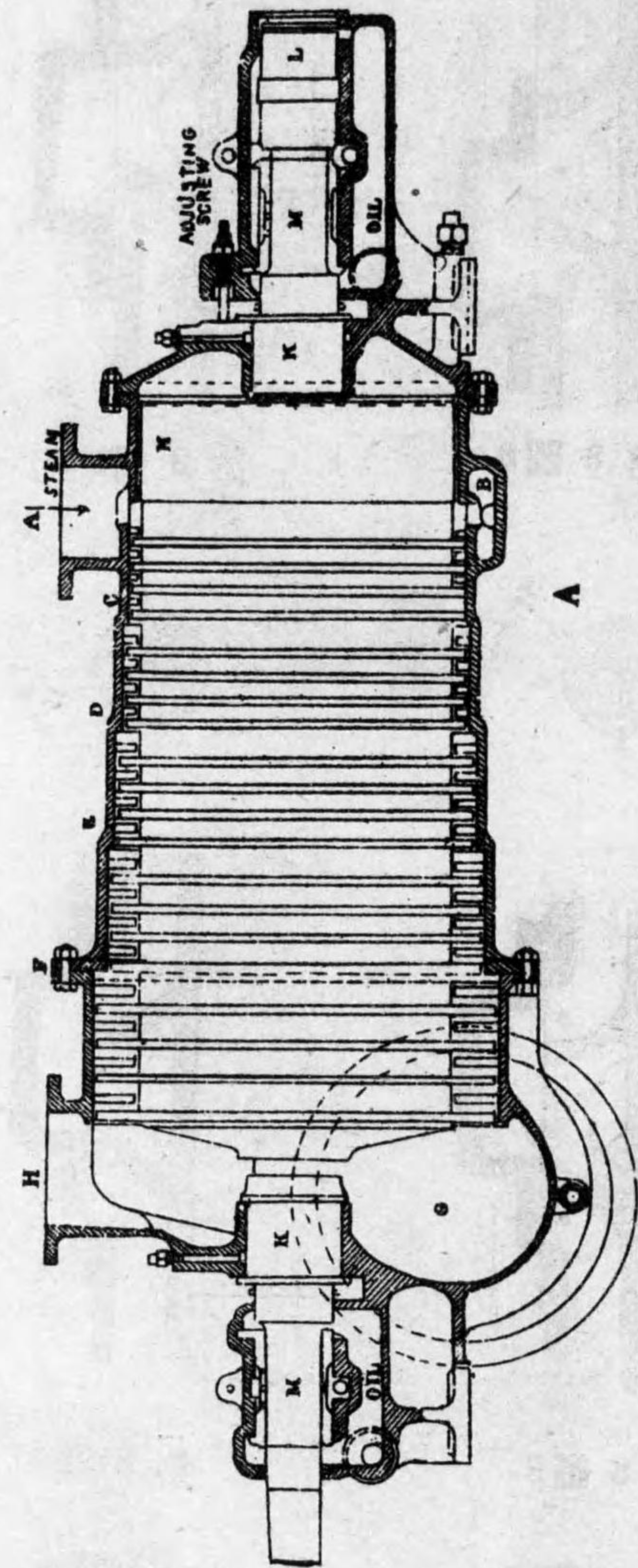


第 3 圖

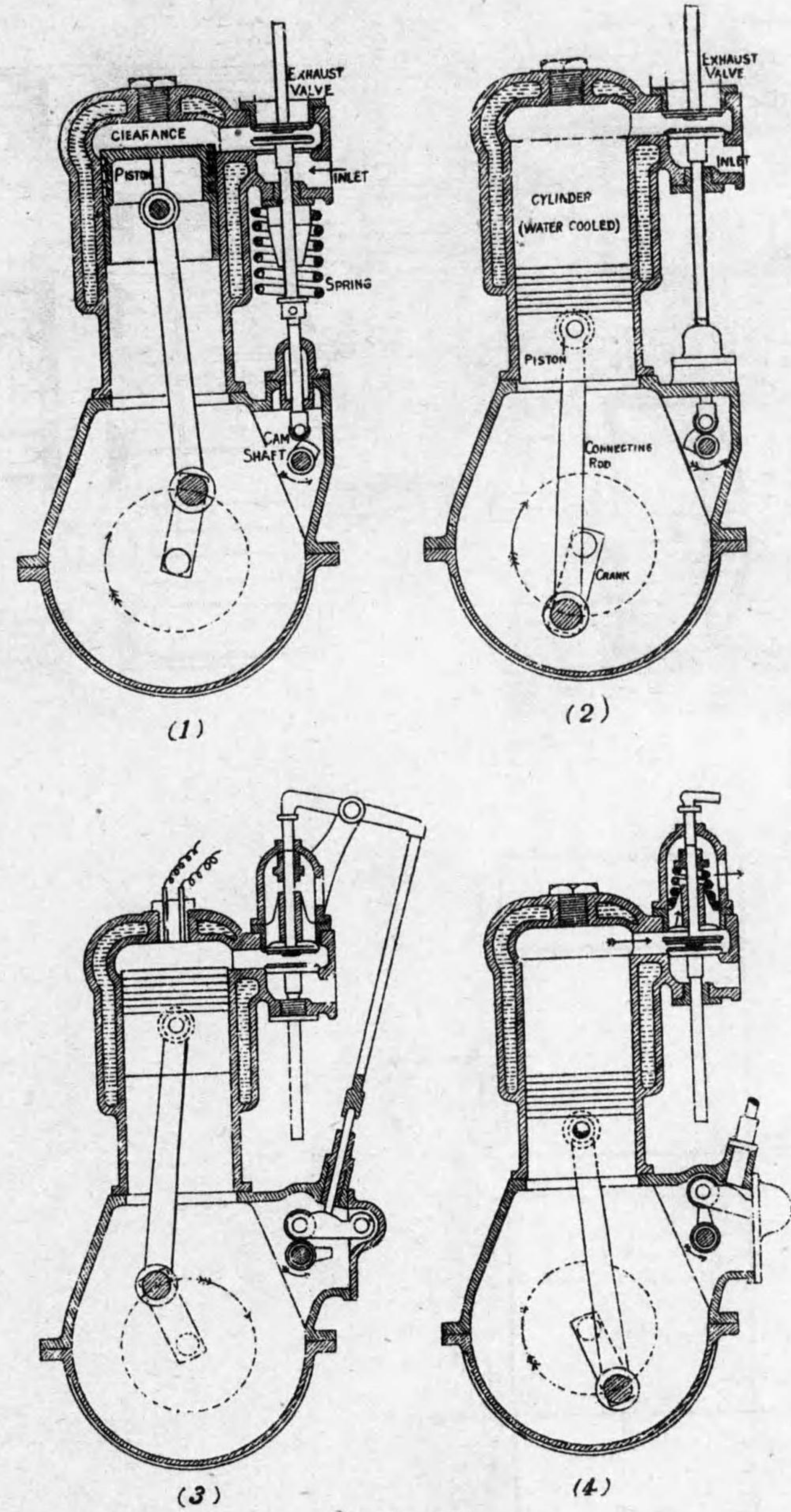


第 7 圖

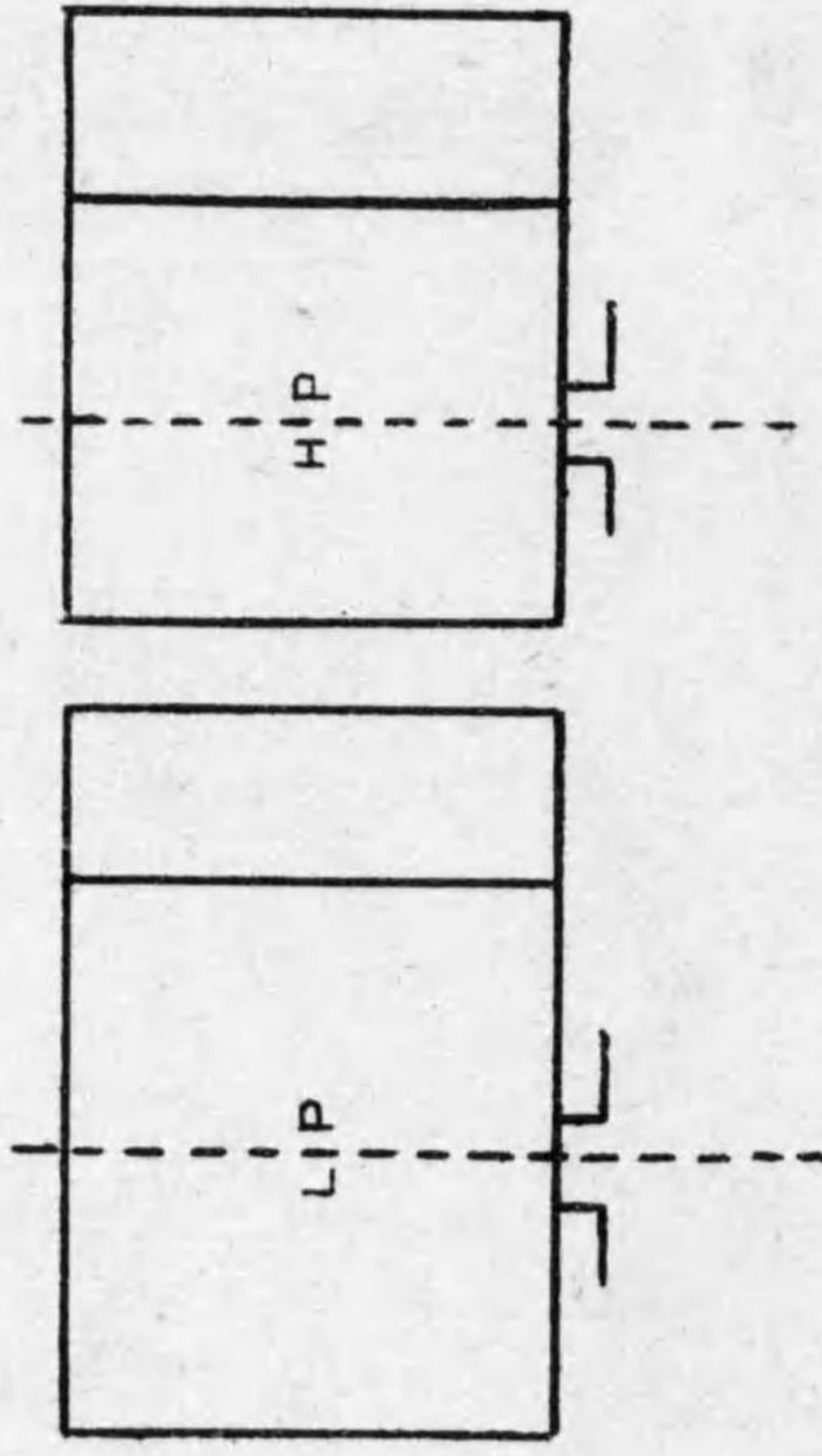




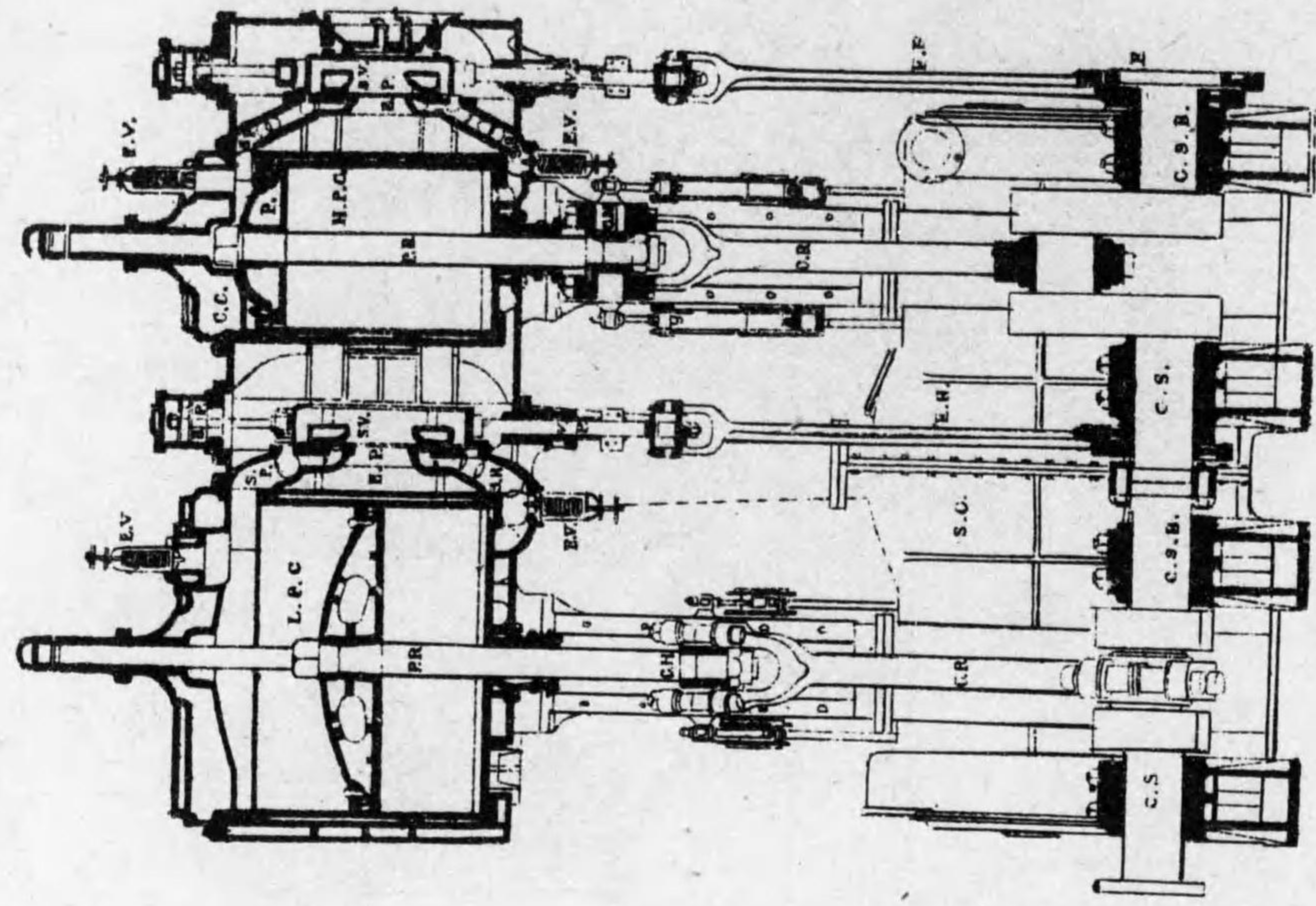
第 9 圖



第 10 圖



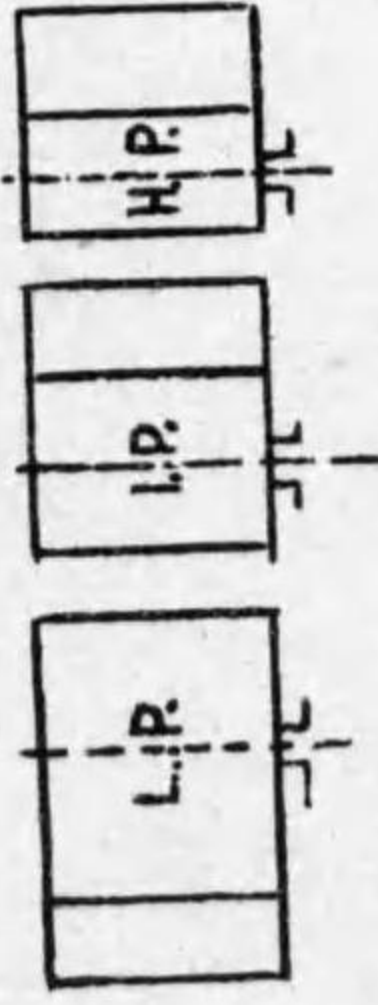
第 11 圖



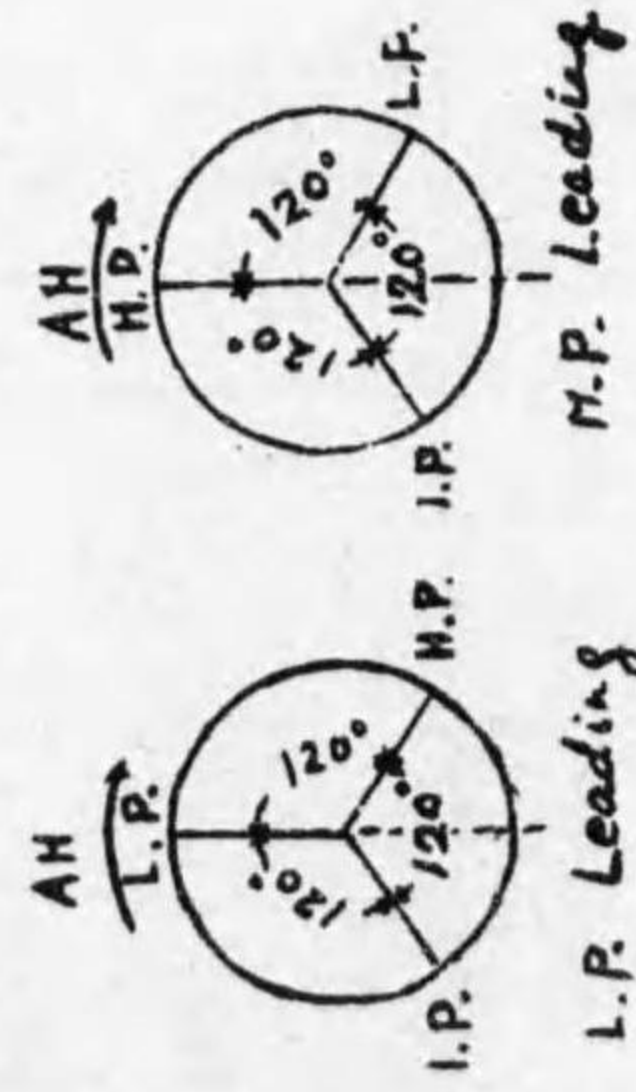
第 12 圖



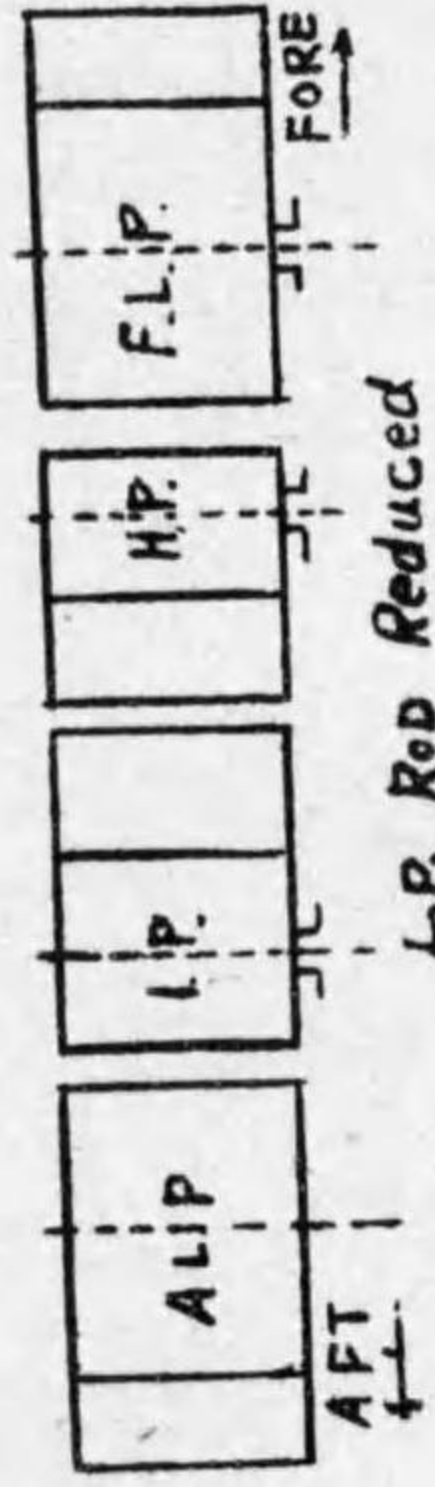
第 13 圖 A



第 13 圖 B



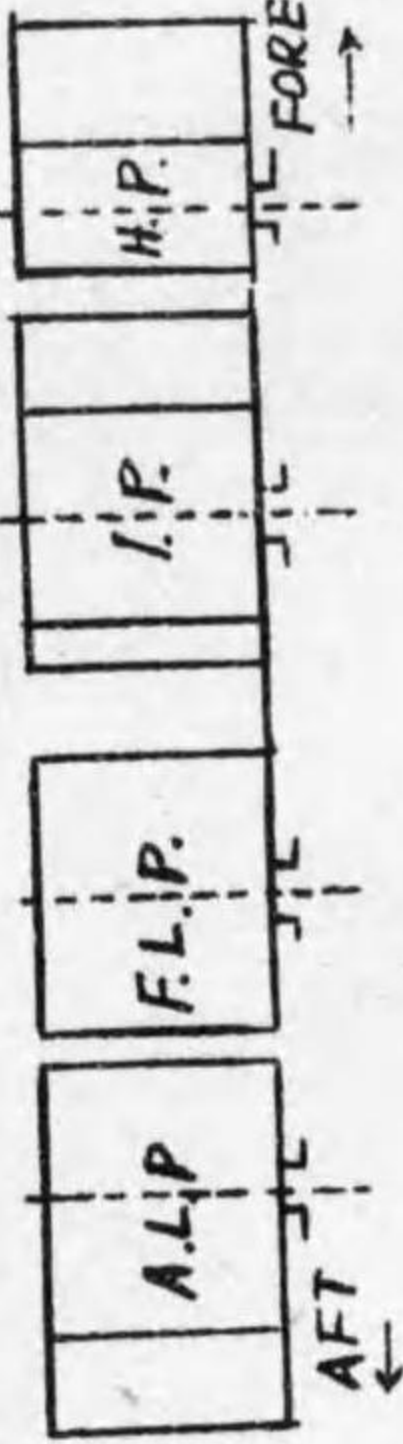
L.P. Leading M.P. Leading
第 14 圖



L.P. Rod Reduced
第 15 圖 A



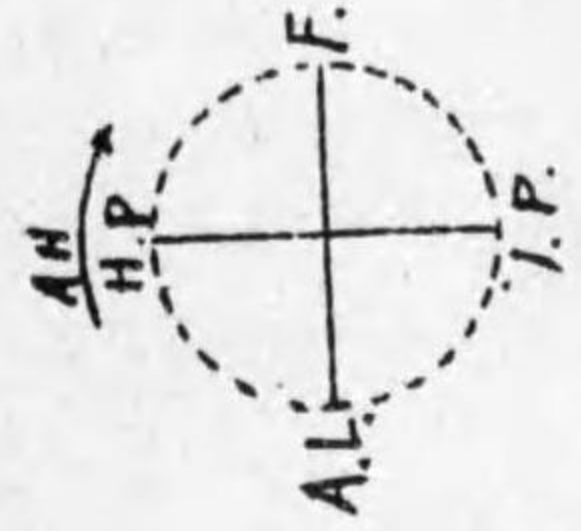
第 15 圖 B



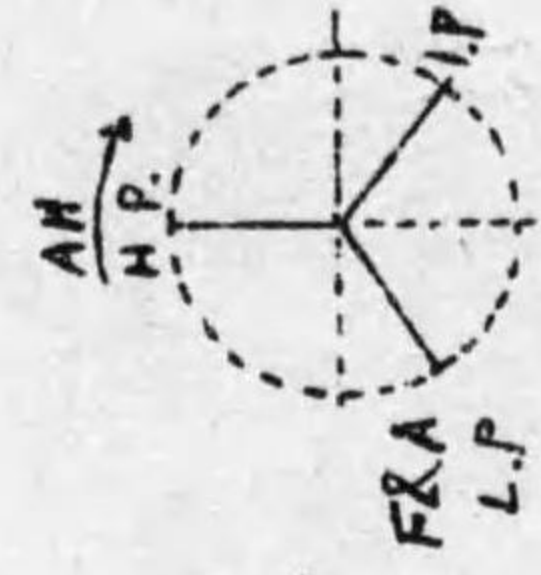
第 15 圖 C



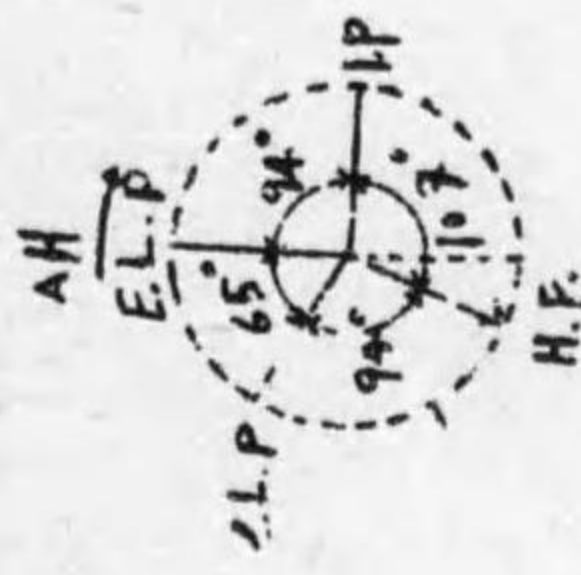
第 16 圖 A



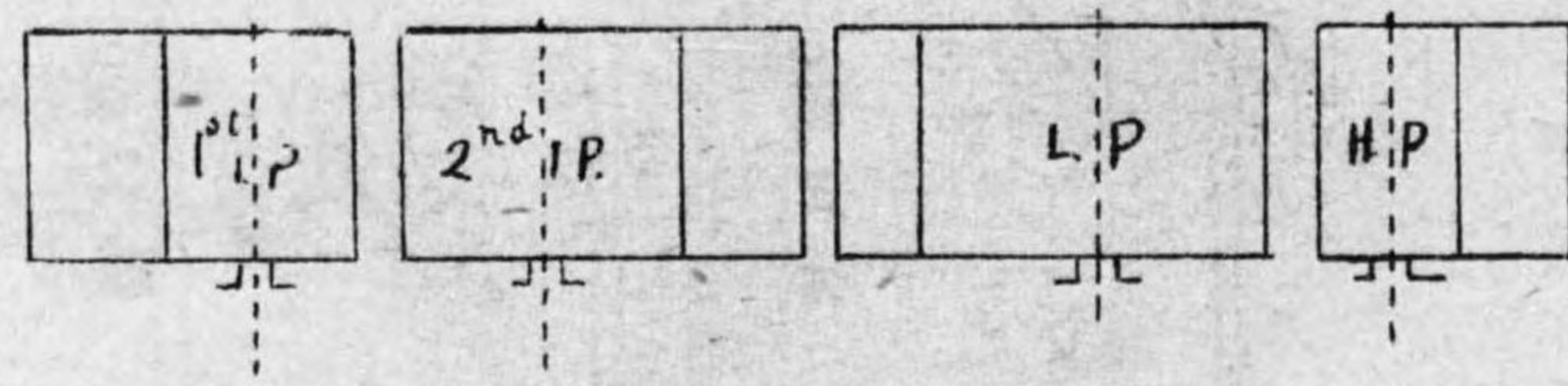
第 16 圖 B



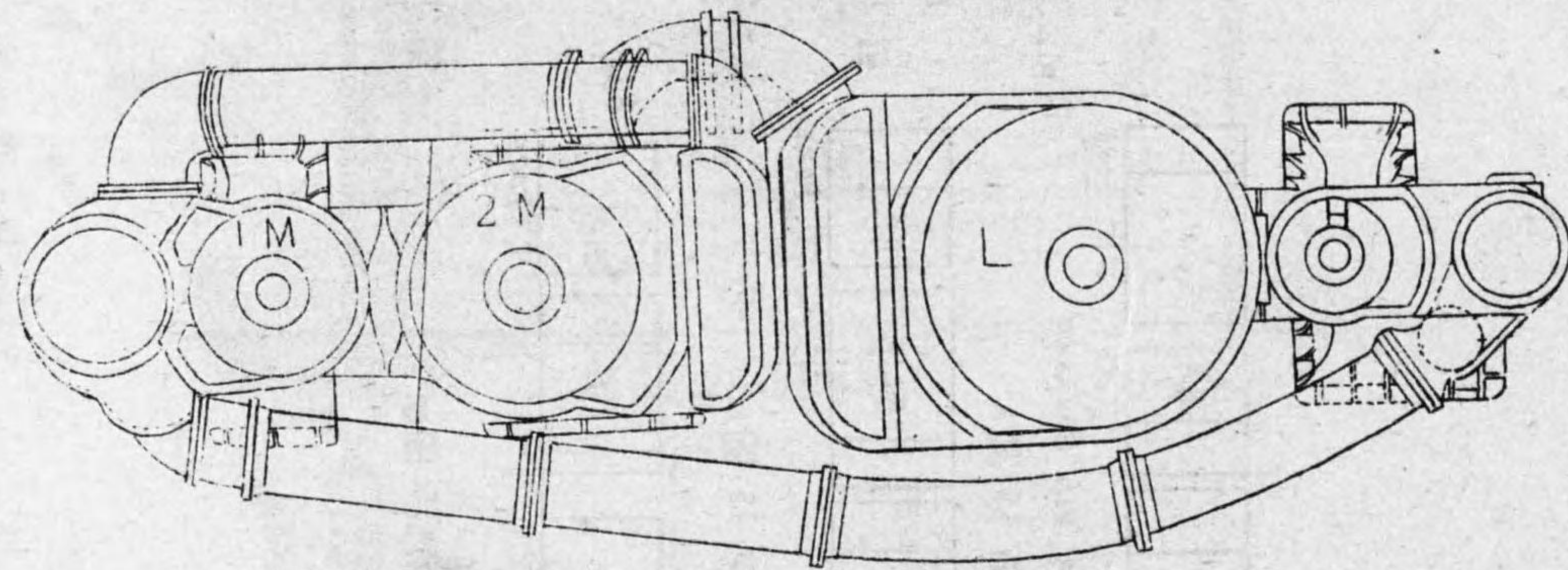
第 16 圖 C



第 17 圖



第 18 圖 A



第 18 圖 B

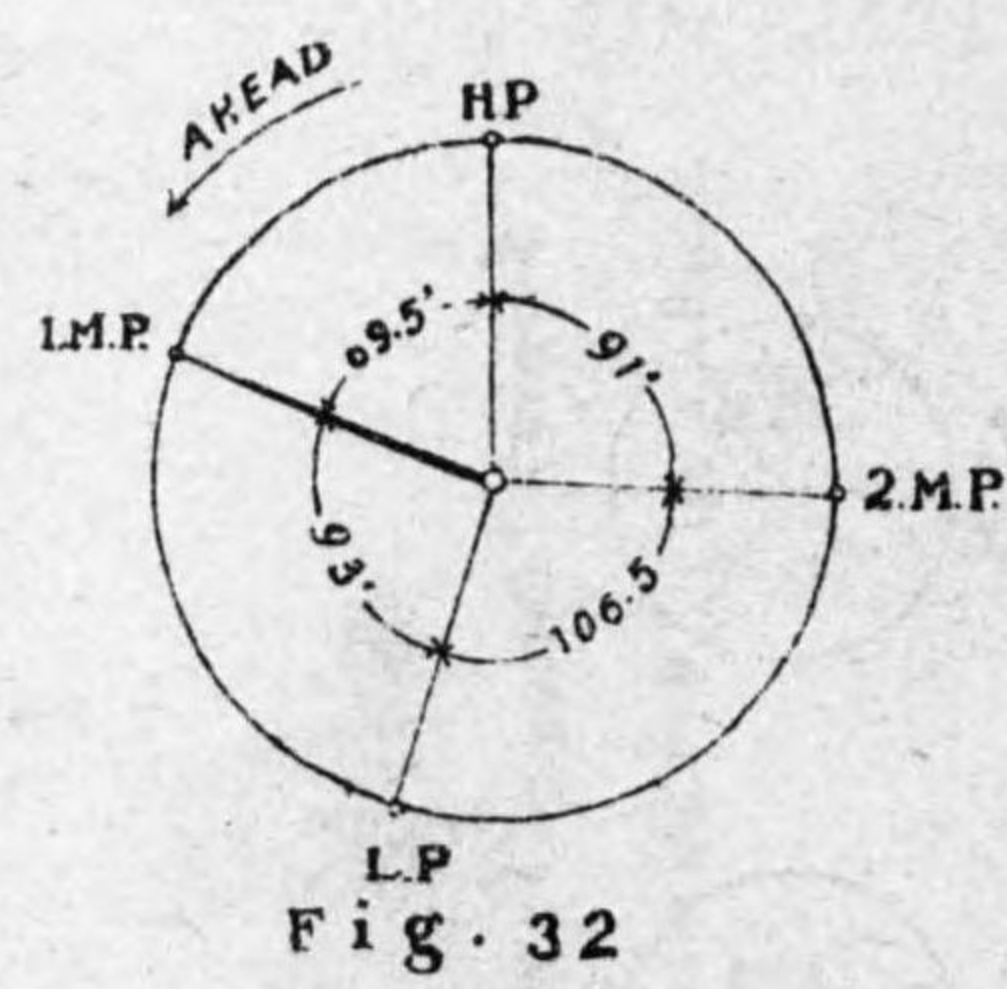
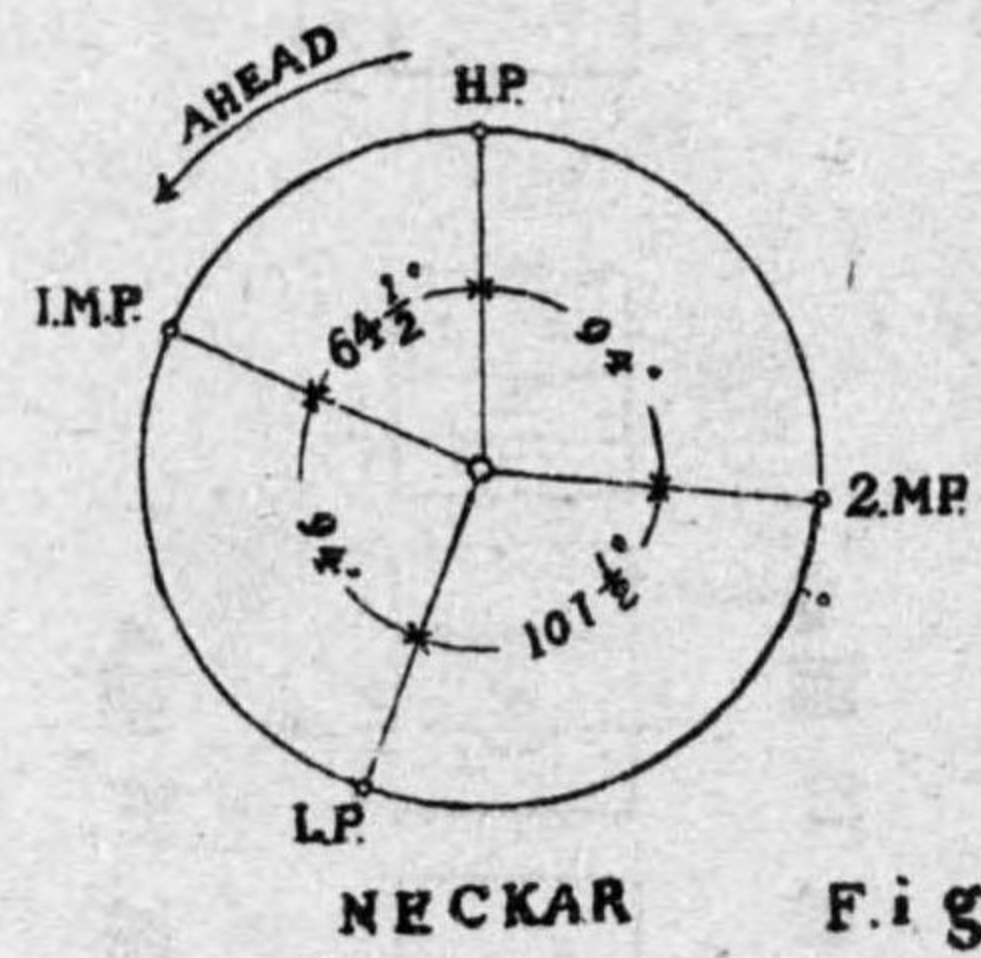
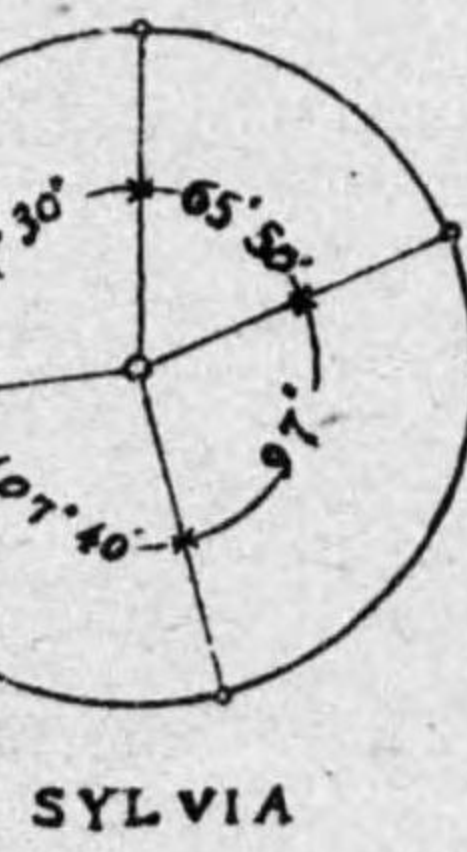


Fig. 32



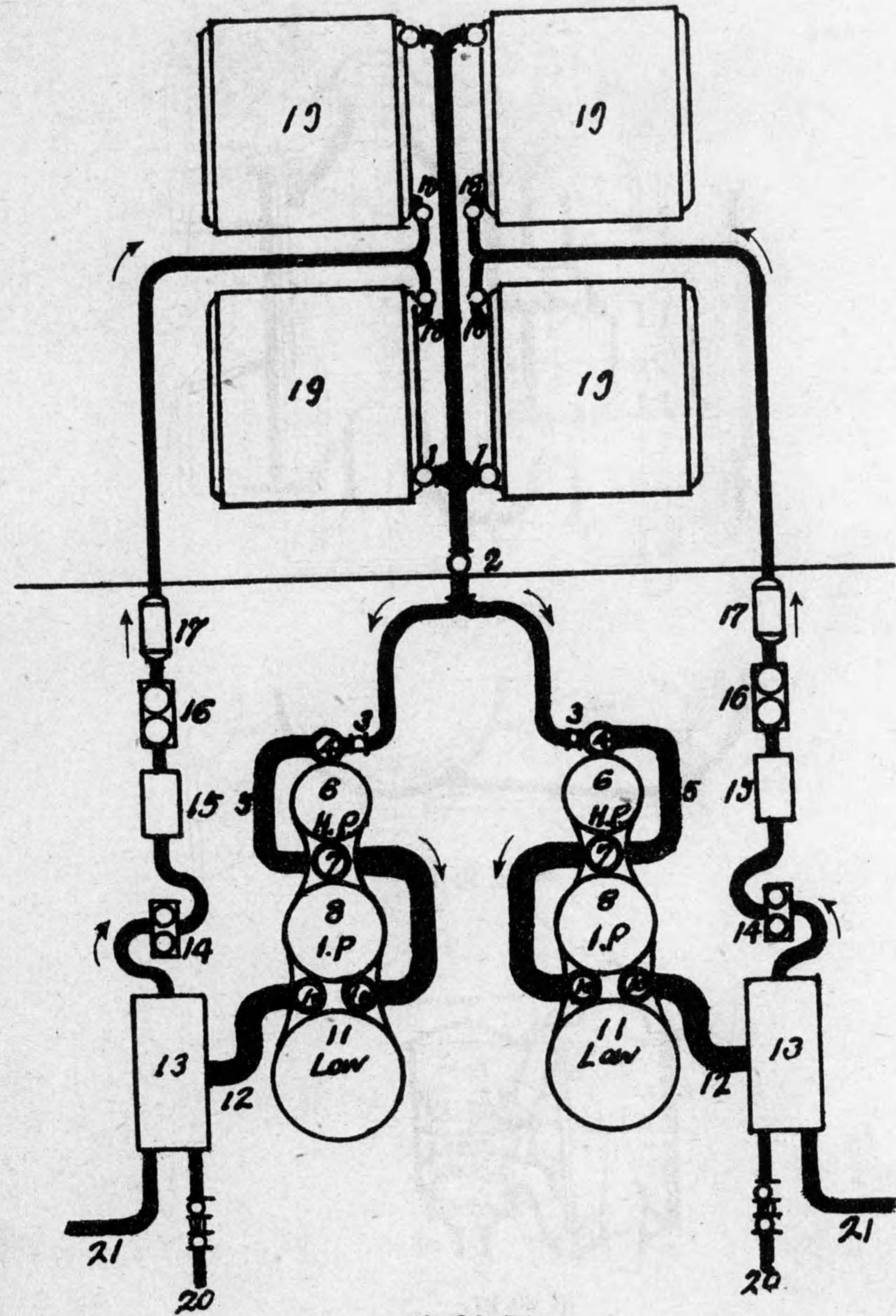
NECKAR

Fig. 33.

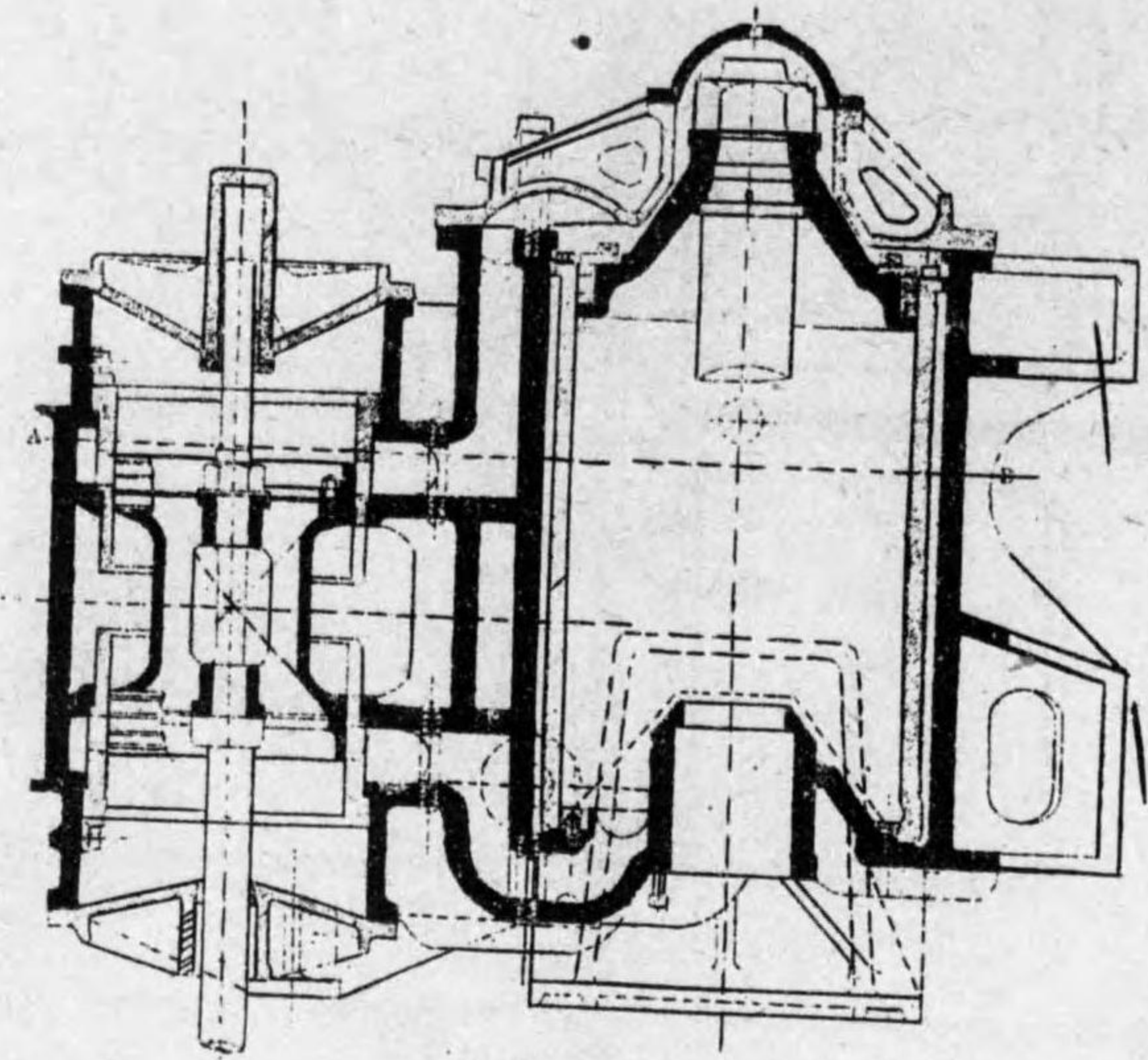


SYLVIA

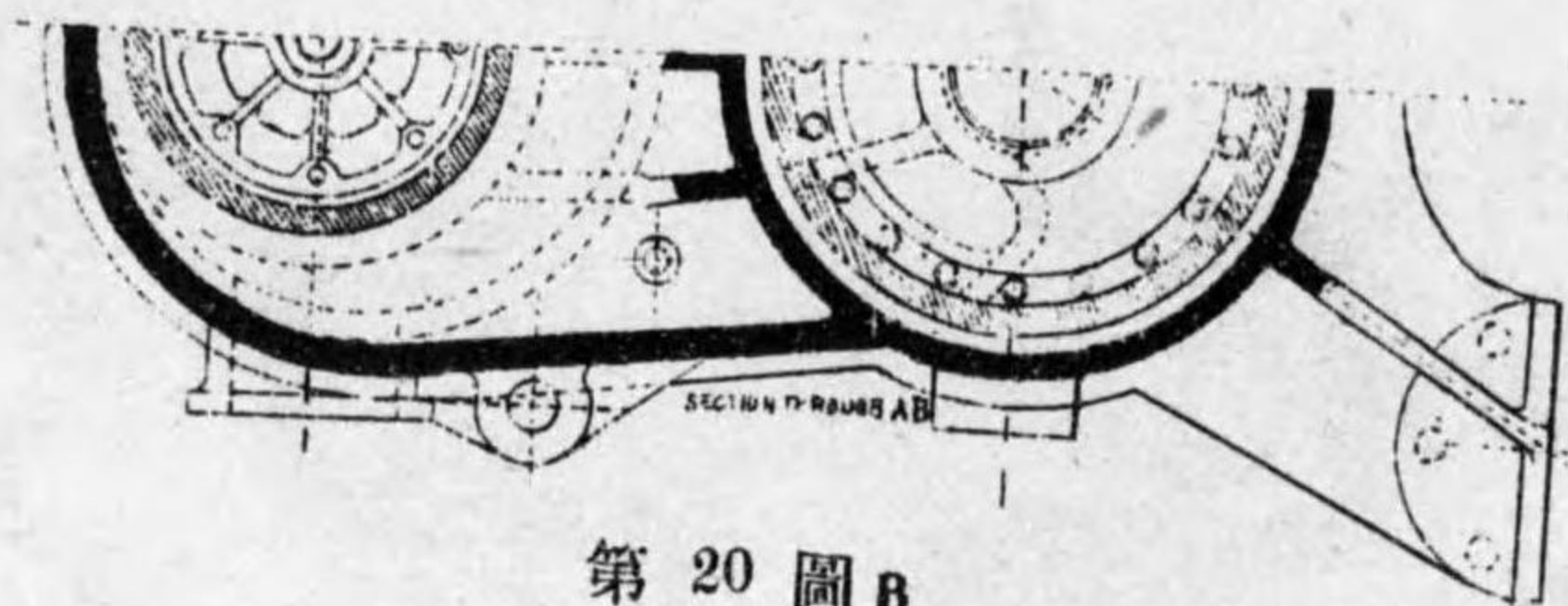
第 18 圖 C



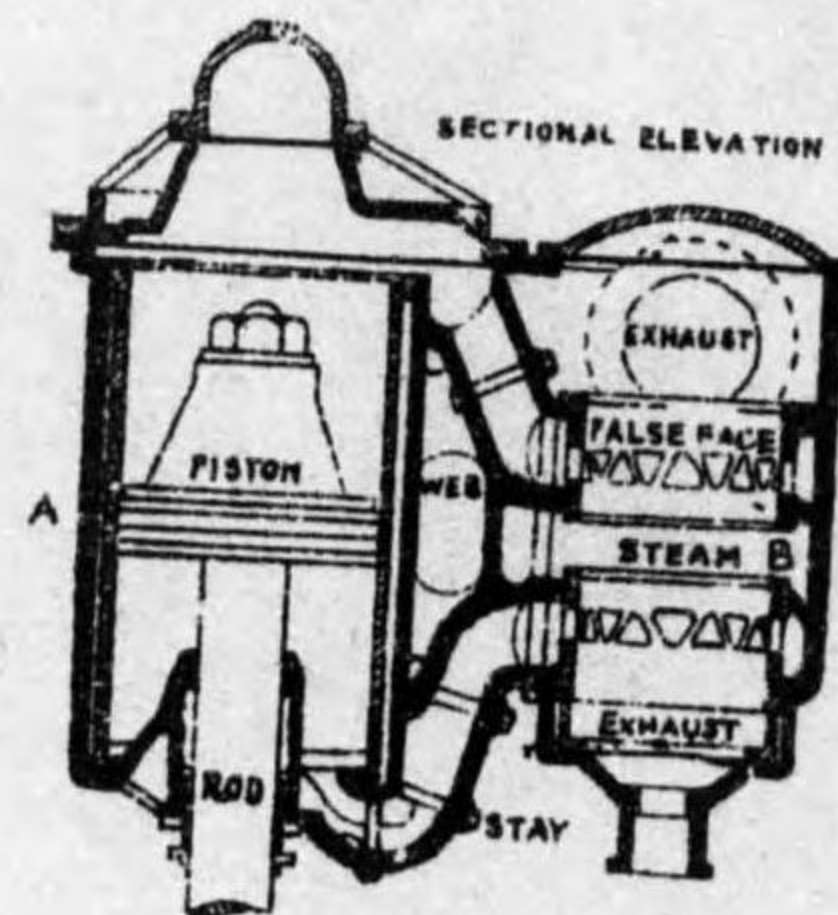
第 19 圖



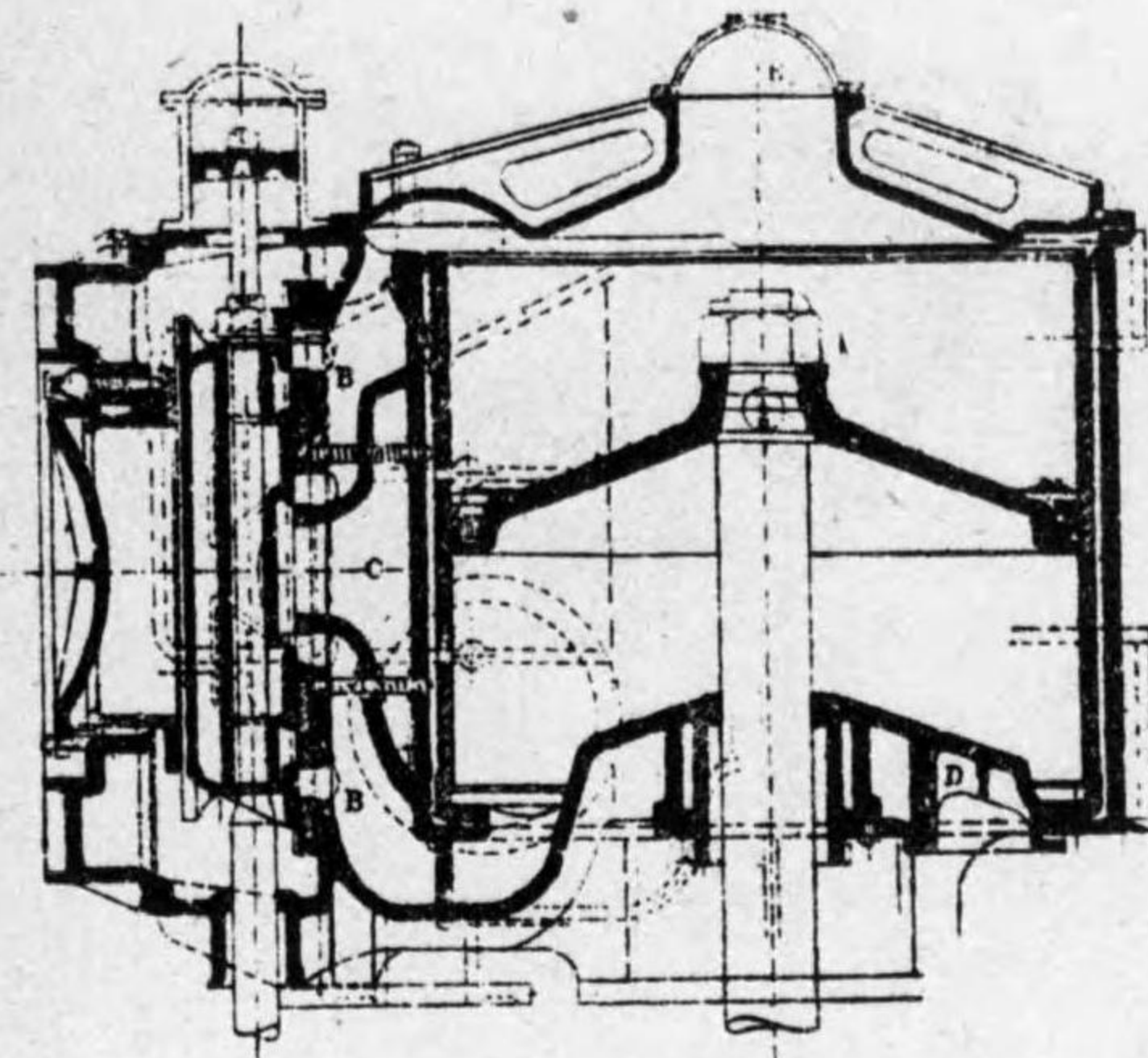
第 20 圖 A



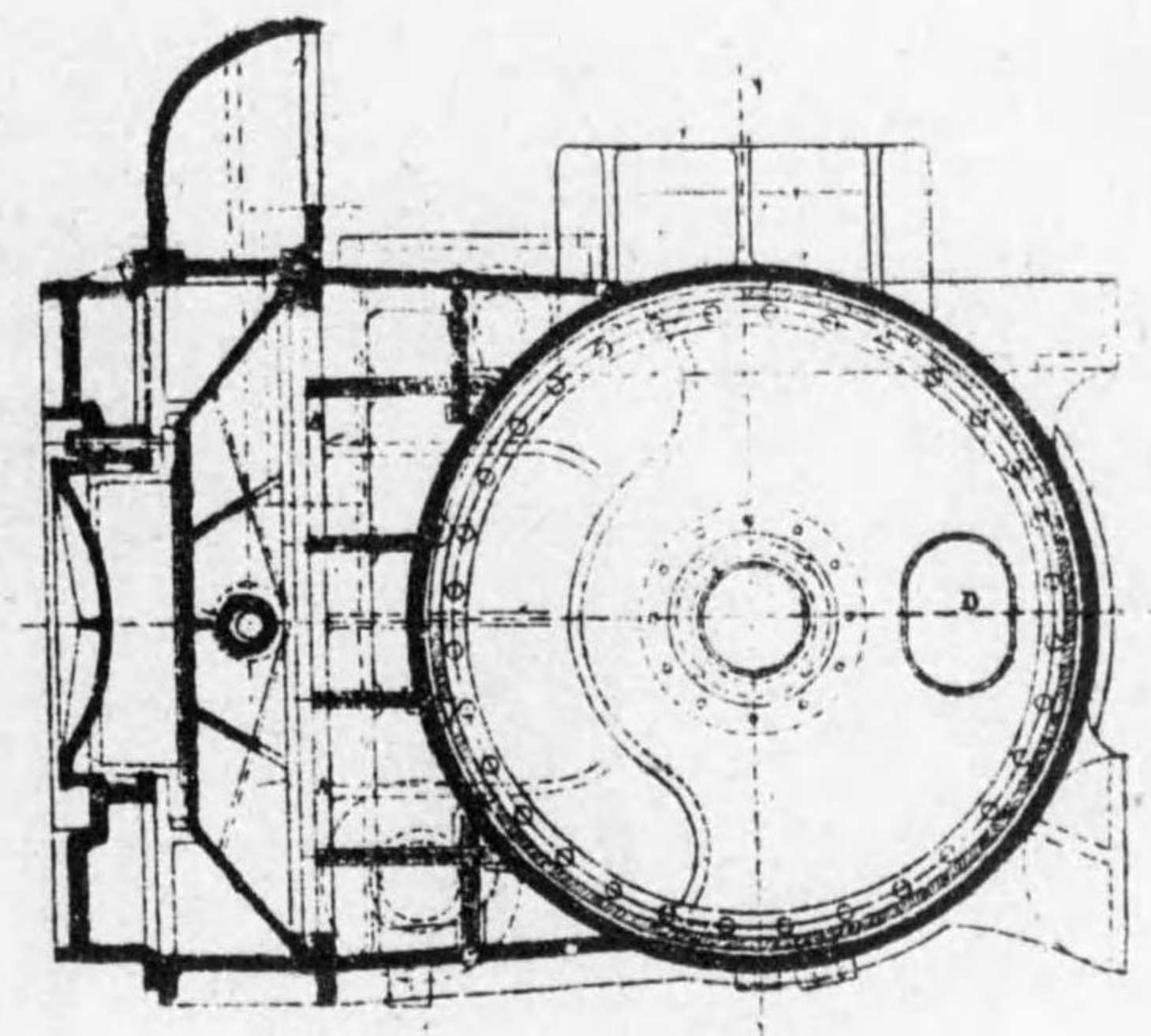
第 20 圖 B



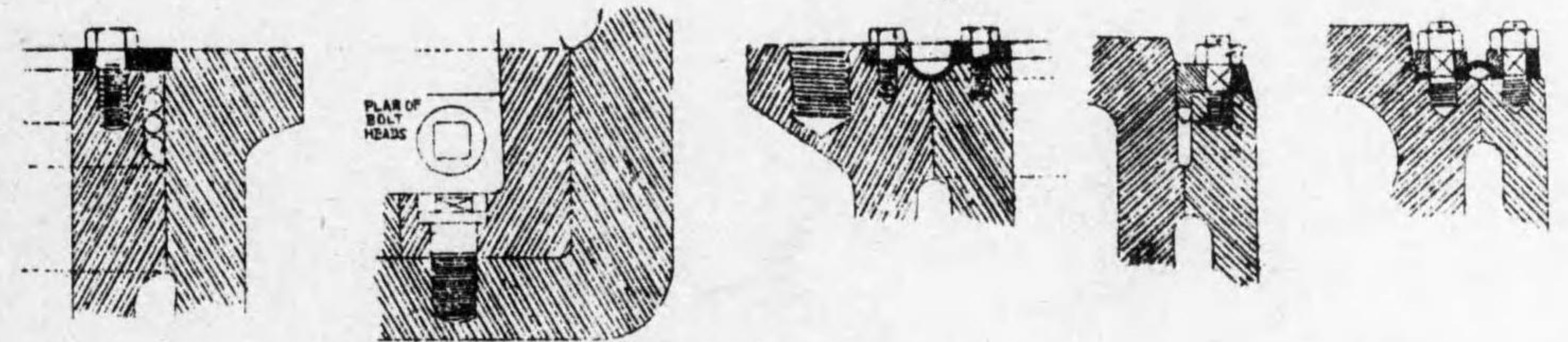
第 20 圖 C



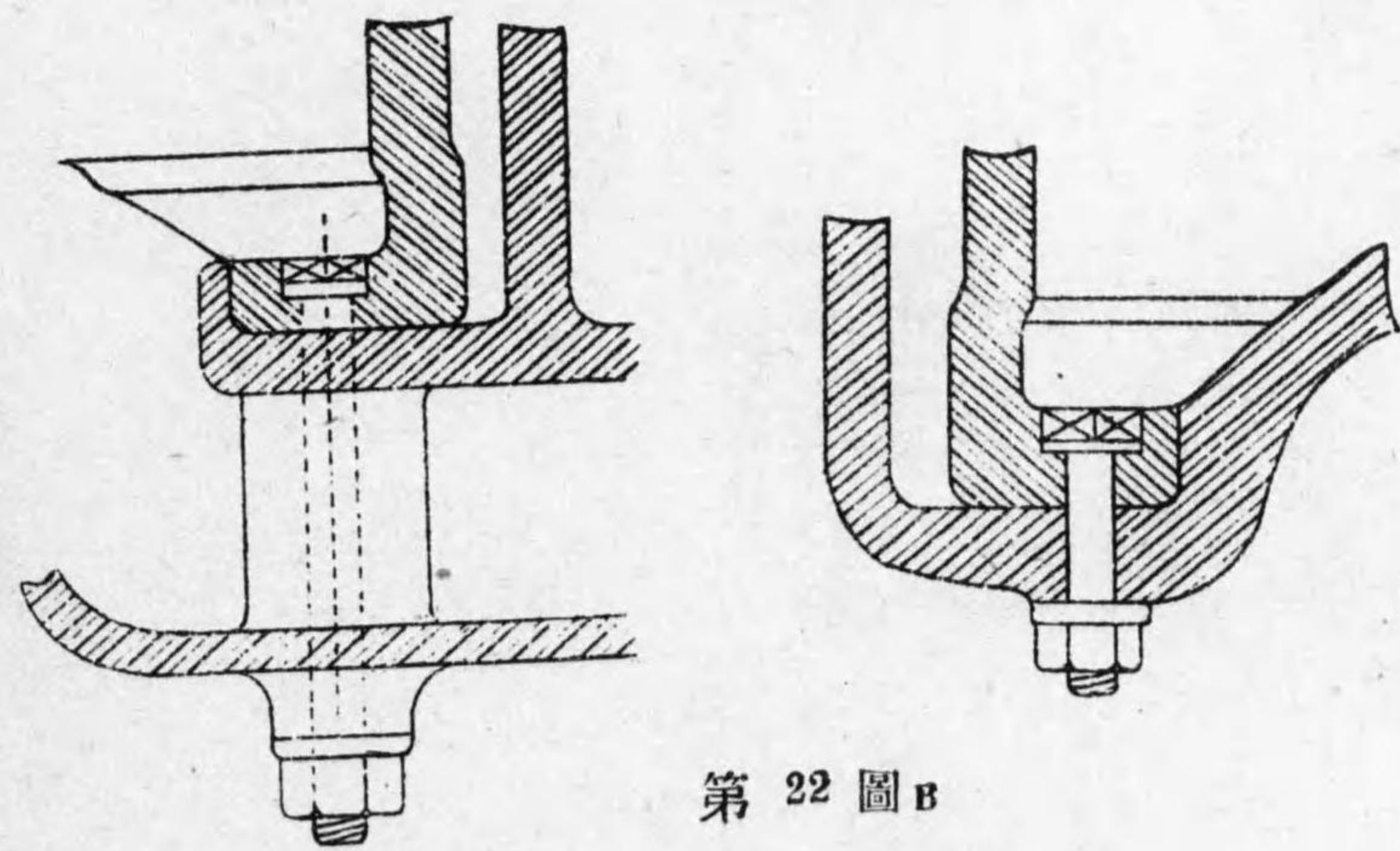
第 21 圖 A



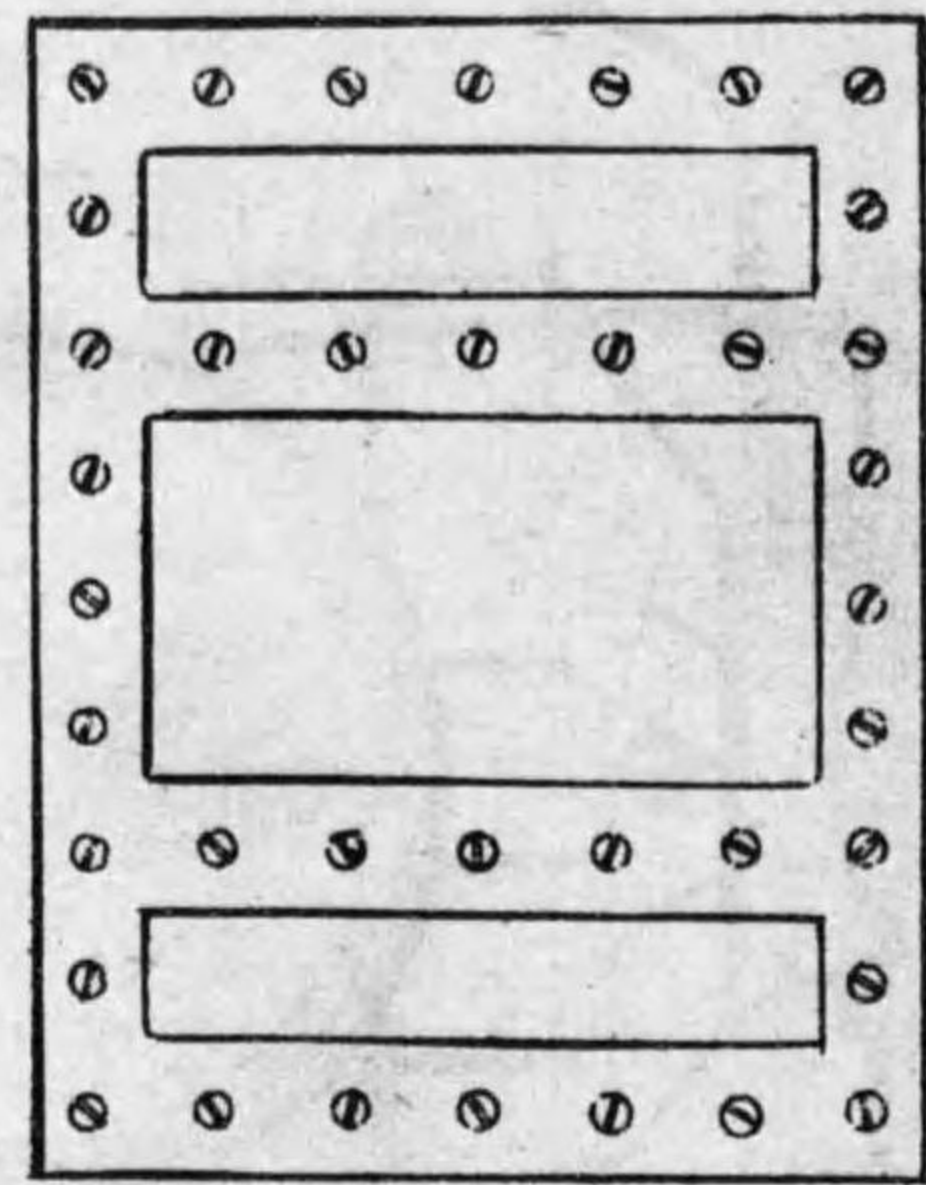
第 21 圖 B



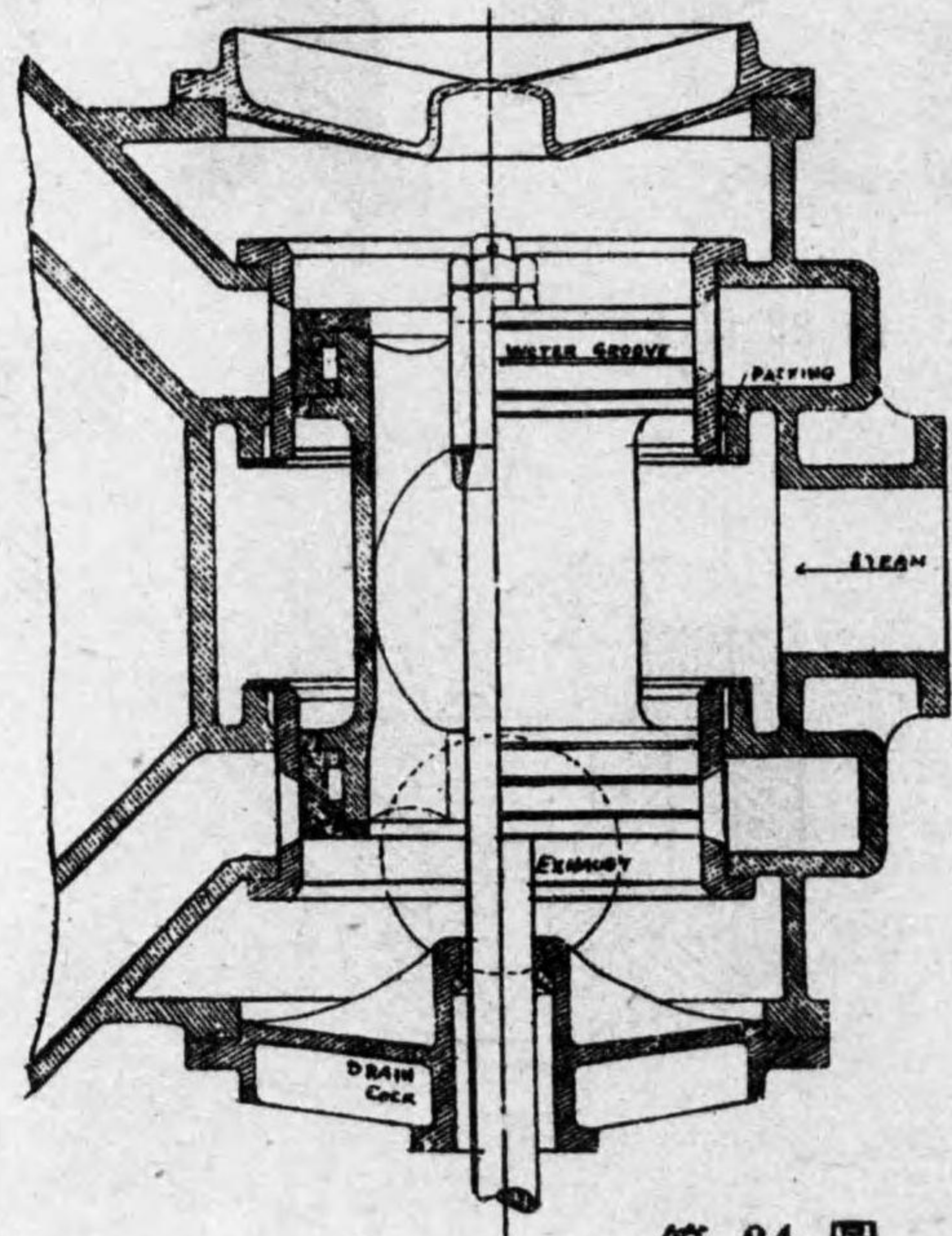
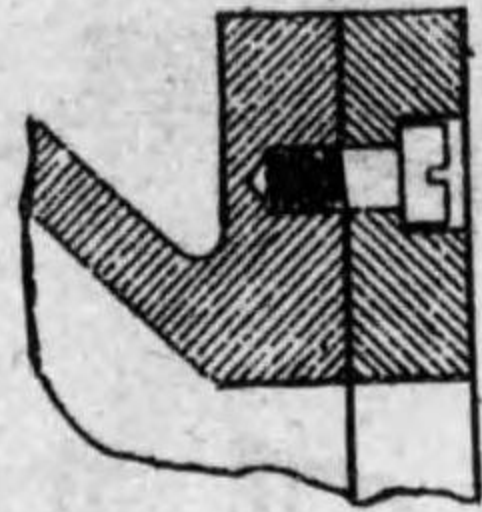
第 22 圖 A



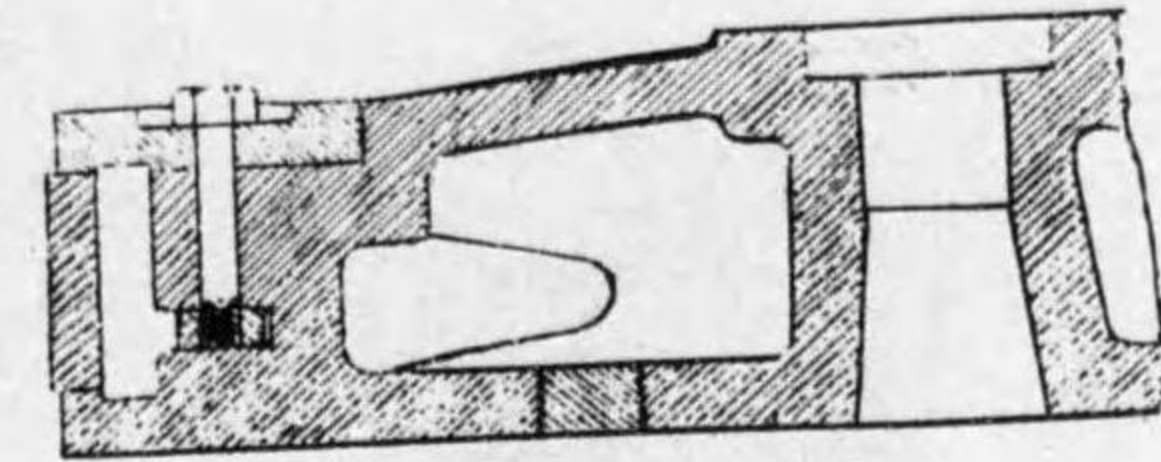
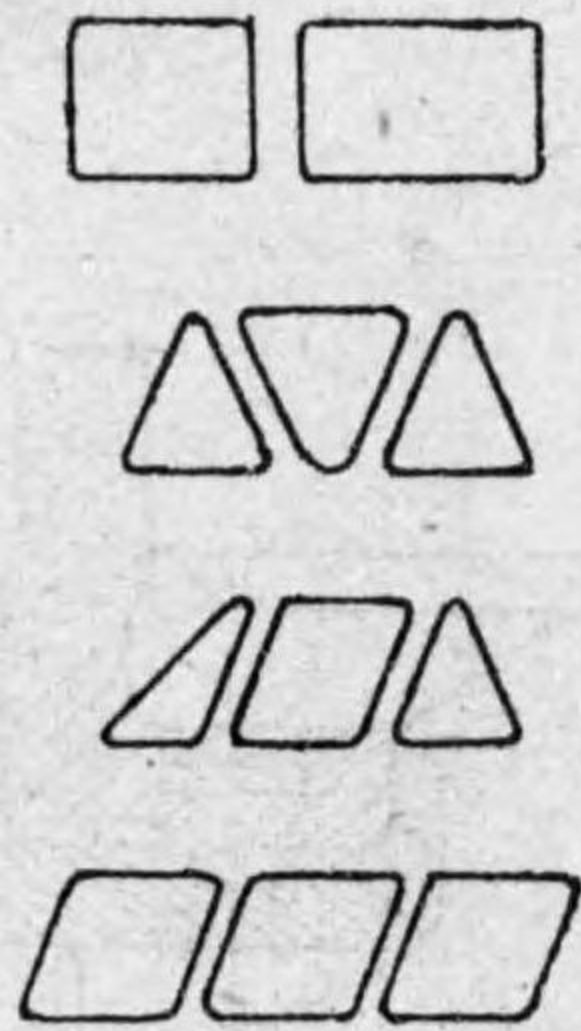
第 22 圖 B



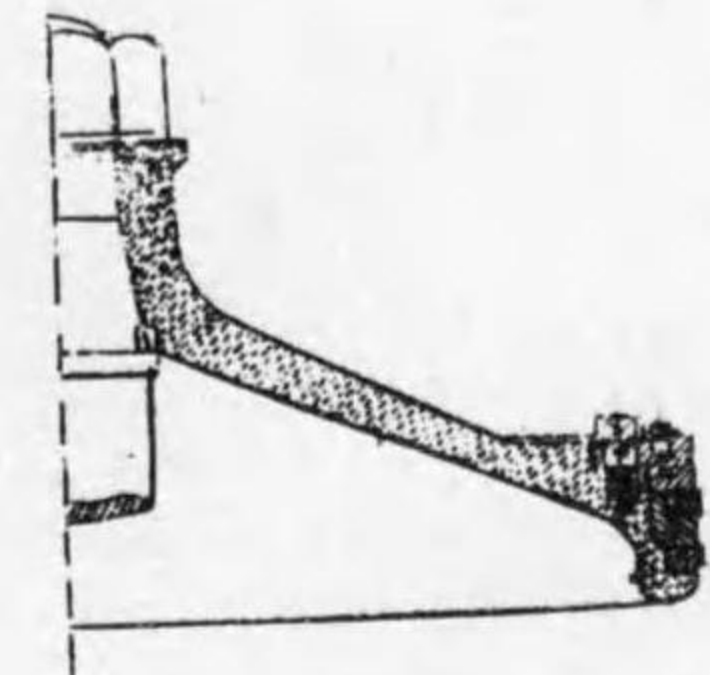
第 23 圖



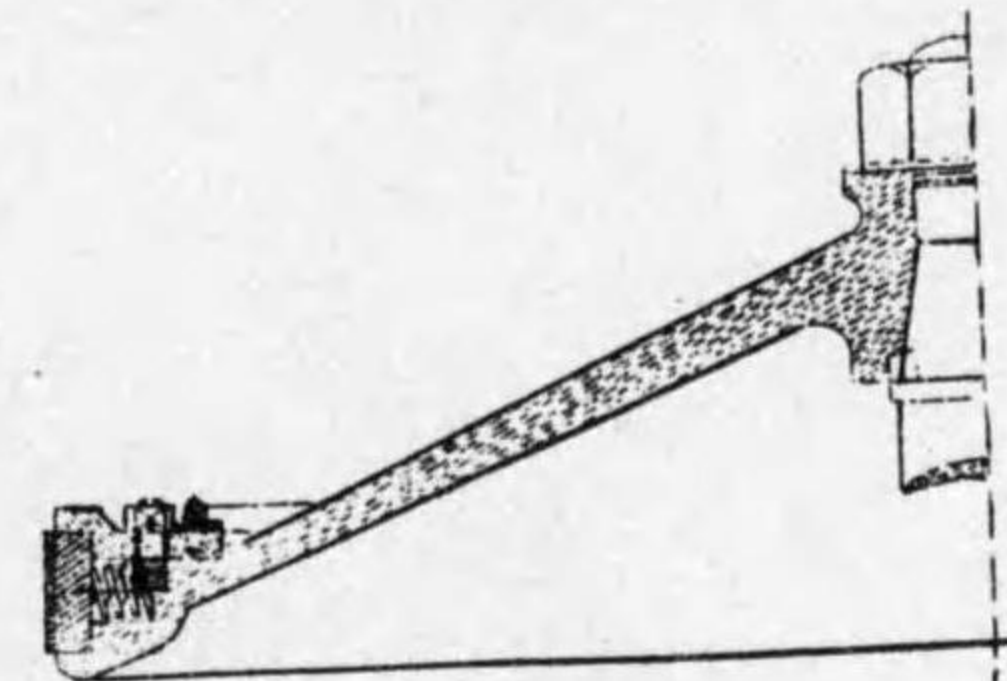
第 24 圖



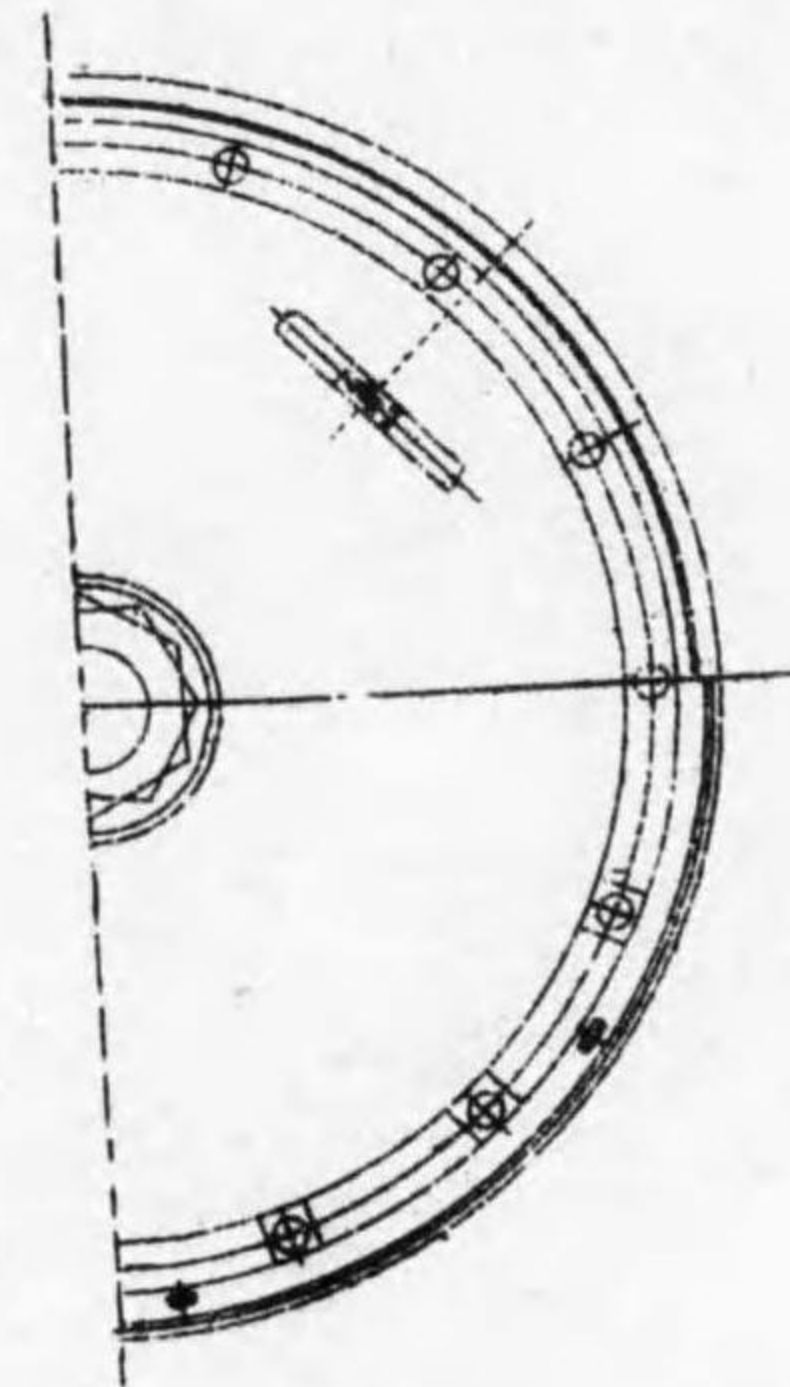
第 25 圖



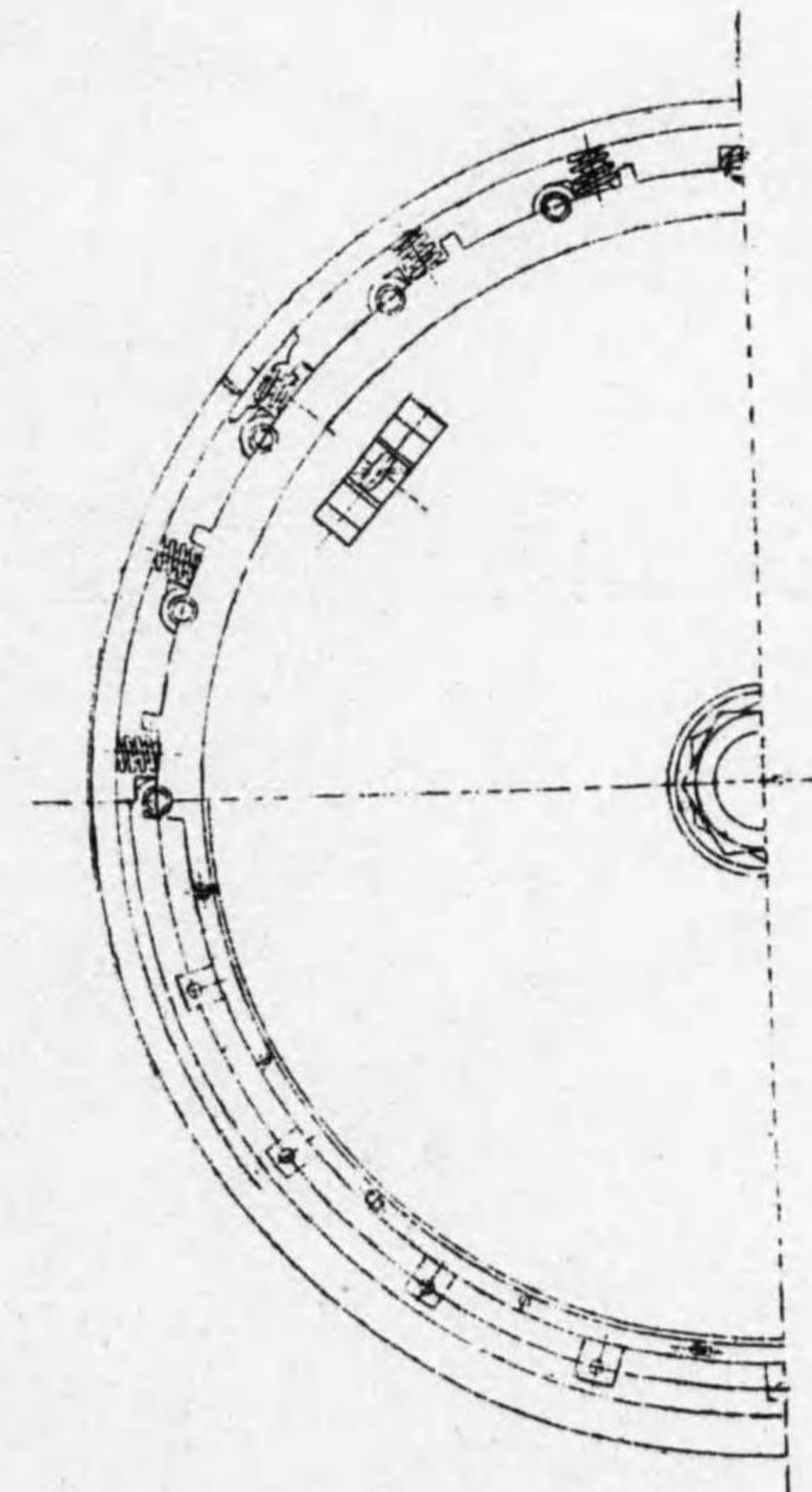
第 27 圖 A



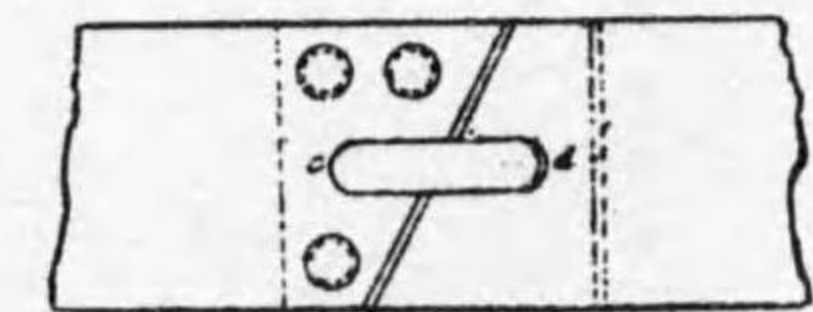
第 26 圖 A



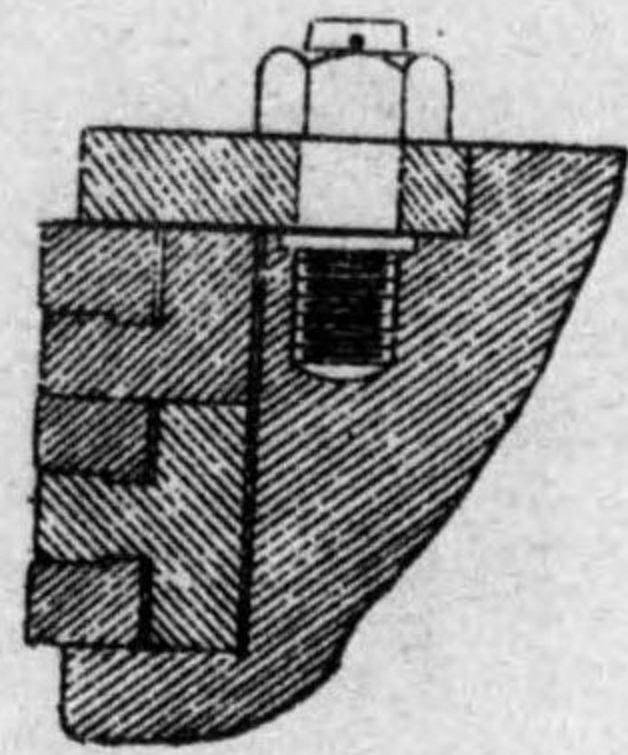
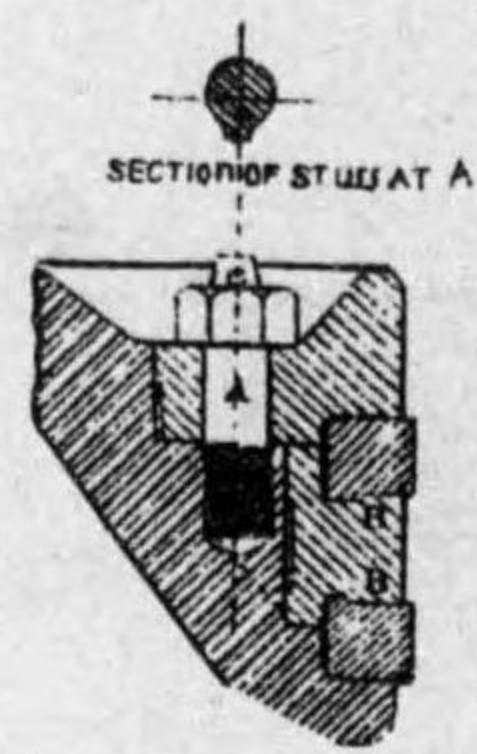
第 27 圖 B



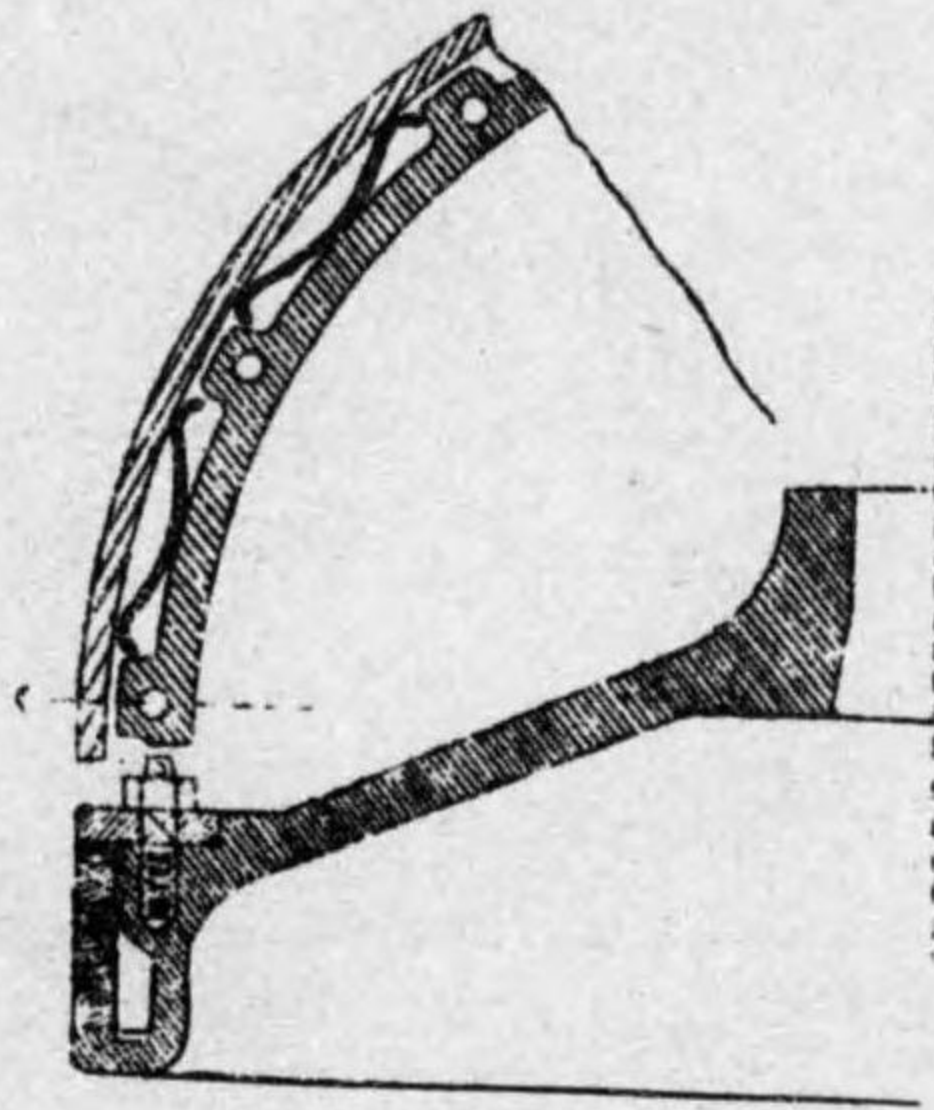
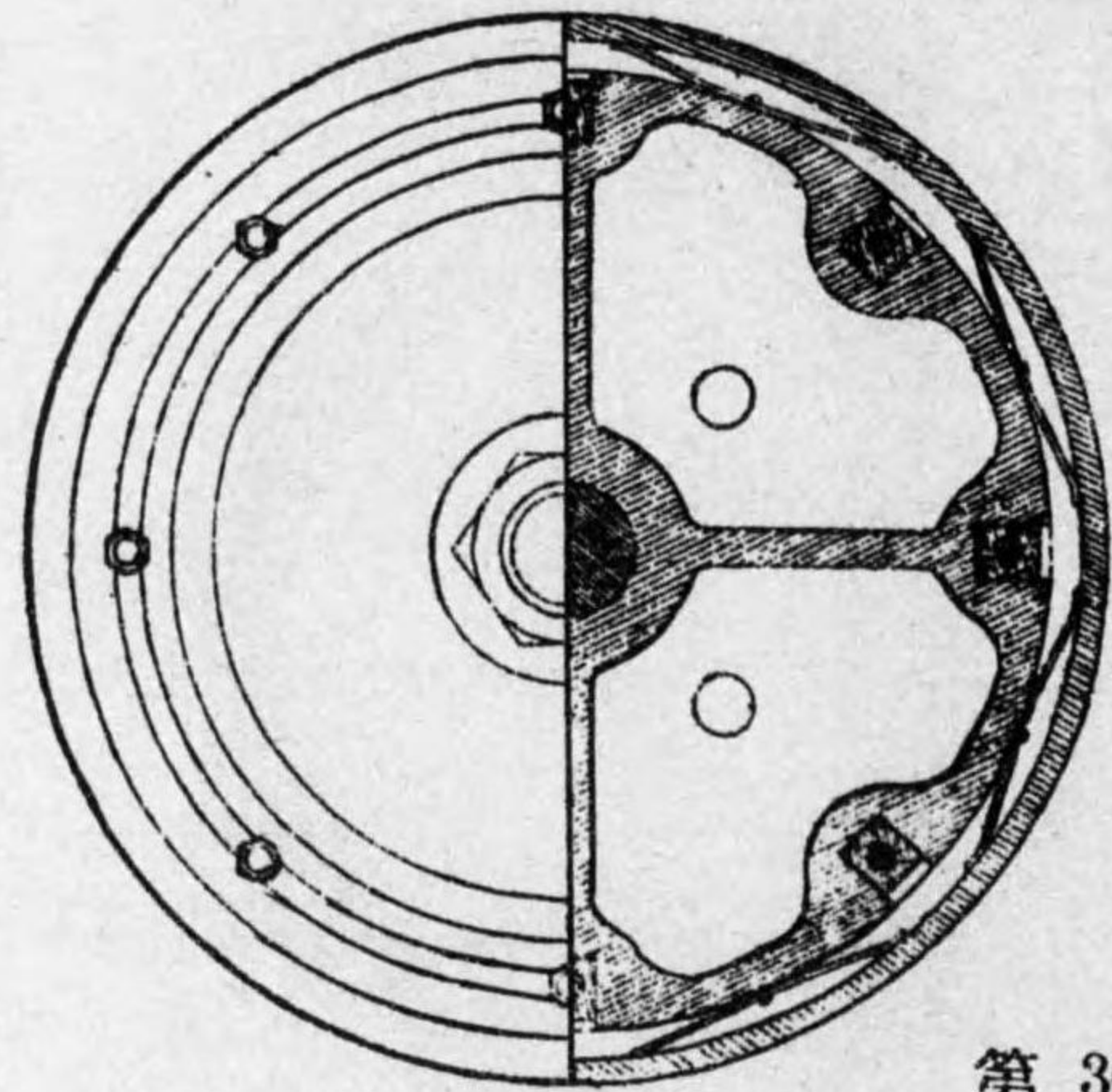
第 26 圖 B



第 28 圖



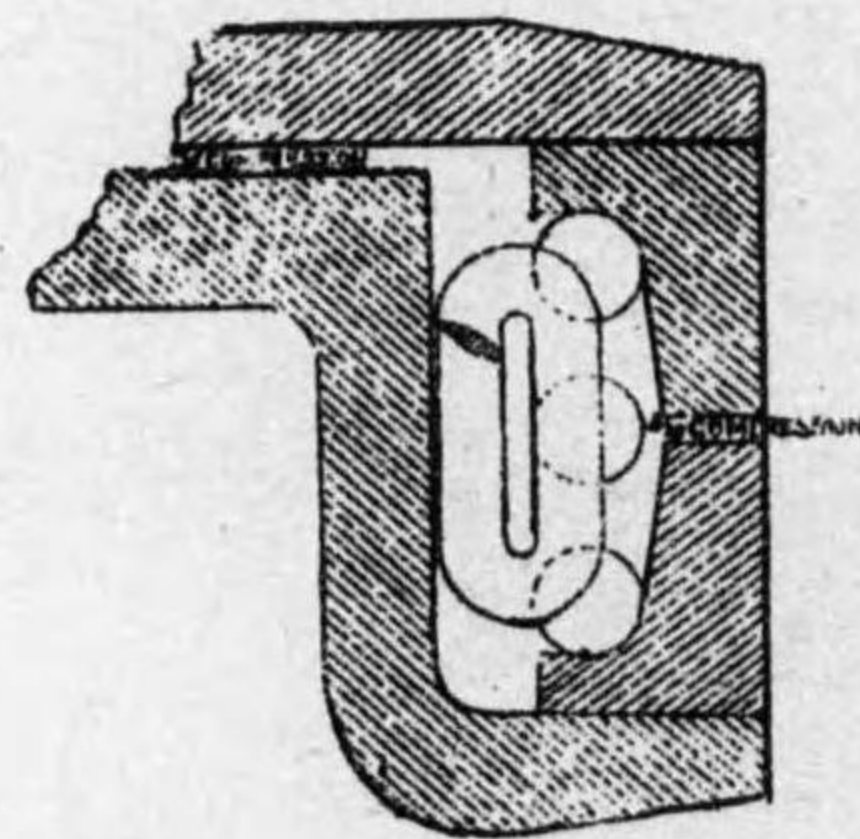
第 29 圖



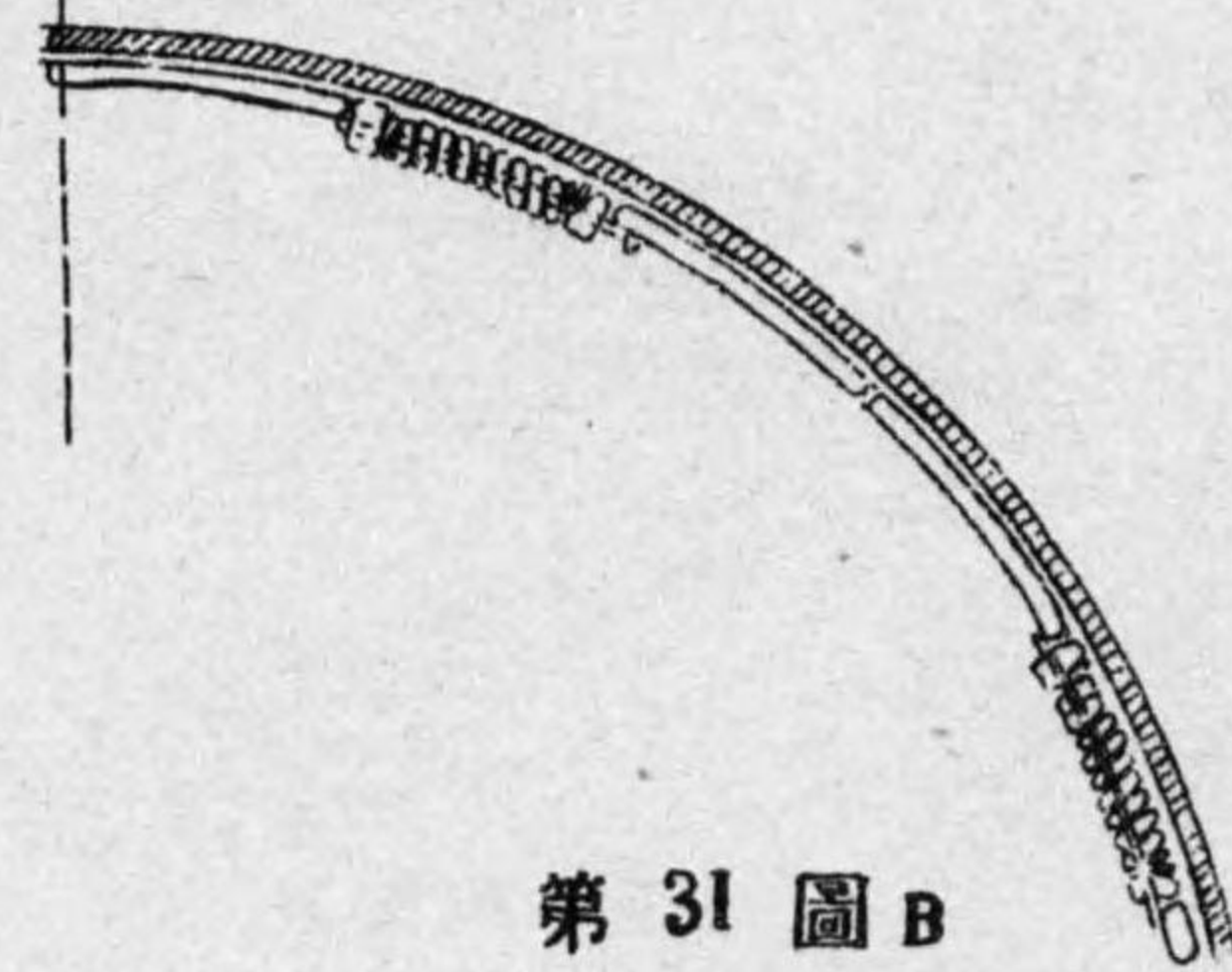
第 30 圖



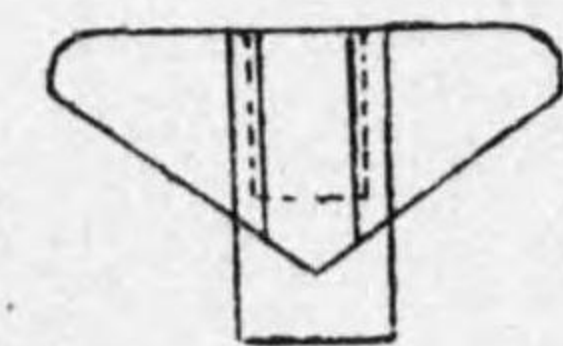
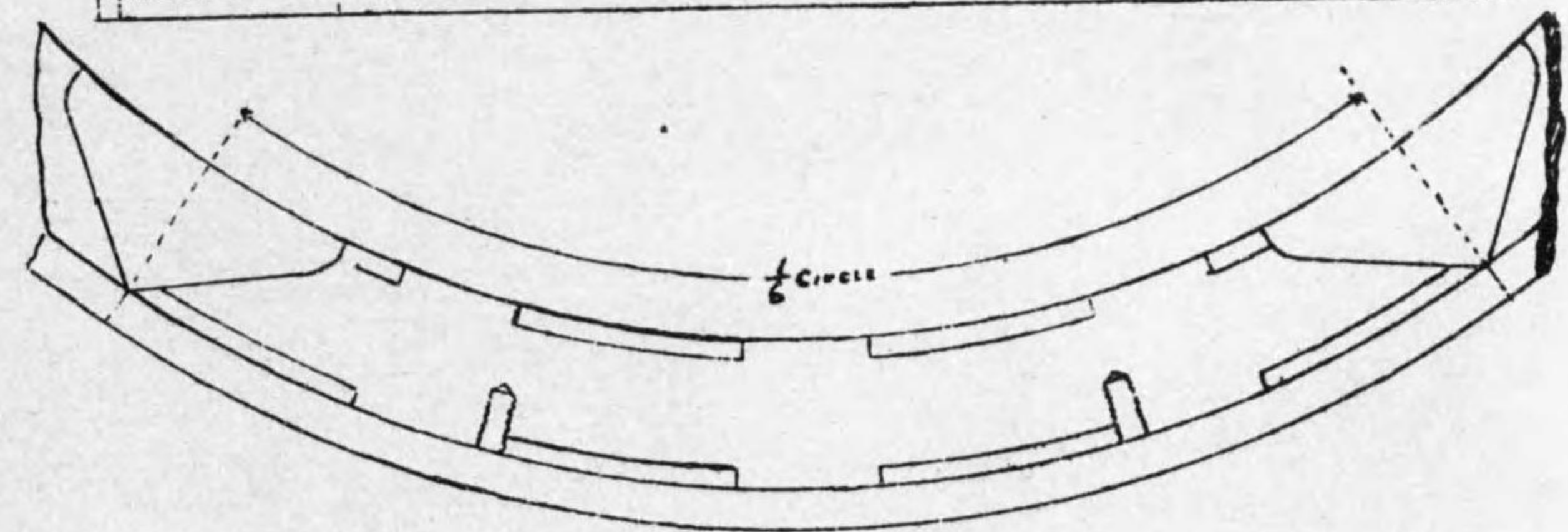
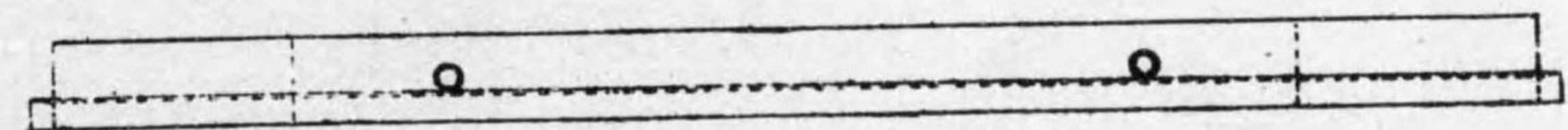
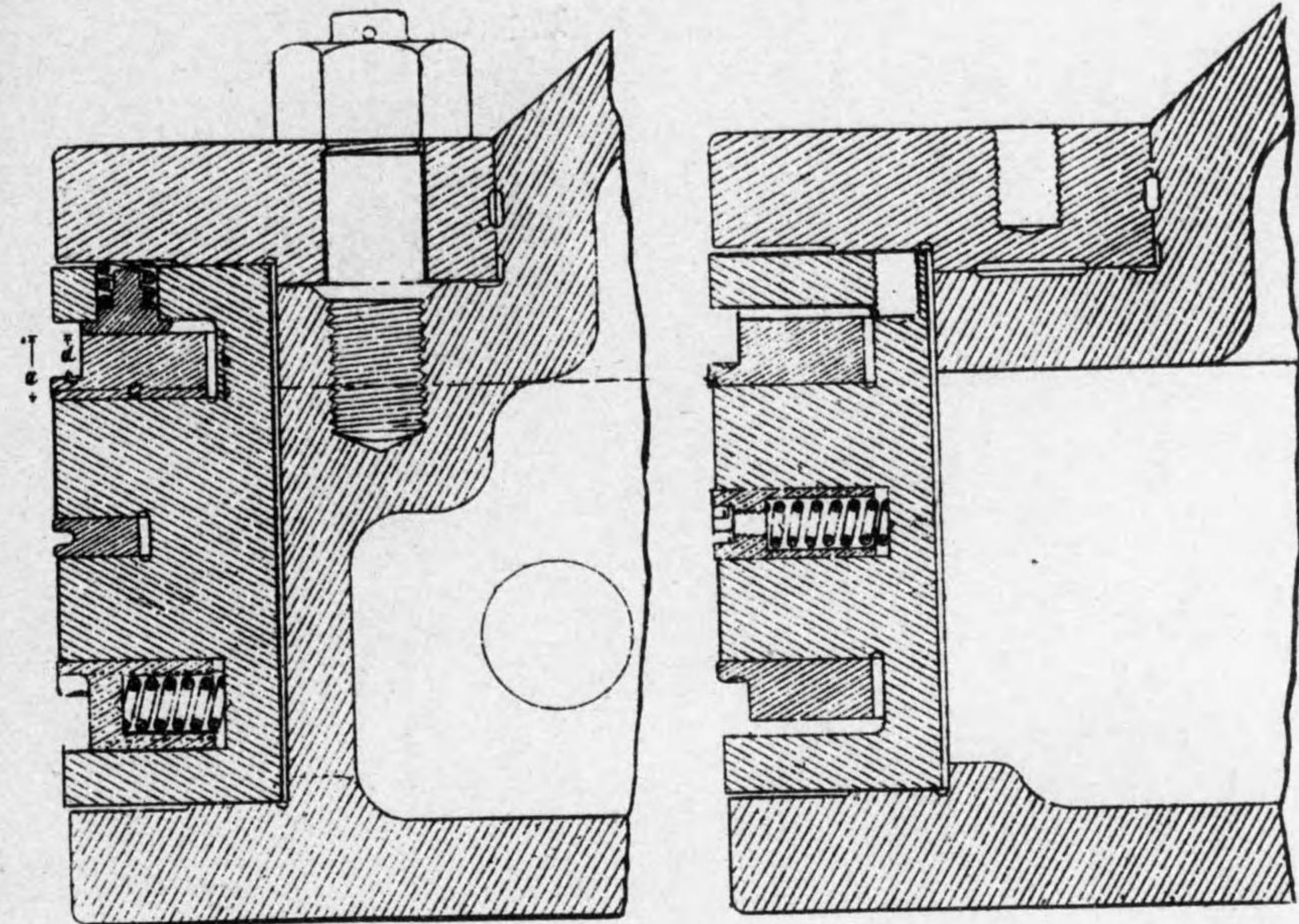
第 31 圖 A



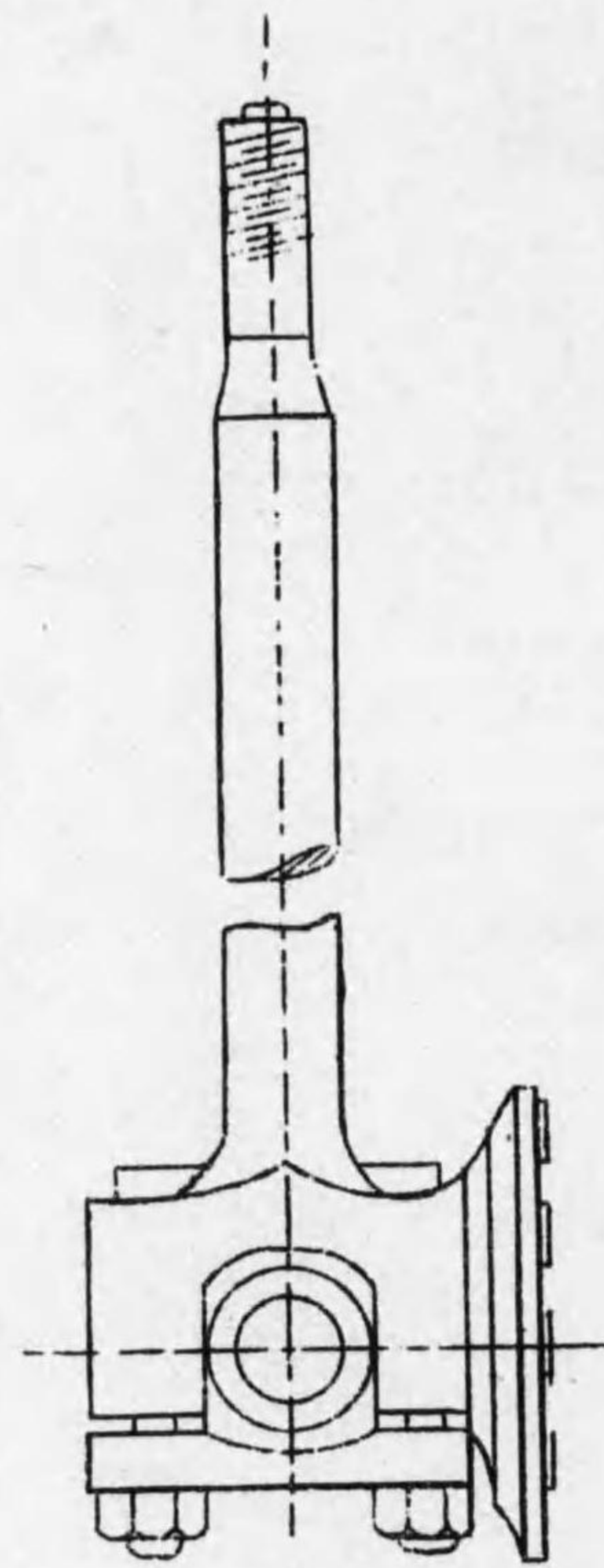
第 31 圖 C



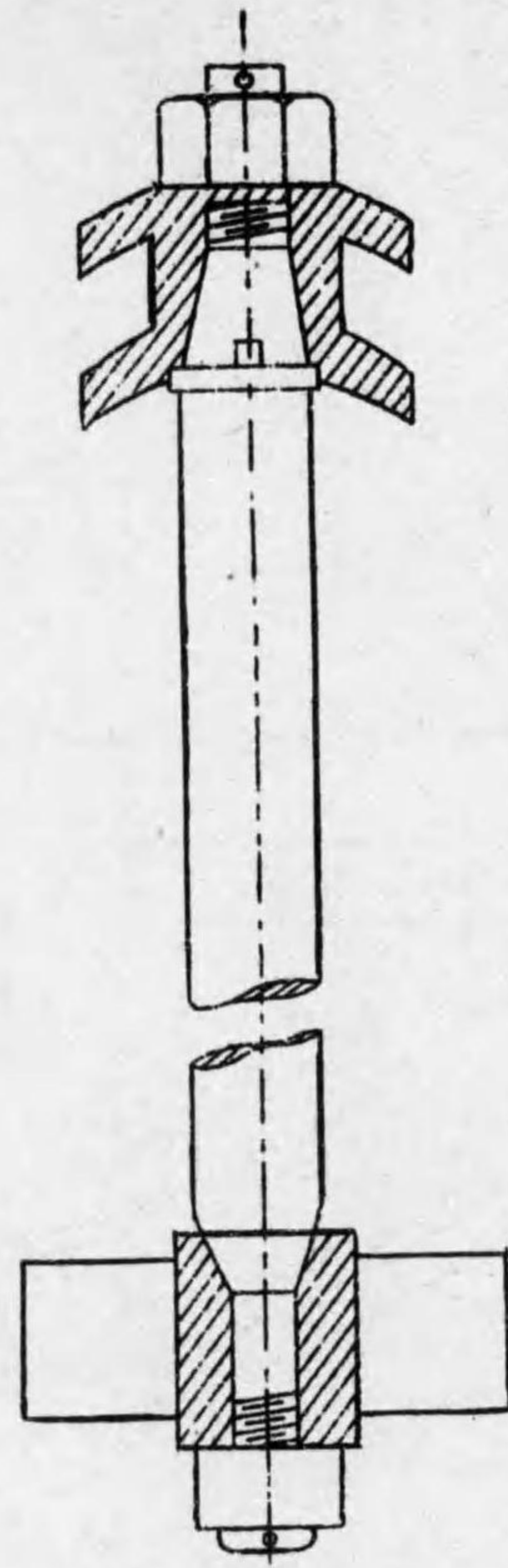
第 31 圖 B



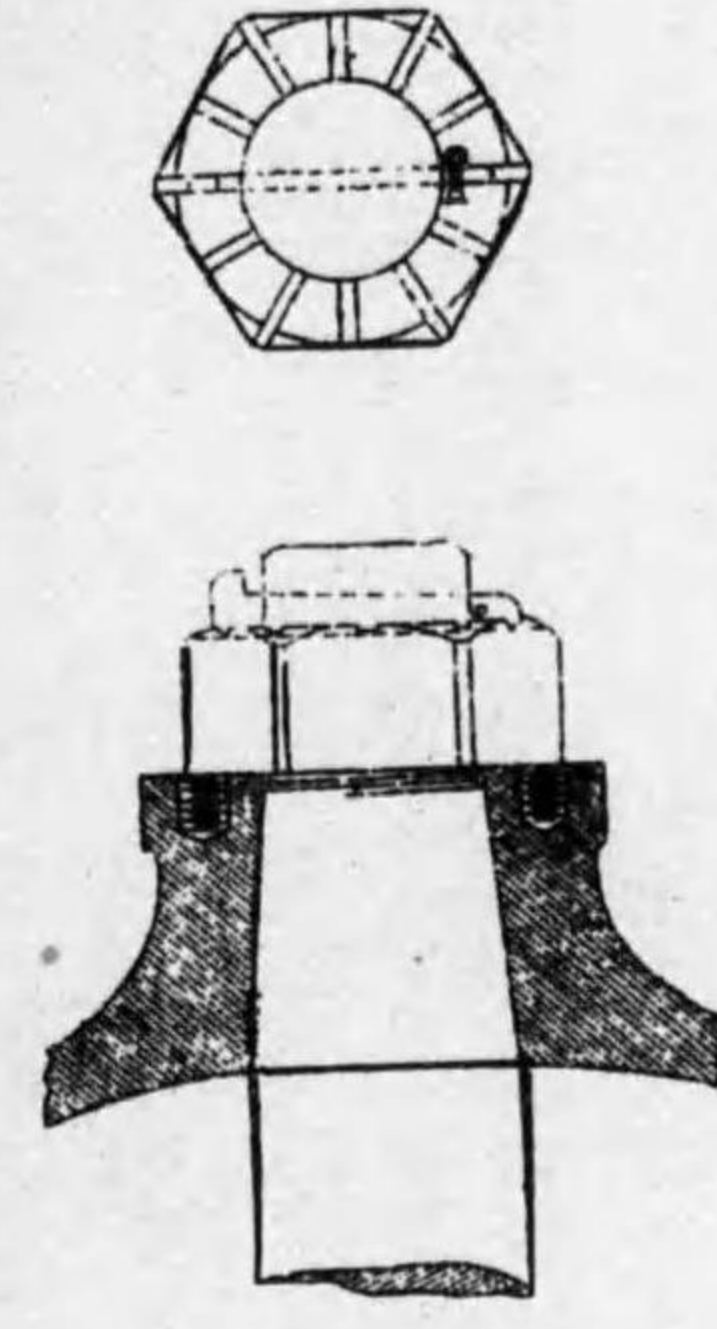
第 32 圖



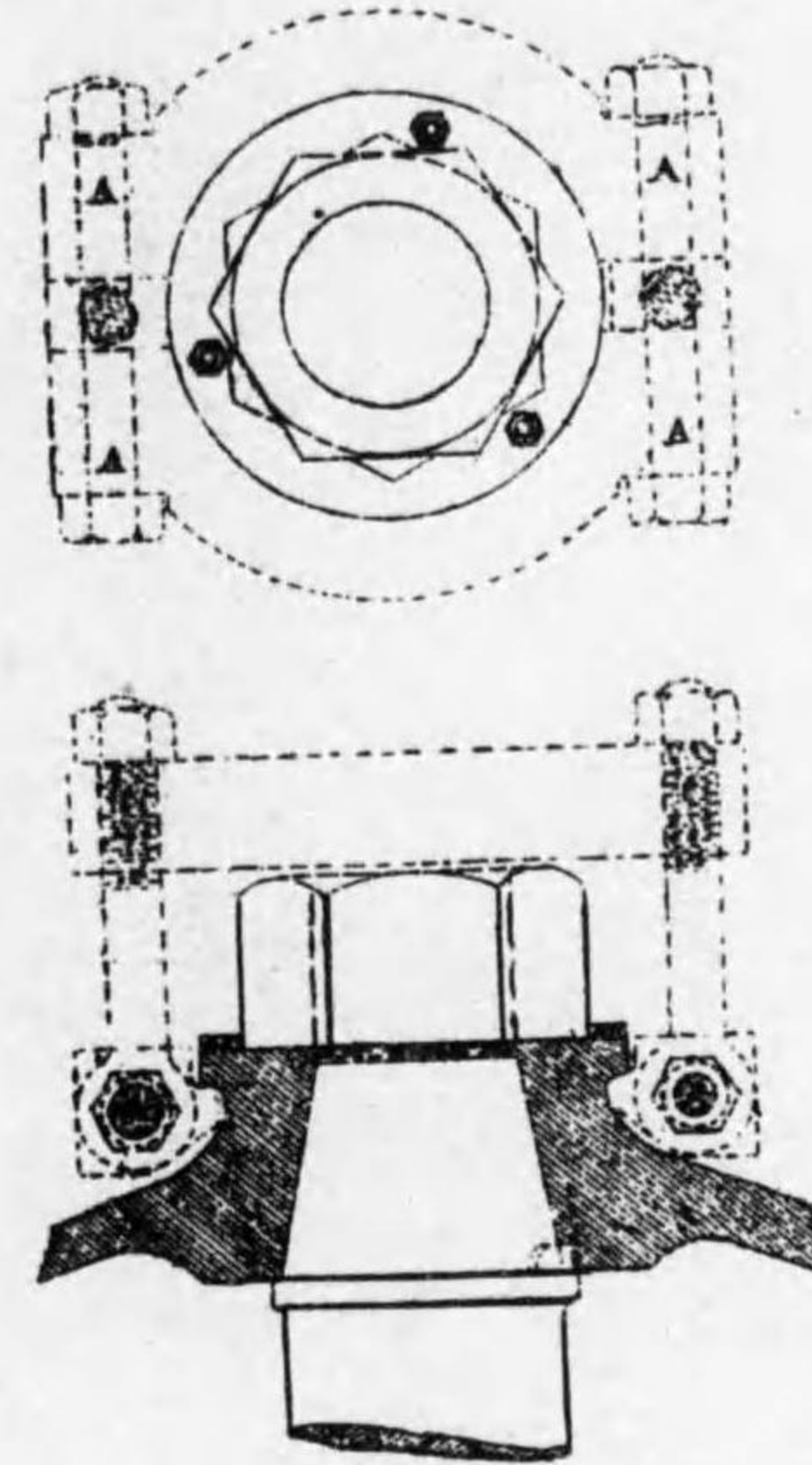
第 33 圖



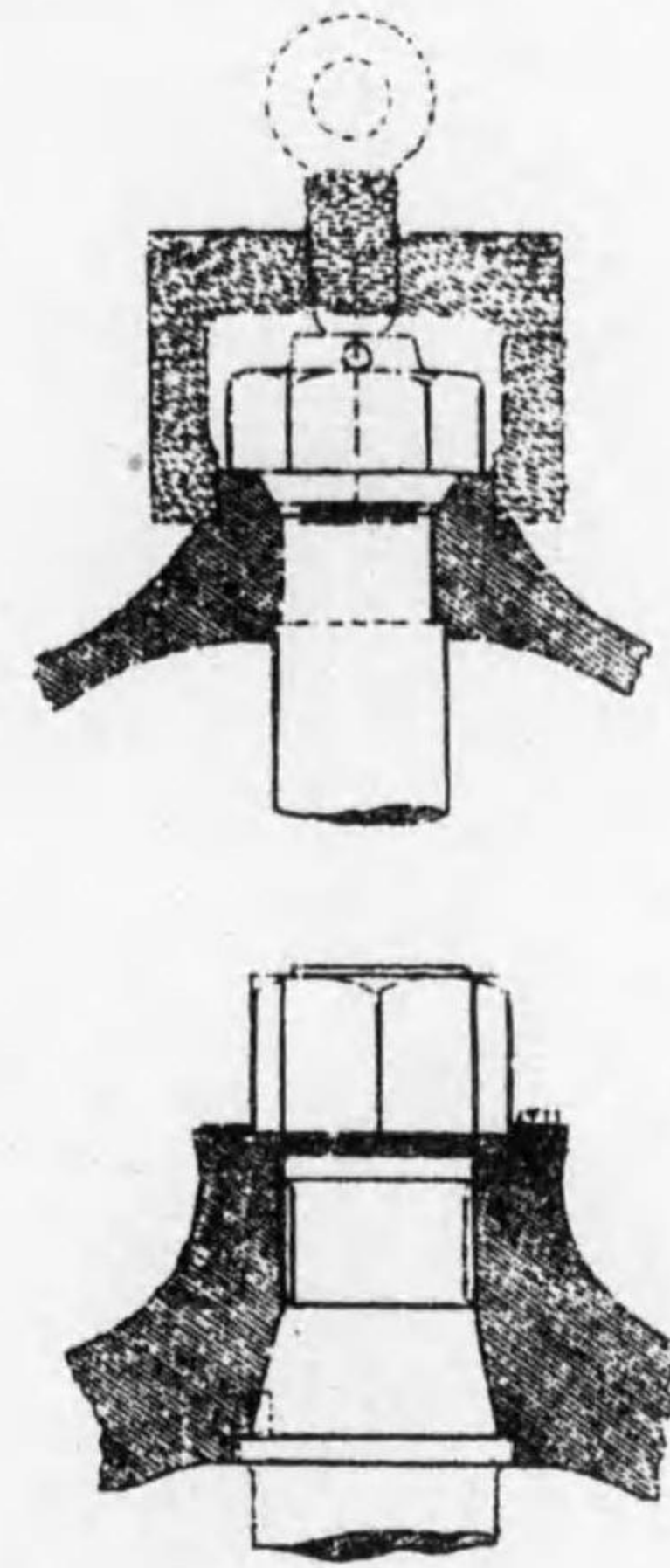
第 34 圖



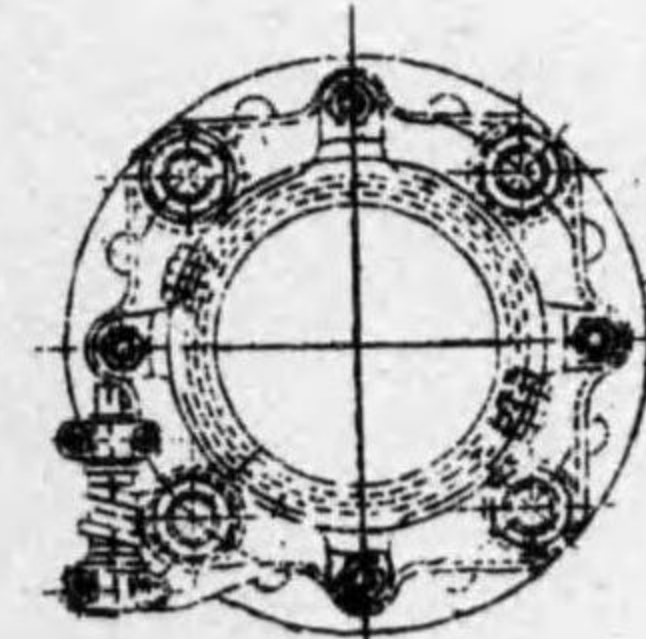
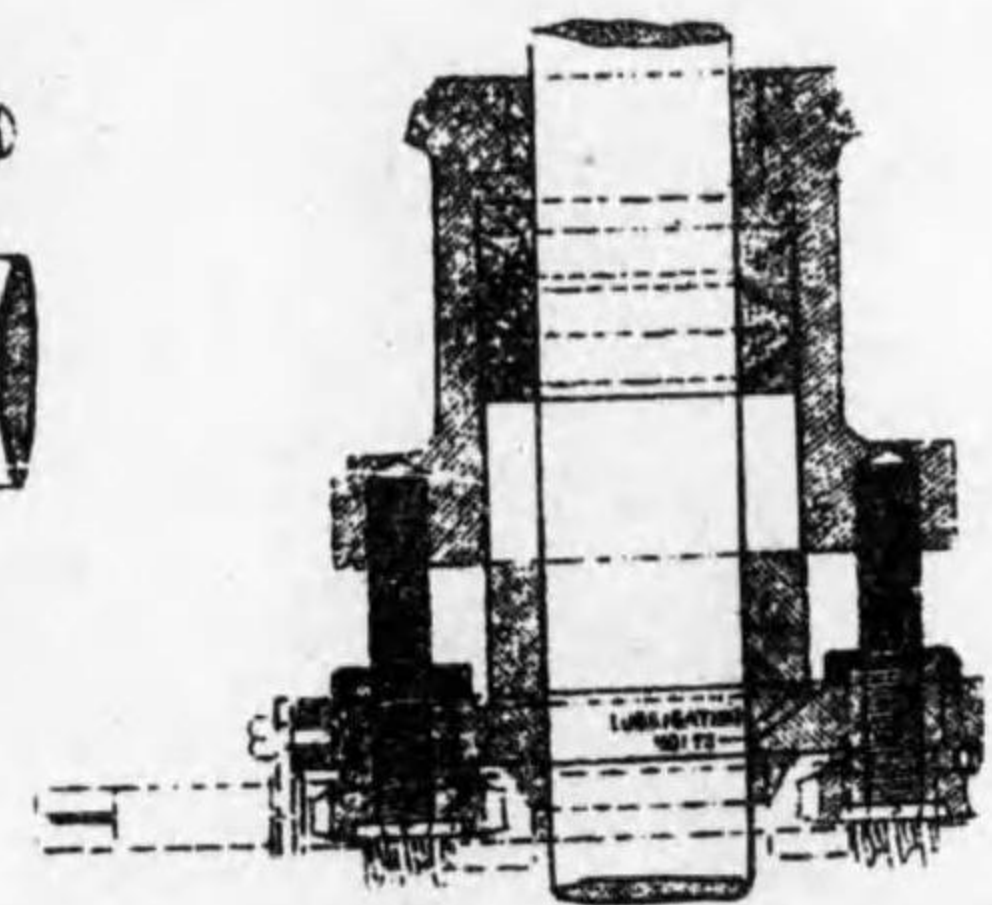
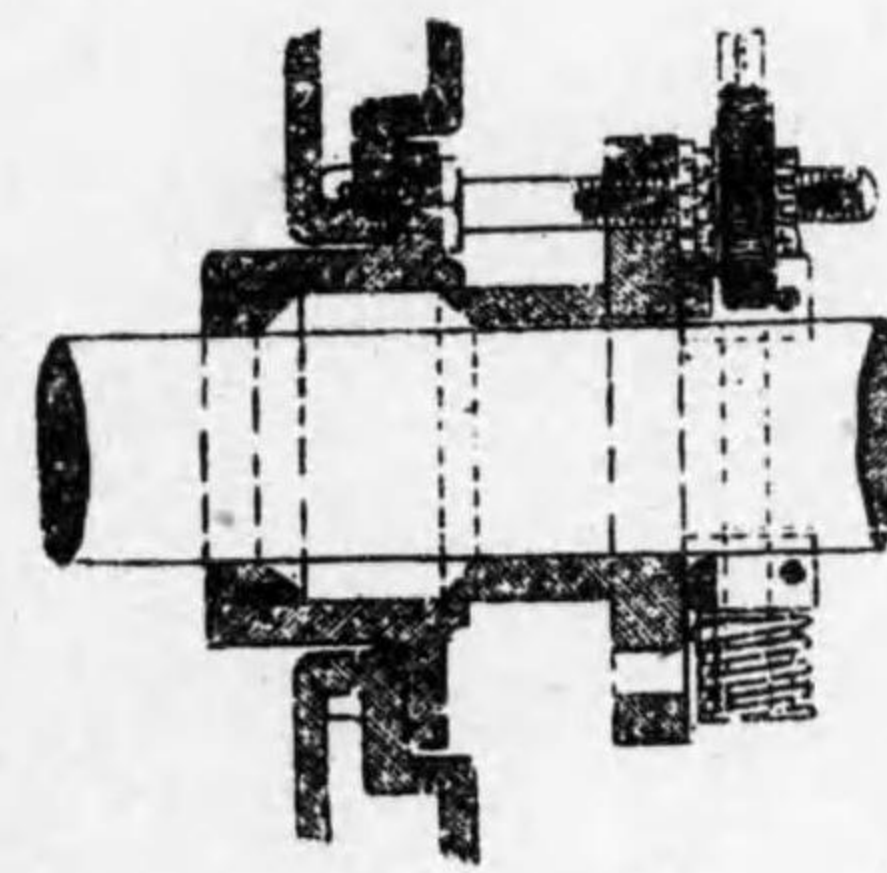
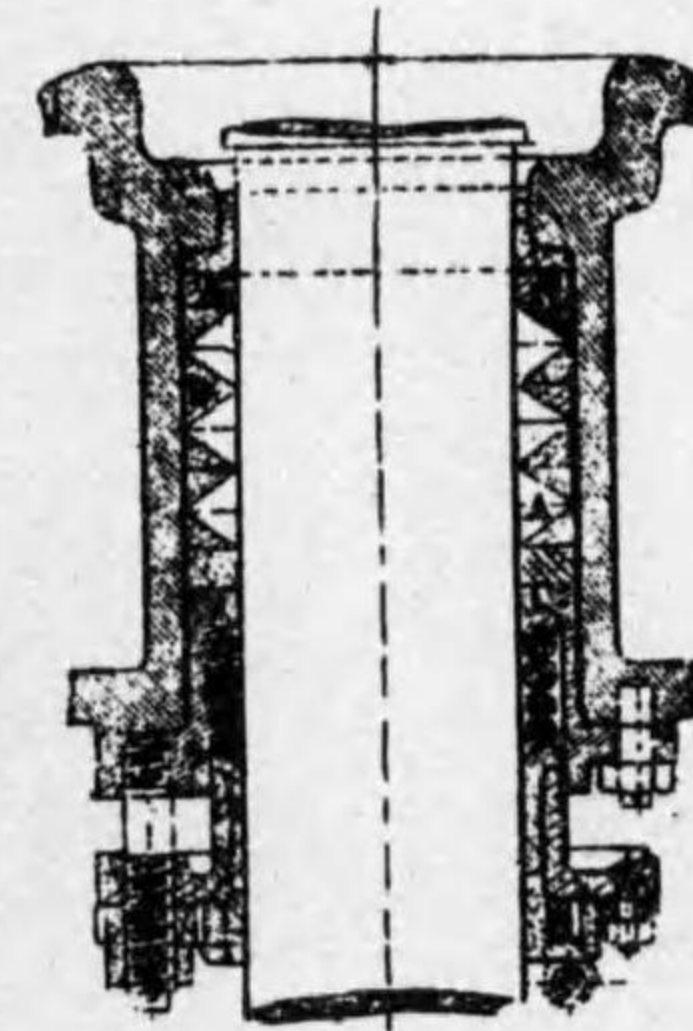
第 35 圖 A



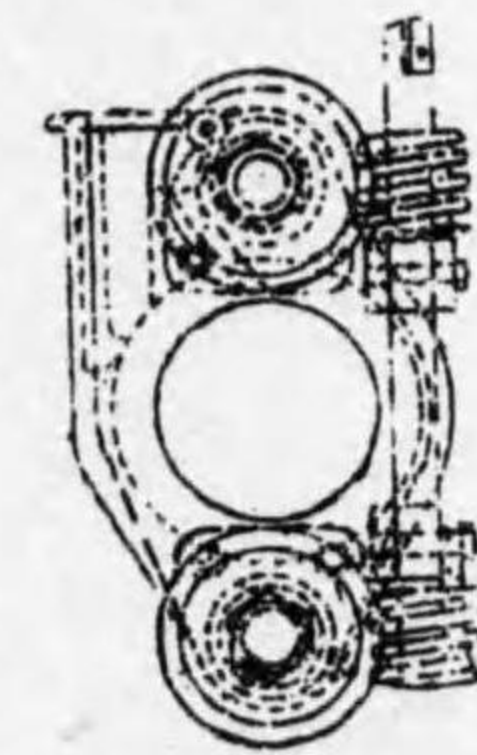
第 35 圖 B



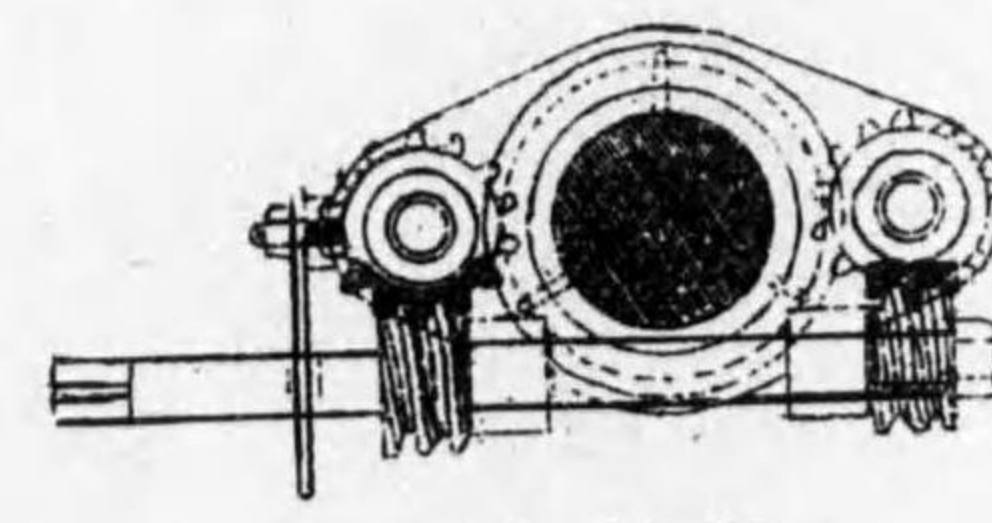
第 35 圖 c



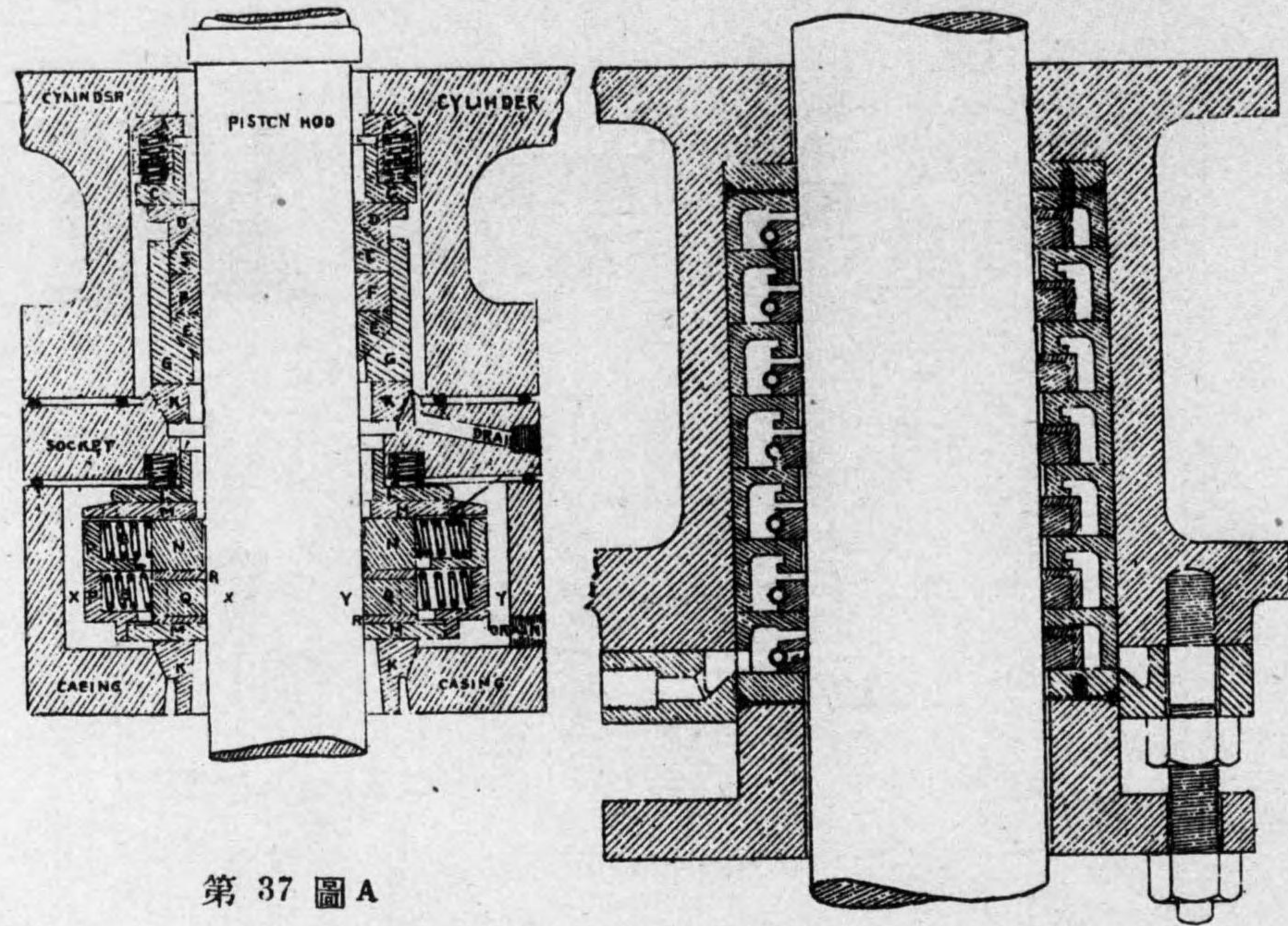
第 36 圖 A



第 36 圖 B

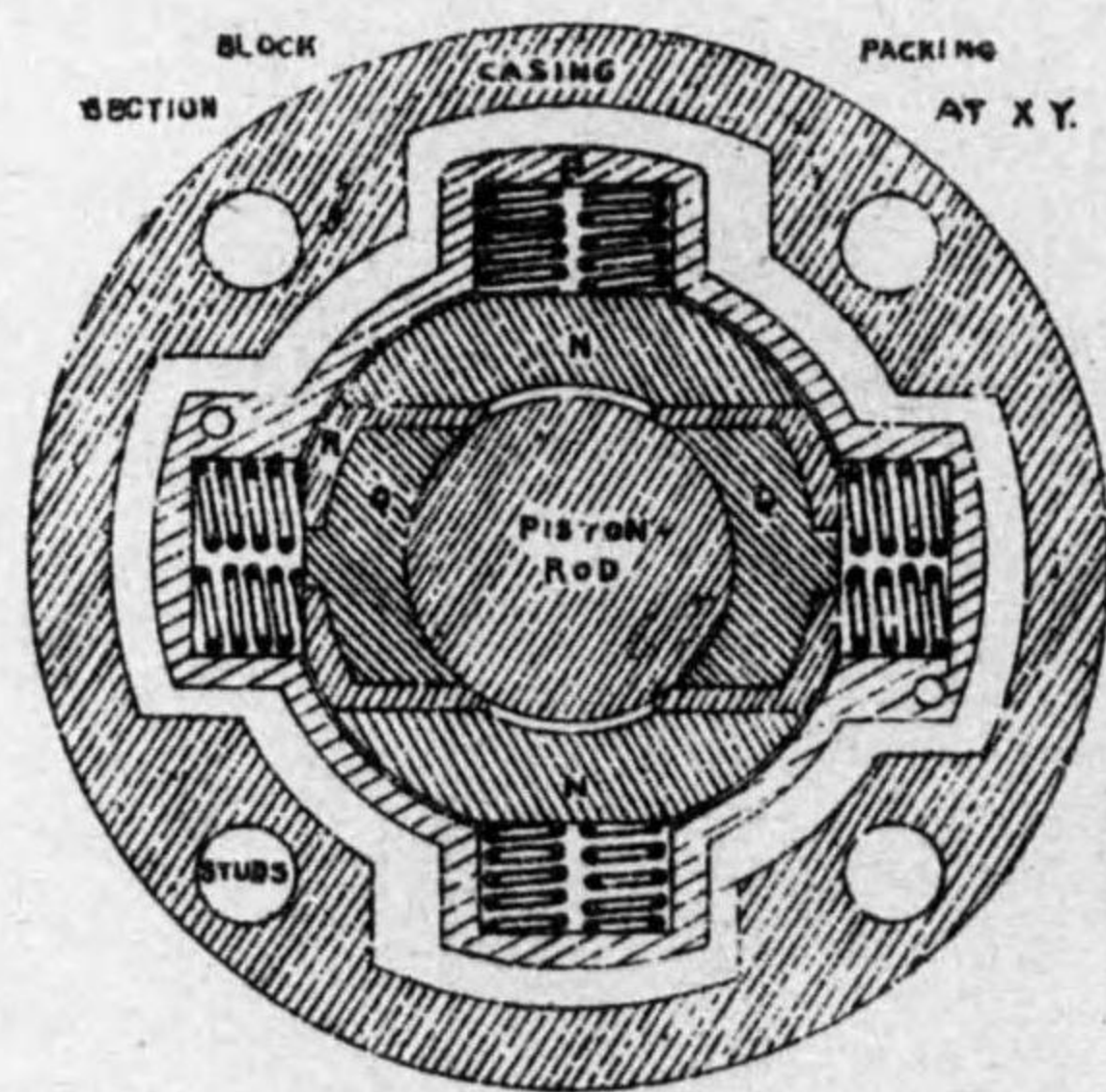


第 36 圖 c

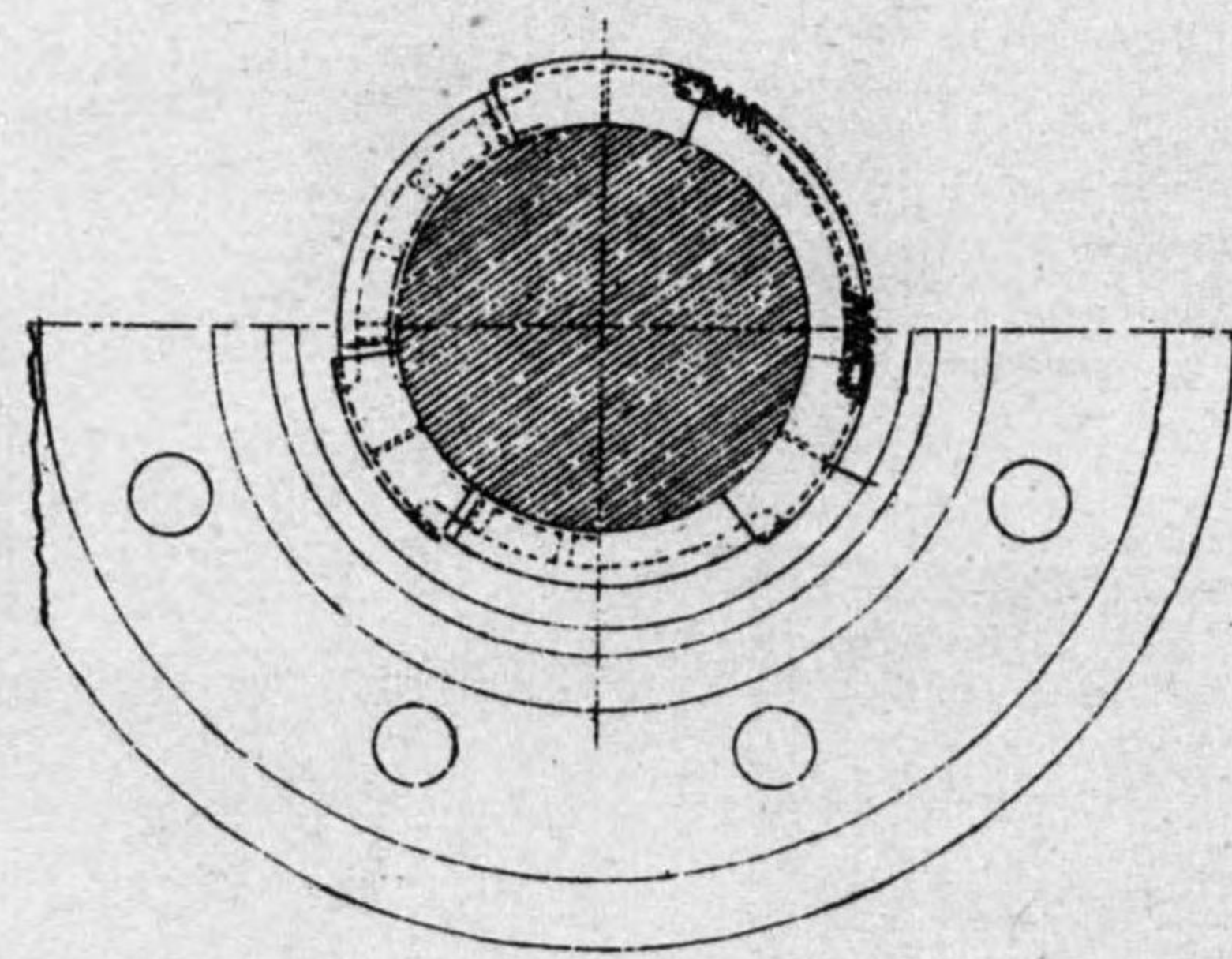


第 37 圖 A

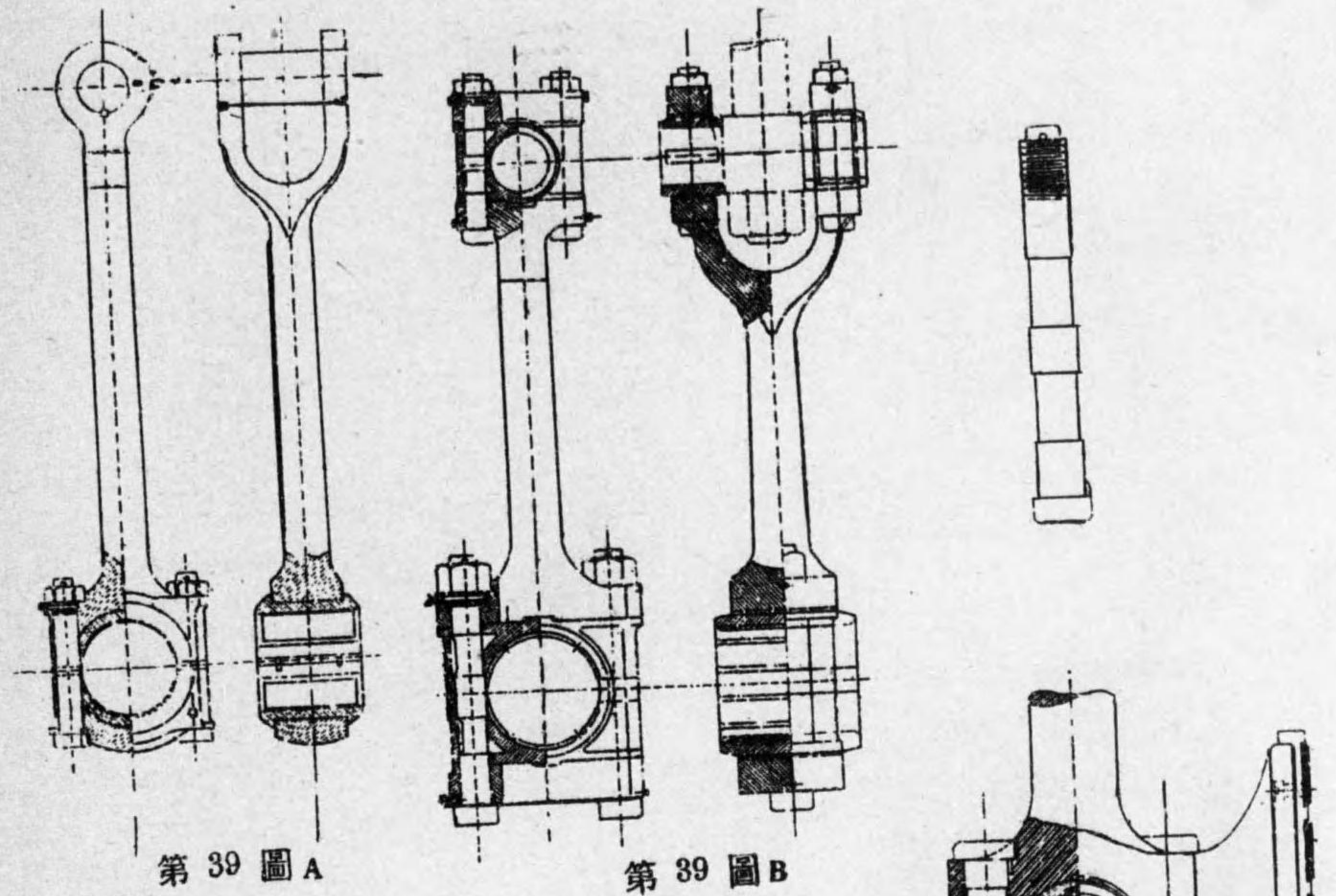
第 38 圖 A



第 37 圖 B

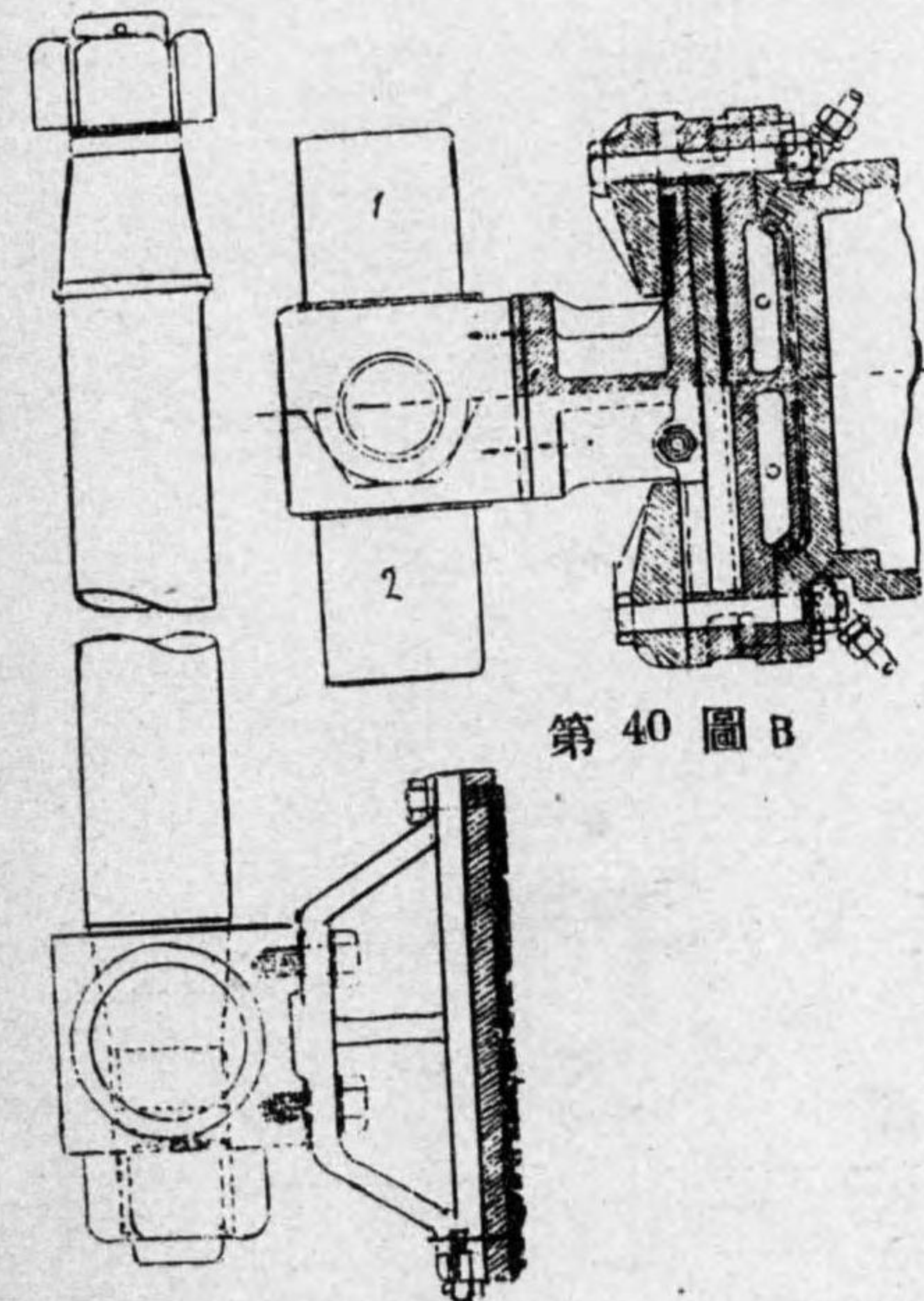


第 38 圖 B



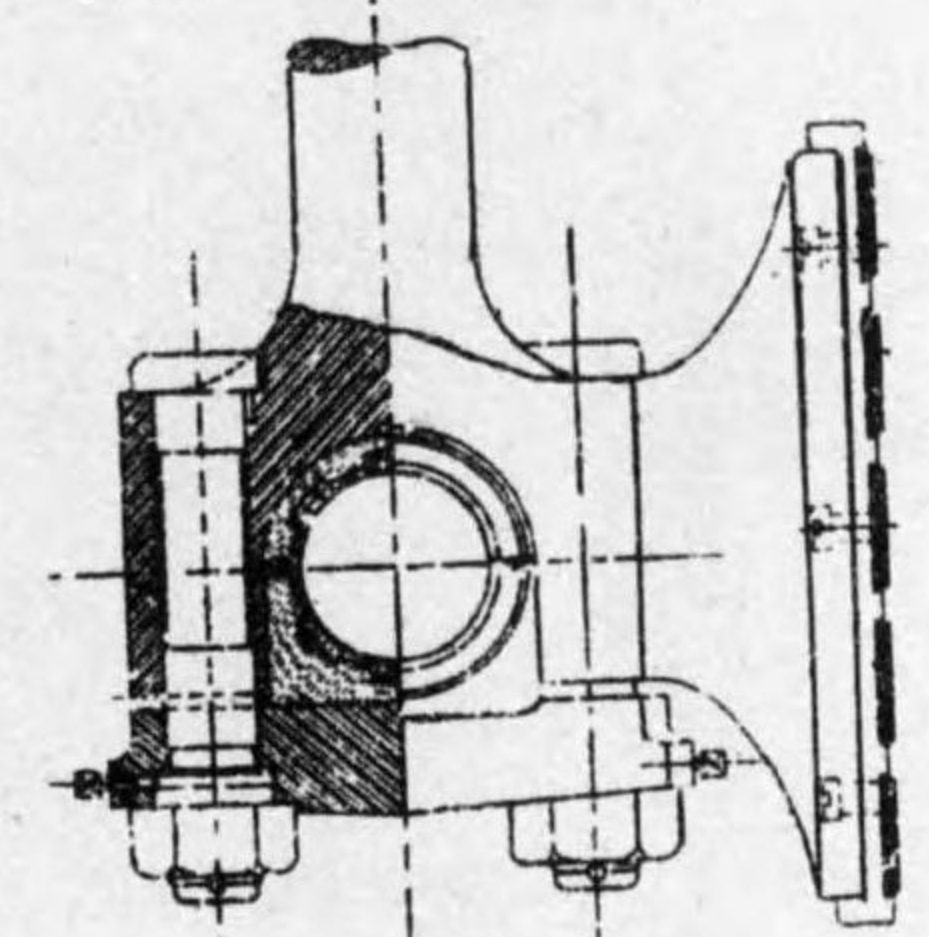
第 39 圖 A

第 39 圖 B

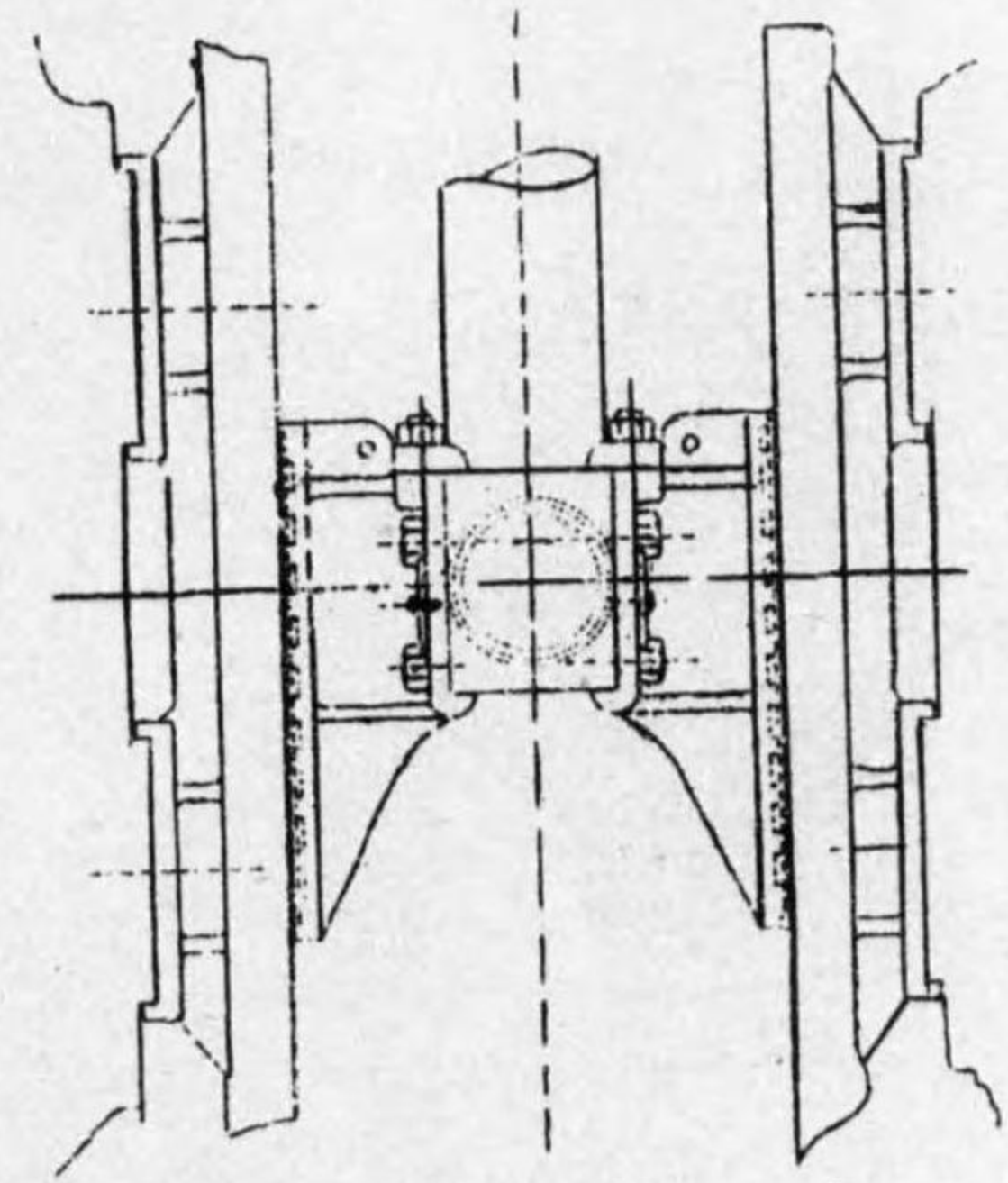


第 40 圖 B

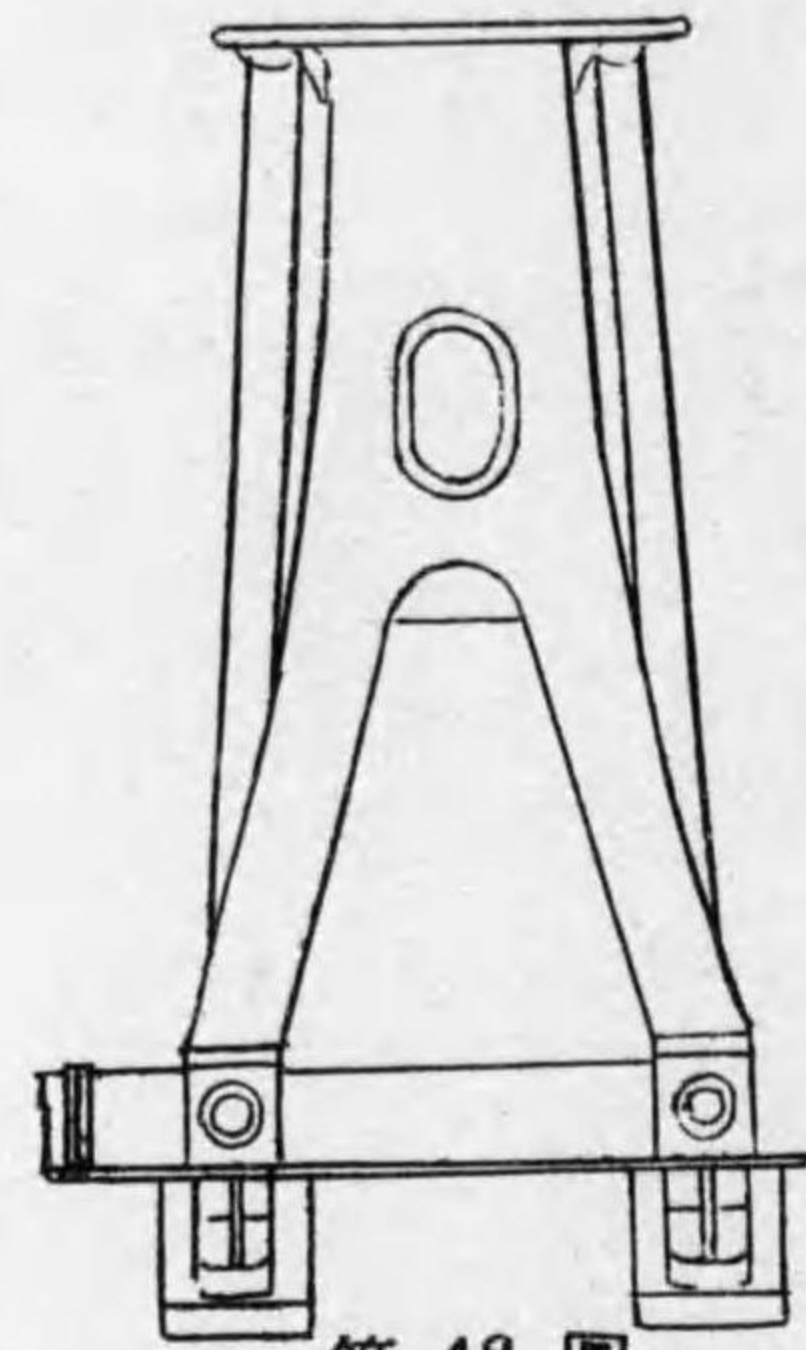
第 40 圖 A



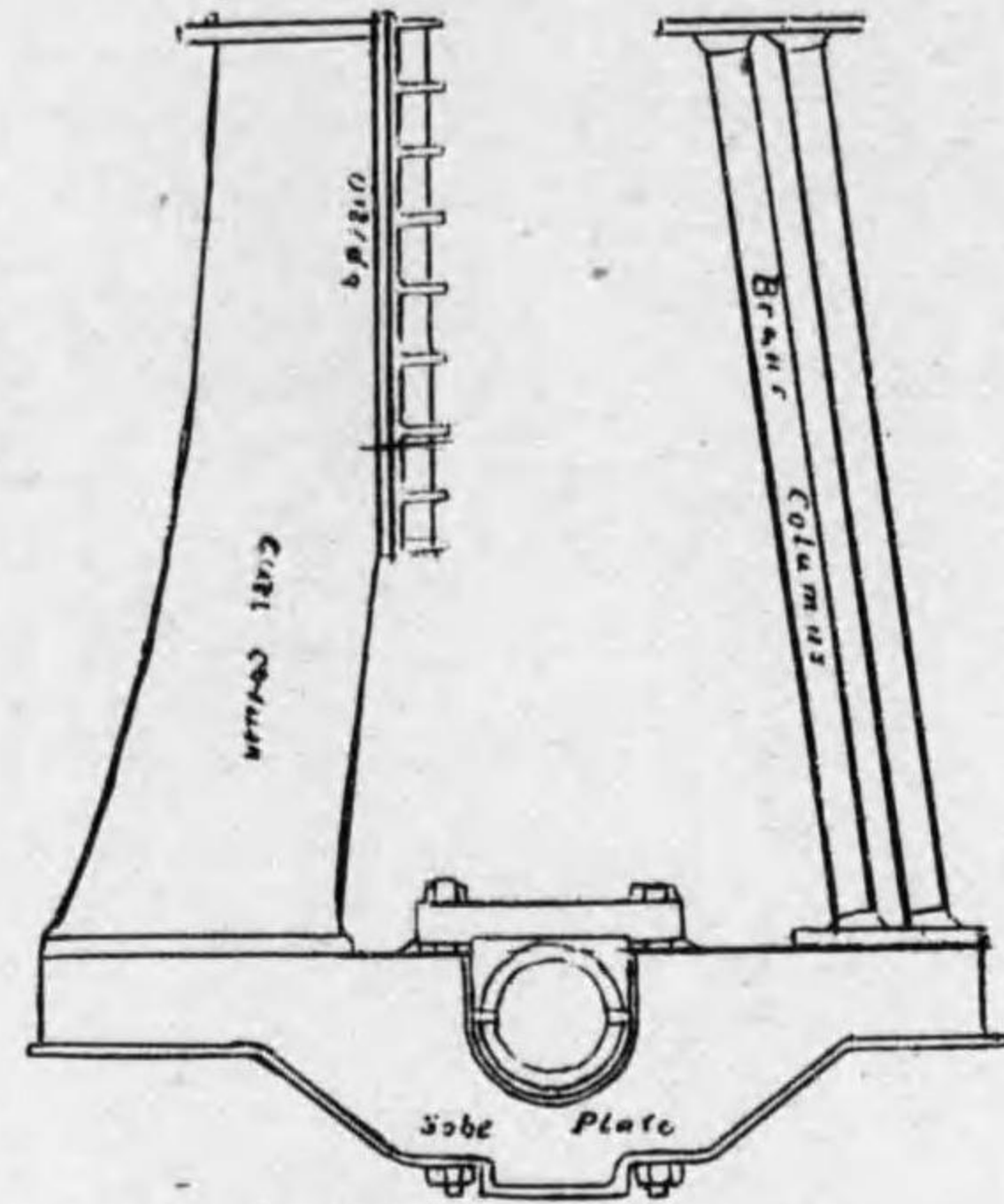
第 40 圖 C



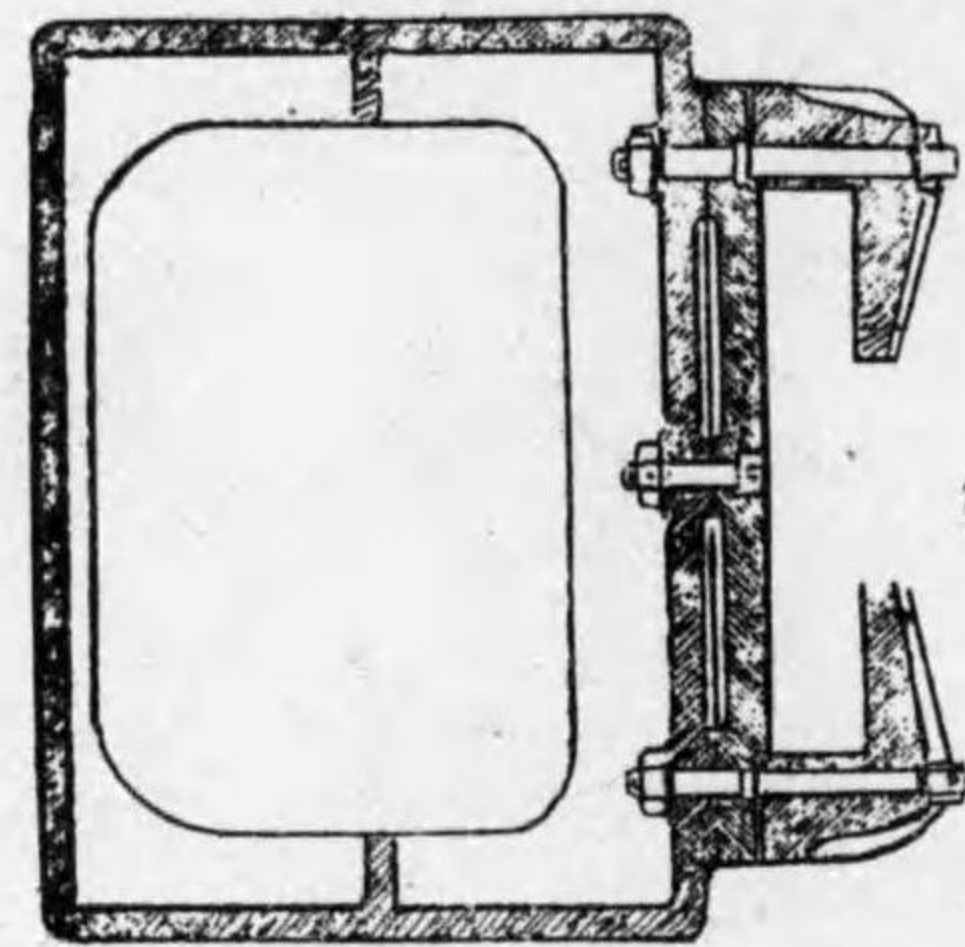
第 41 圖



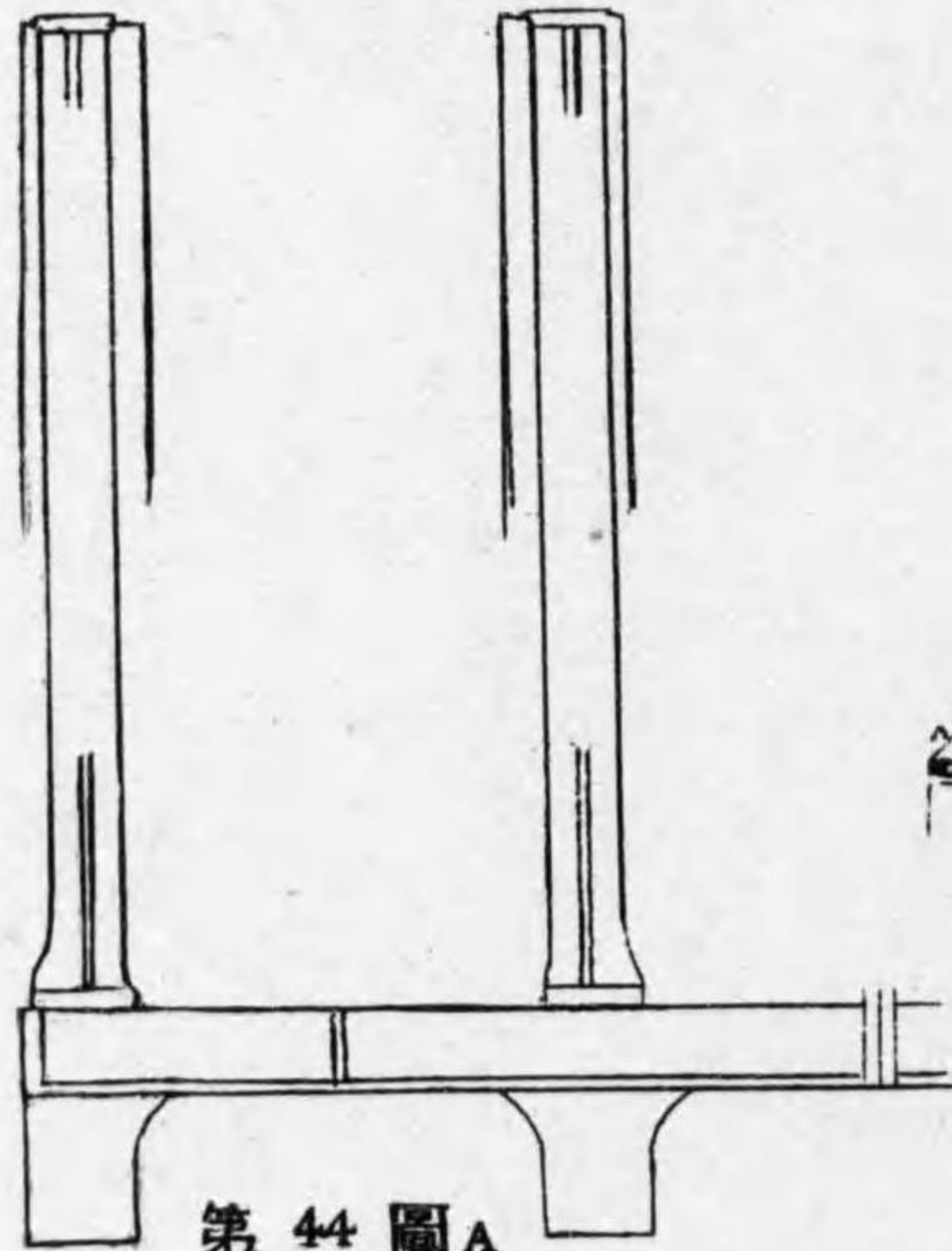
第 42 圖 A



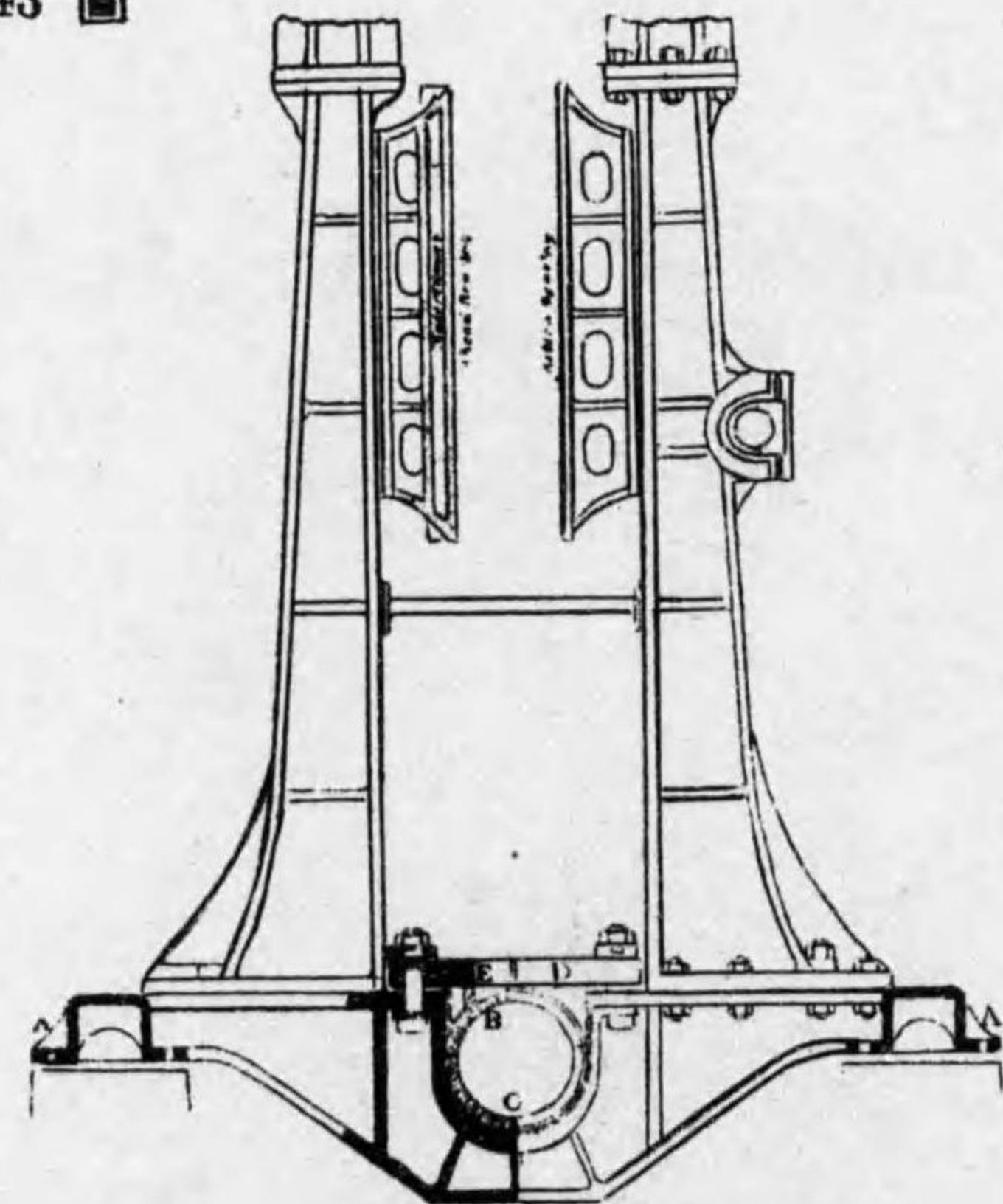
第 42 圖 B



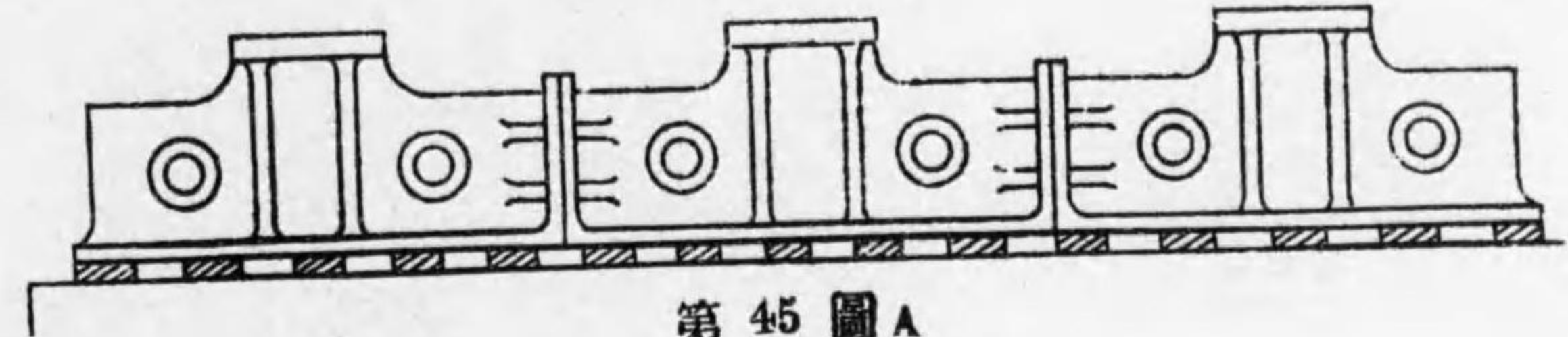
第 43 圖



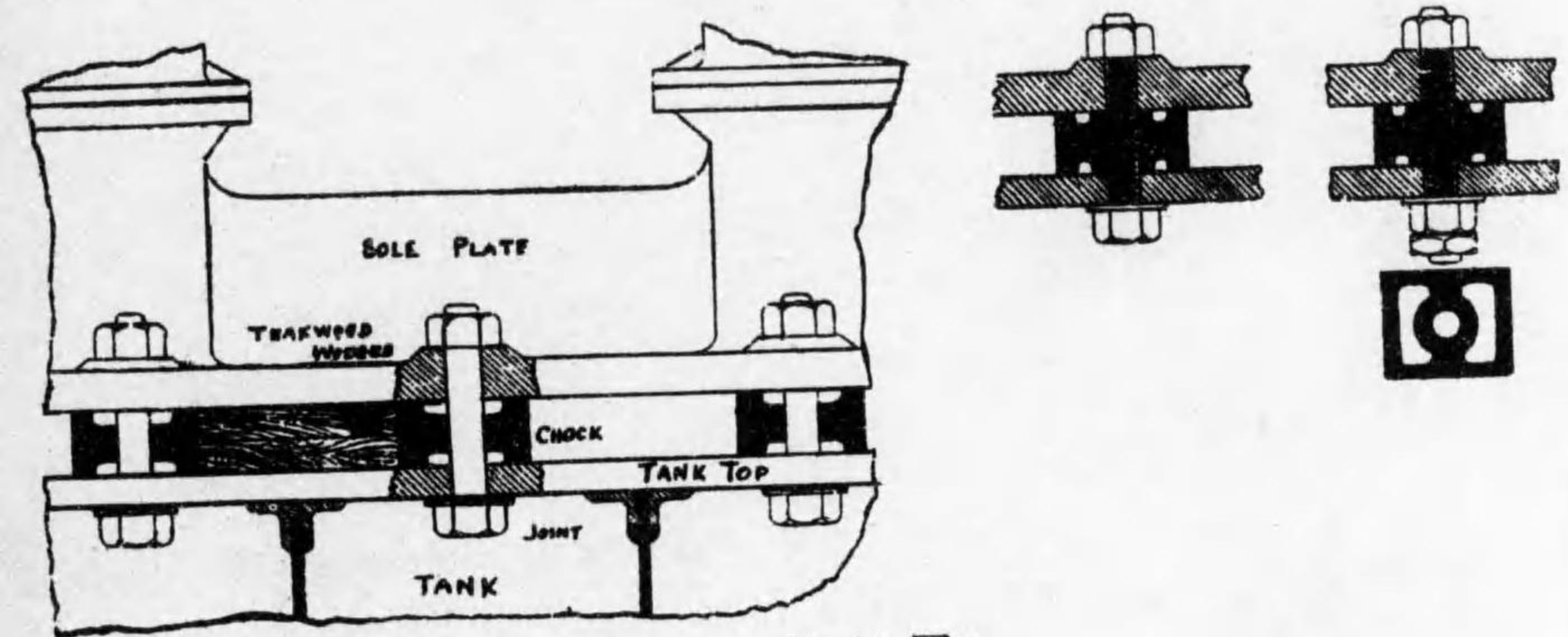
第 44 圖 A



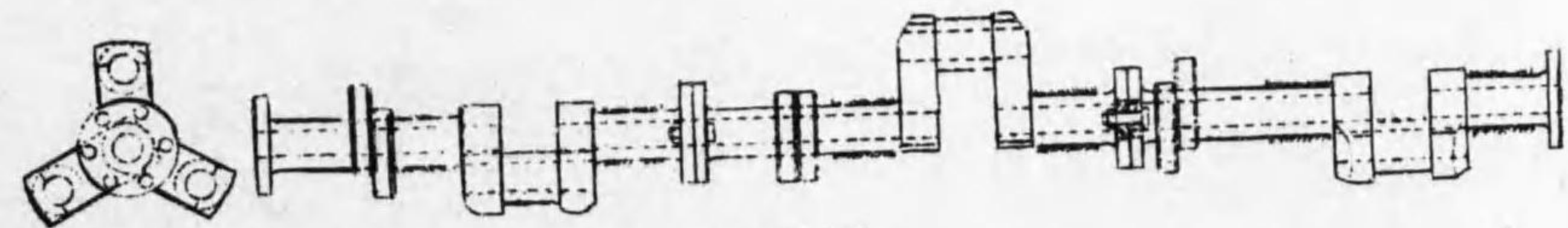
第 44 圖 B



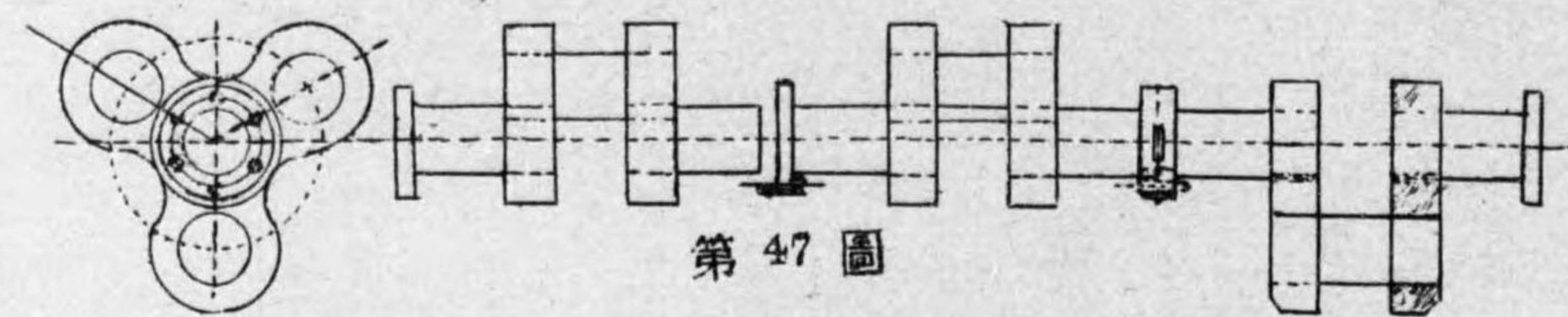
第 45 圖 A



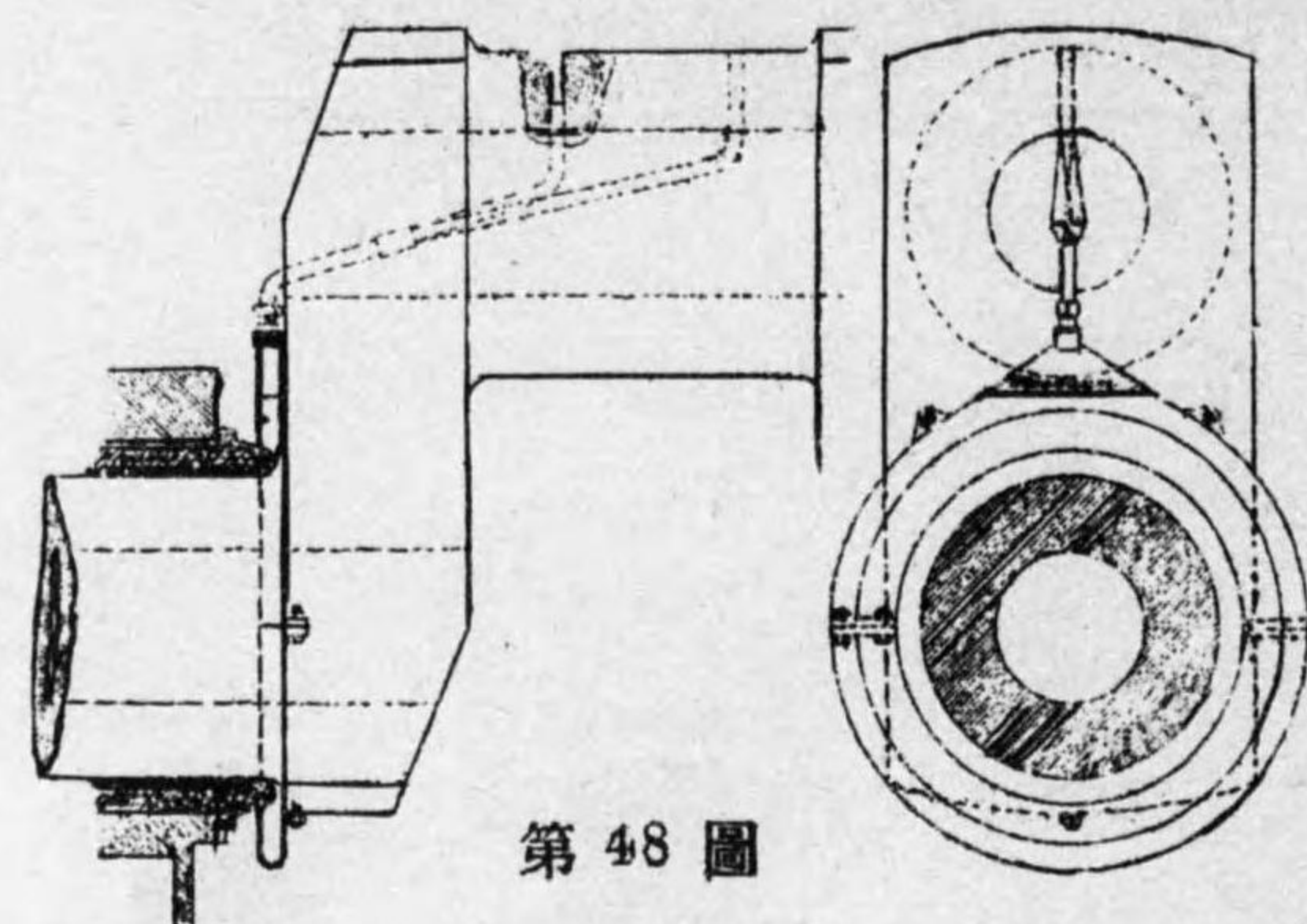
第 45 圖 B



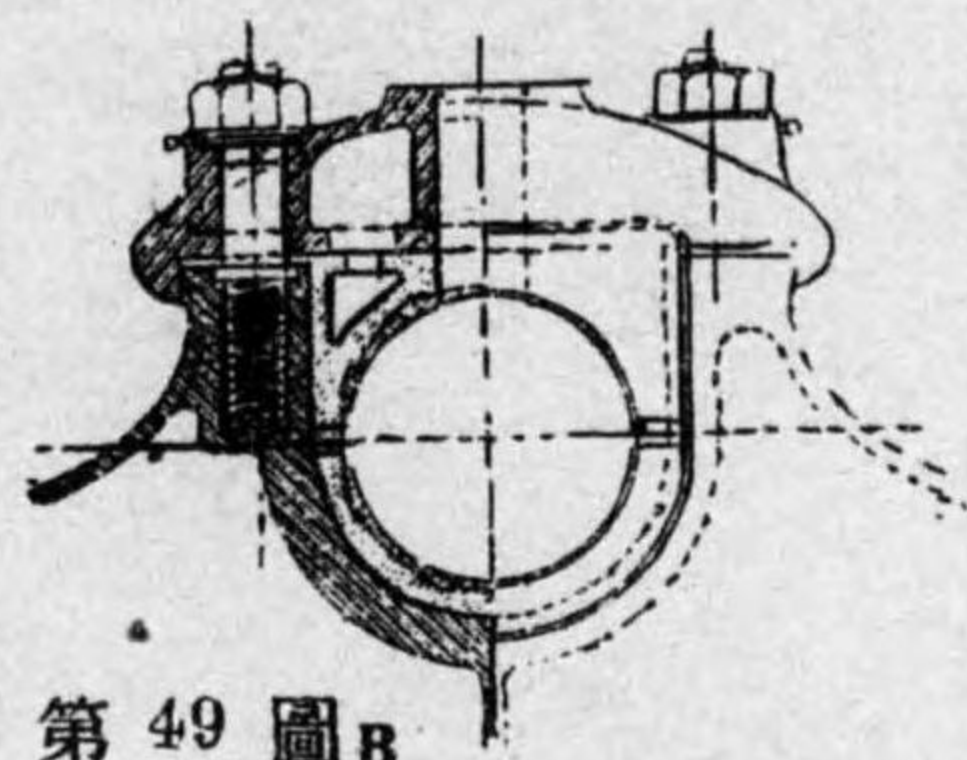
第 46 圖



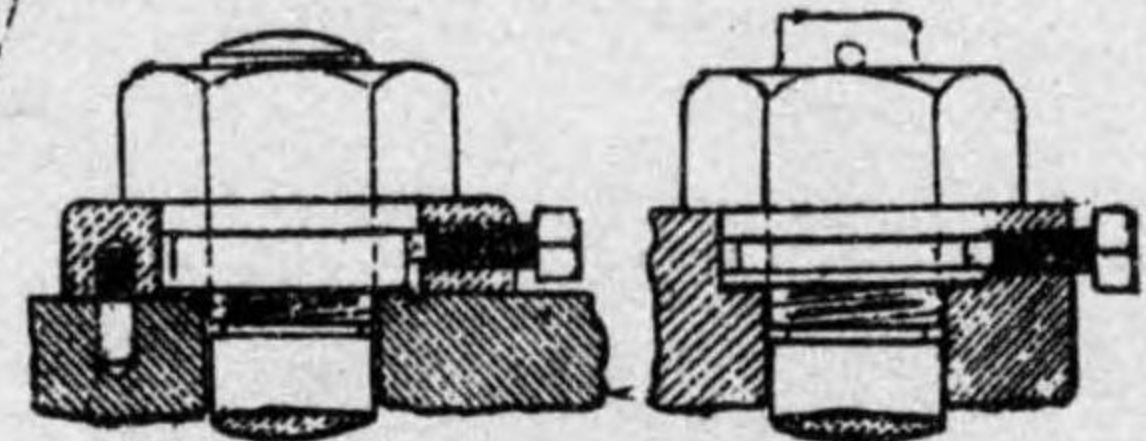
第 47 圖



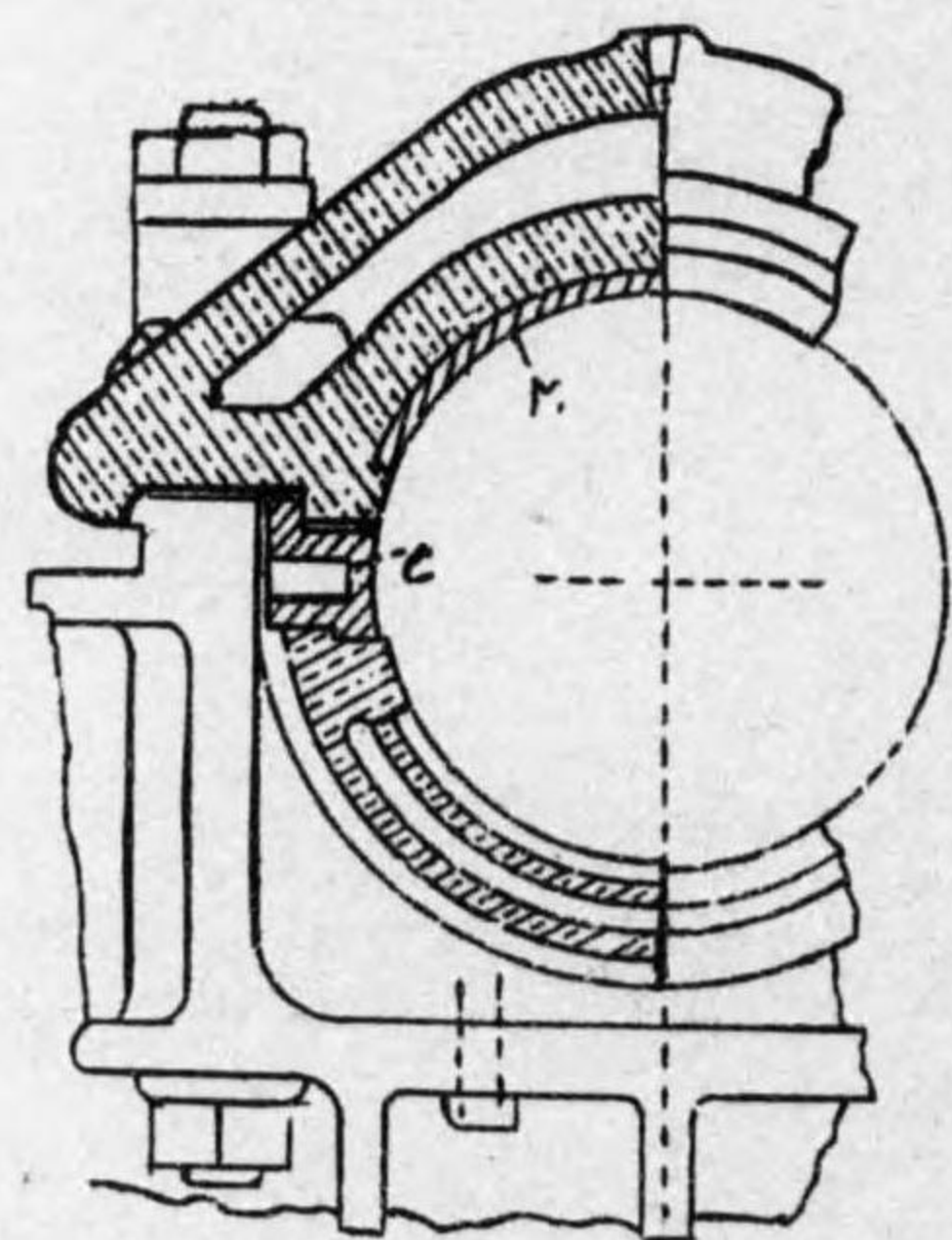
第 48 圖



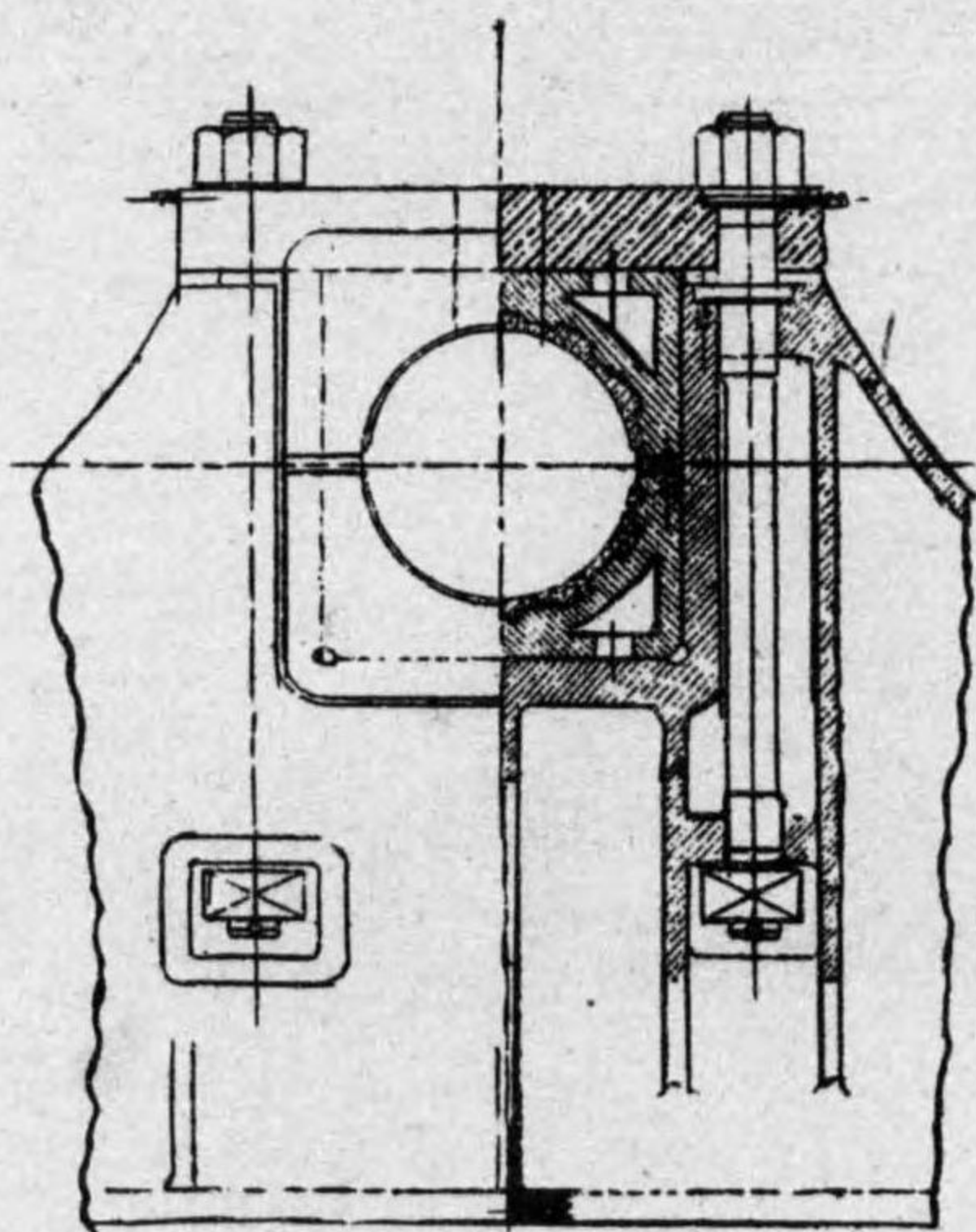
第 49 圖 B



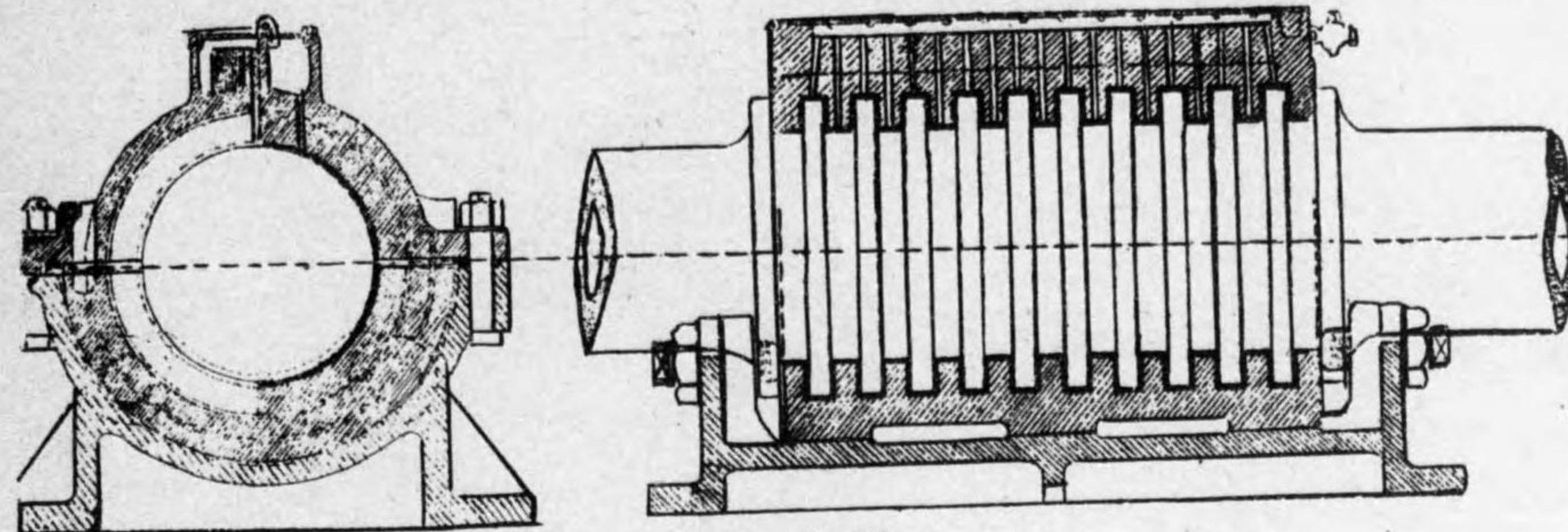
第 49 圖 C



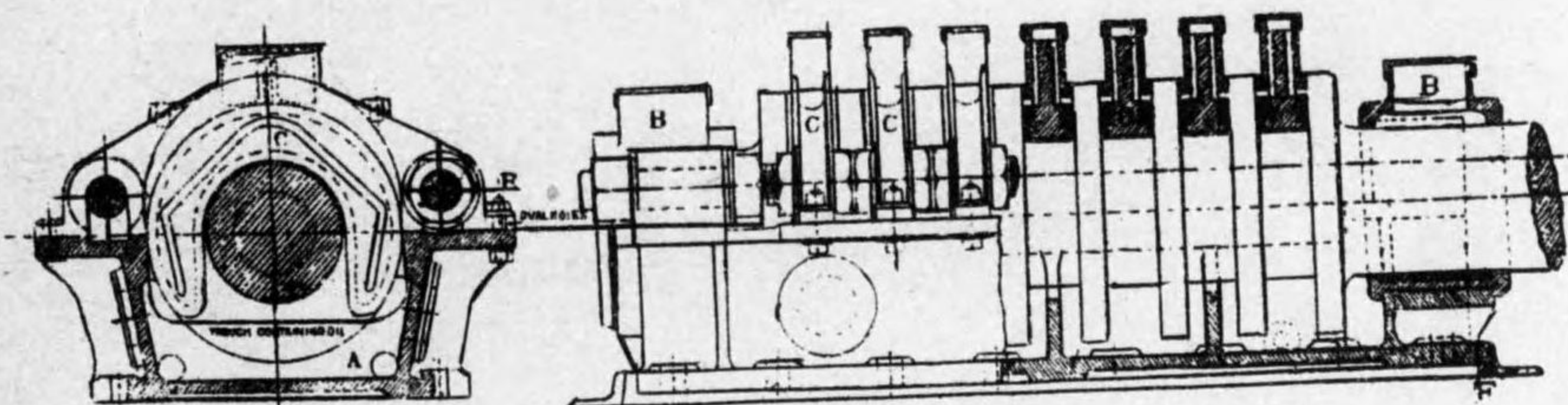
第 49 圖 A



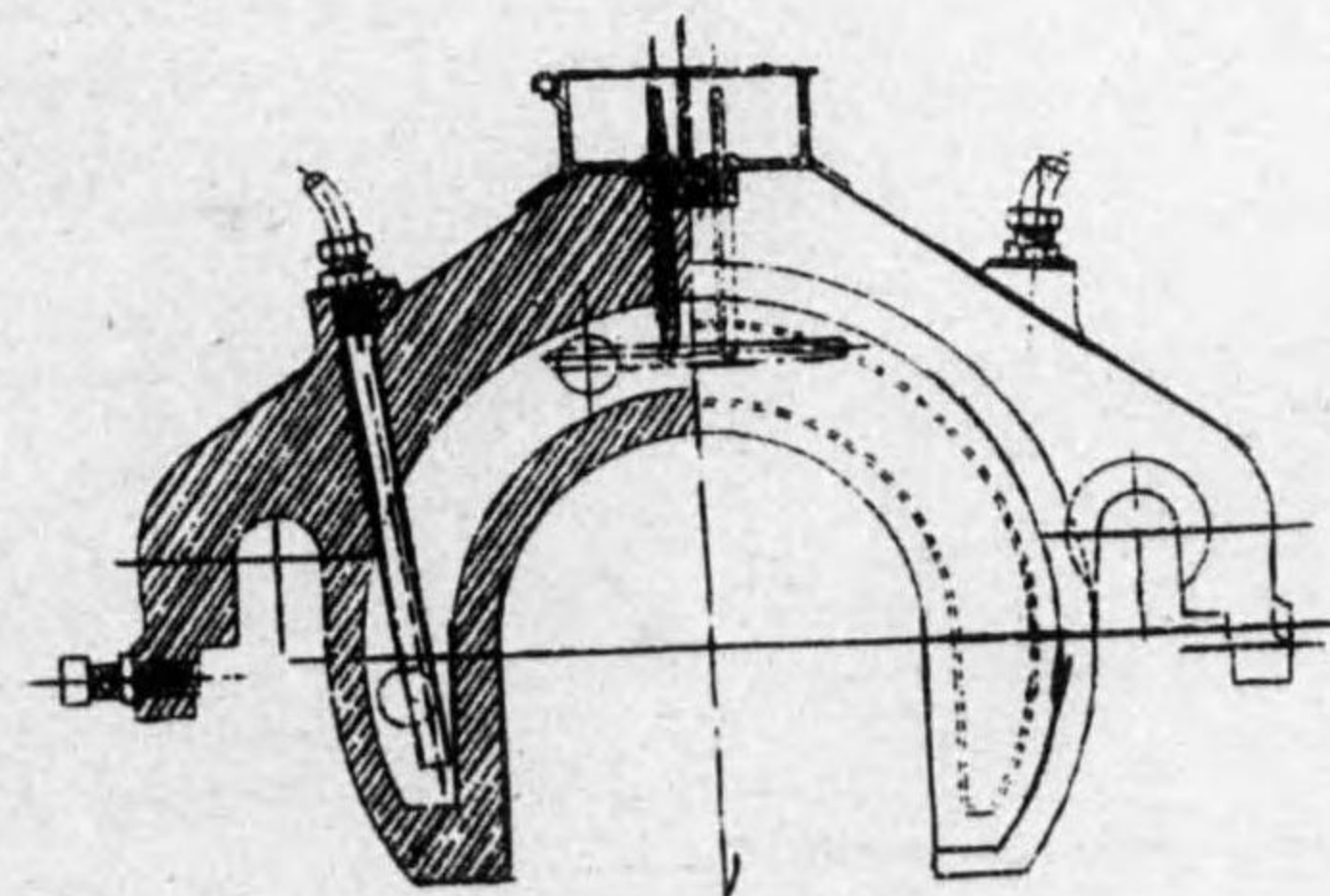
第 50 圖



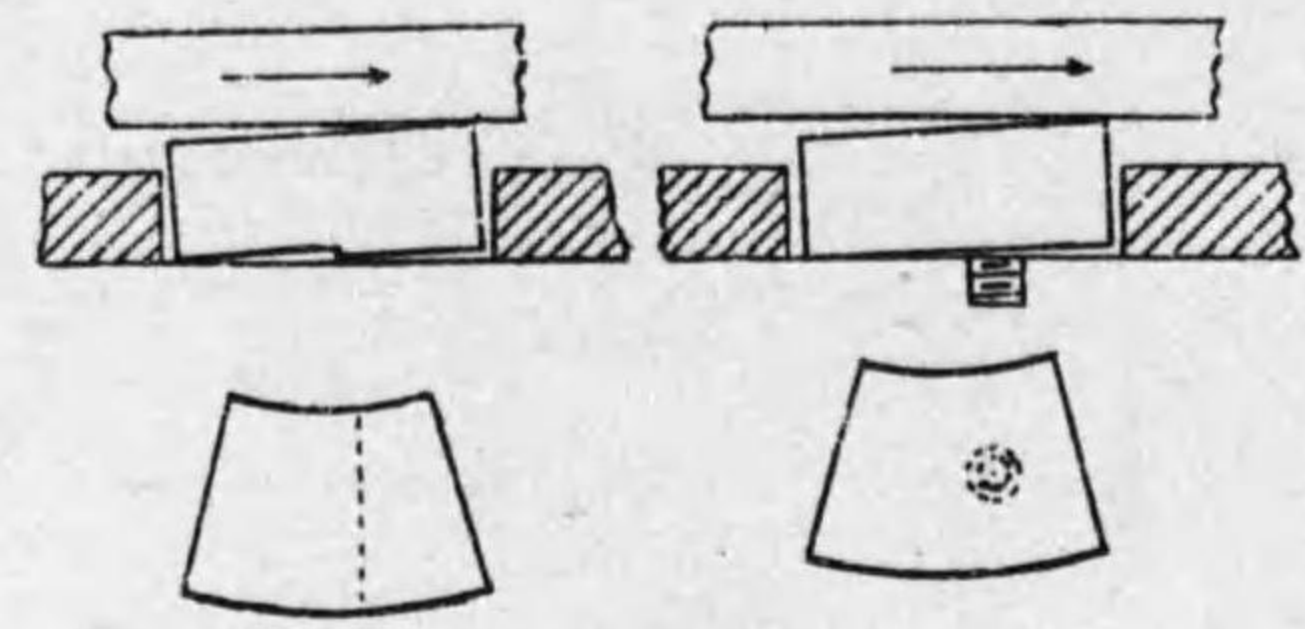
第 51 圖



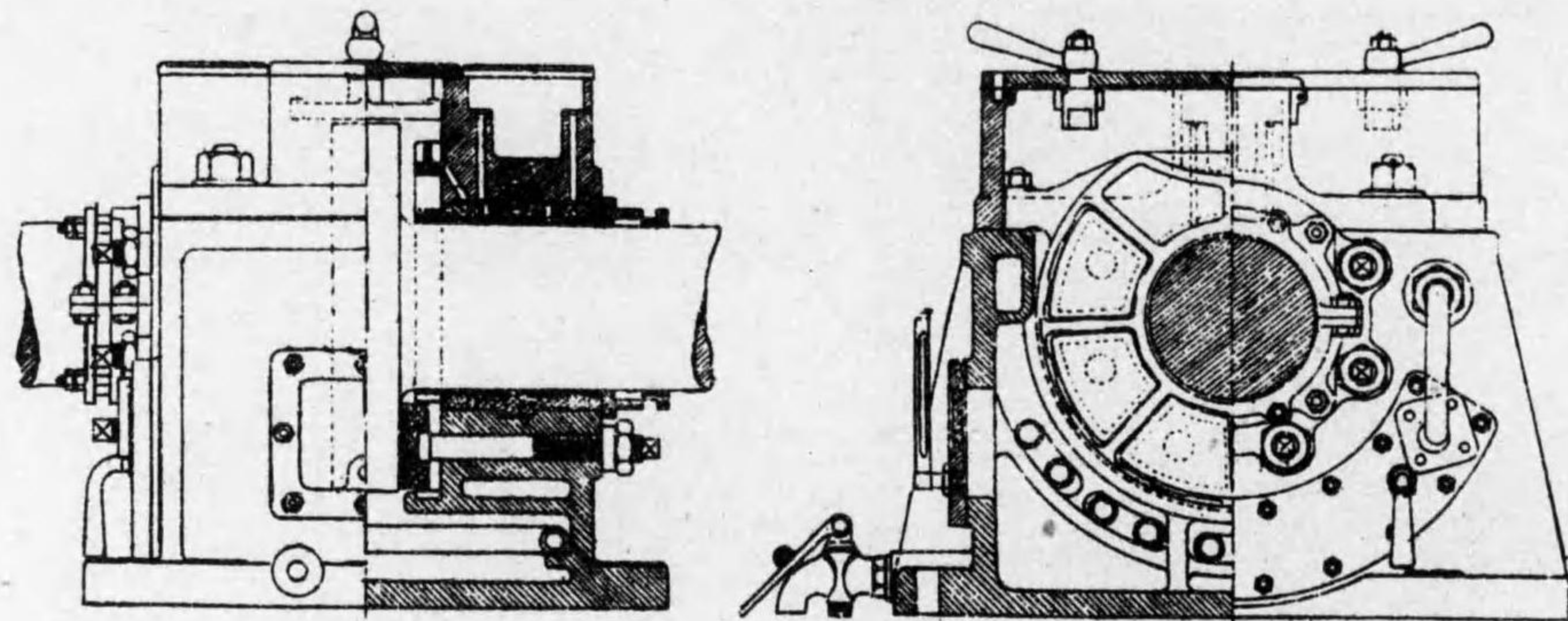
第 52 圖 A



第 52 圖 B

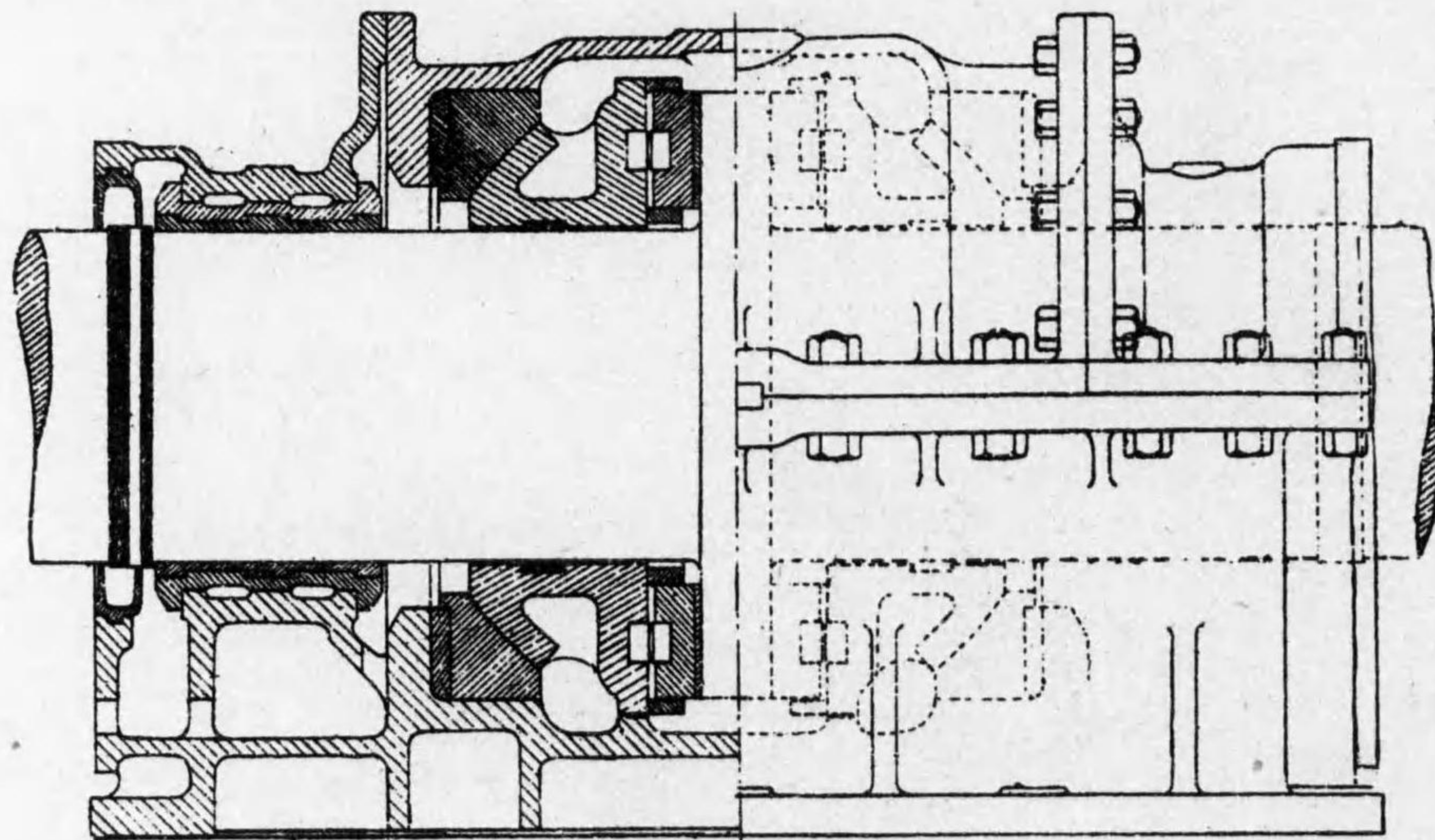


第 53 圖

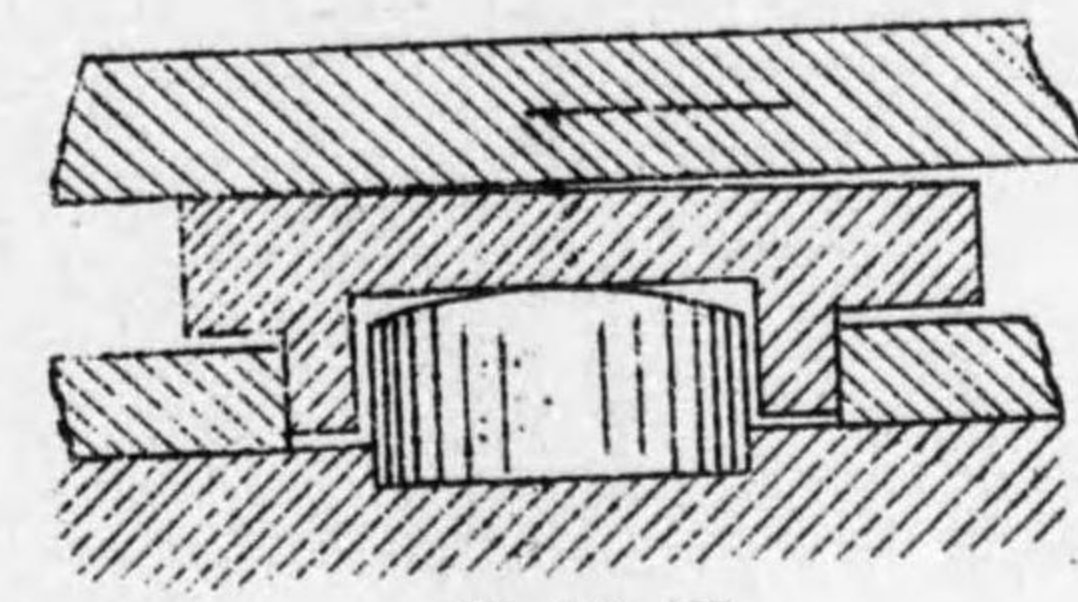


第 54 圖 A

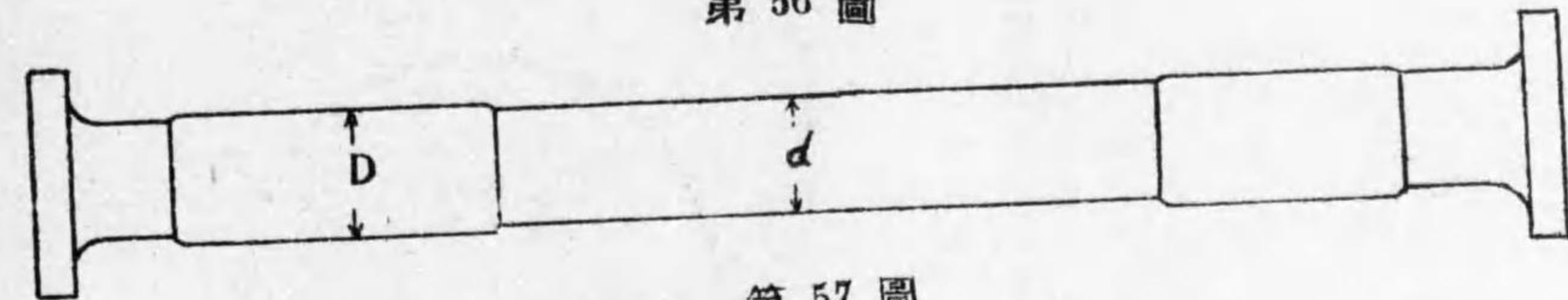
第 54 圖 B



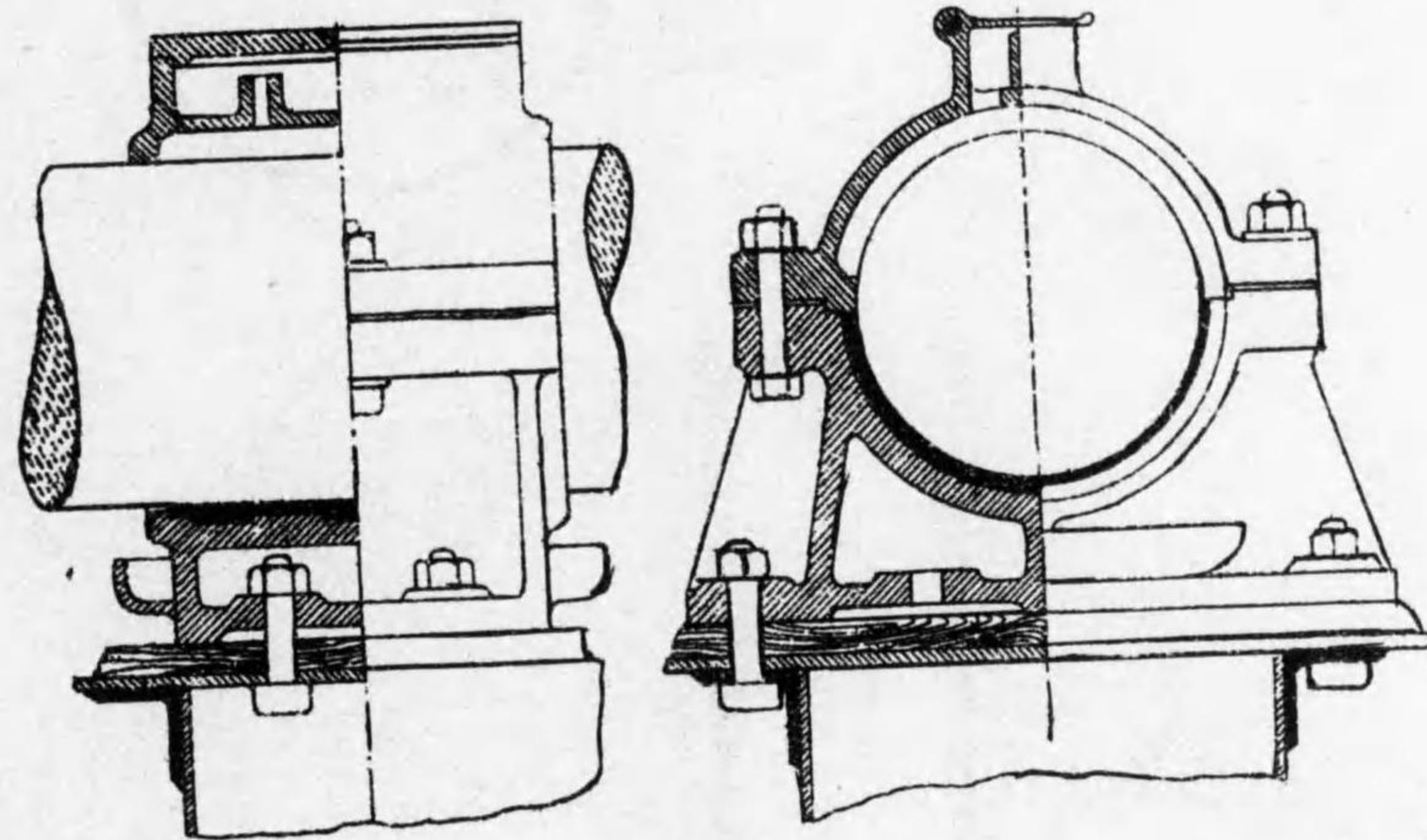
第 55 圖



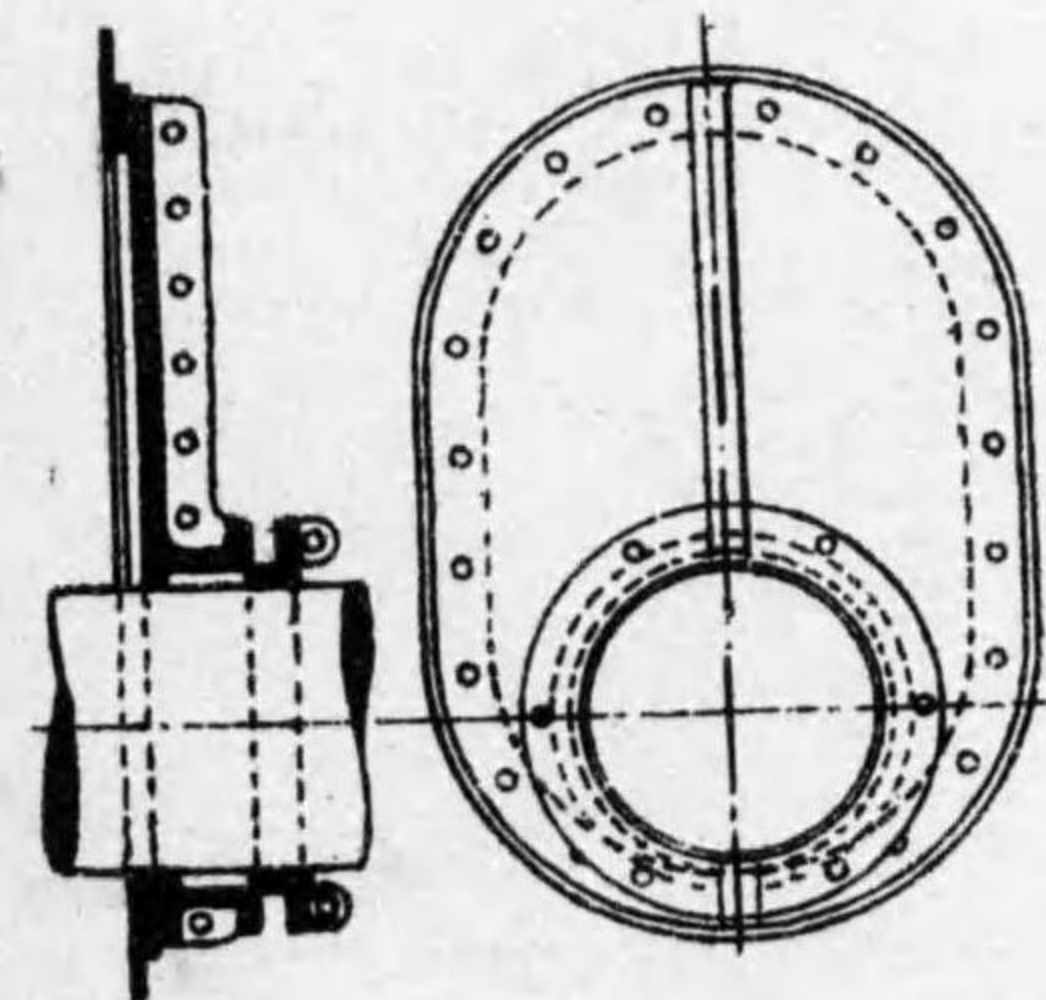
第 56 圖



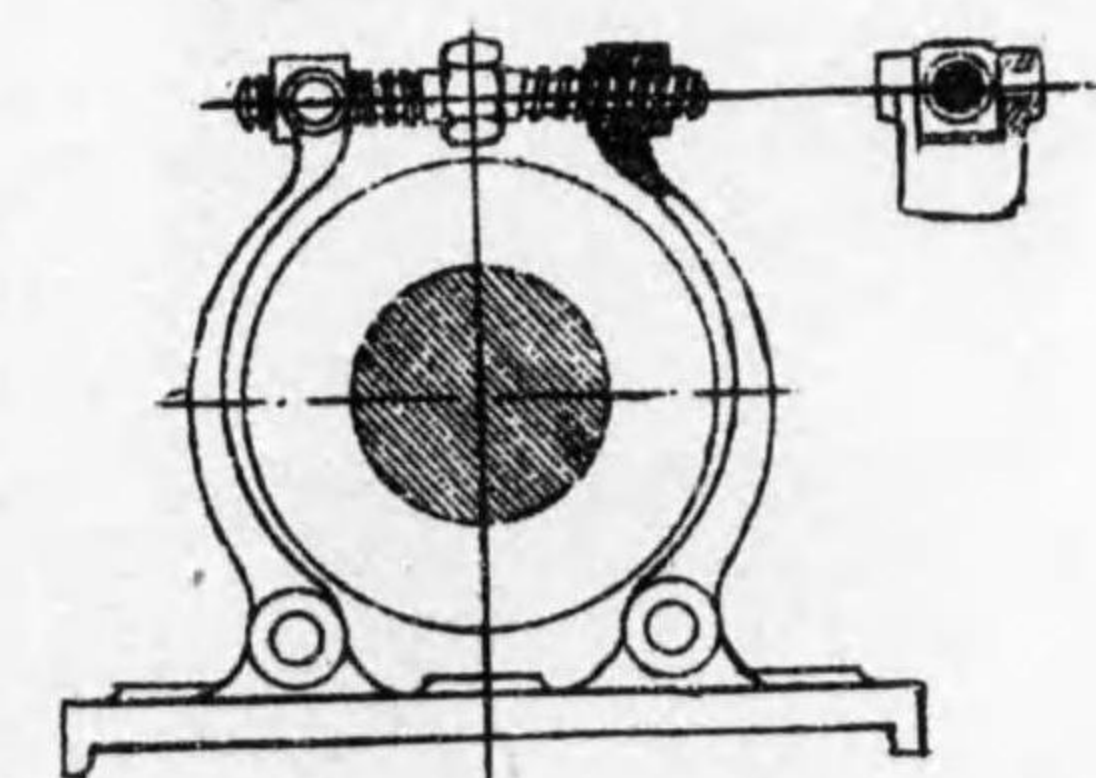
第 57 圖



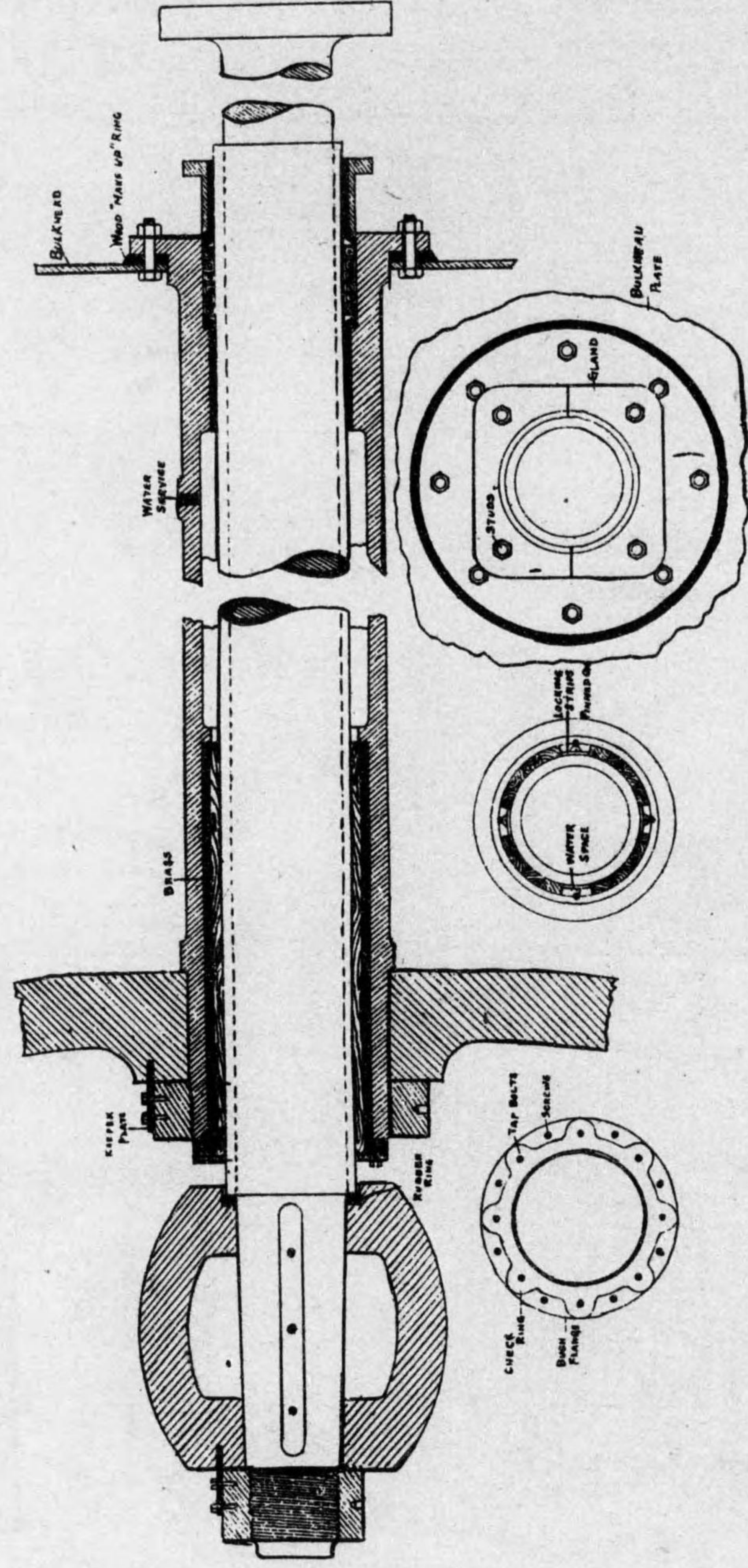
第 58 圖



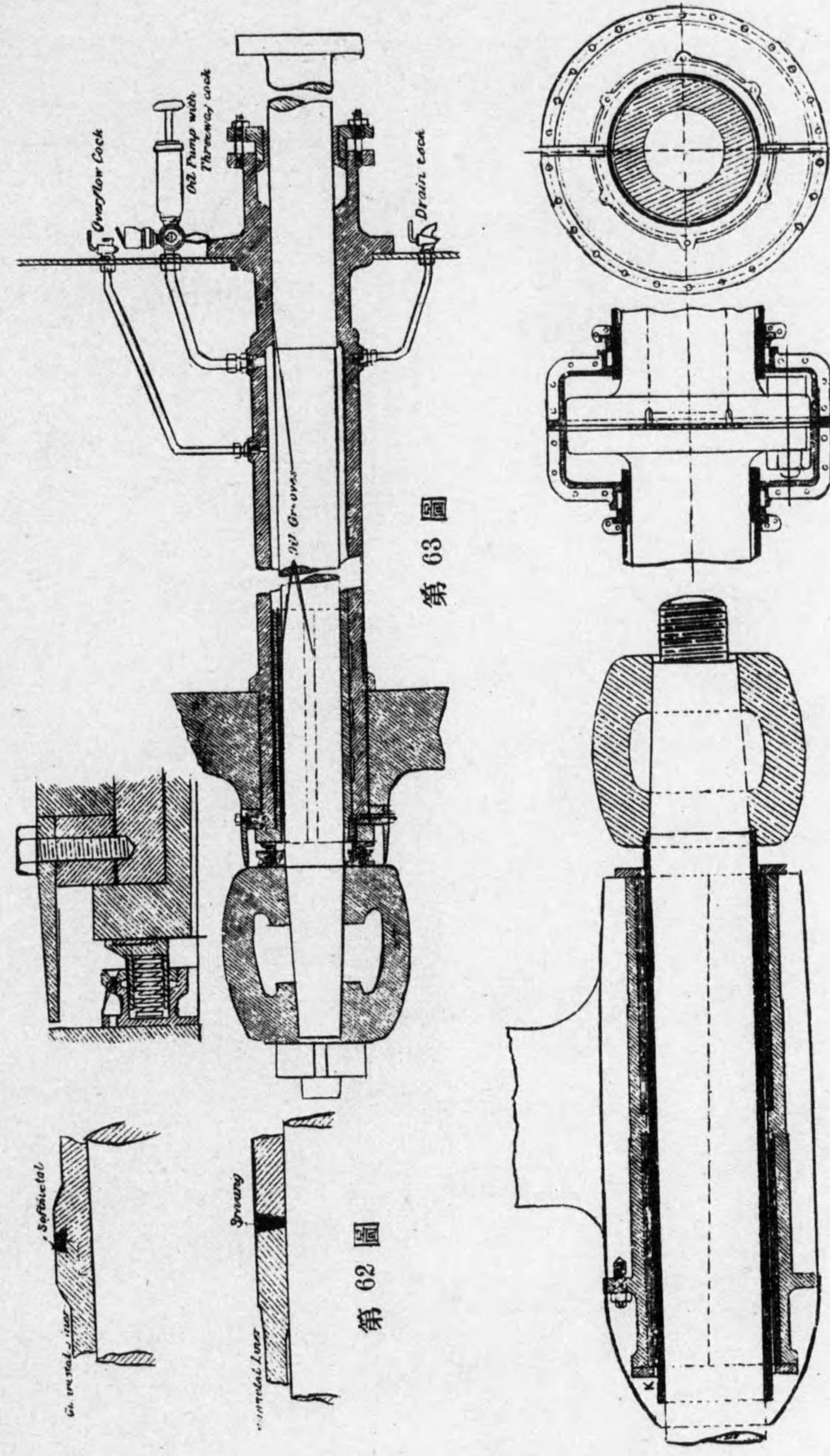
第 59 圖



第 60 圖



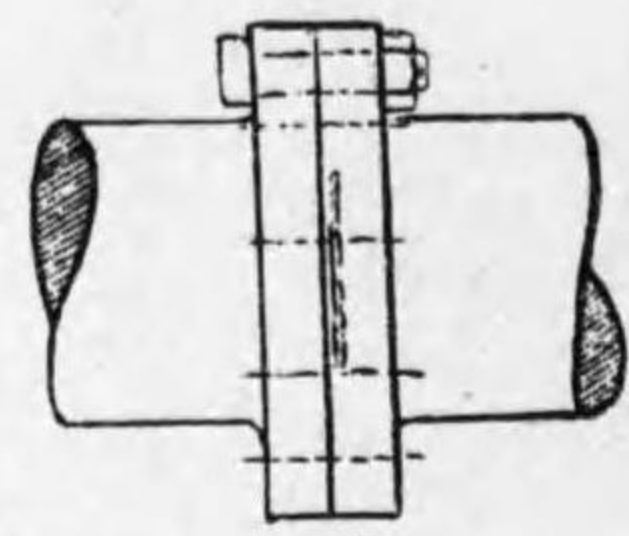
第 61 圖



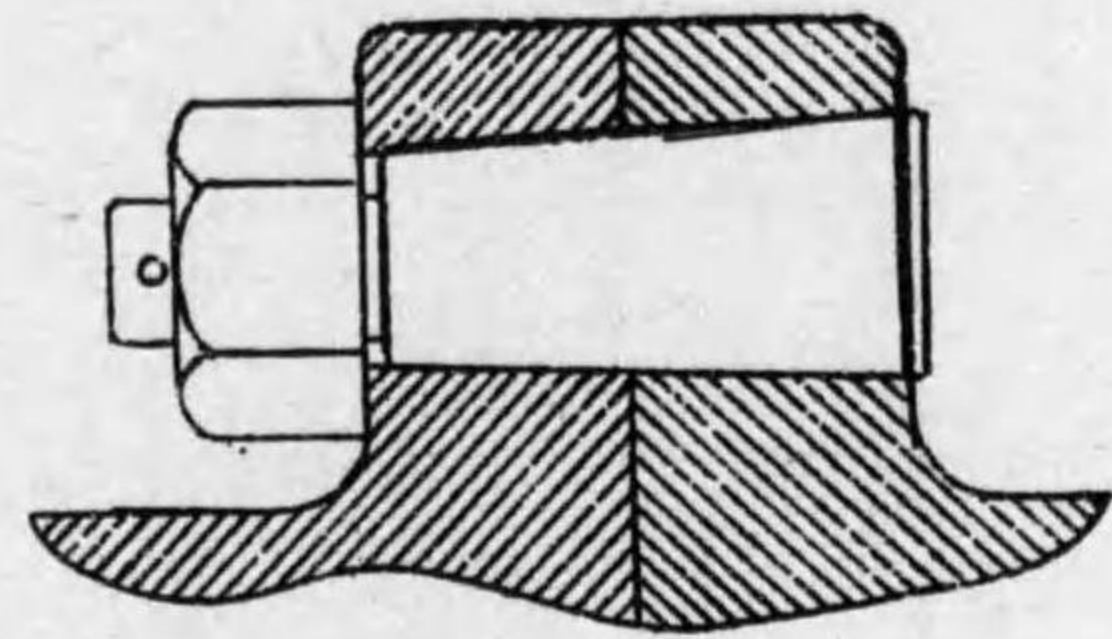
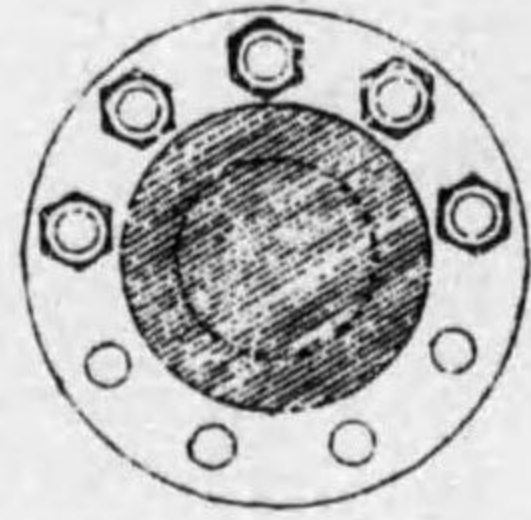
第 62 圖

第 63 圖

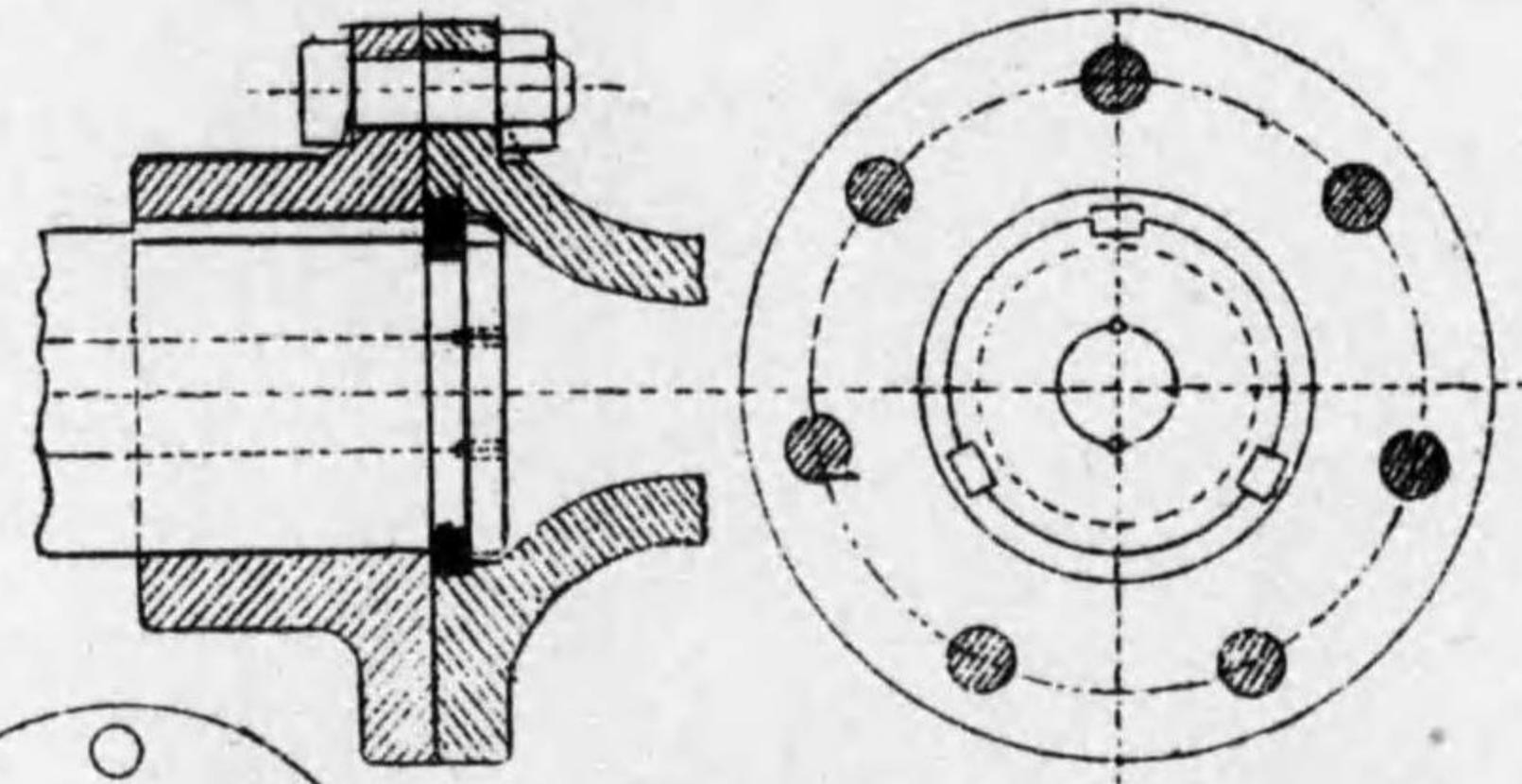
第 64 圖



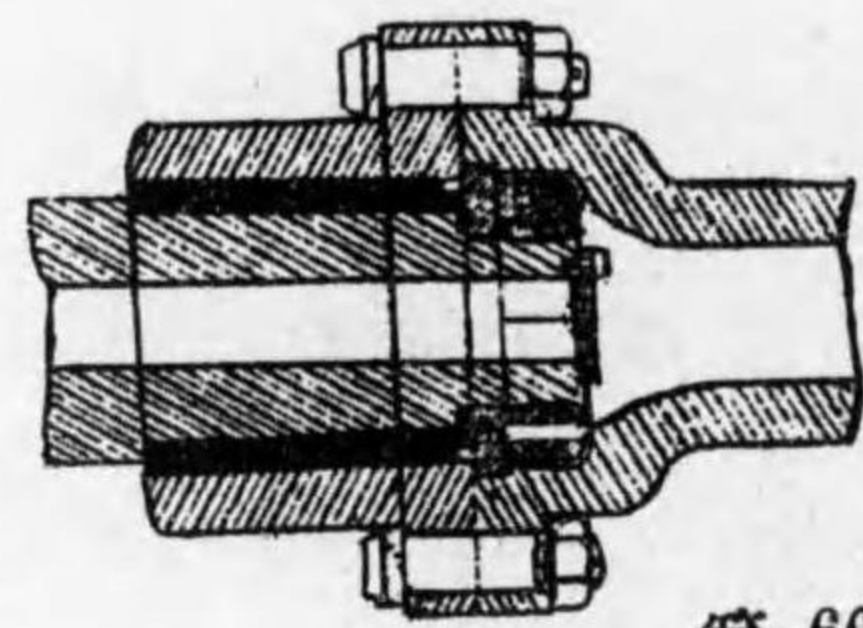
第 65 圖 A



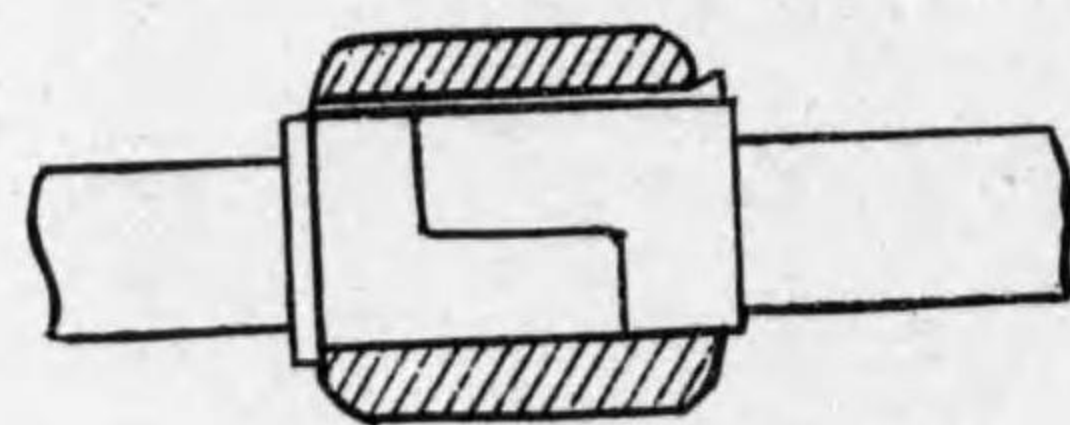
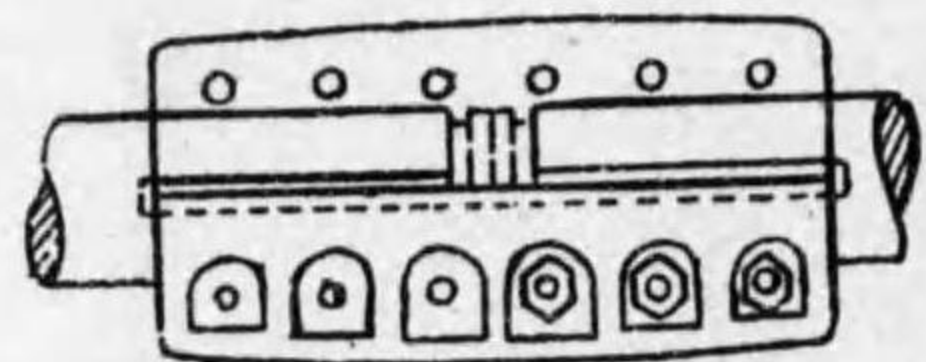
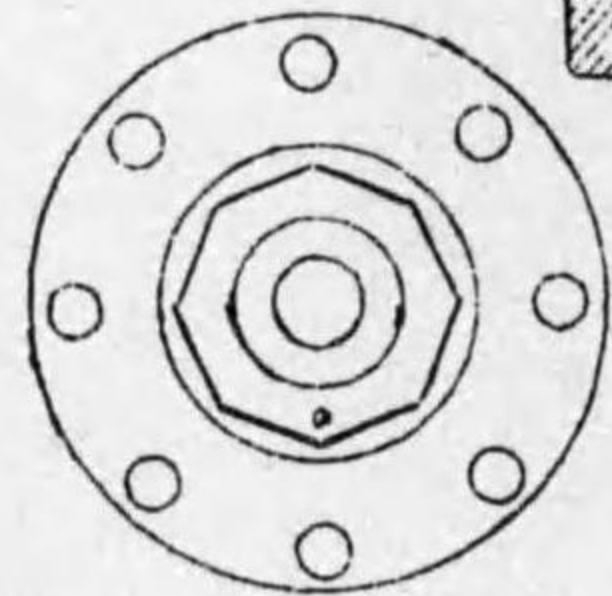
第 65 圖 B



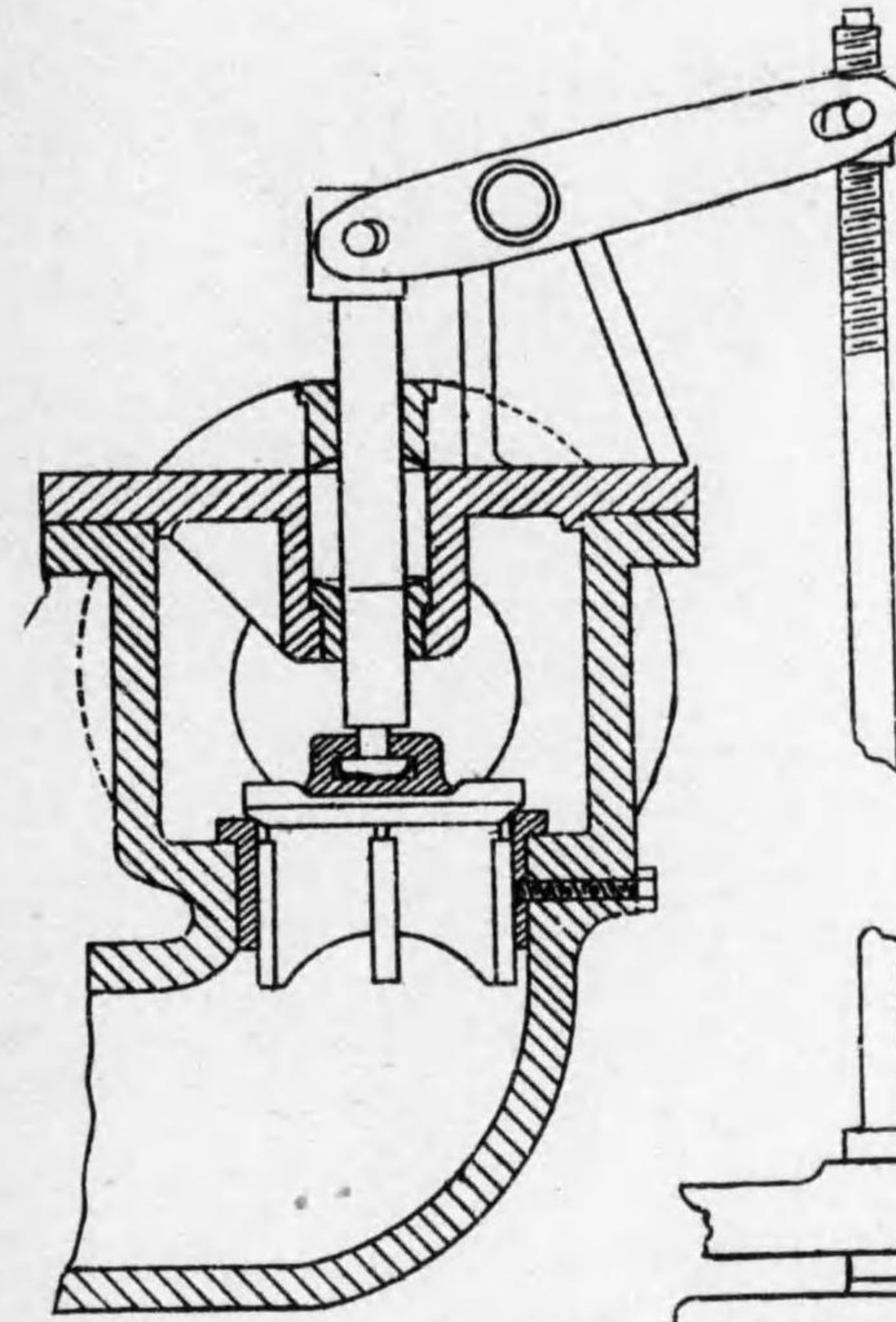
第 66 圖 A



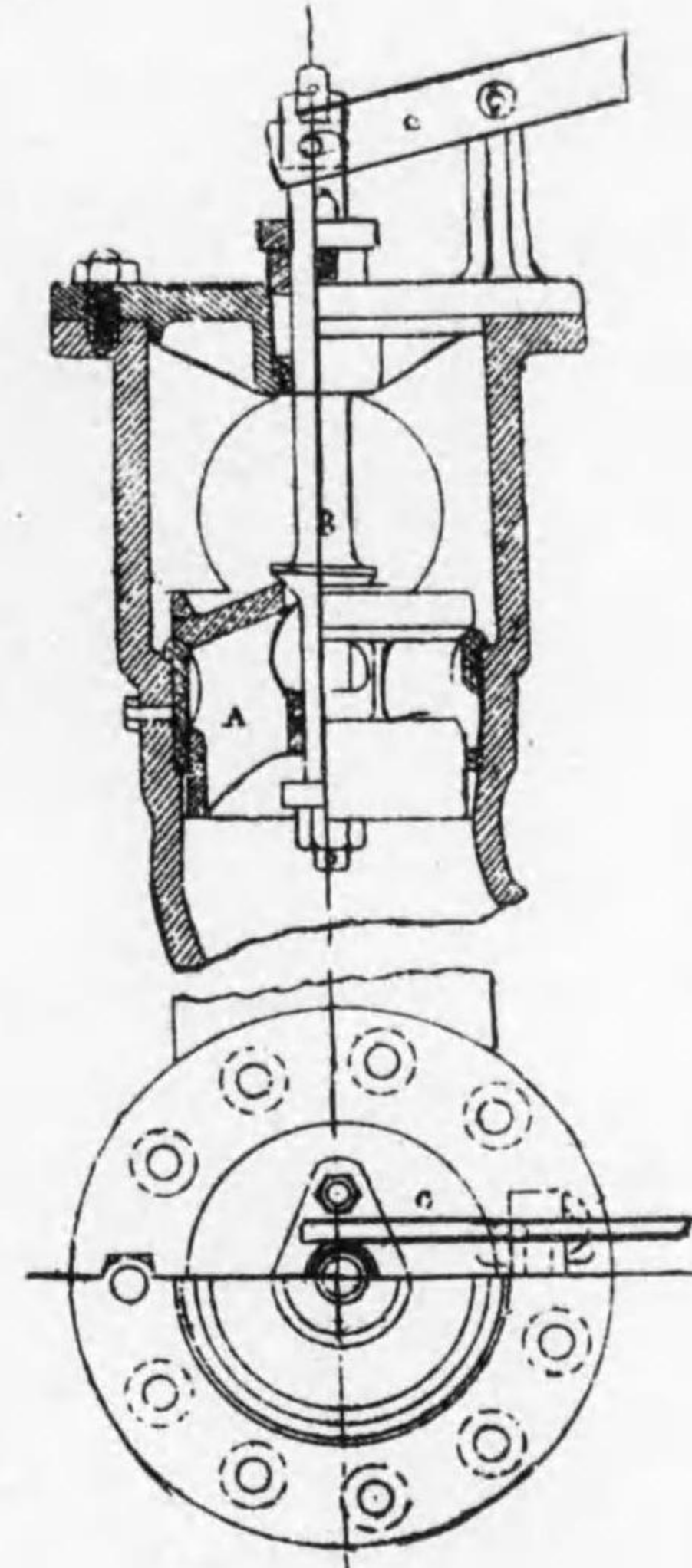
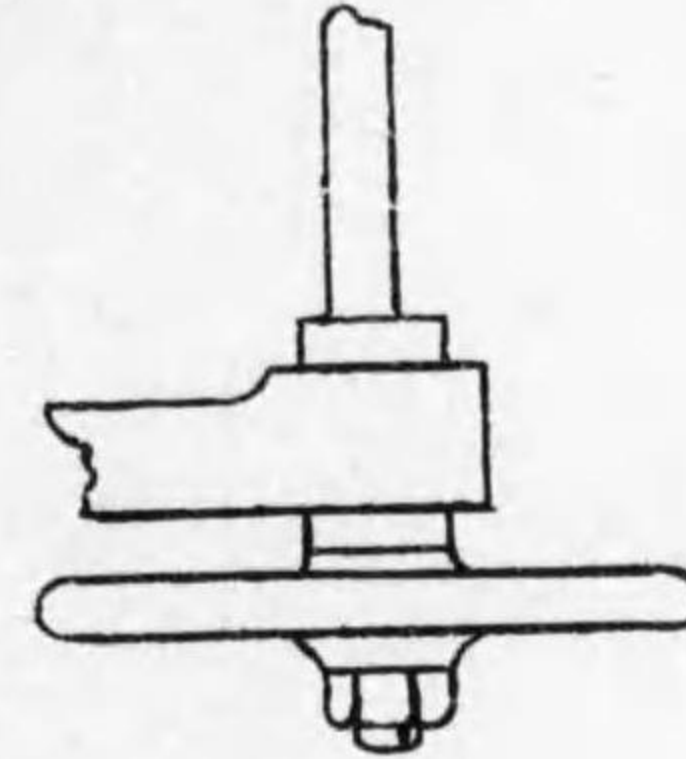
第 66 圖 B



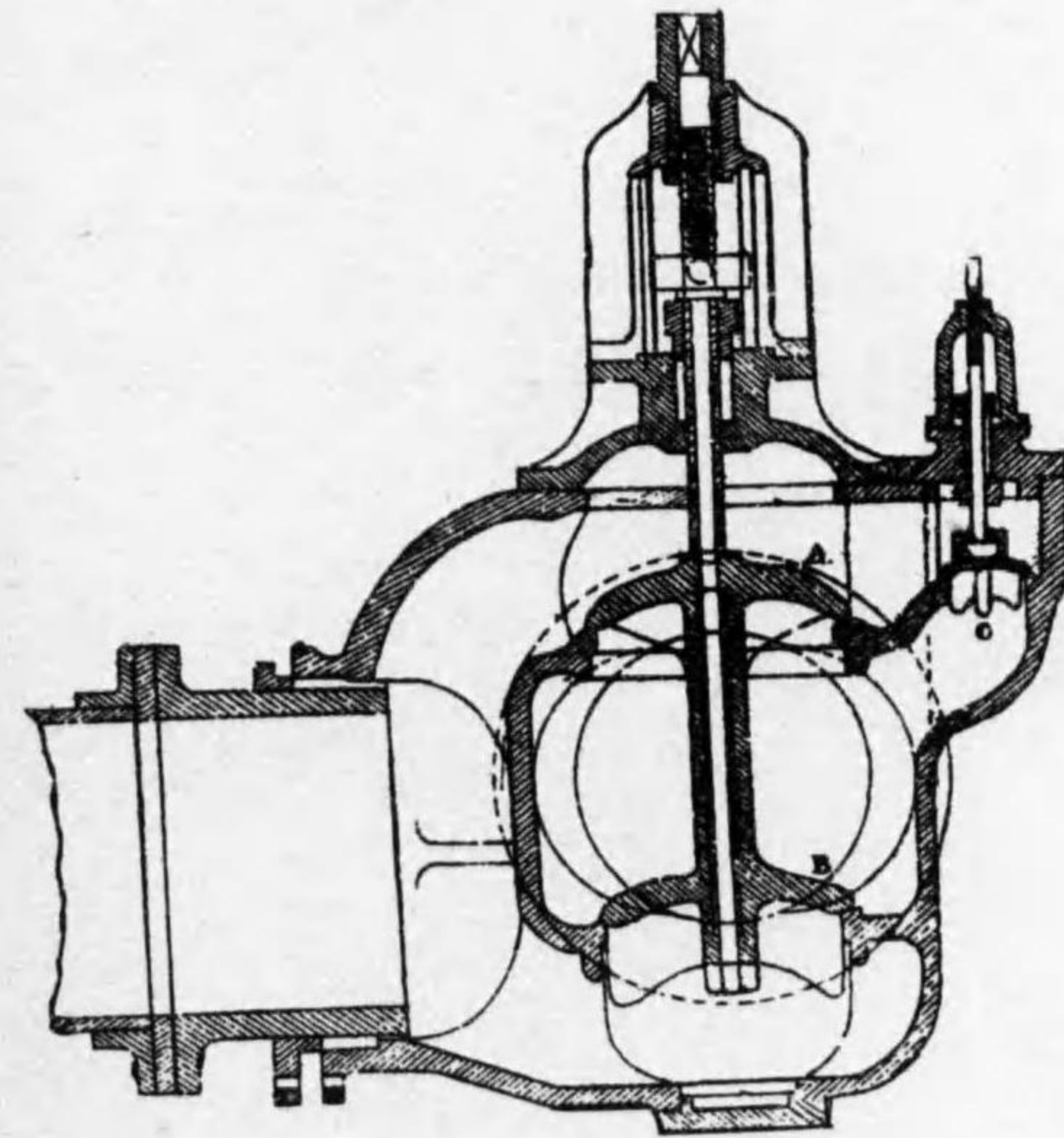
第 67 圖



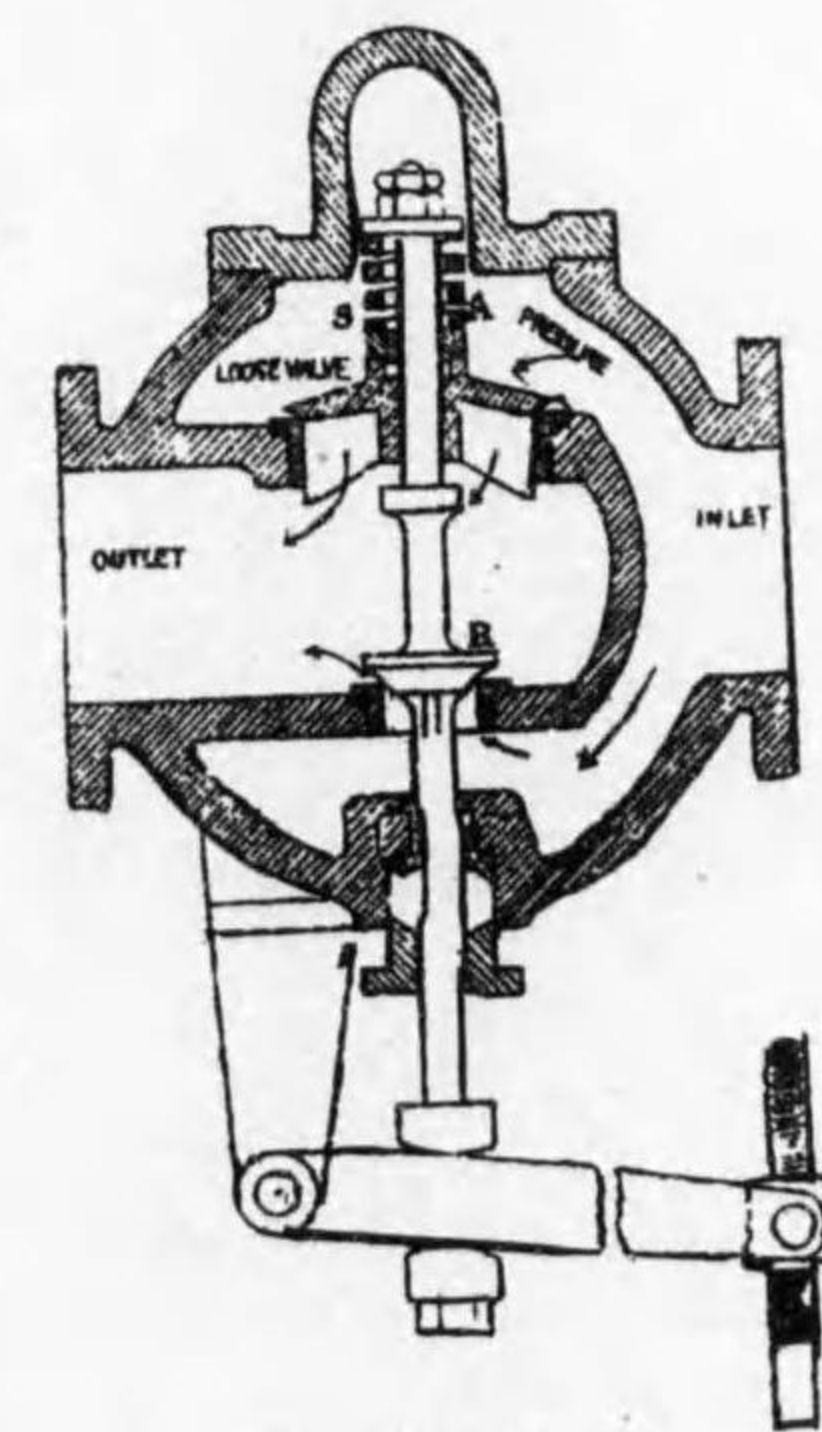
第 68 圖 A



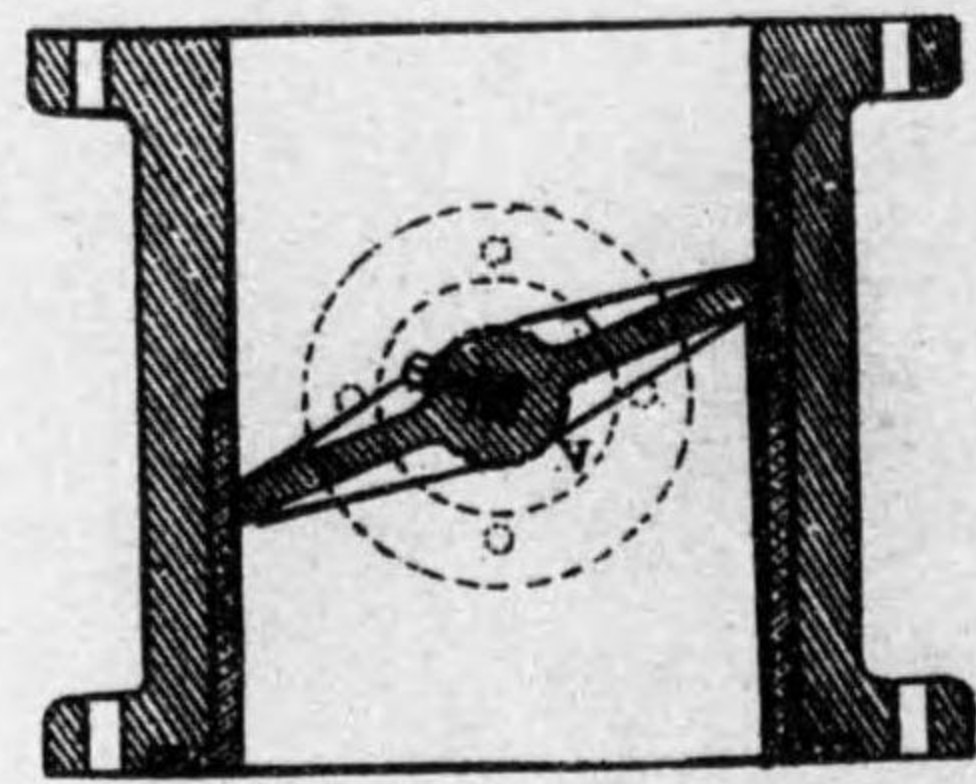
第 68 圖 B



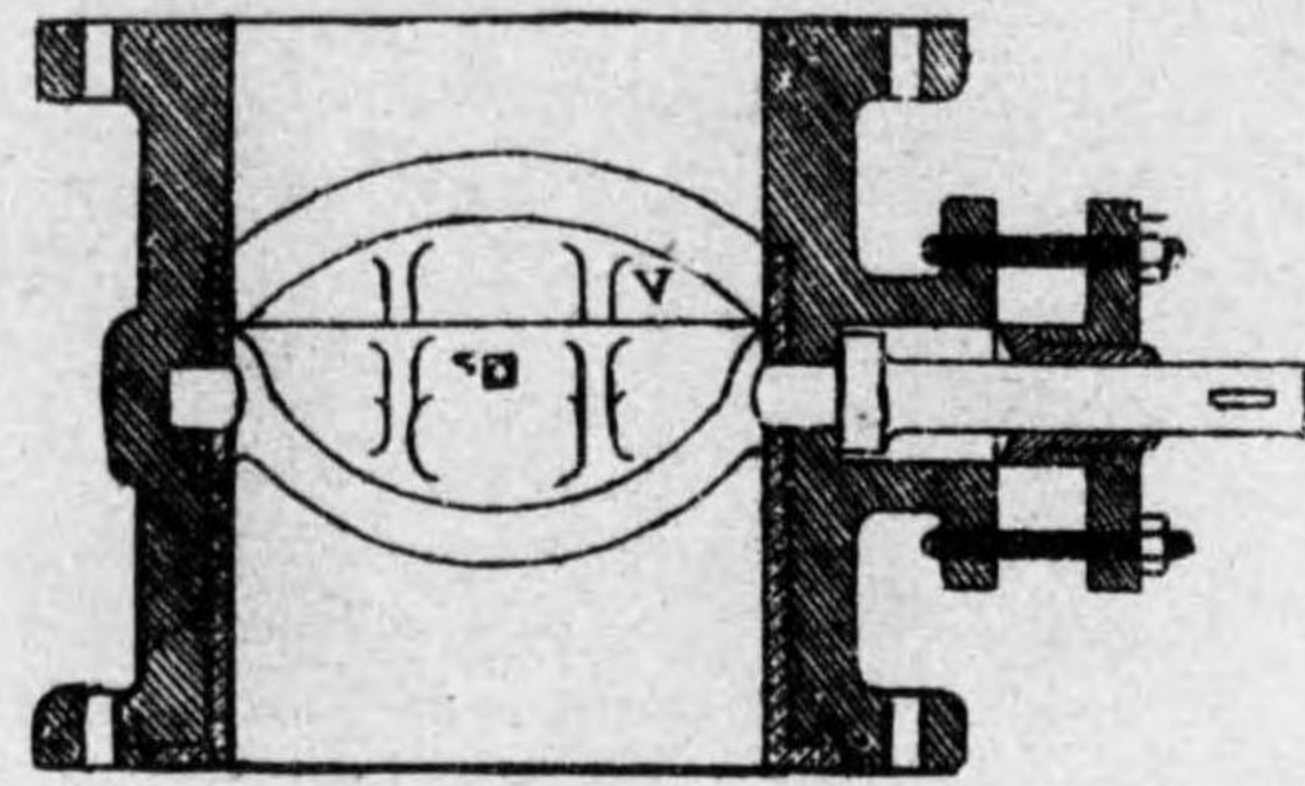
第 69 圖



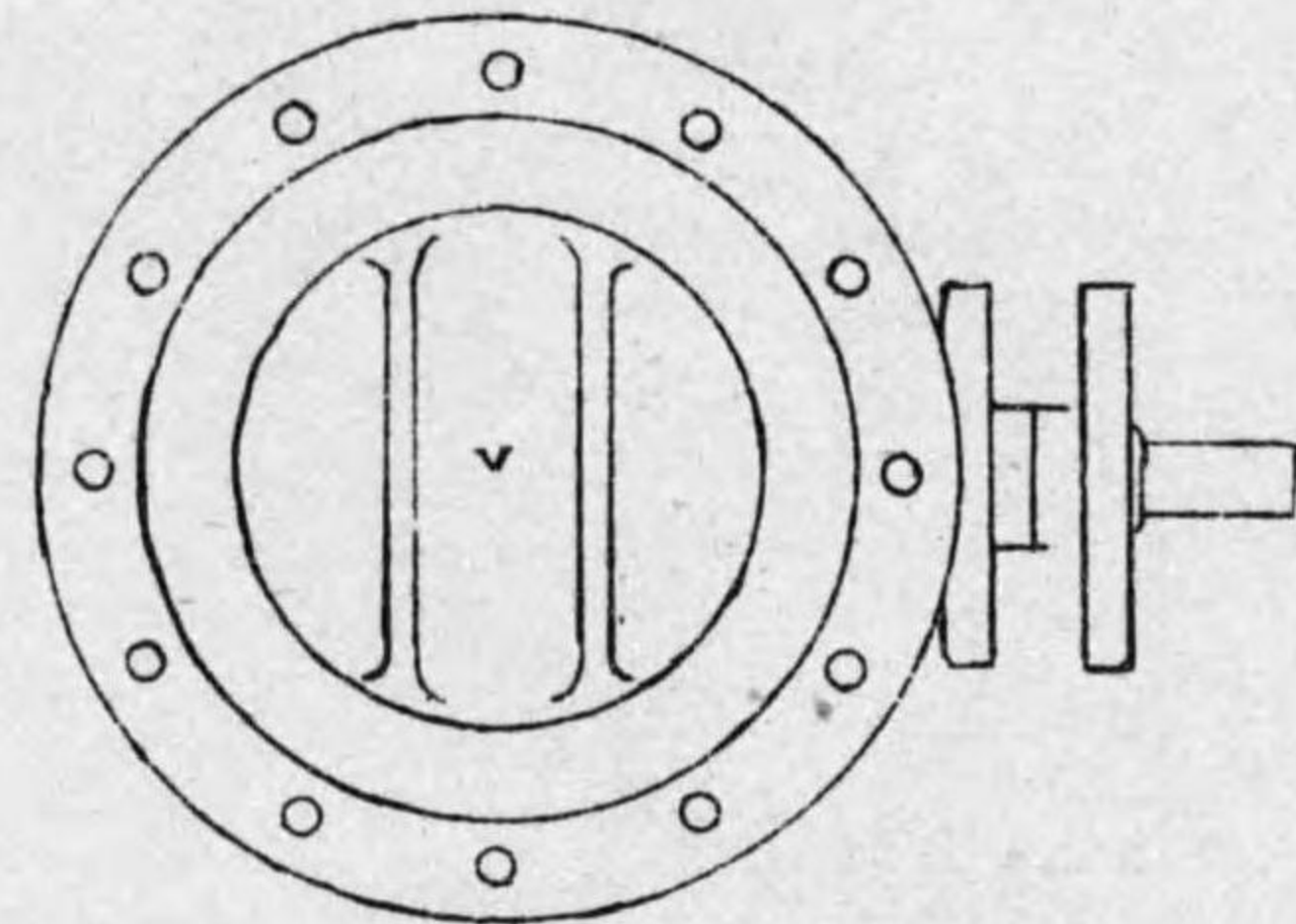
第 70 圖



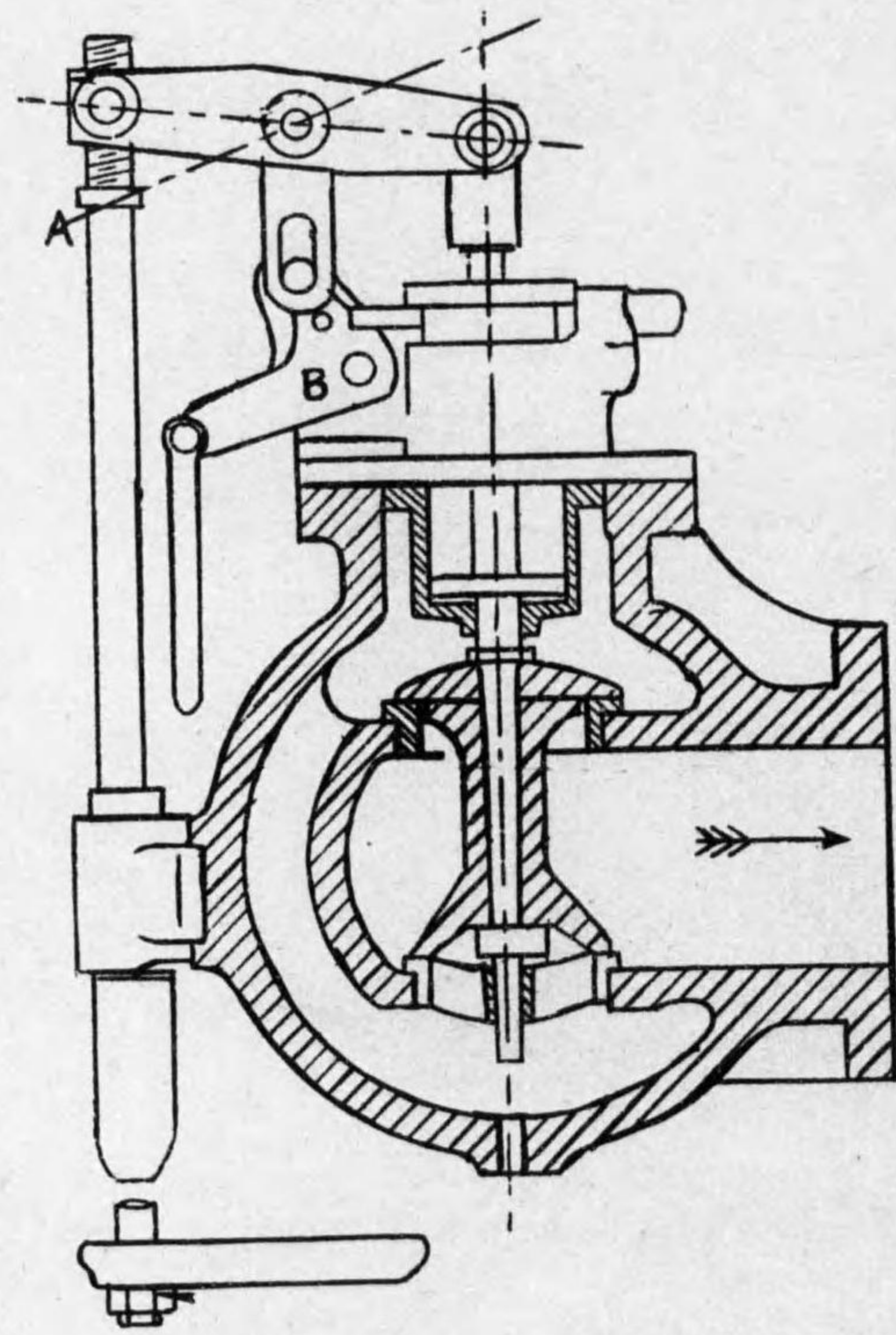
第 71 圖 c



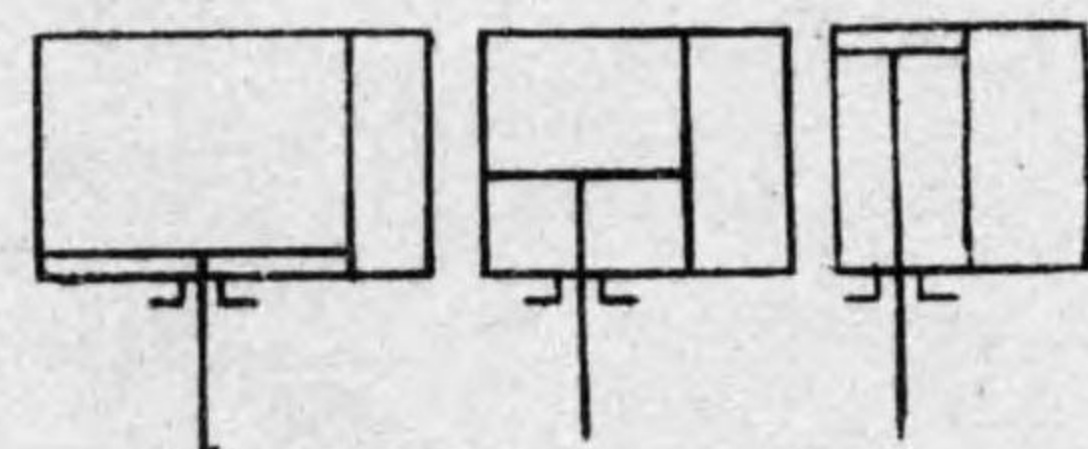
第 71 圖 A



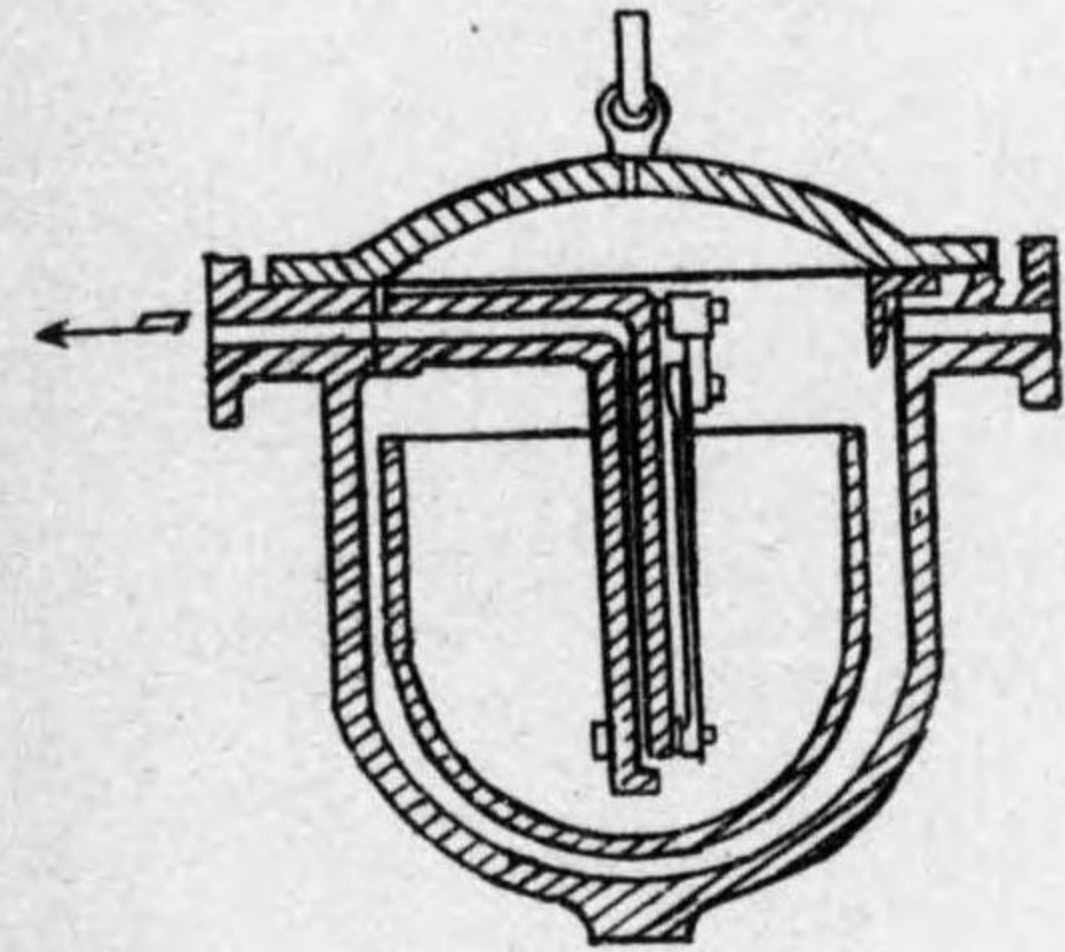
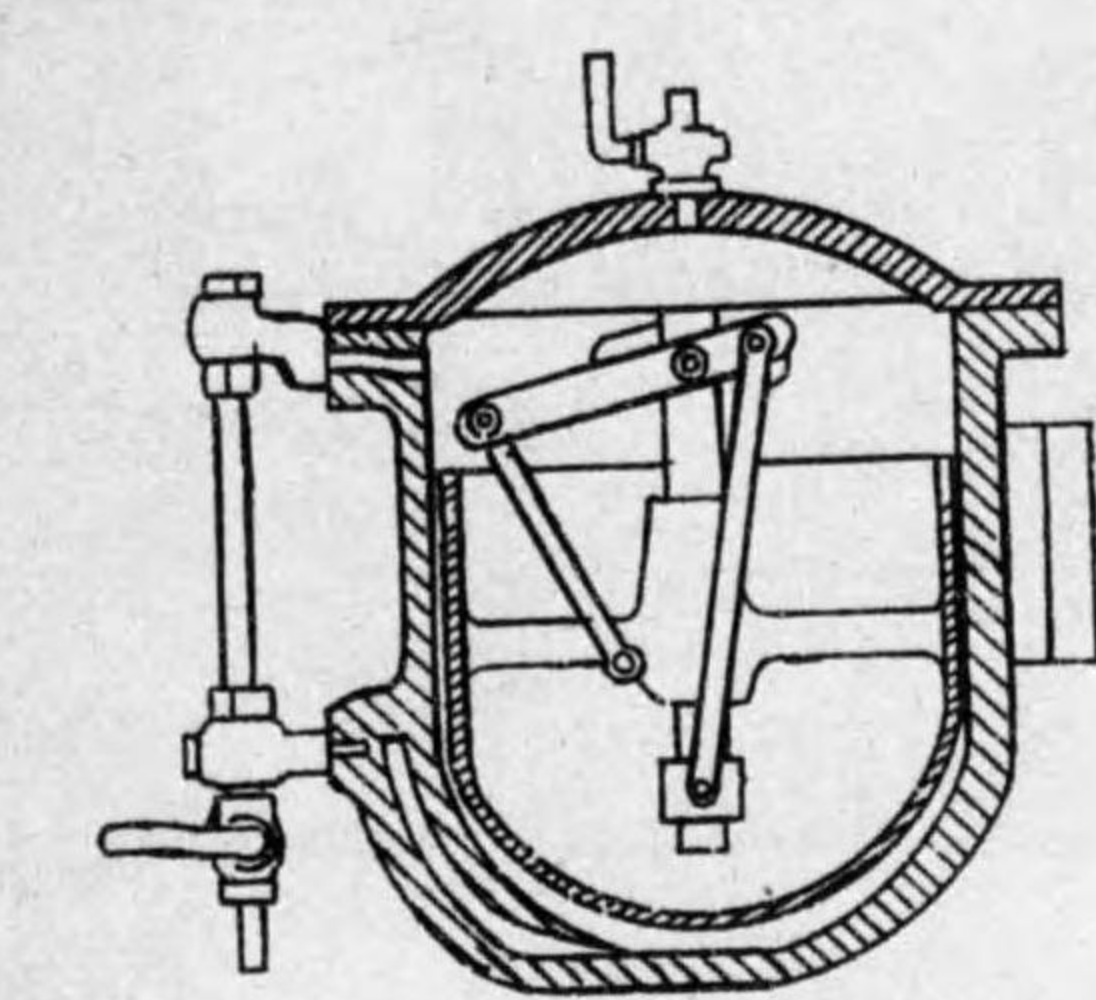
第 71 圖 B



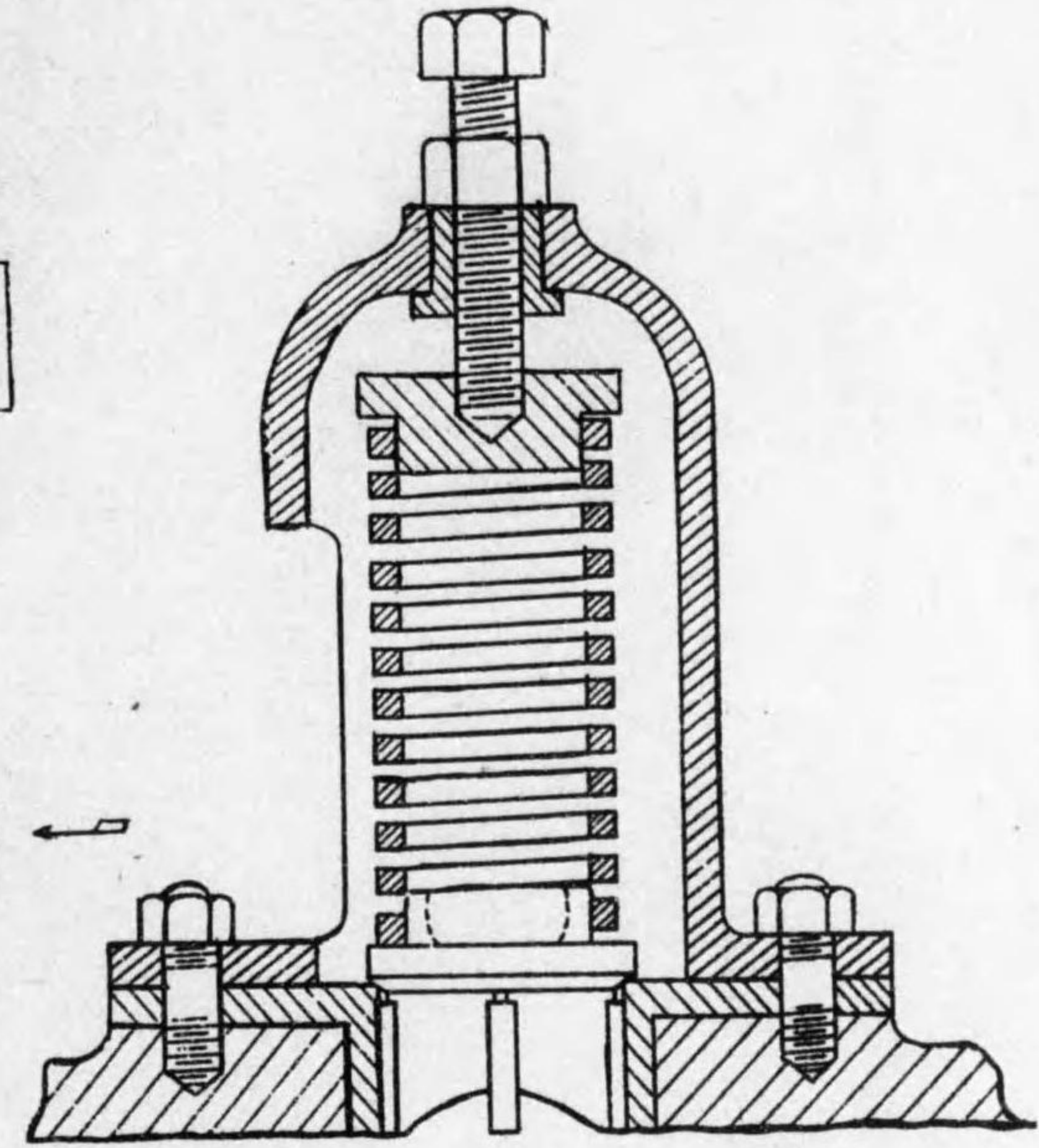
第 72 圖



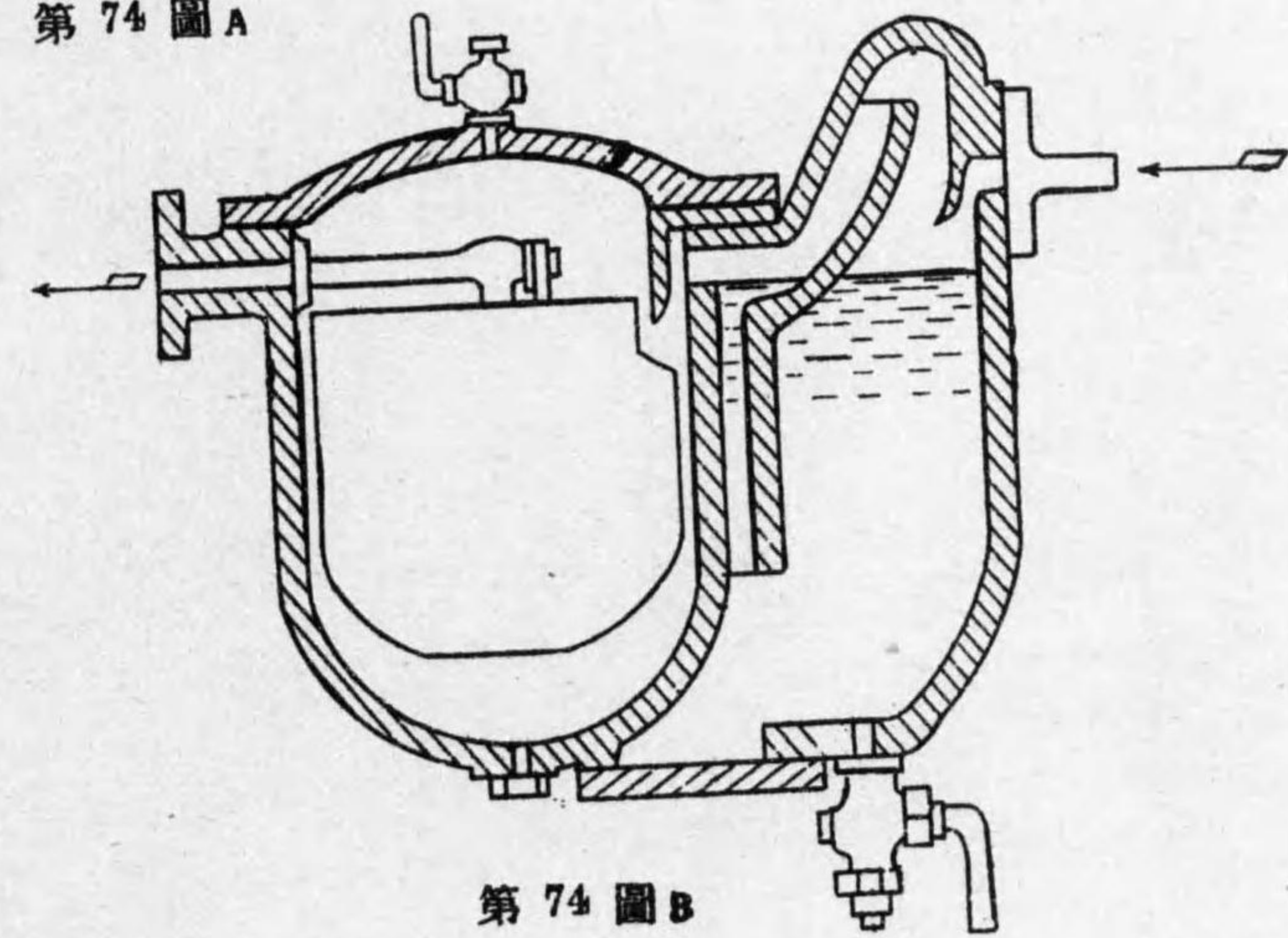
第 73 圖



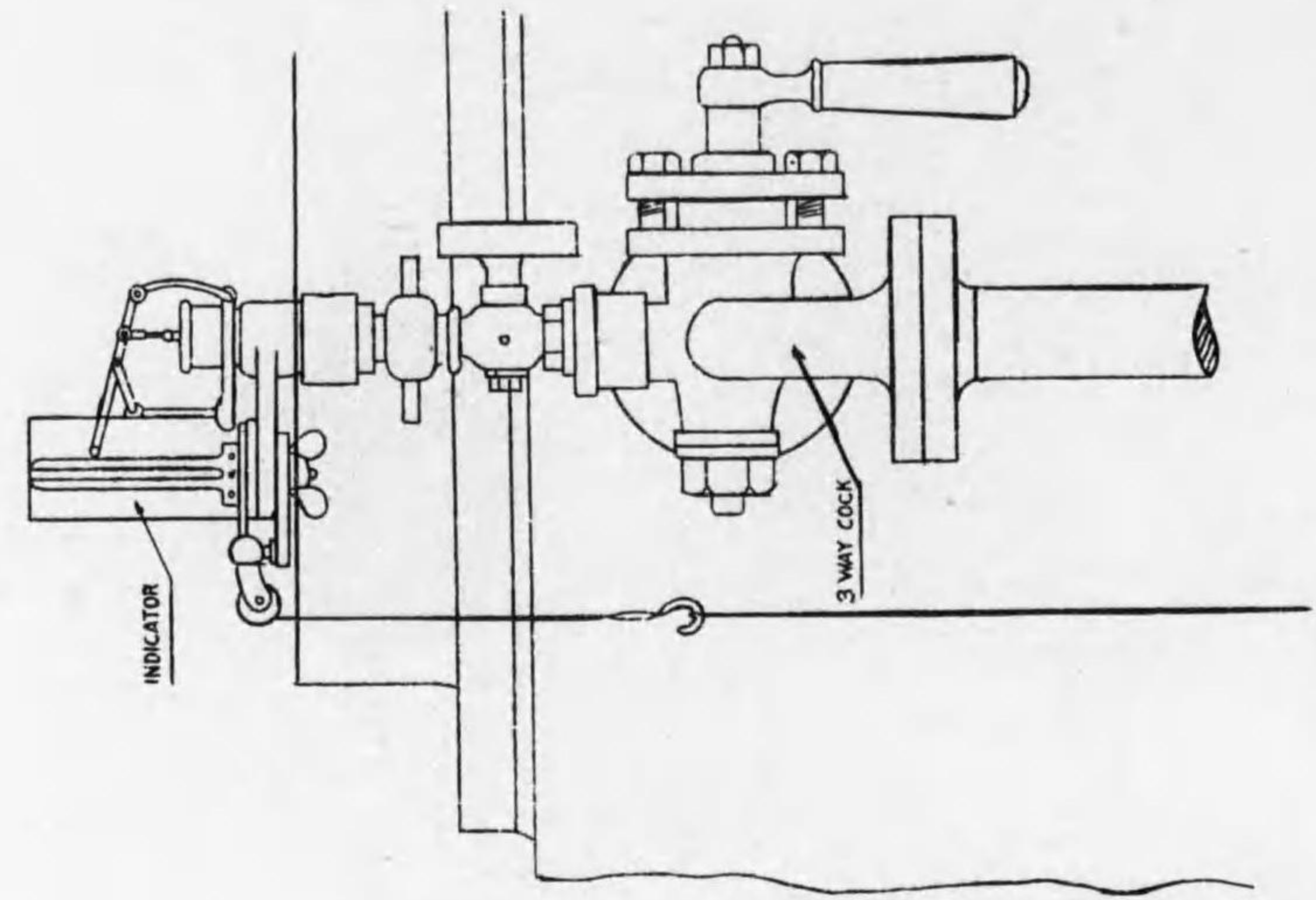
第 74 圖 A



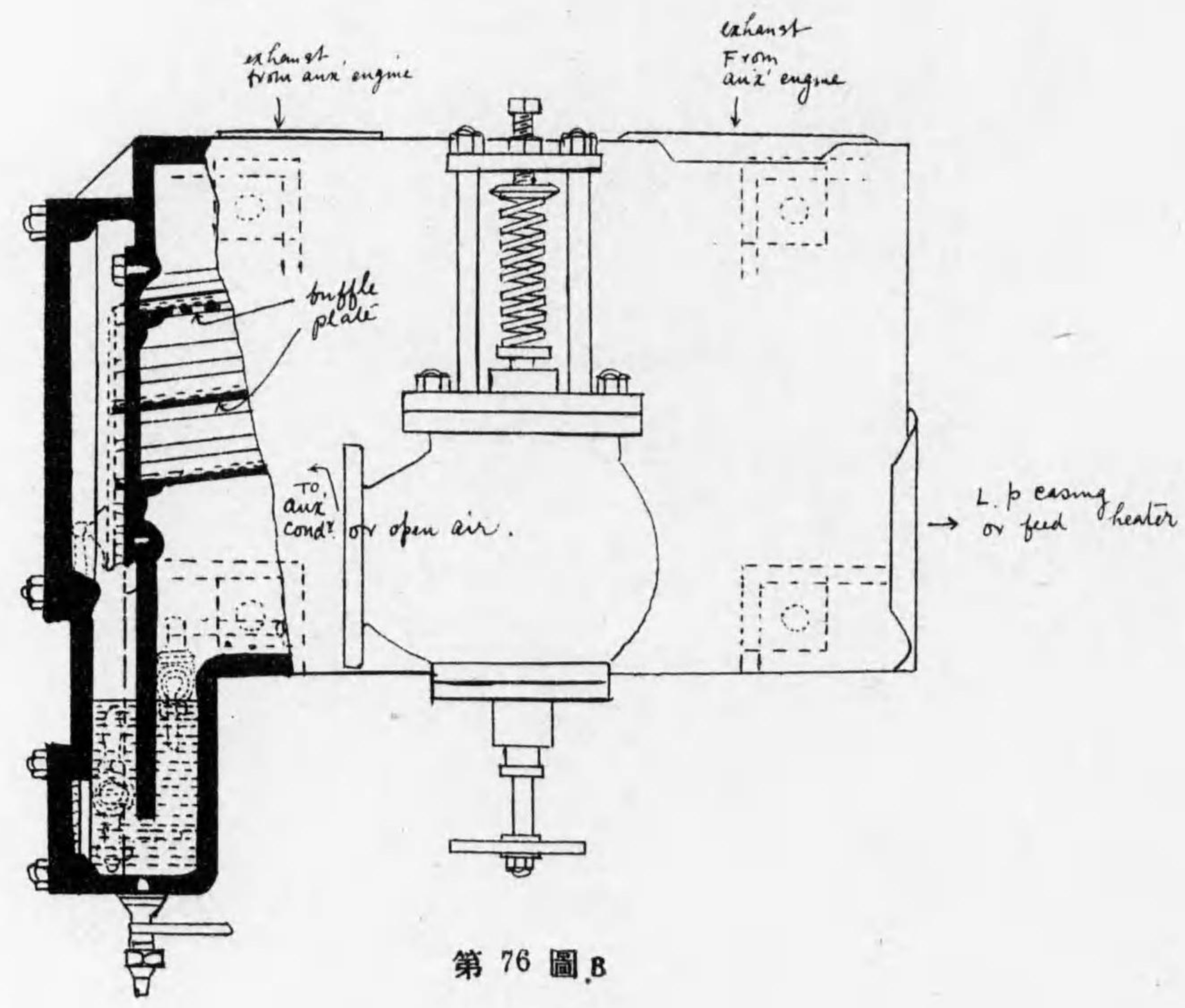
第 75 圖



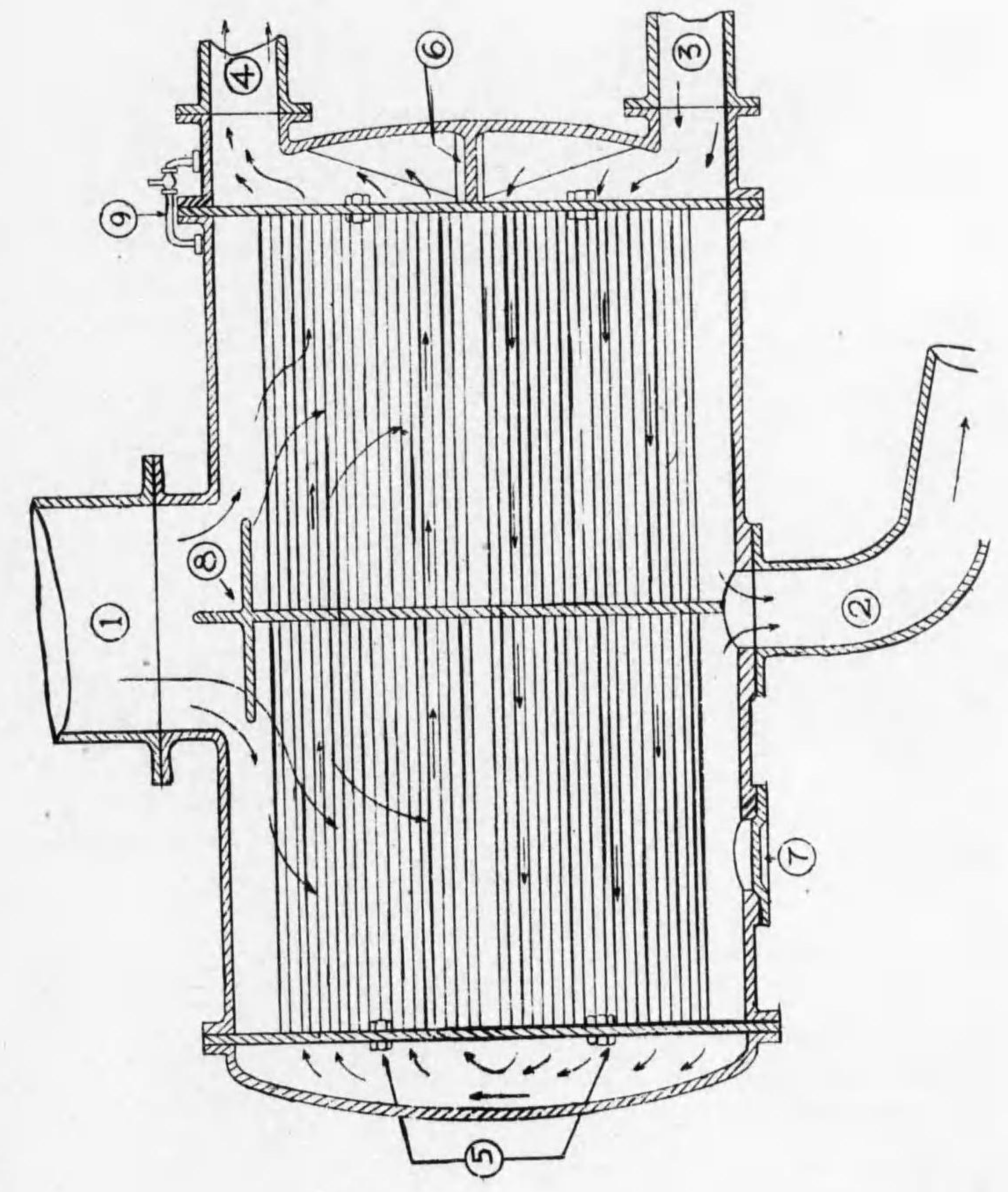
第 74 圖 B



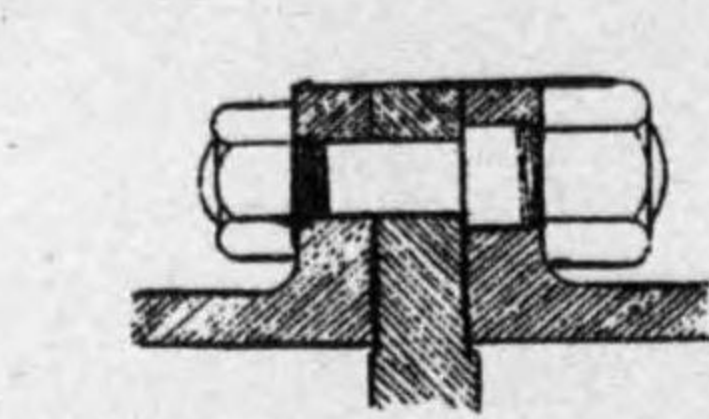
第 76 圖



第 76 圖 B

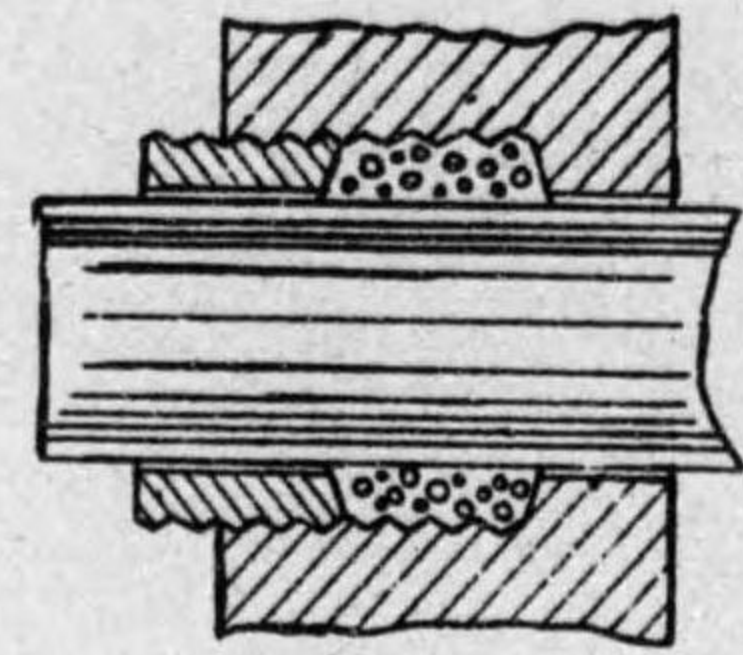


第 77 圖

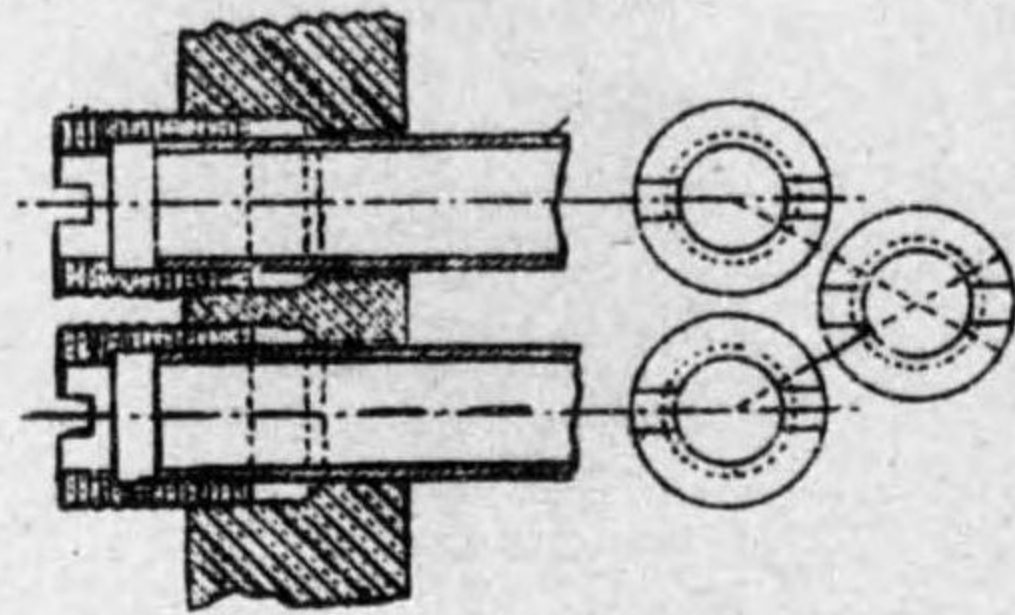


ENLARGED VIEW OF TUBE PLATE JOINT

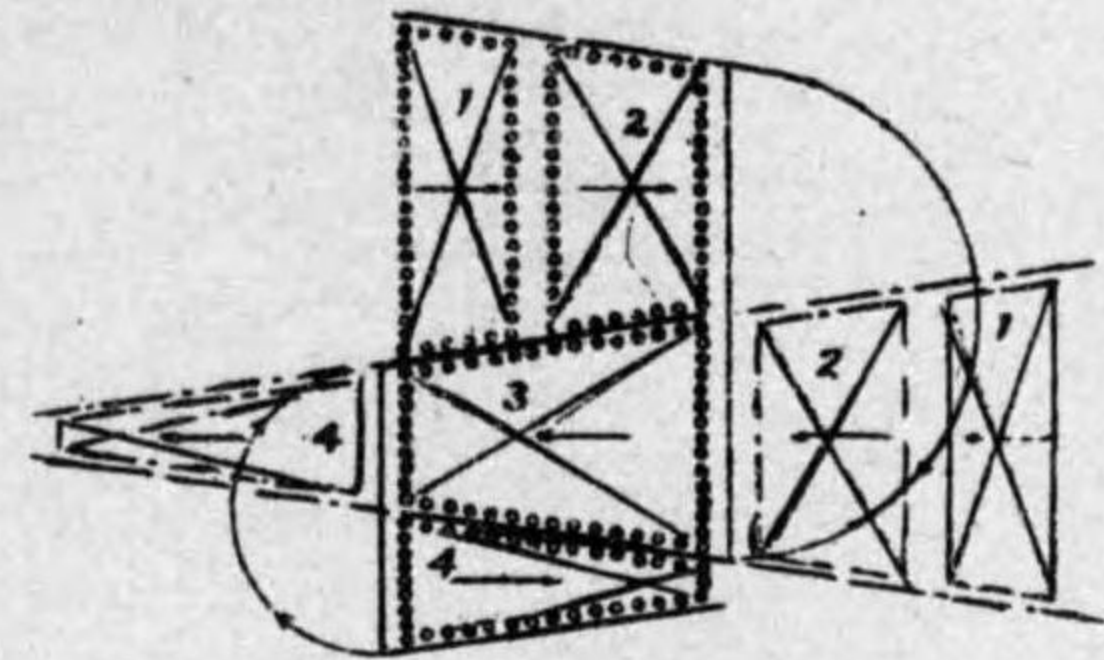
第 78 圖



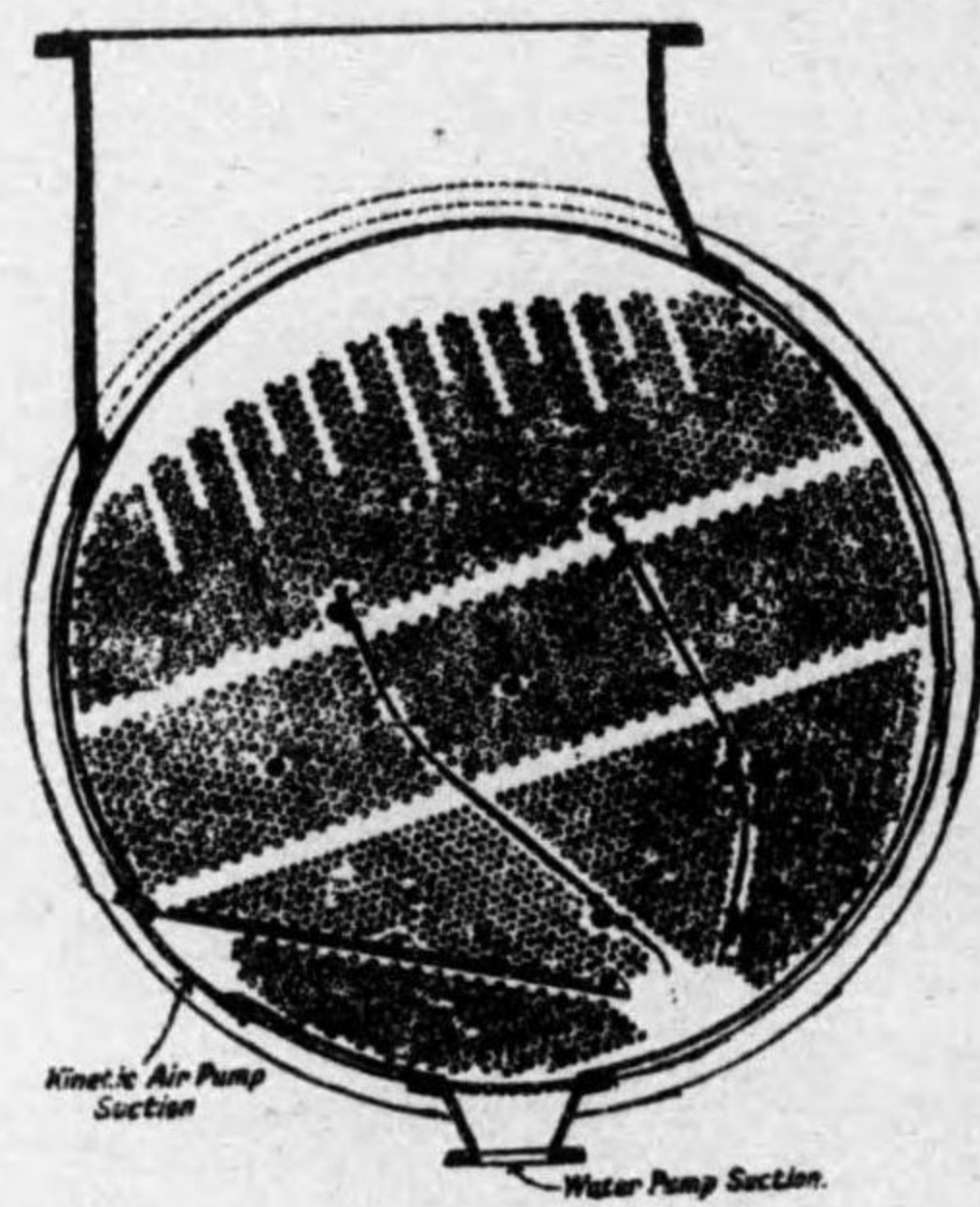
第 79 圖 B



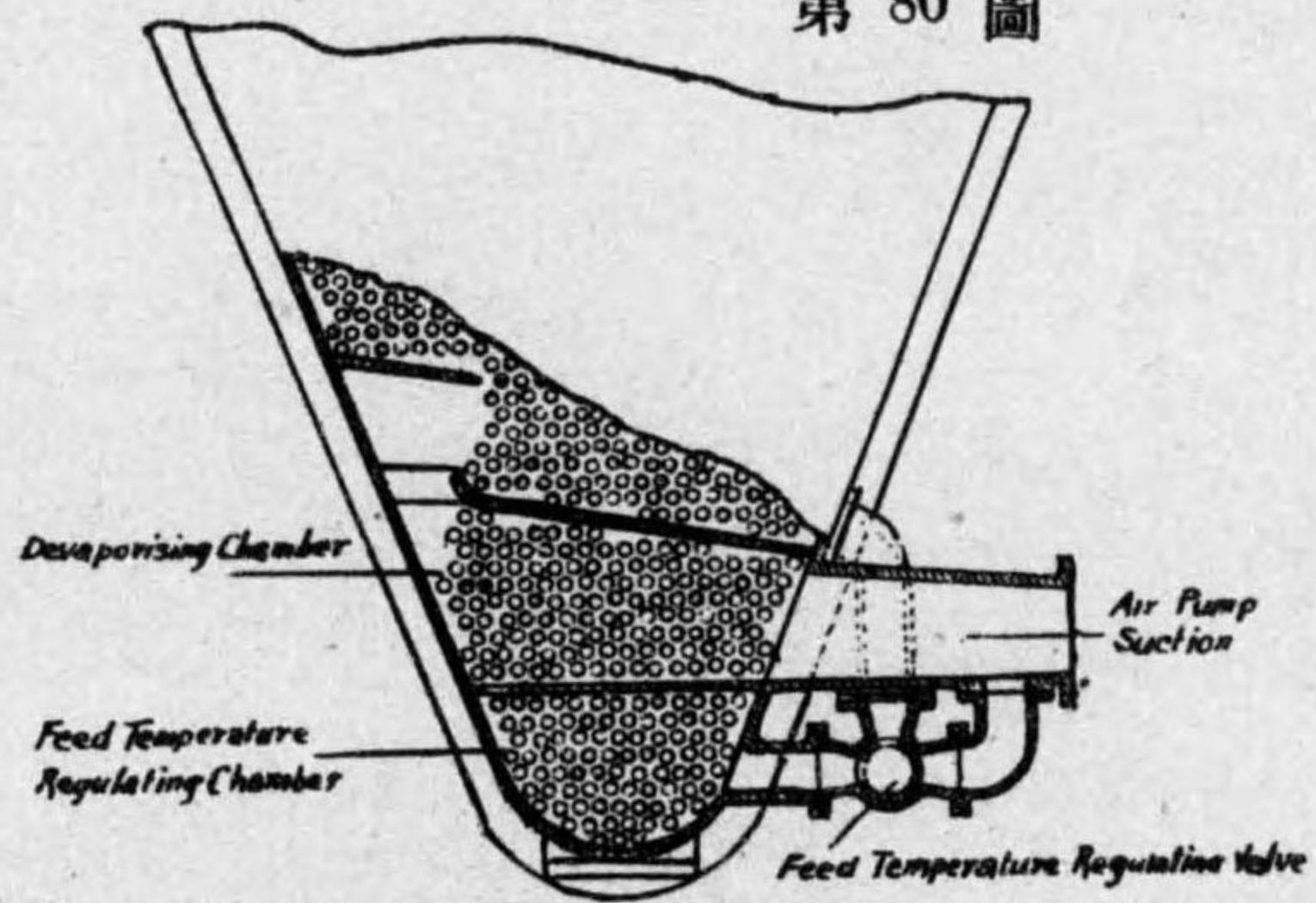
第 79 圖 A



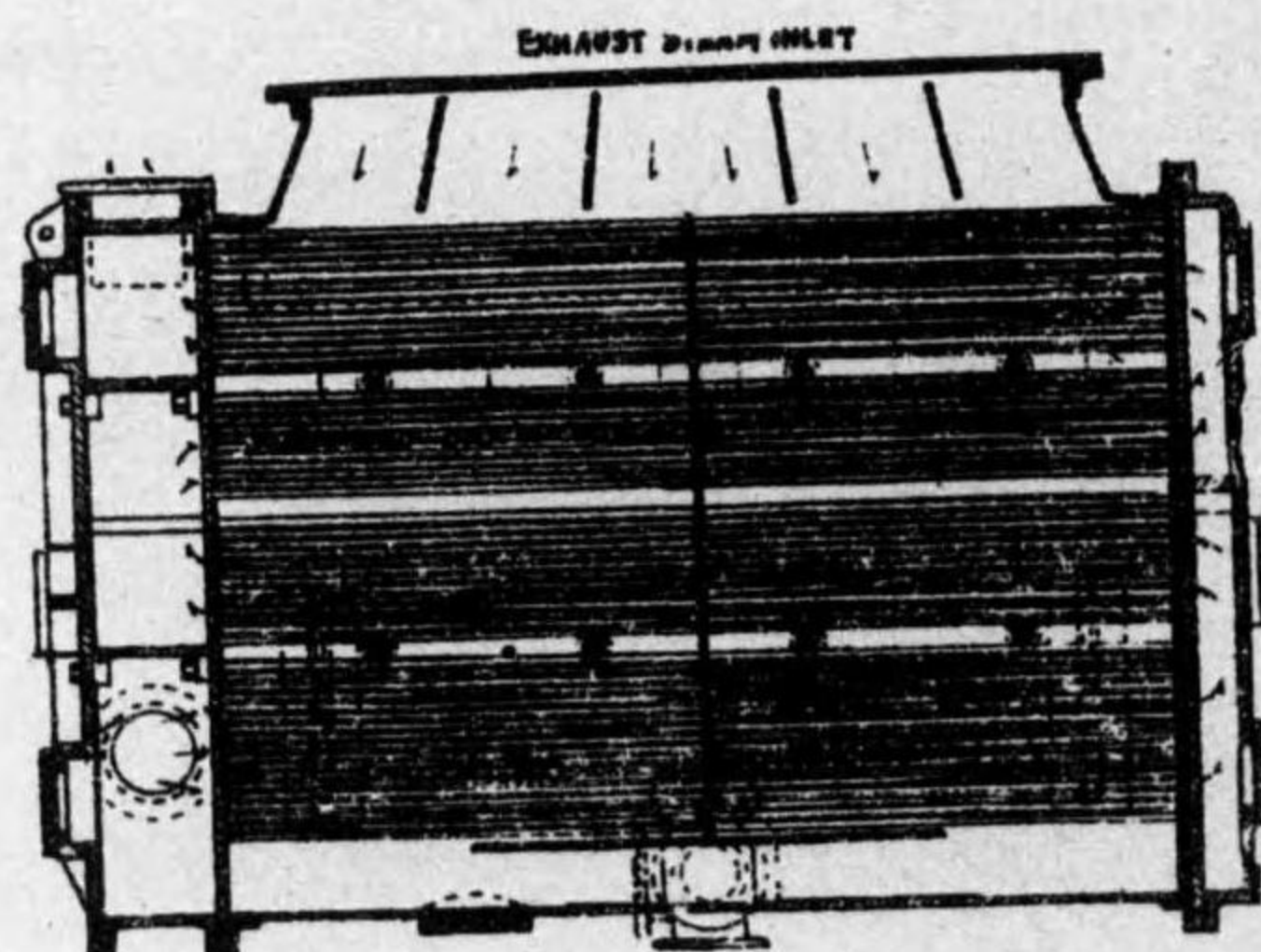
第 80 圖



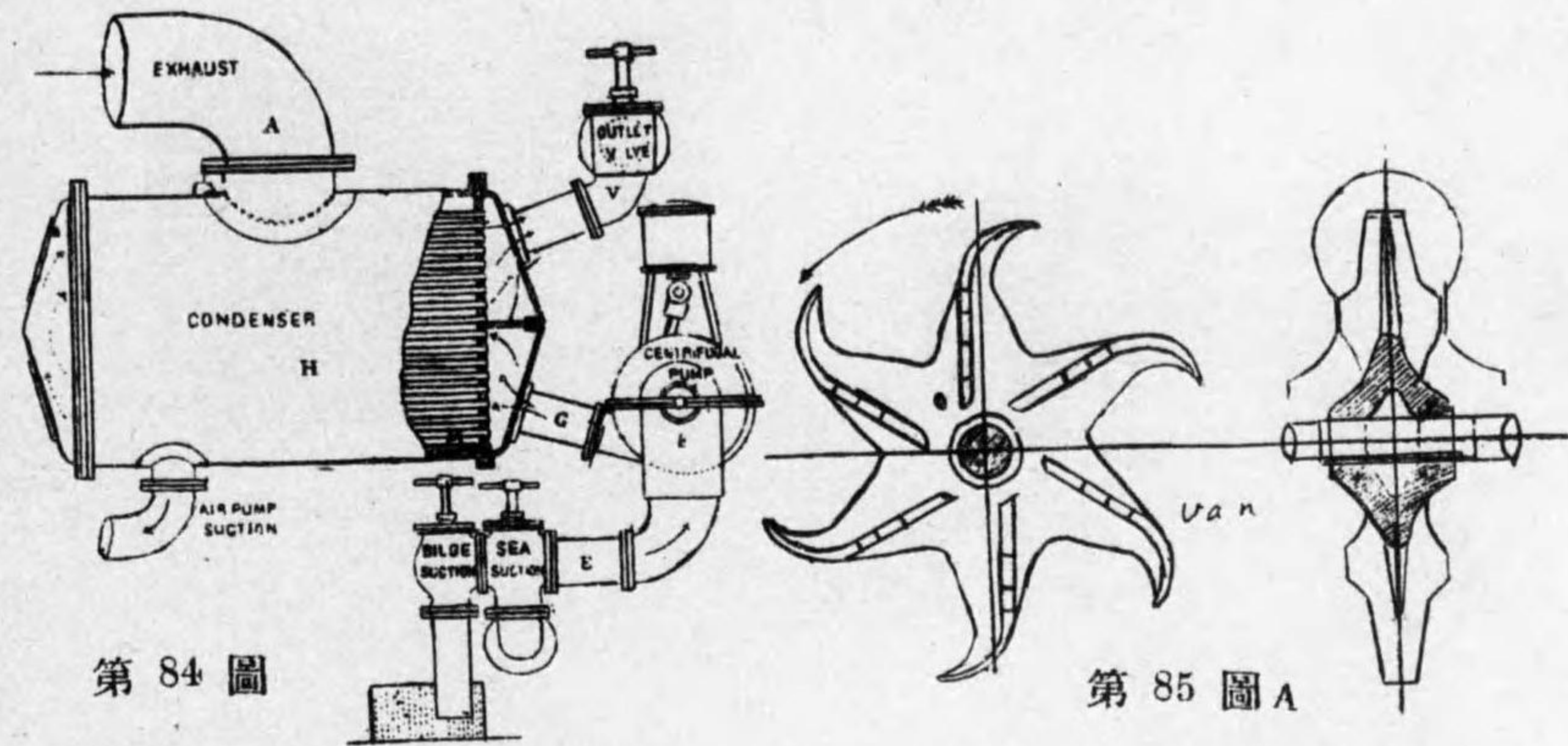
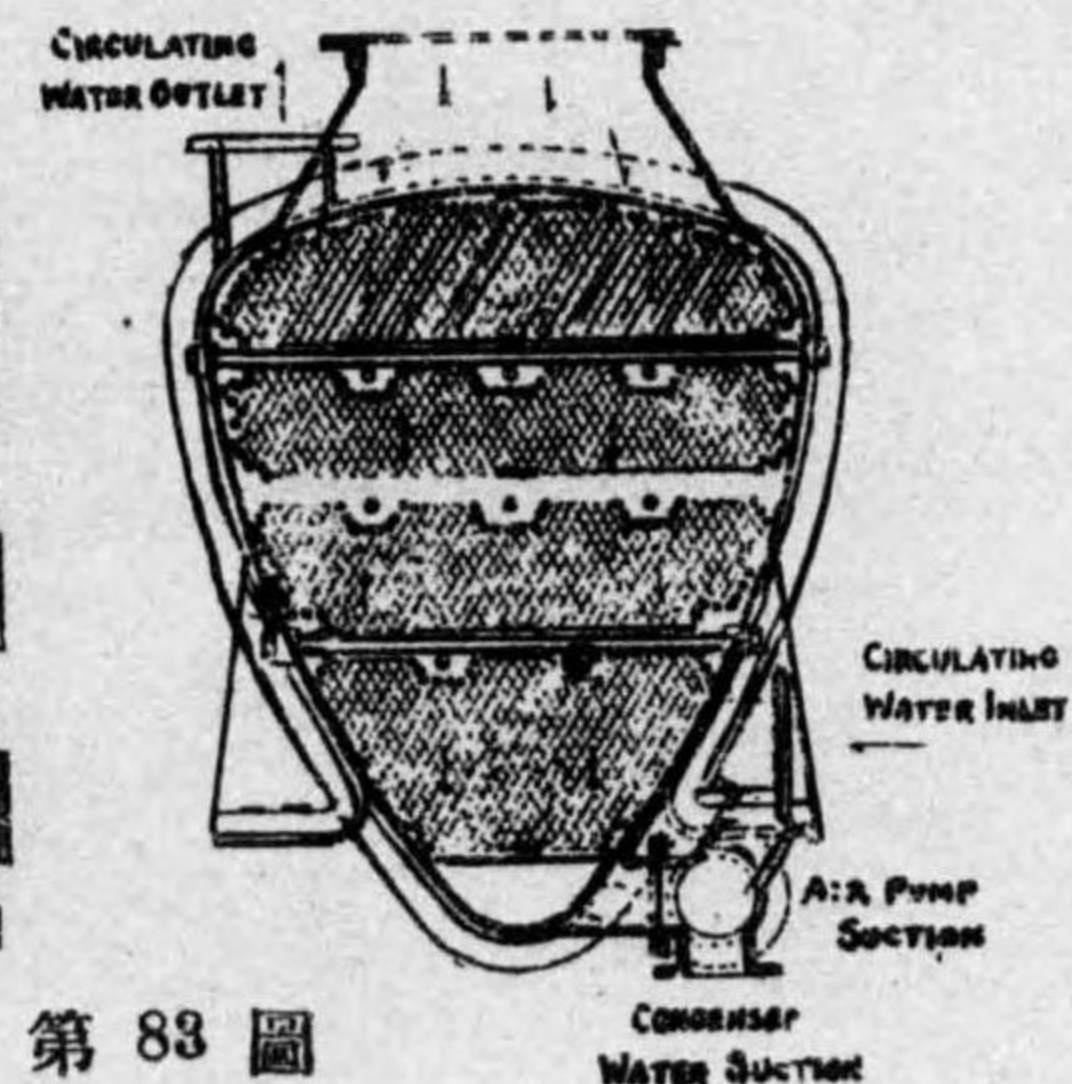
第 81 圖



第 82 圖

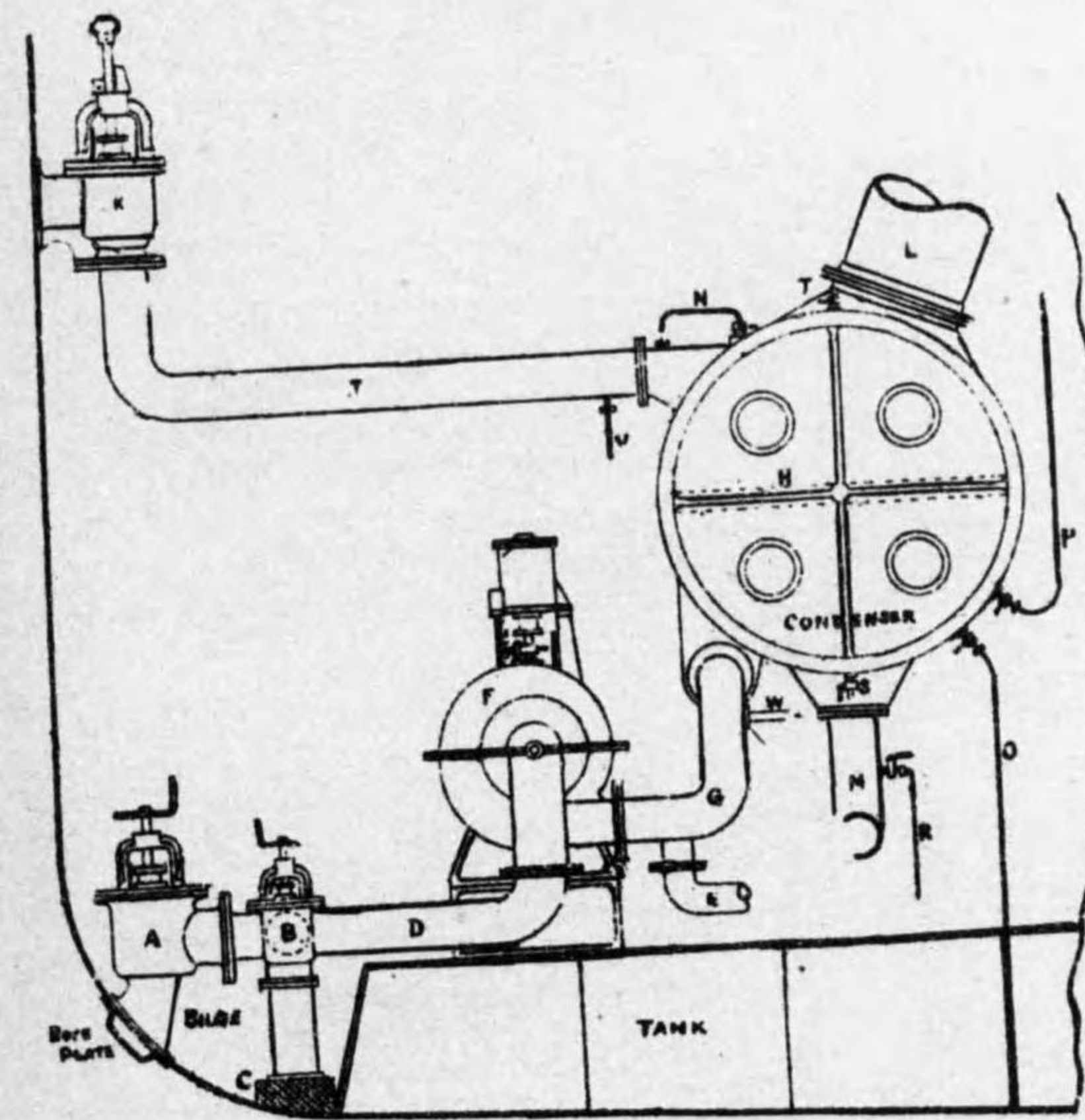


第 83 圖

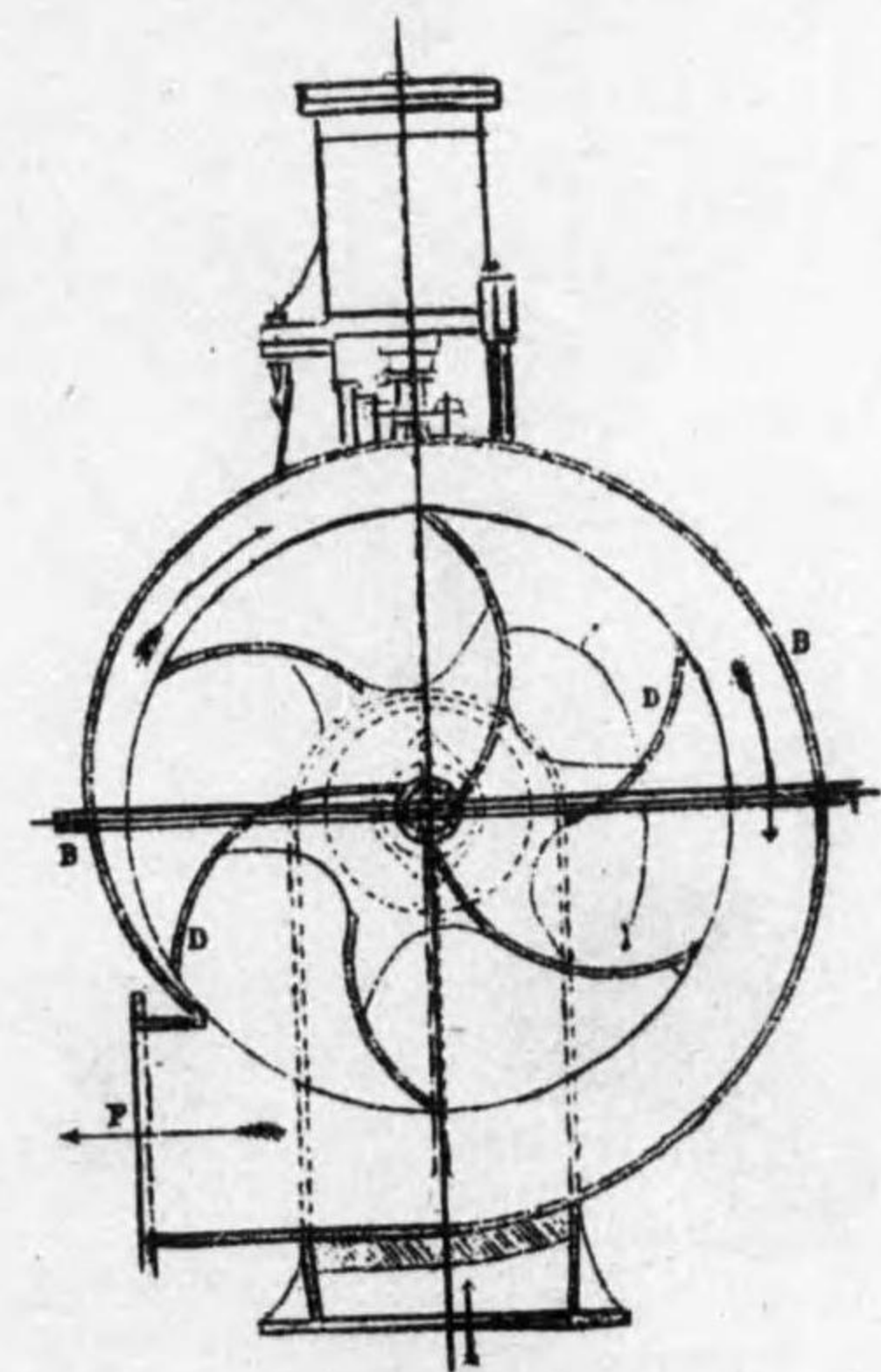


第 84 圖

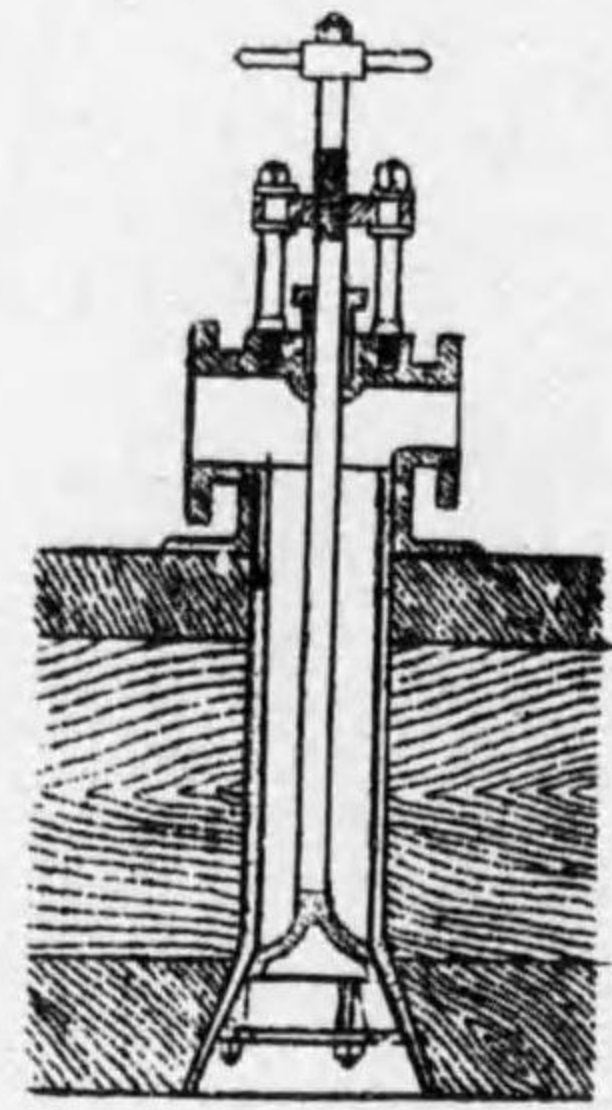
第 85 圖 A



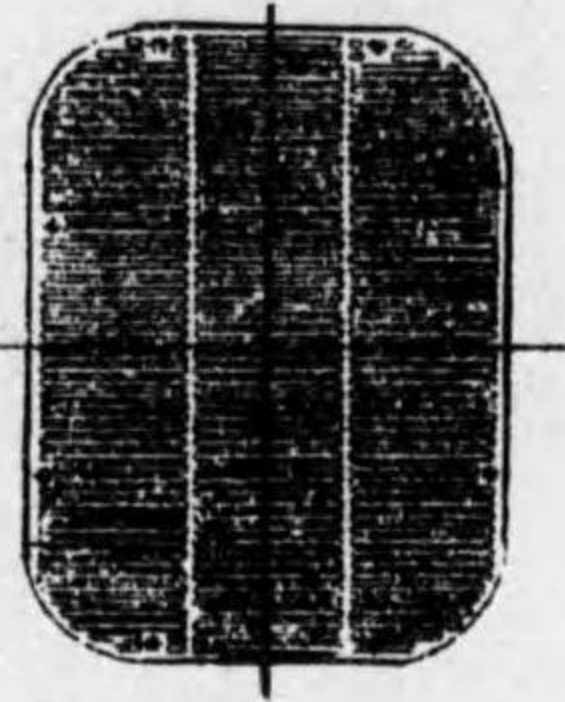
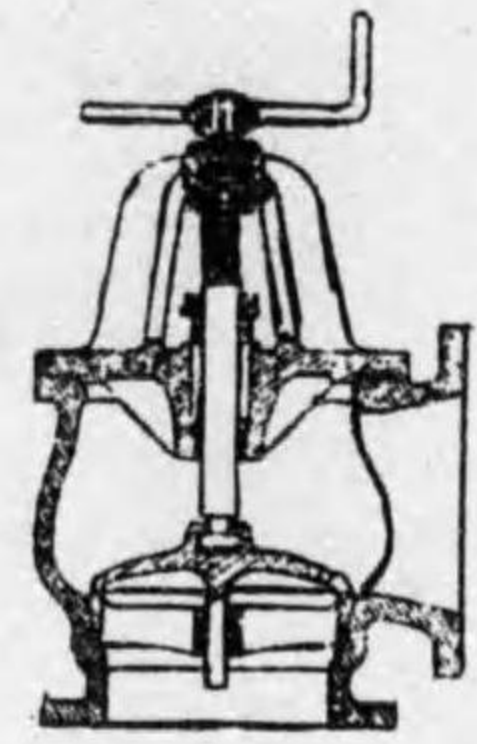
第 86 圖



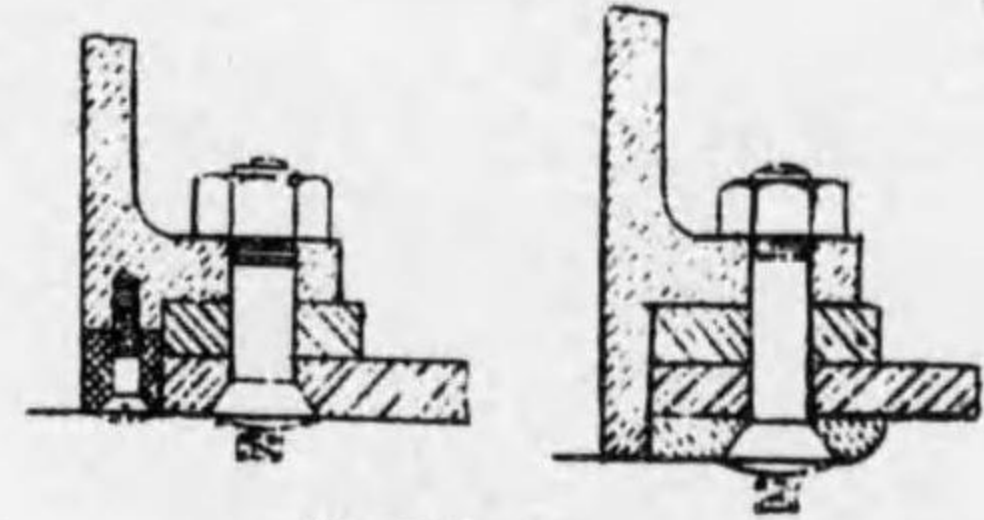
第 85 圖 B



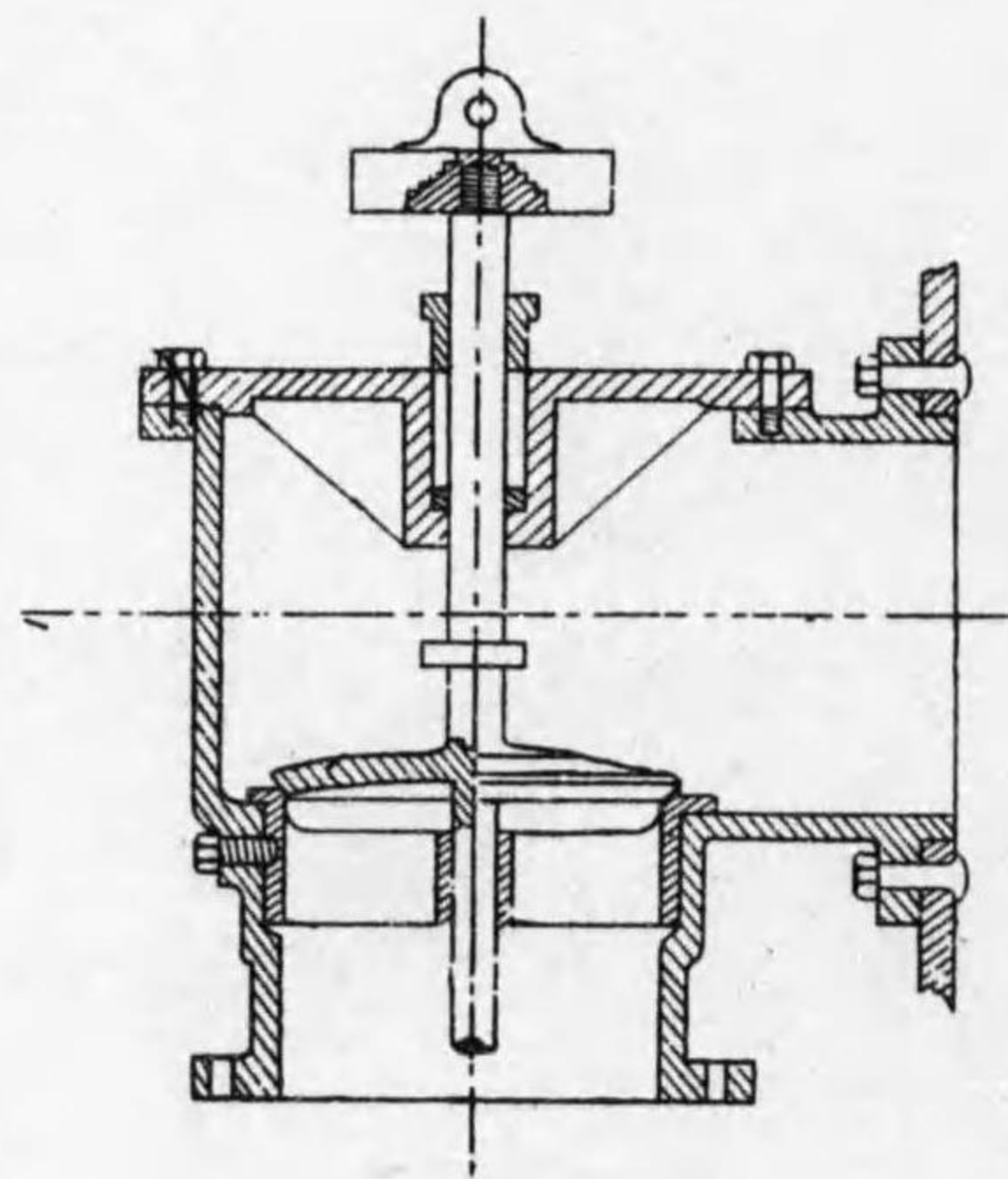
第 87 圖



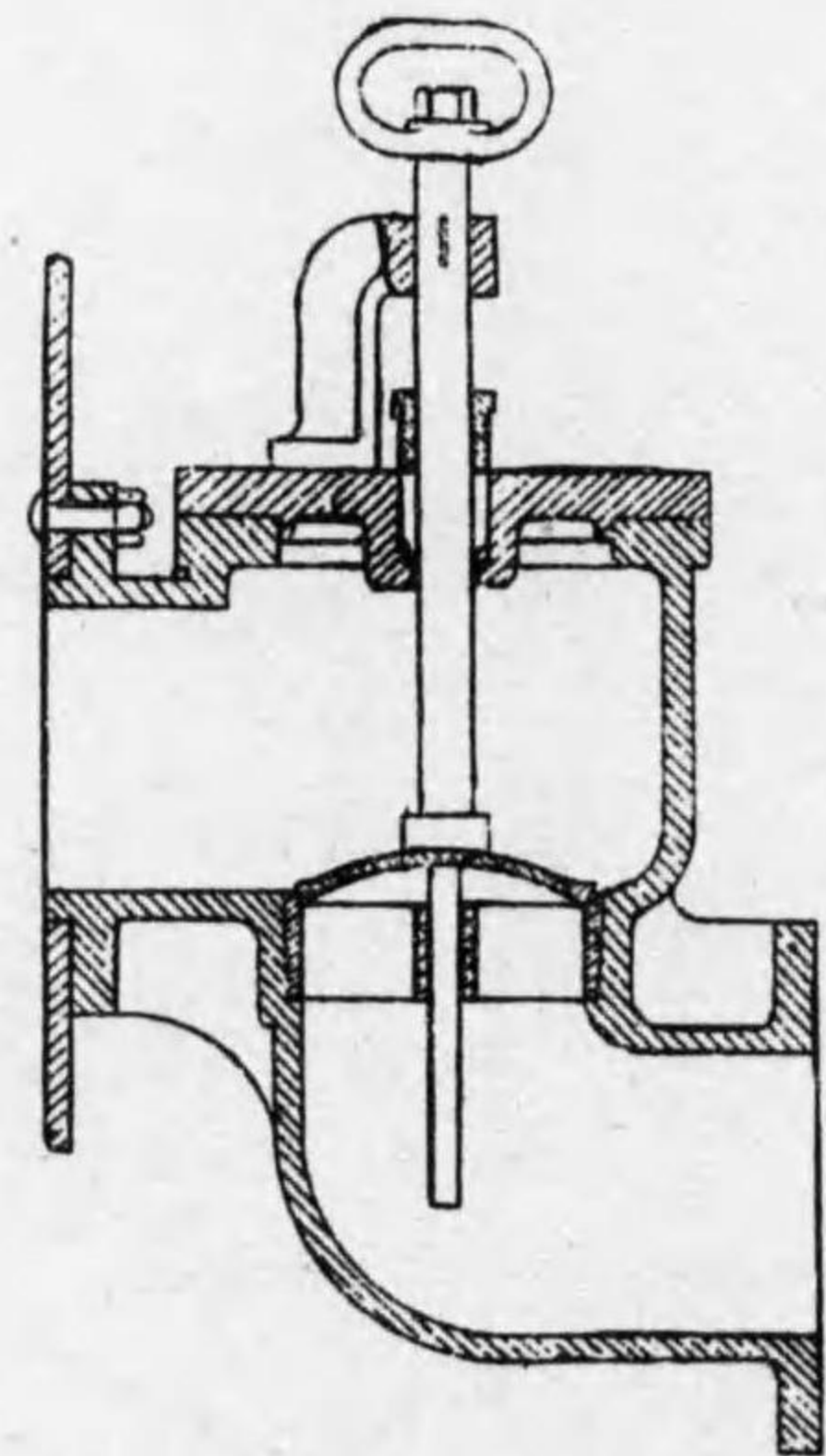
第 88 圖



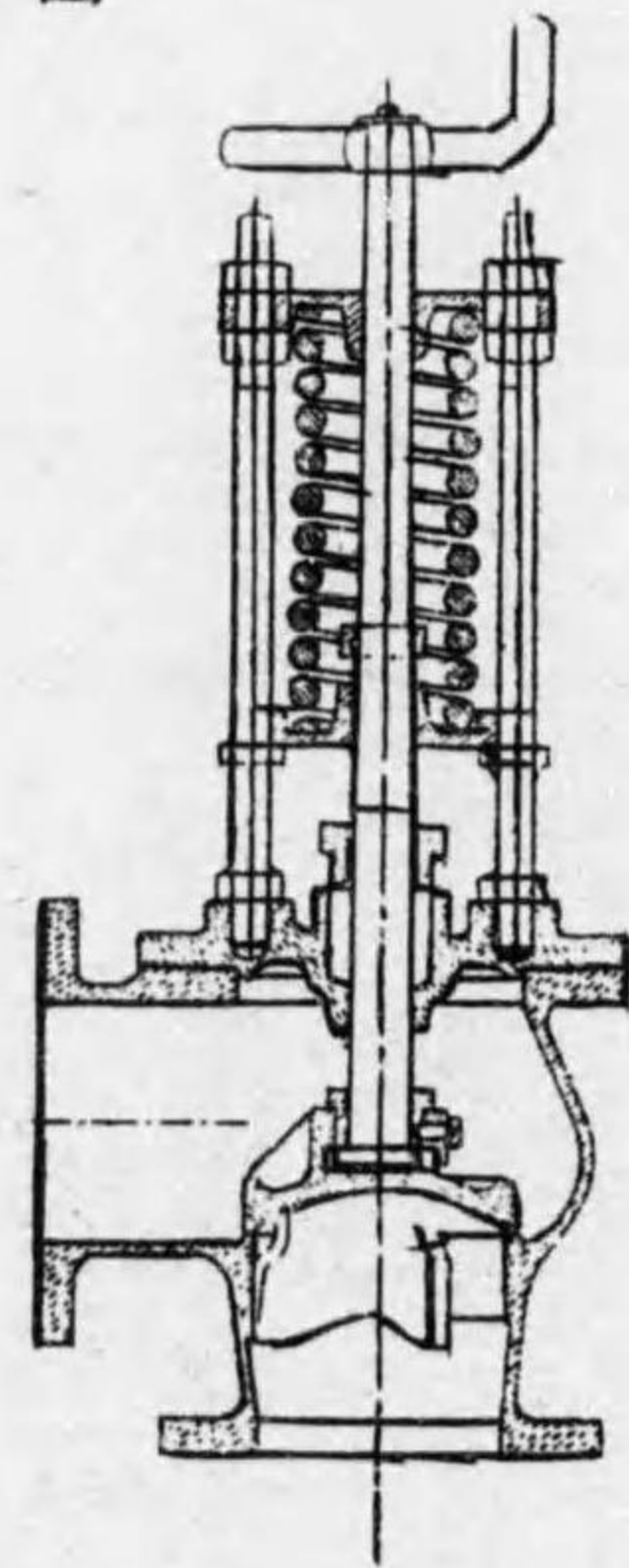
第 89 圖



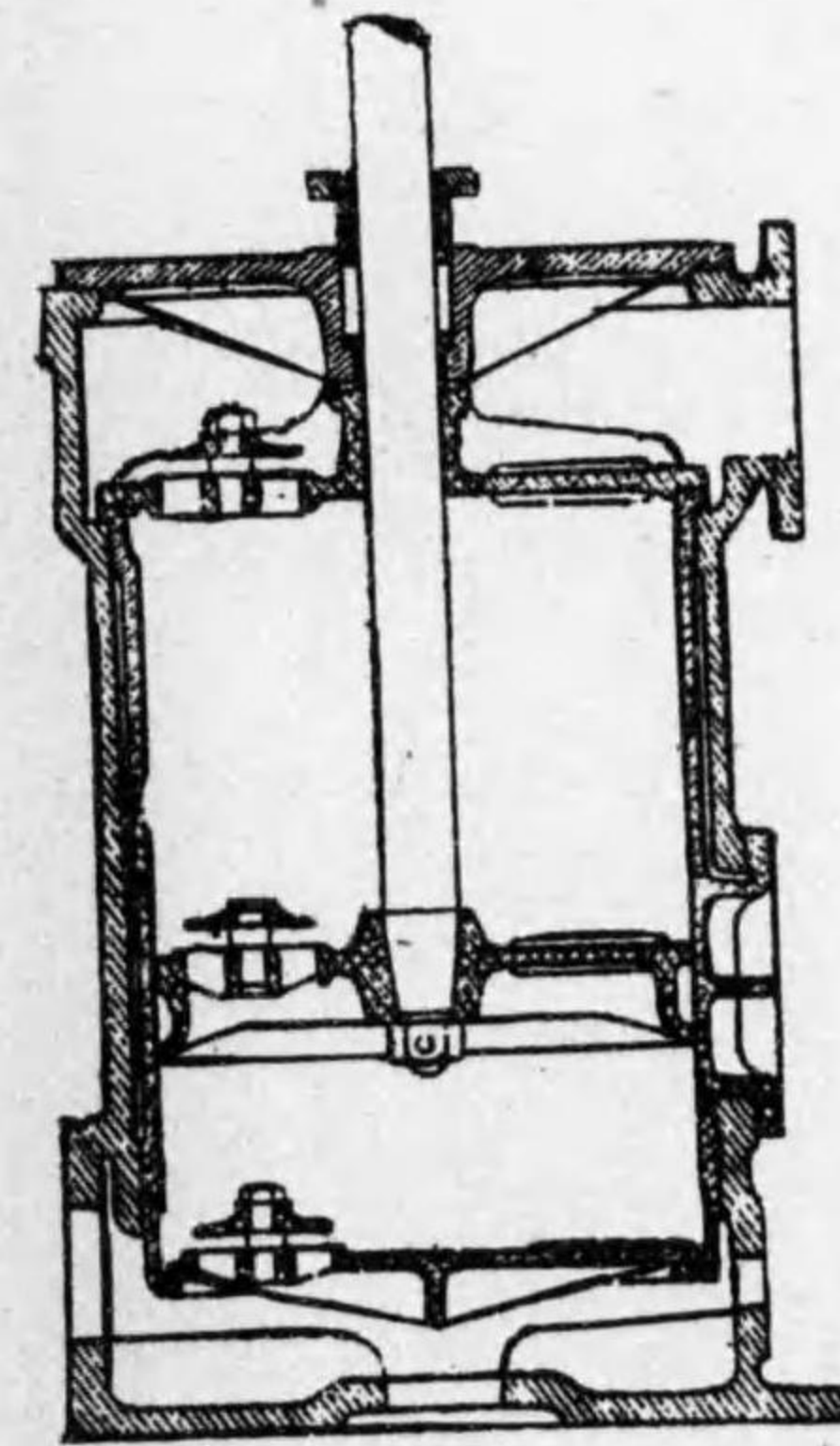
第 90 圖 A



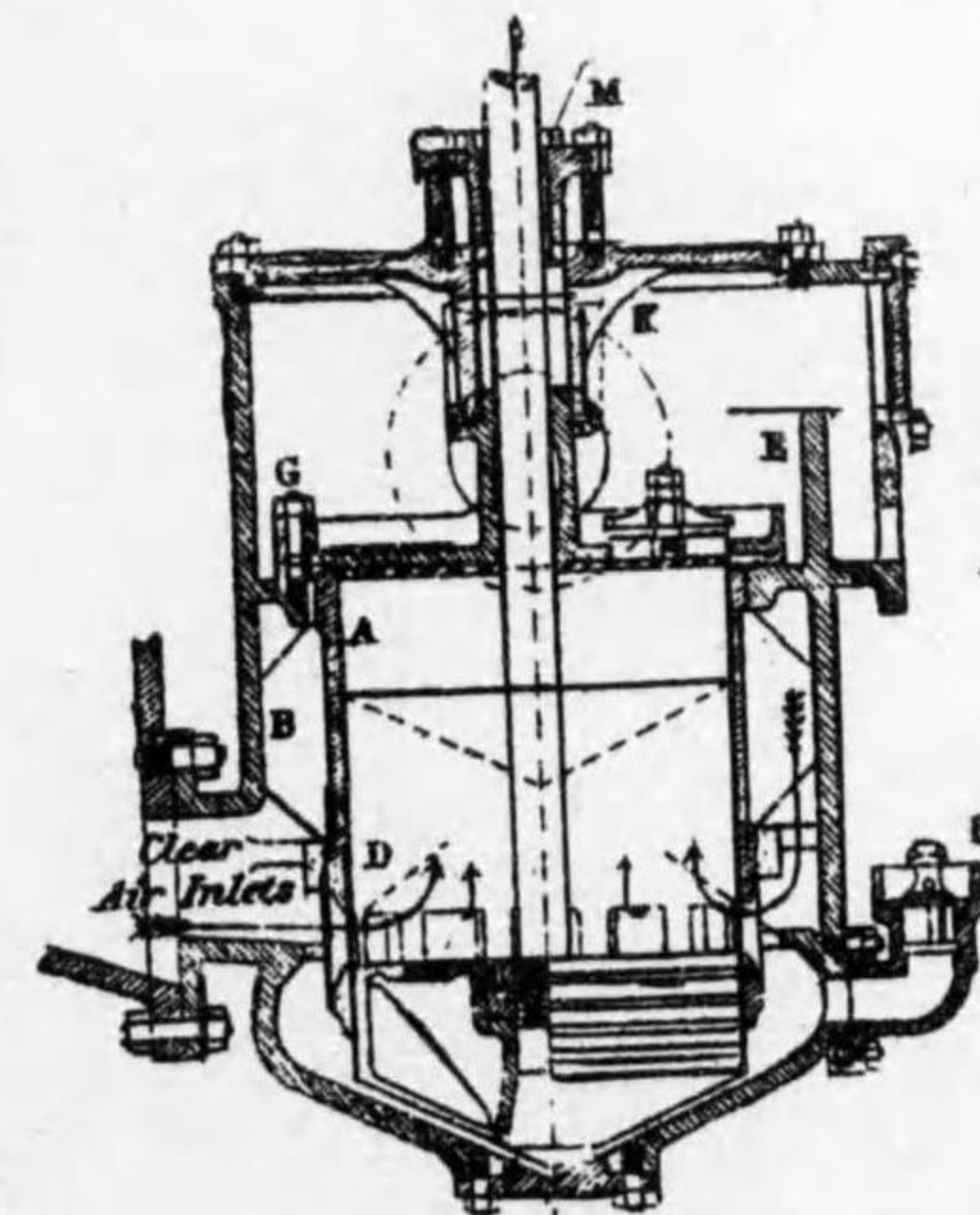
第 90 圖 B



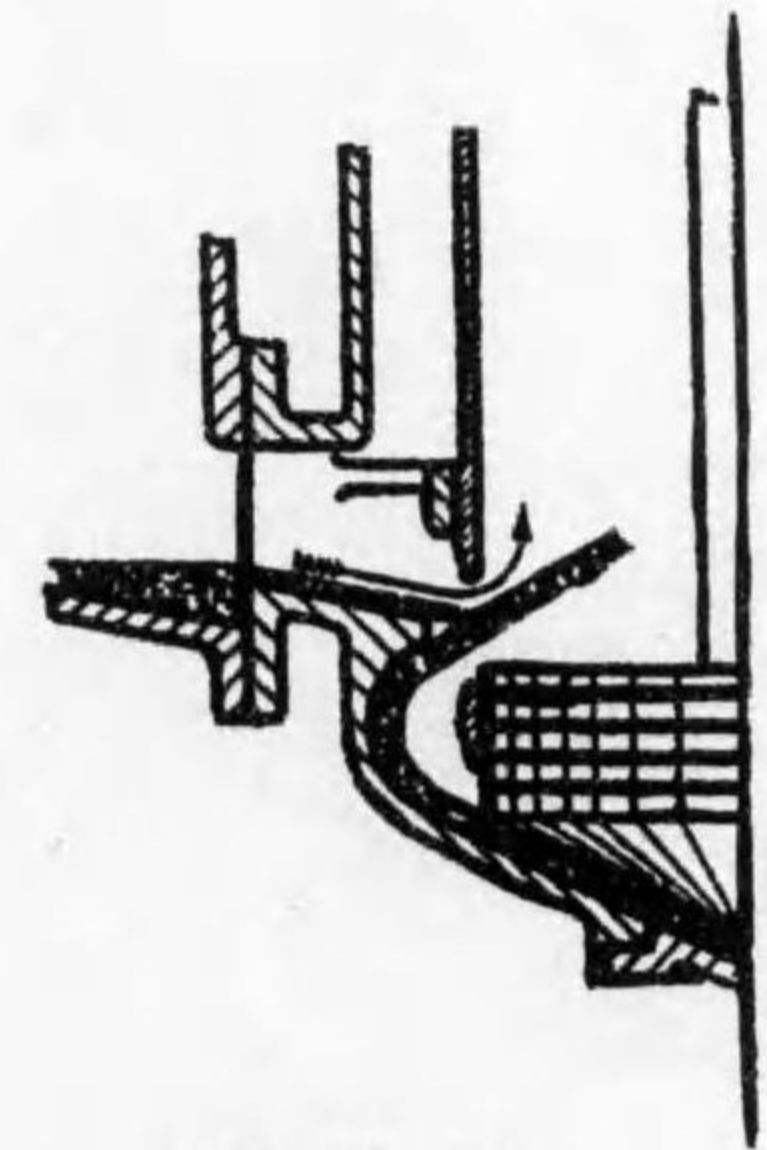
第 90 圖 C



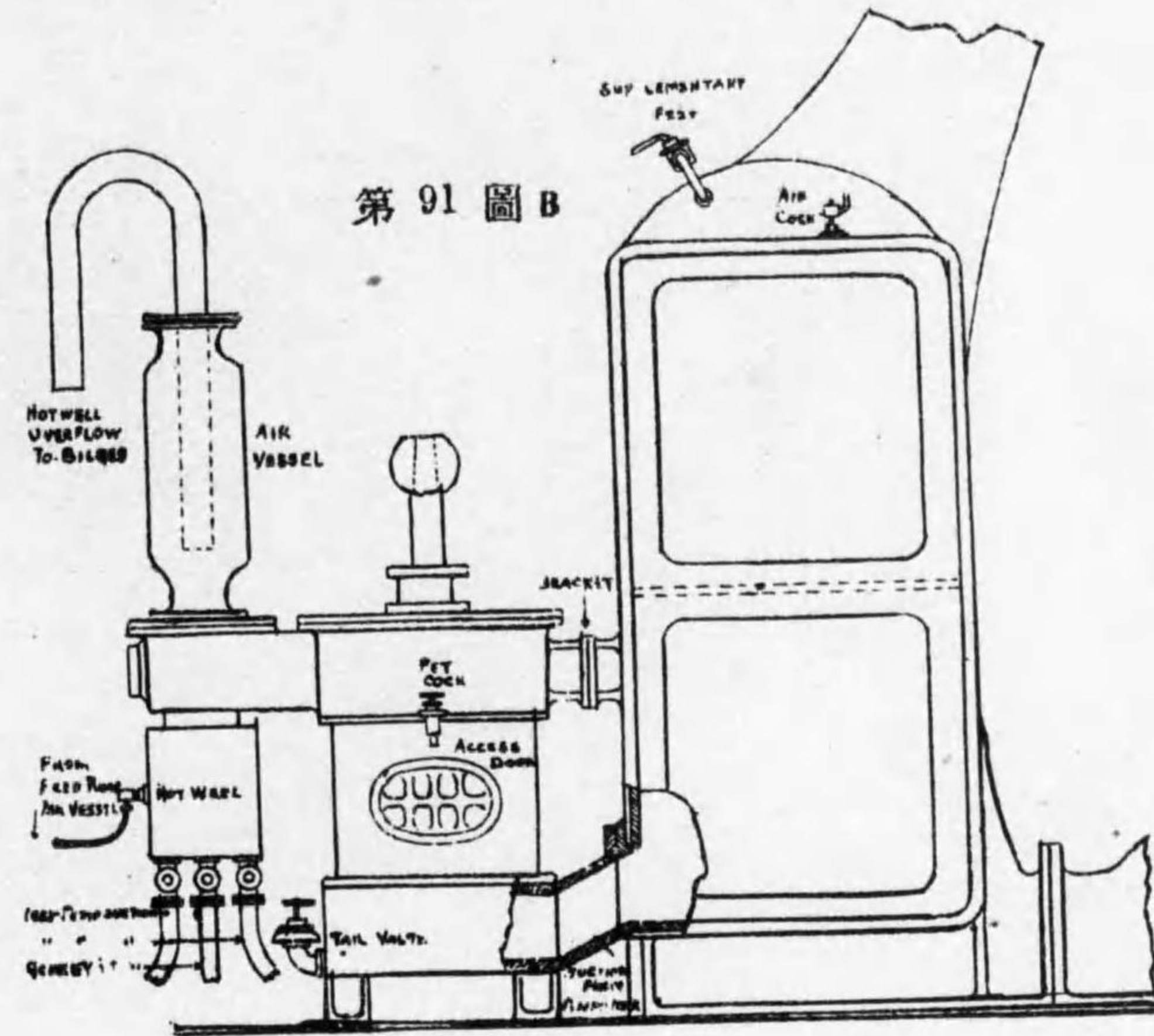
第 91 圖 A



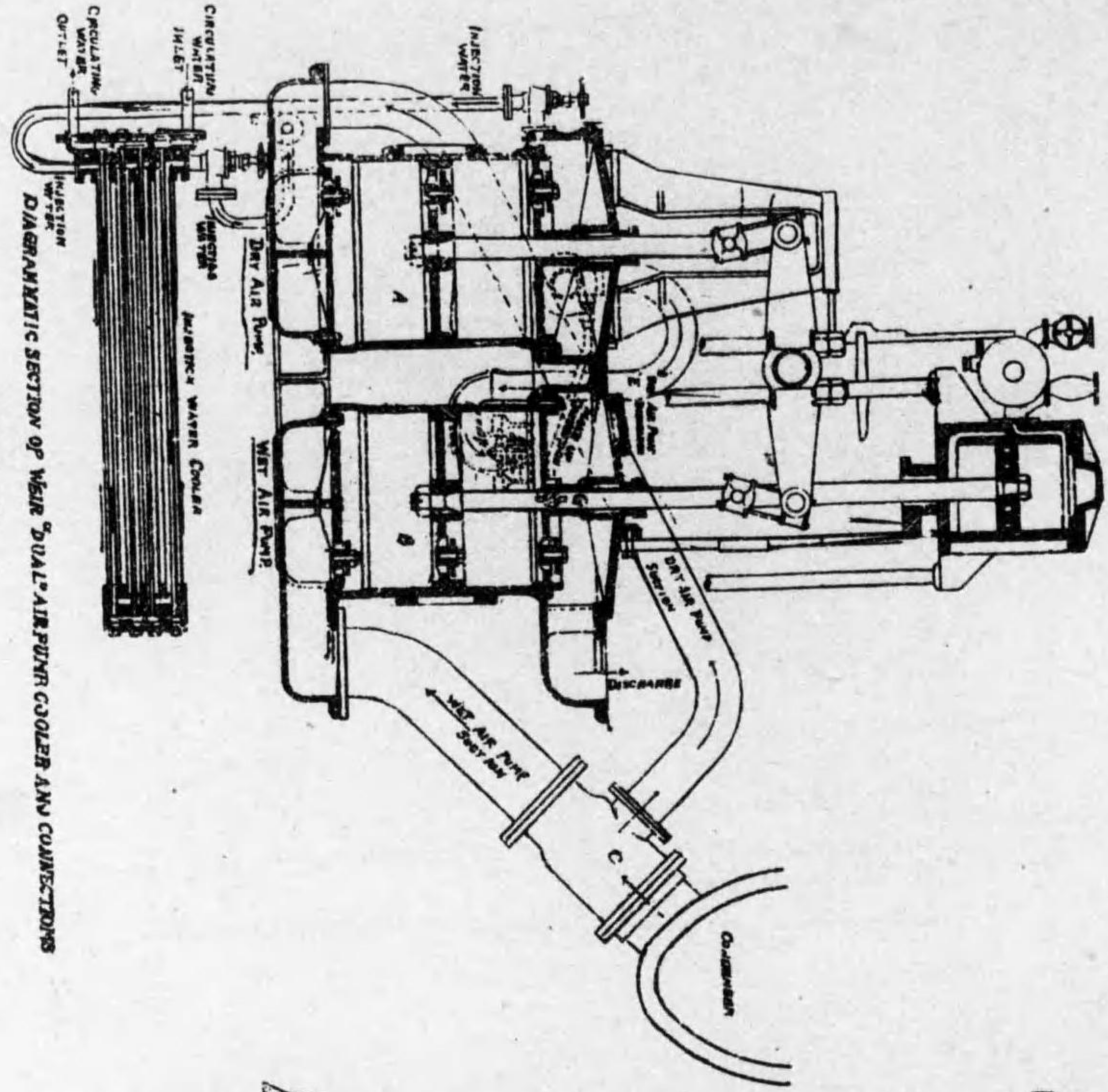
第 92 圖 A



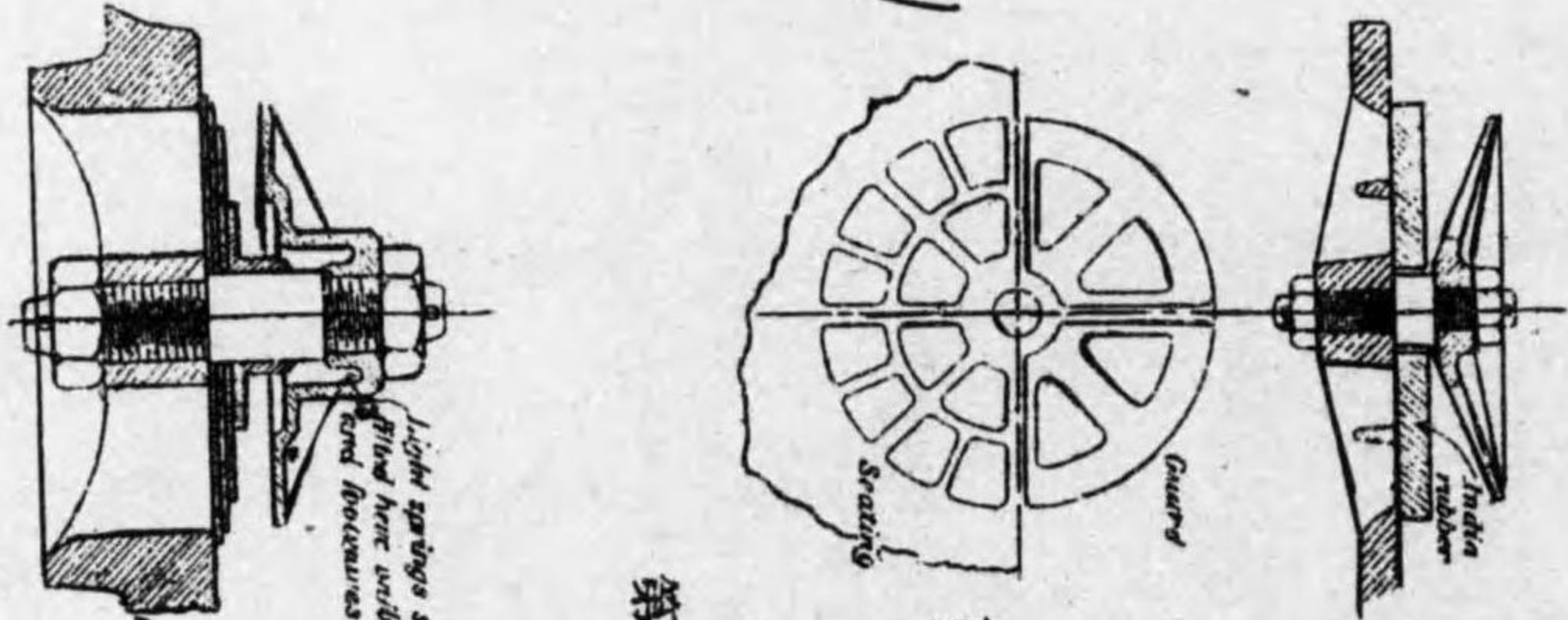
第 92 圖 B



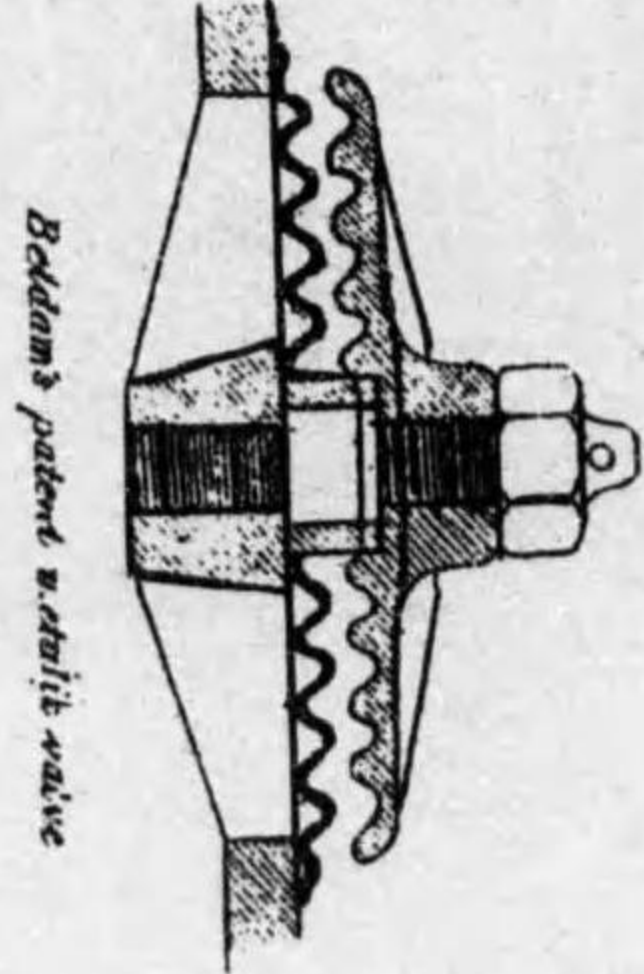
第 91 圖 B



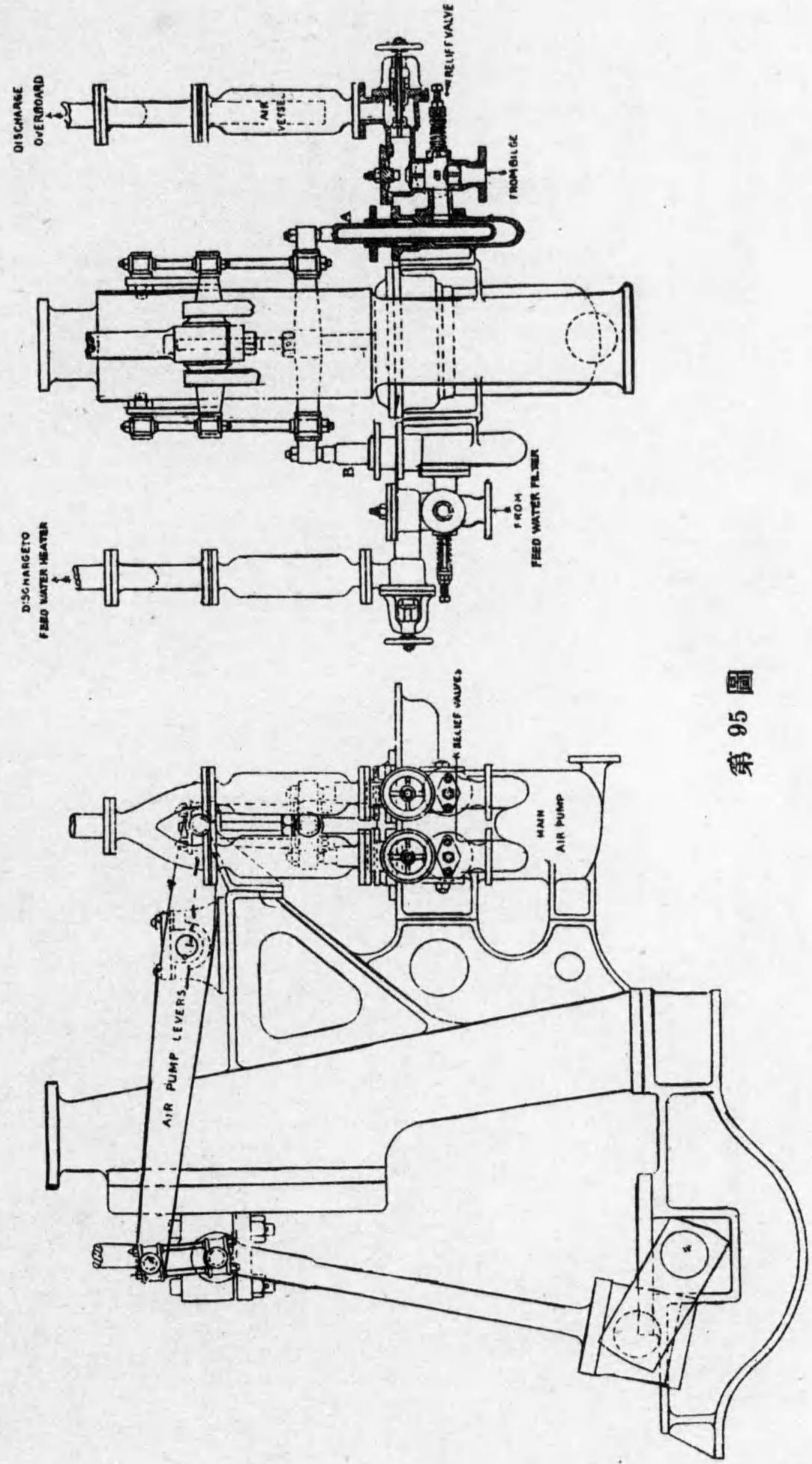
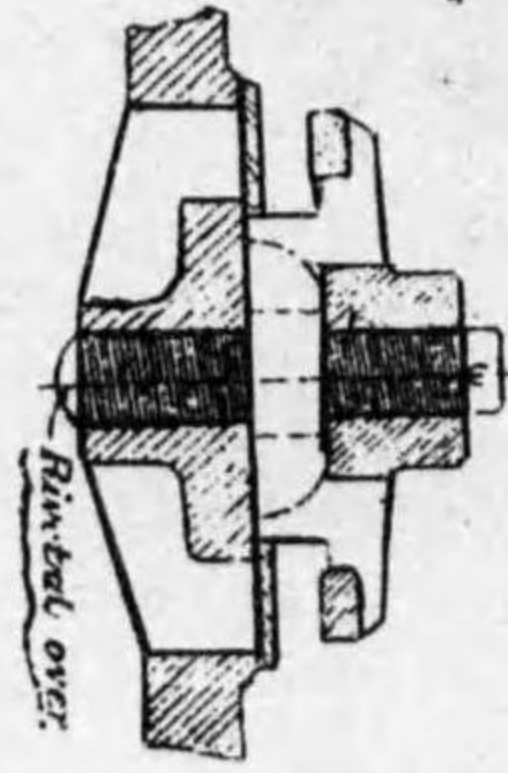
第 93 圖



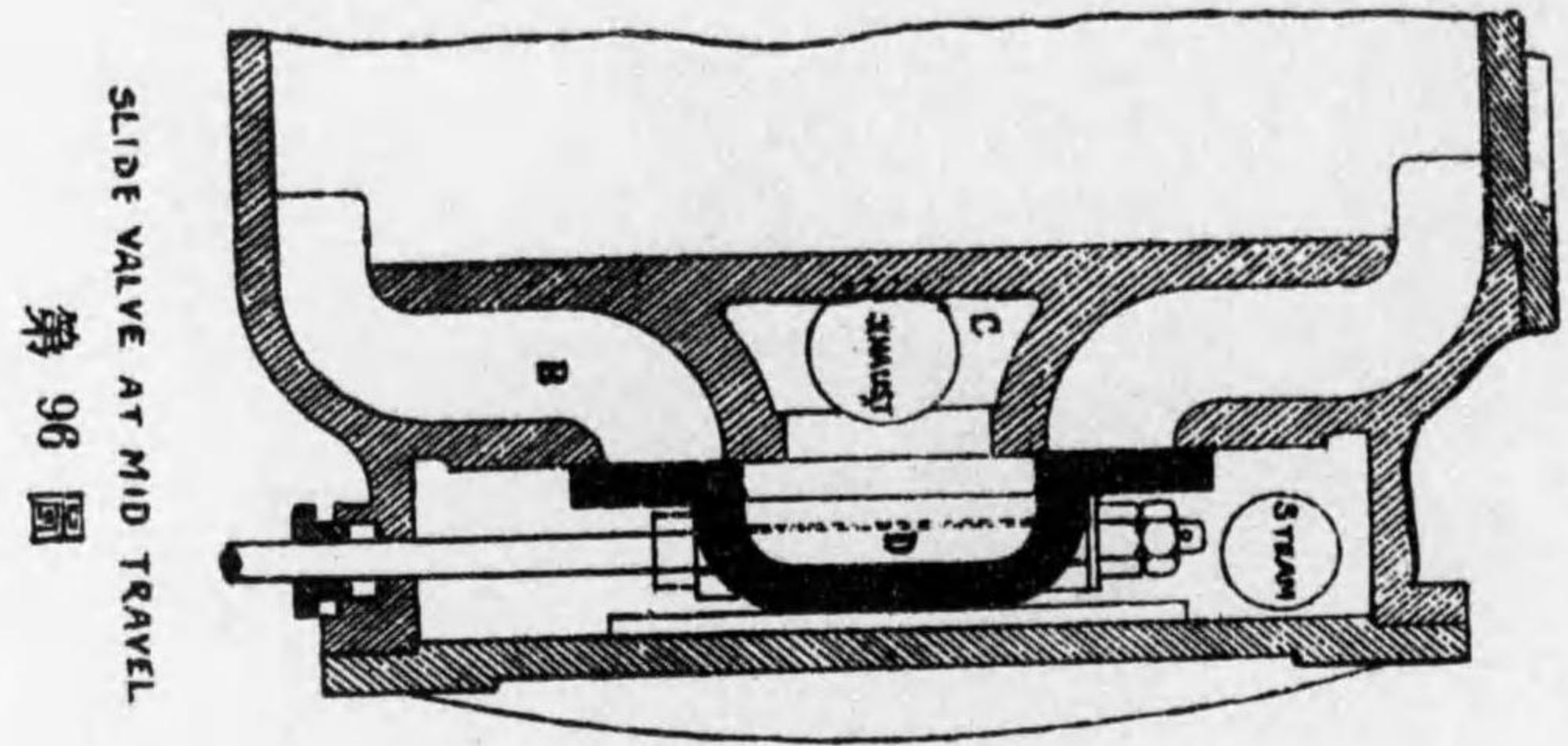
第 94 圖 A



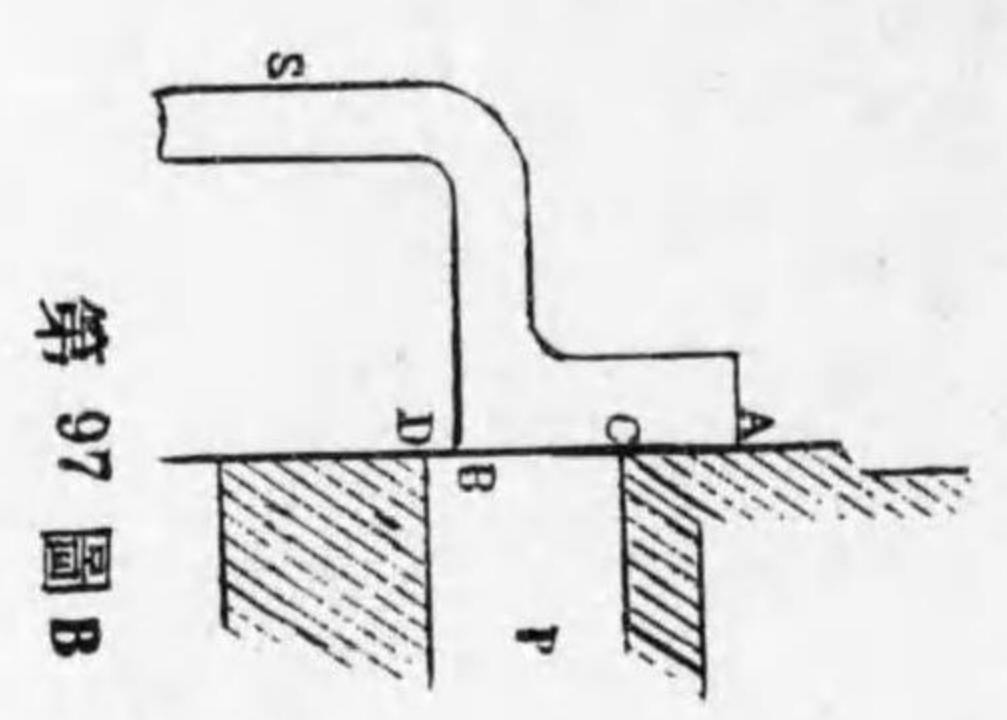
第 94 圖 B



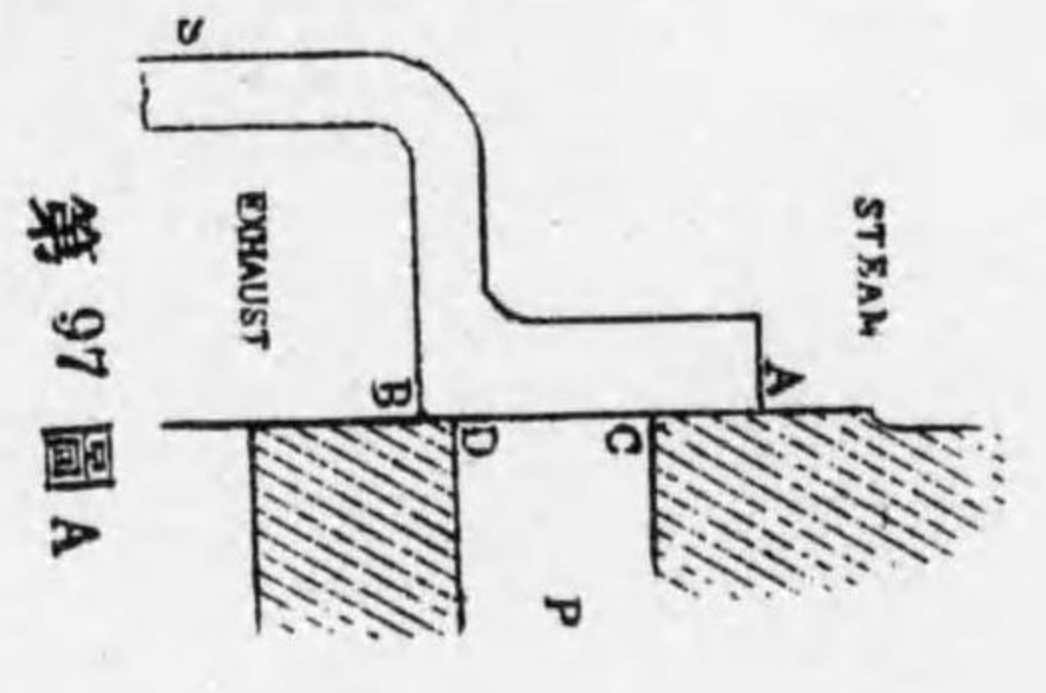
第 95 圖



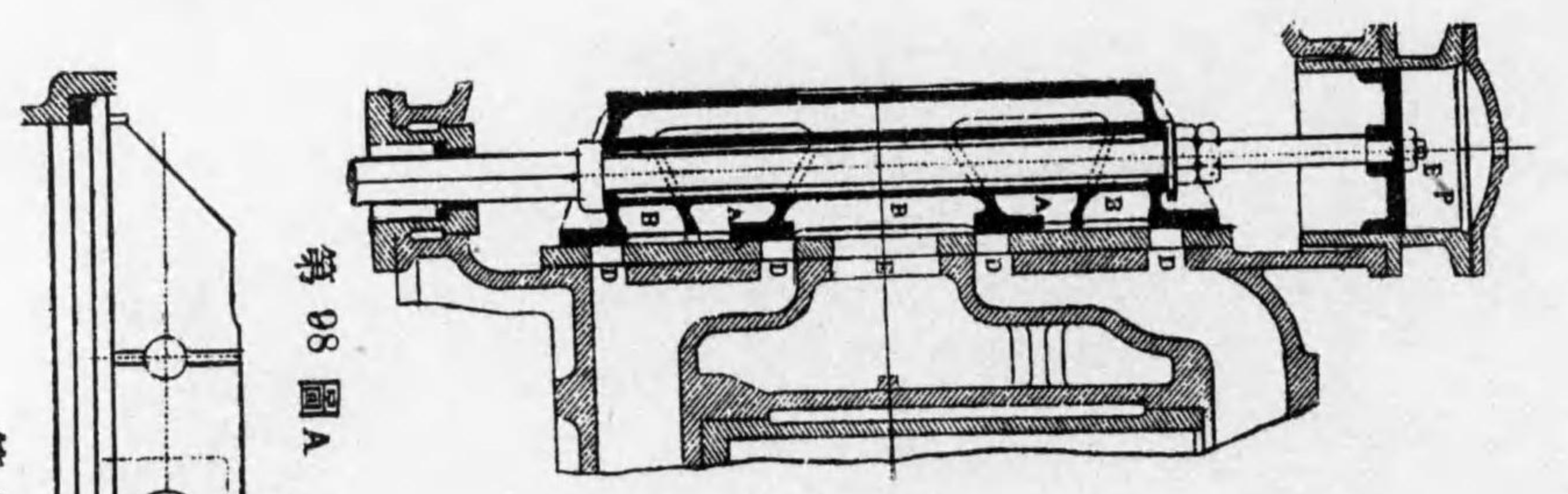
SLIDE VALVE AT MID TRAVEL
第 96 圖



第 97 圖 B

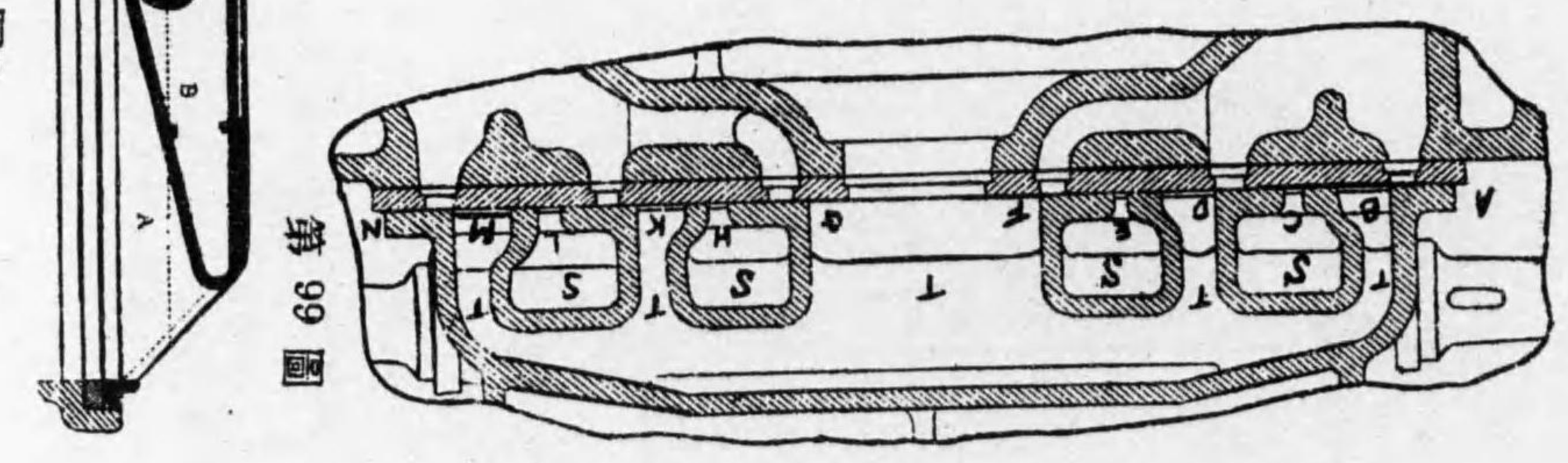


第 97 圖 A

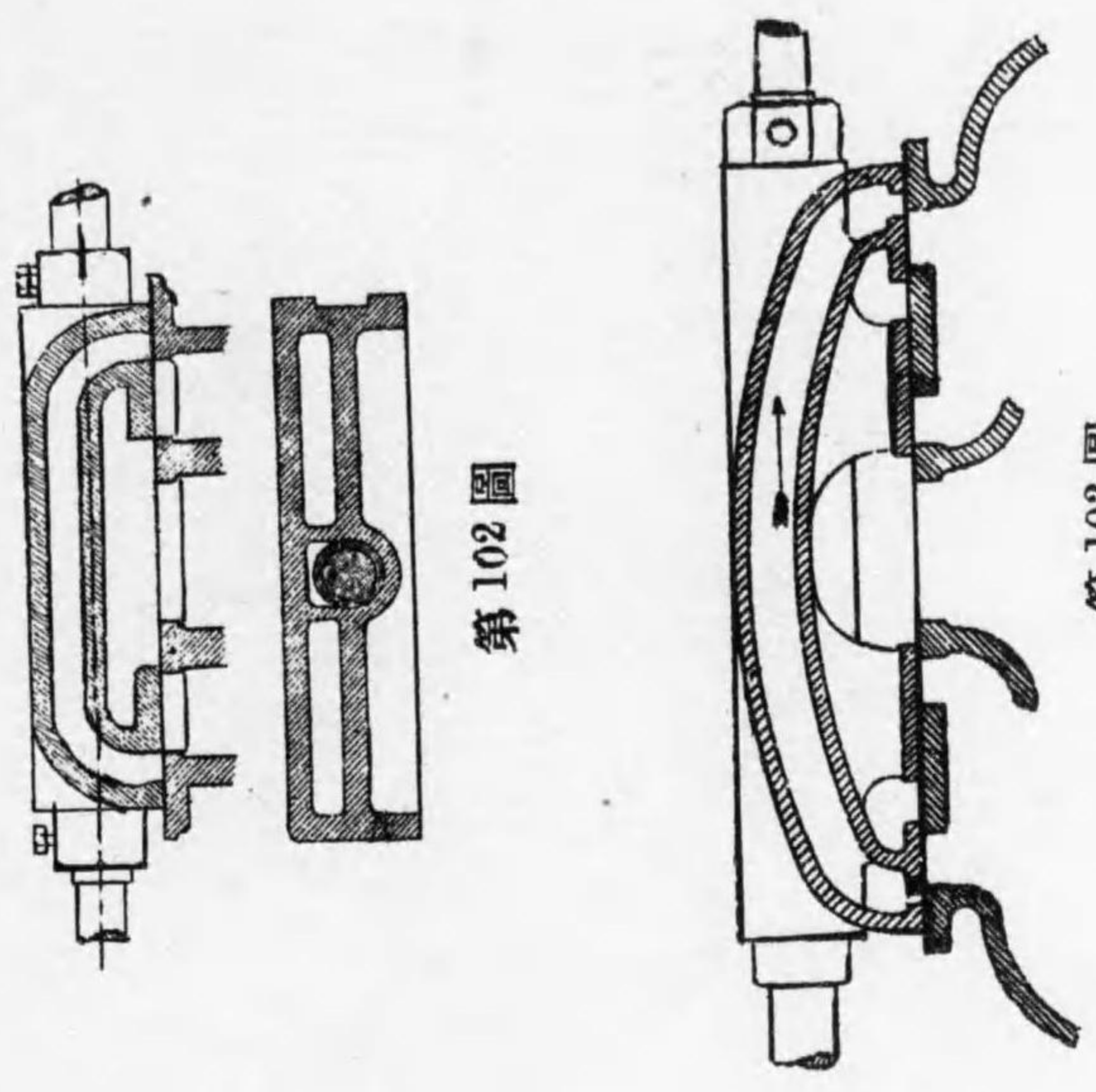


第 98 圖 A

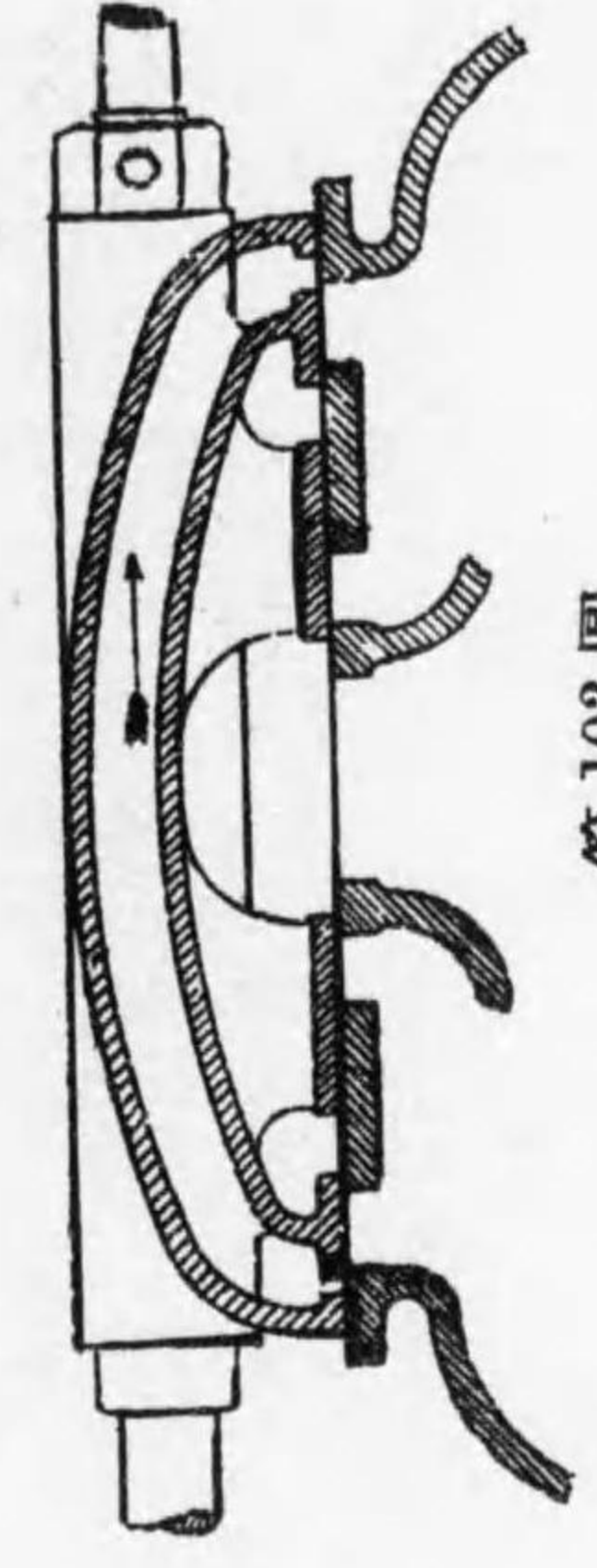
第 98 圖 B



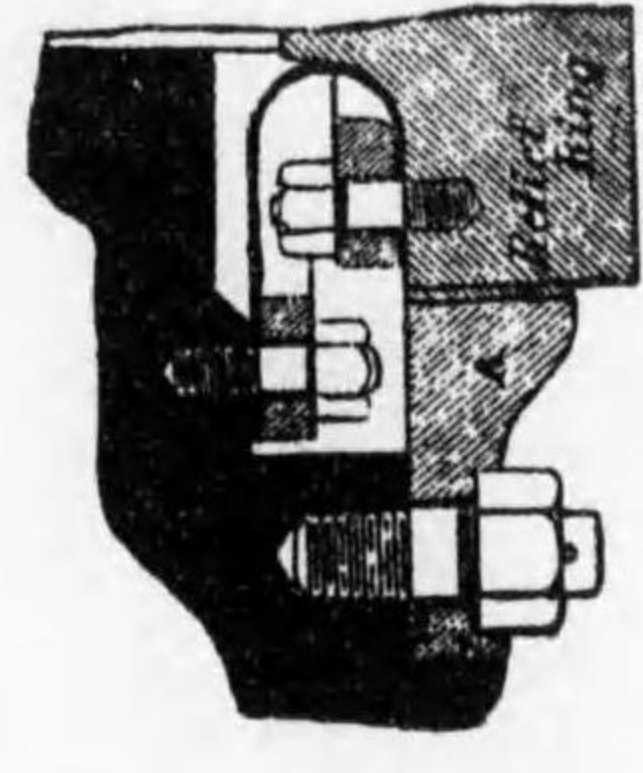
第 99 圖



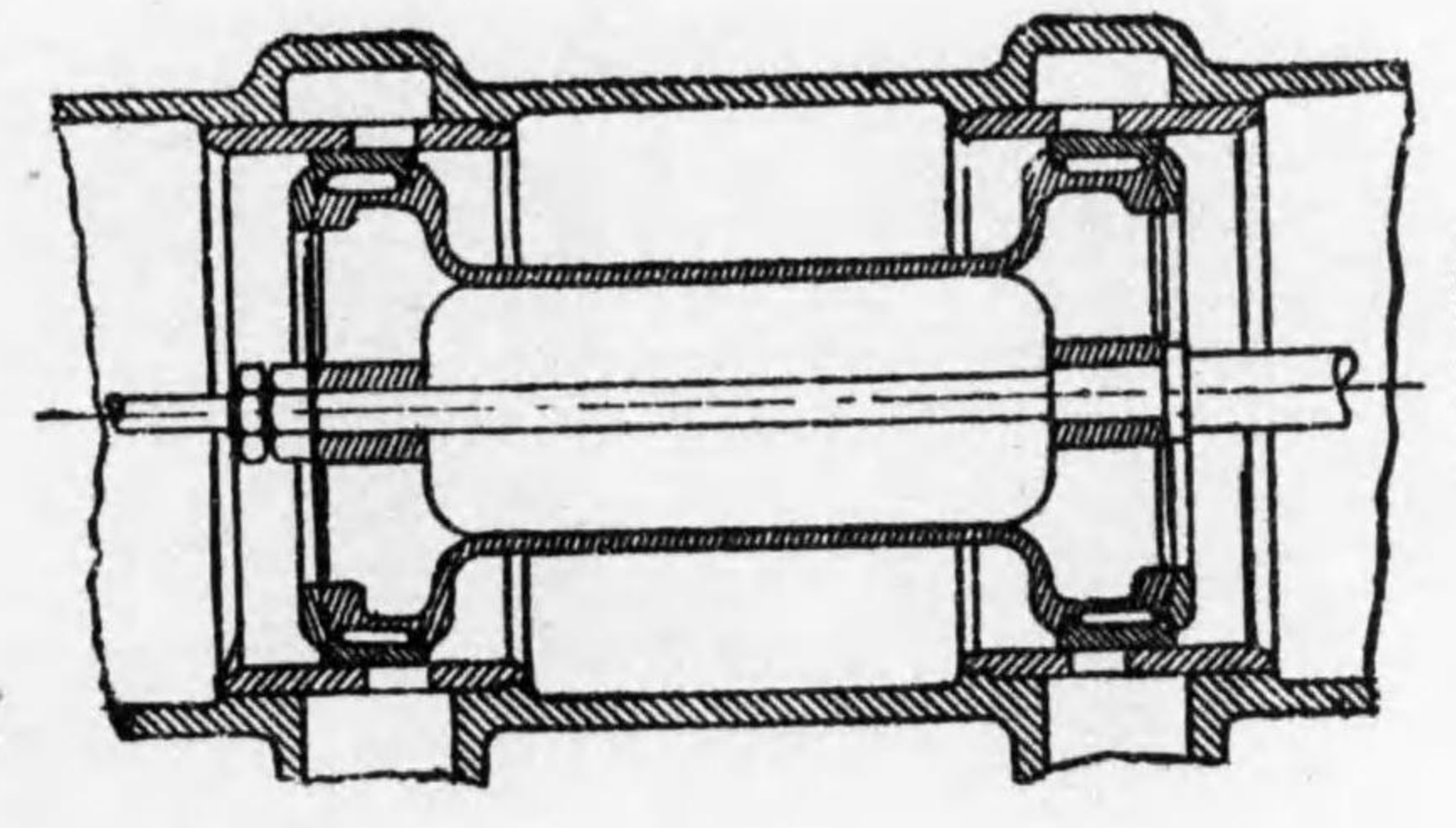
第 102 圖



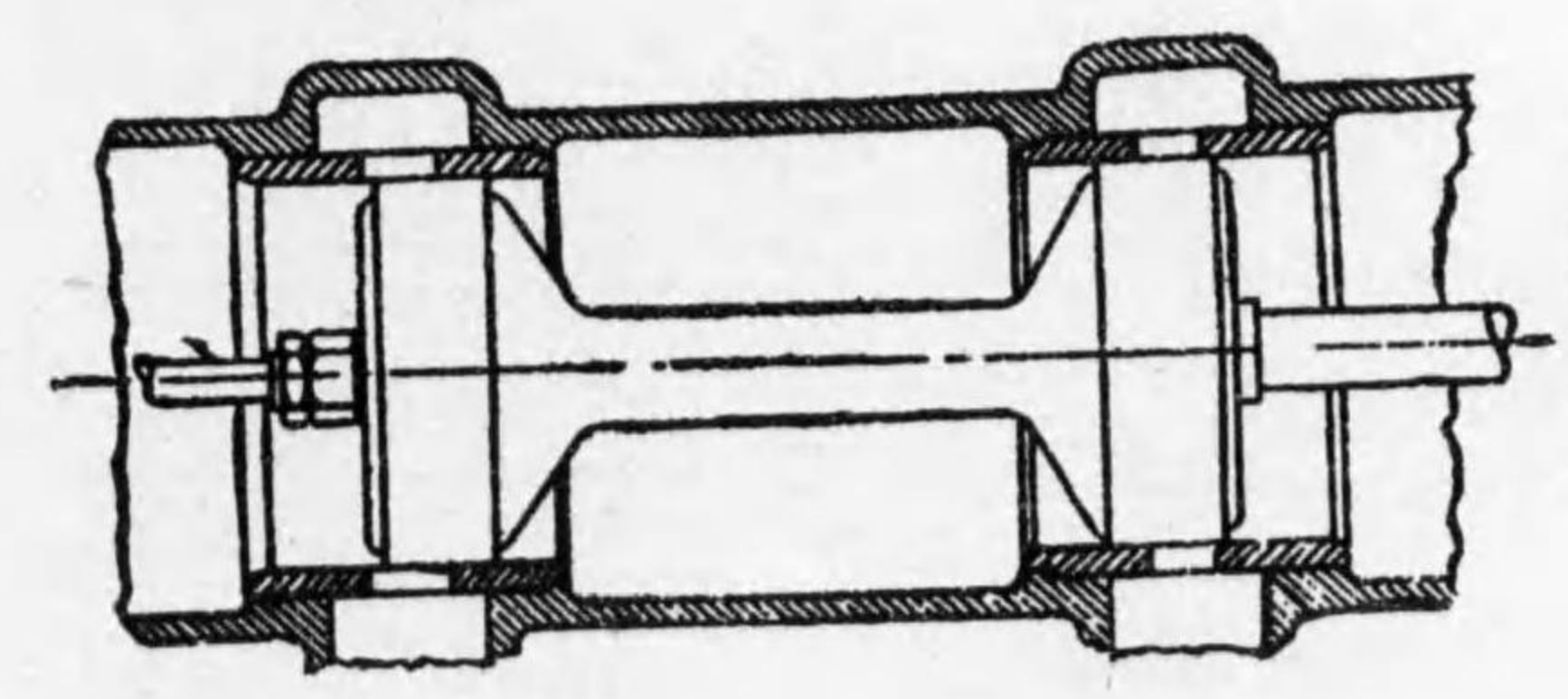
第 103 圖



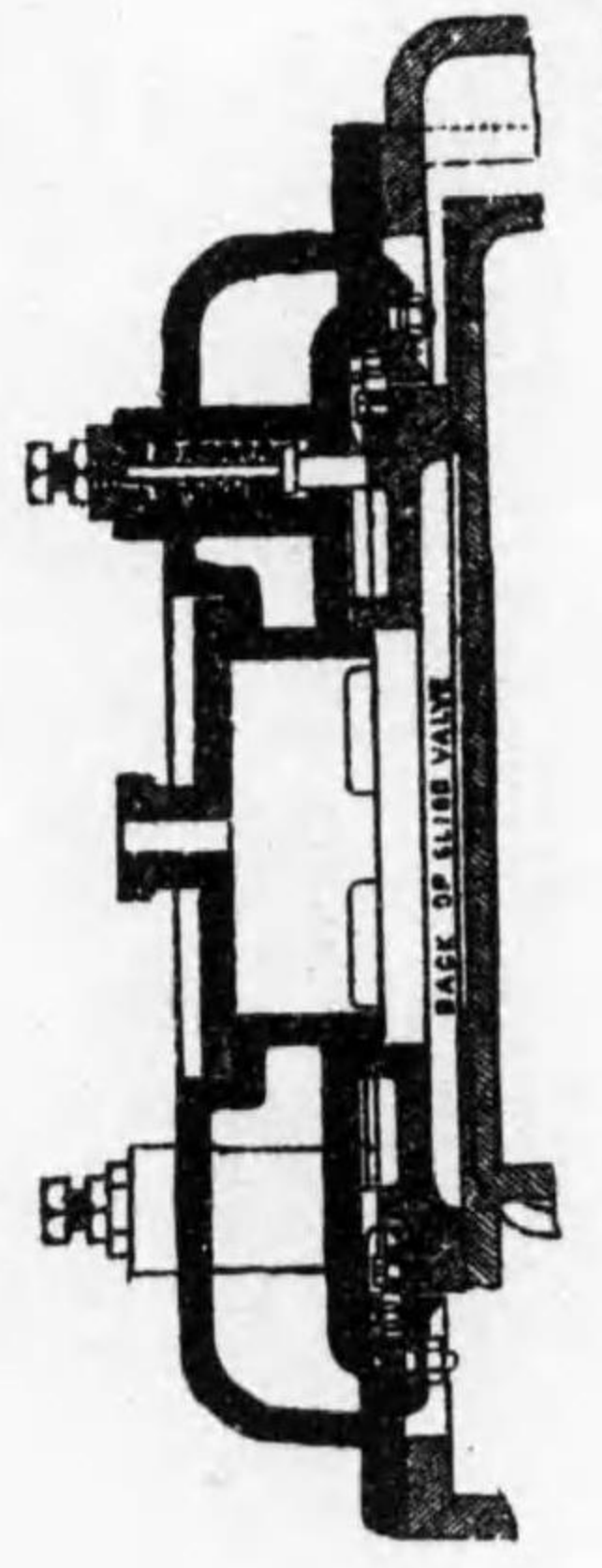
第 101 圖

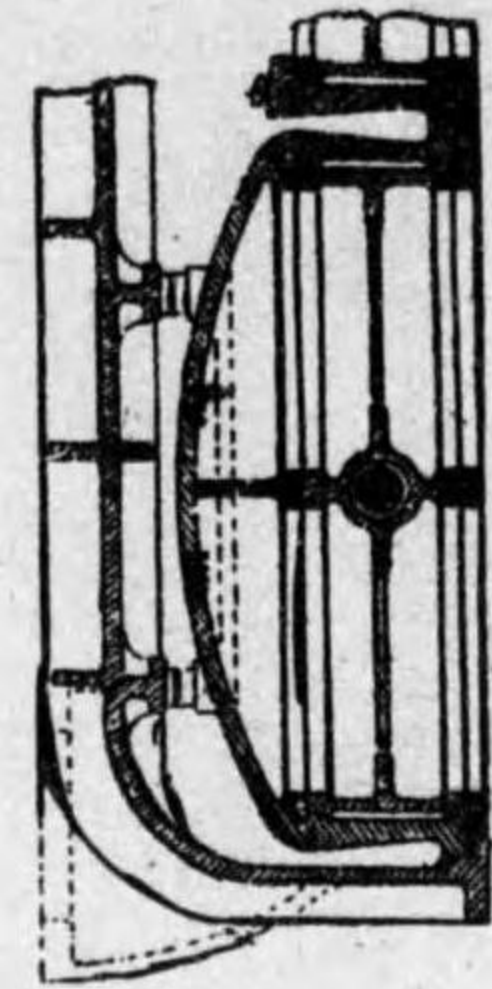
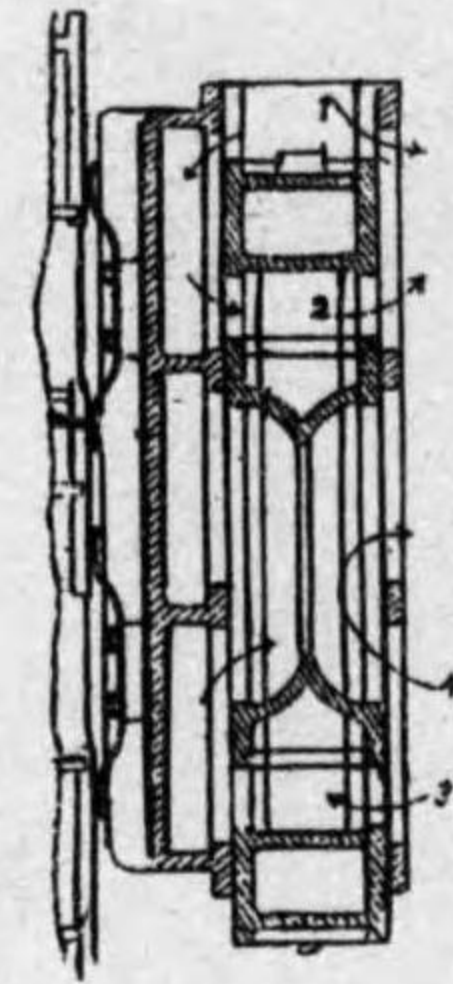
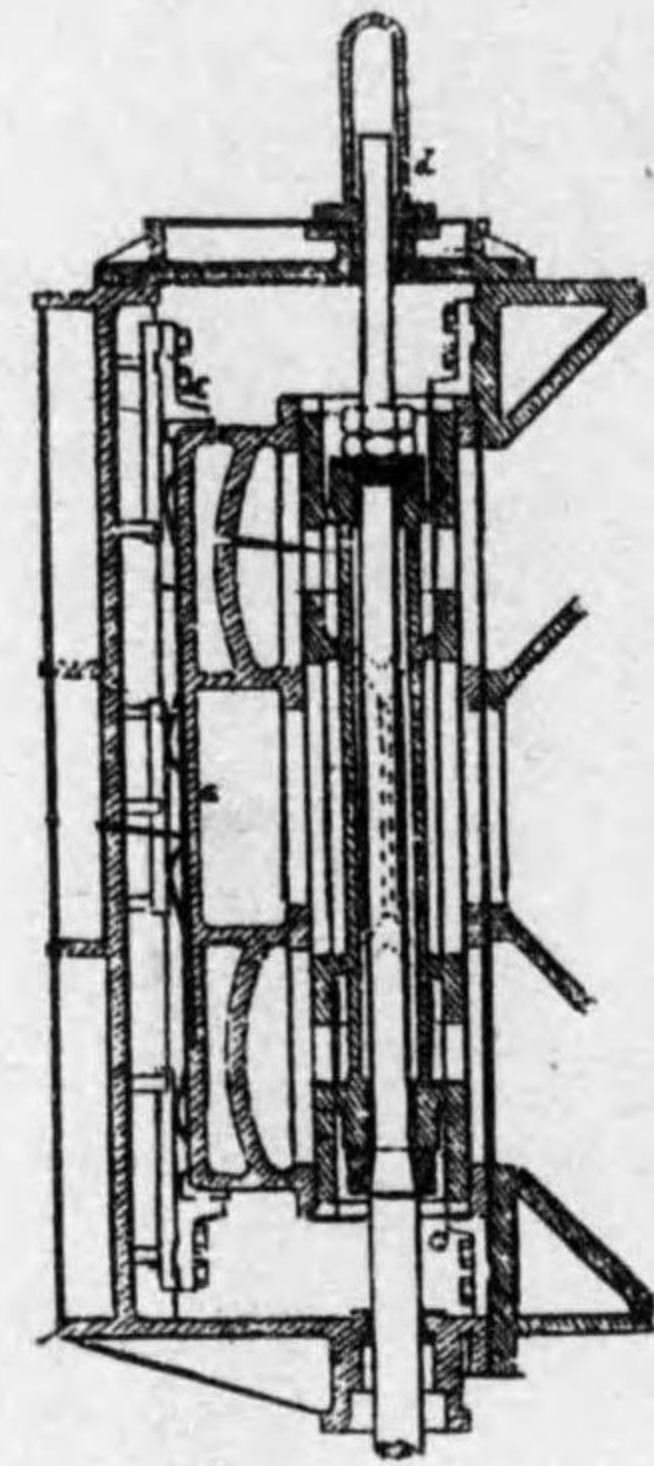


第 100 圖 B

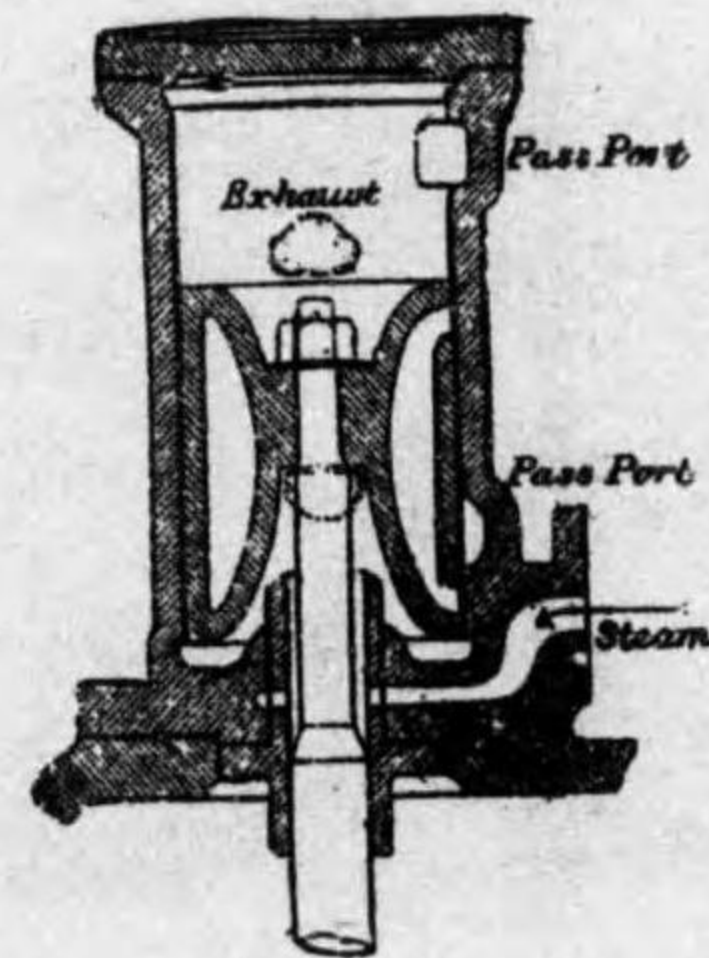
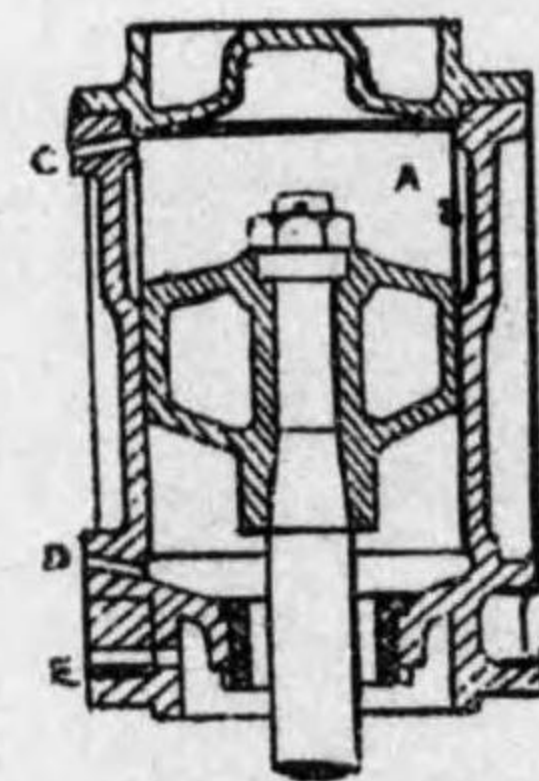
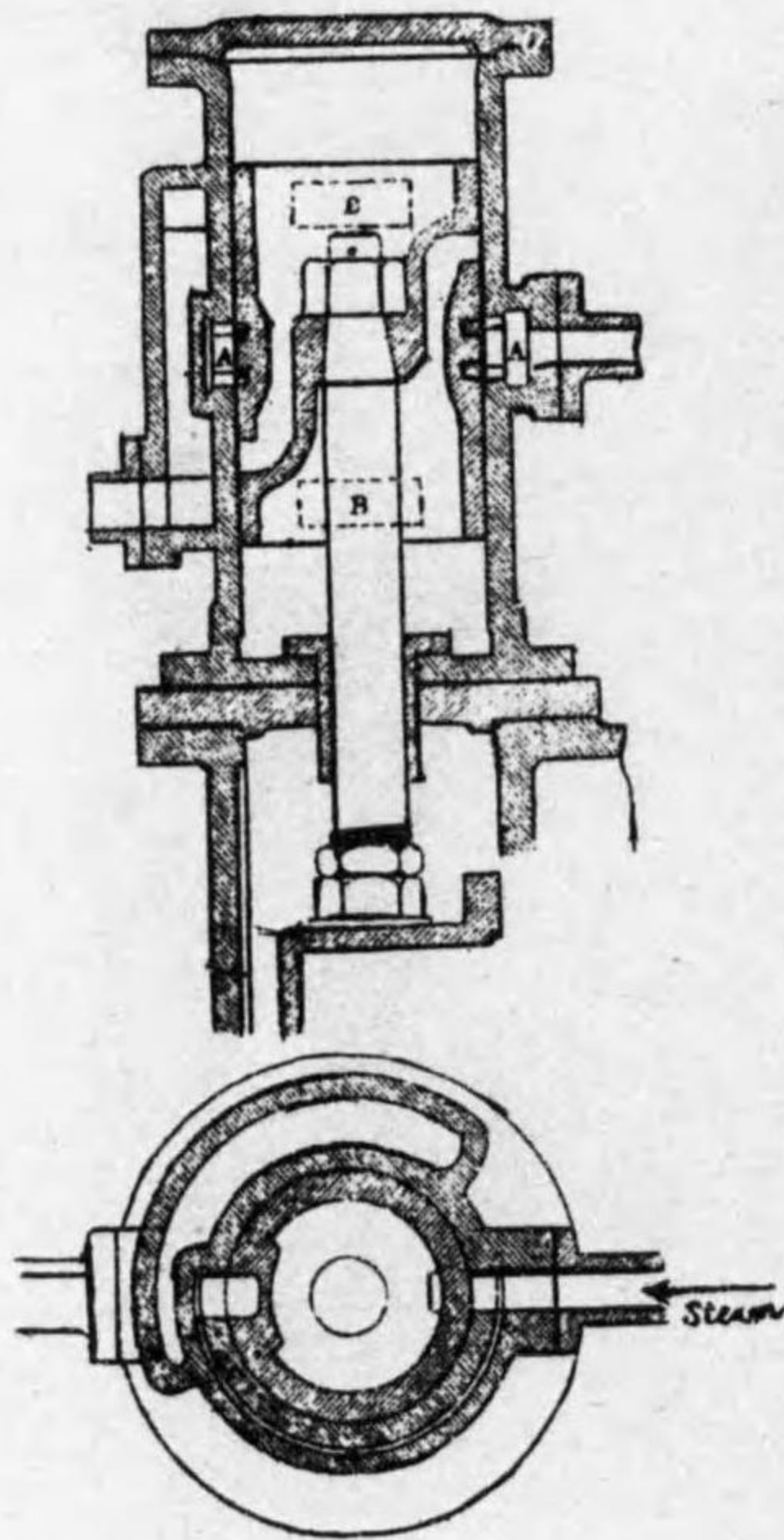


第 100 圖 A

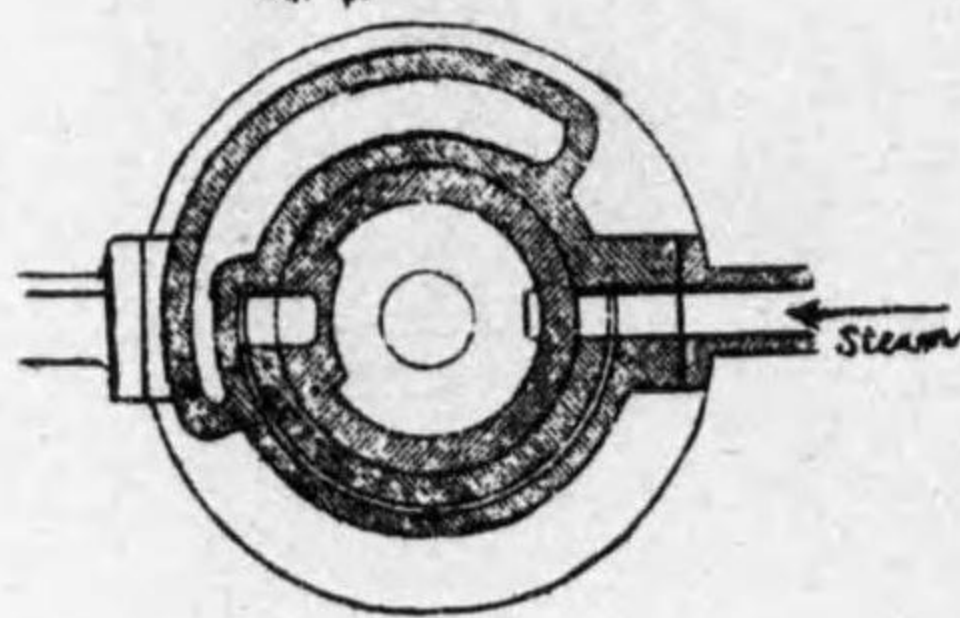




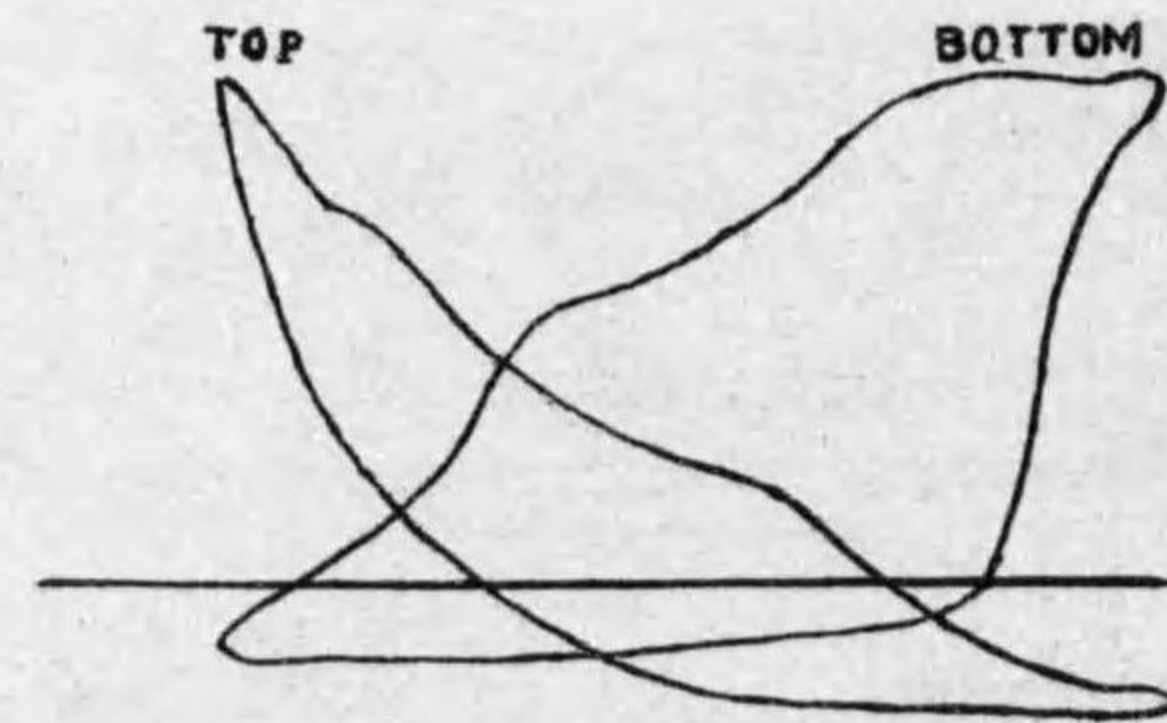
第 104 圖



第 105 圖

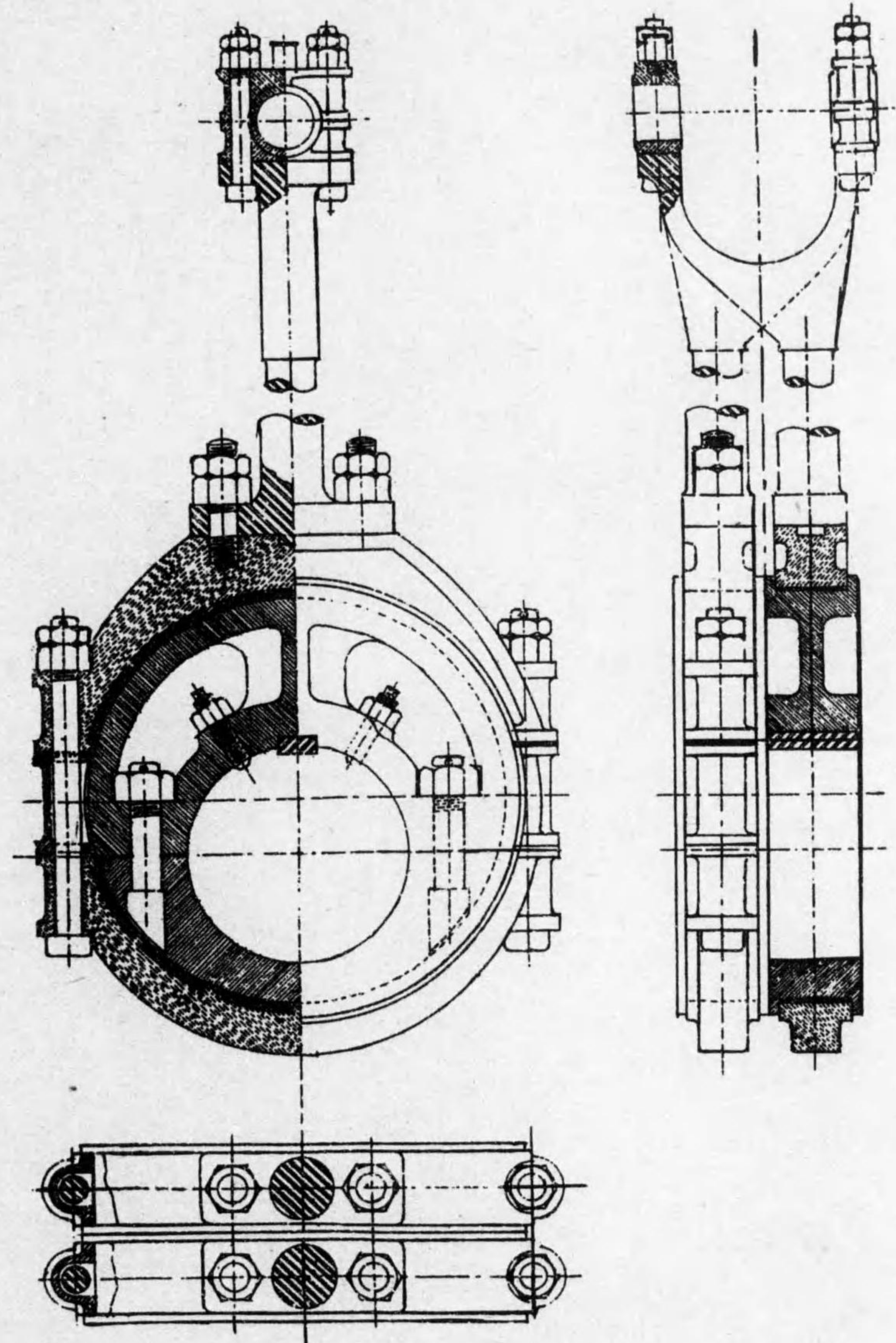


A

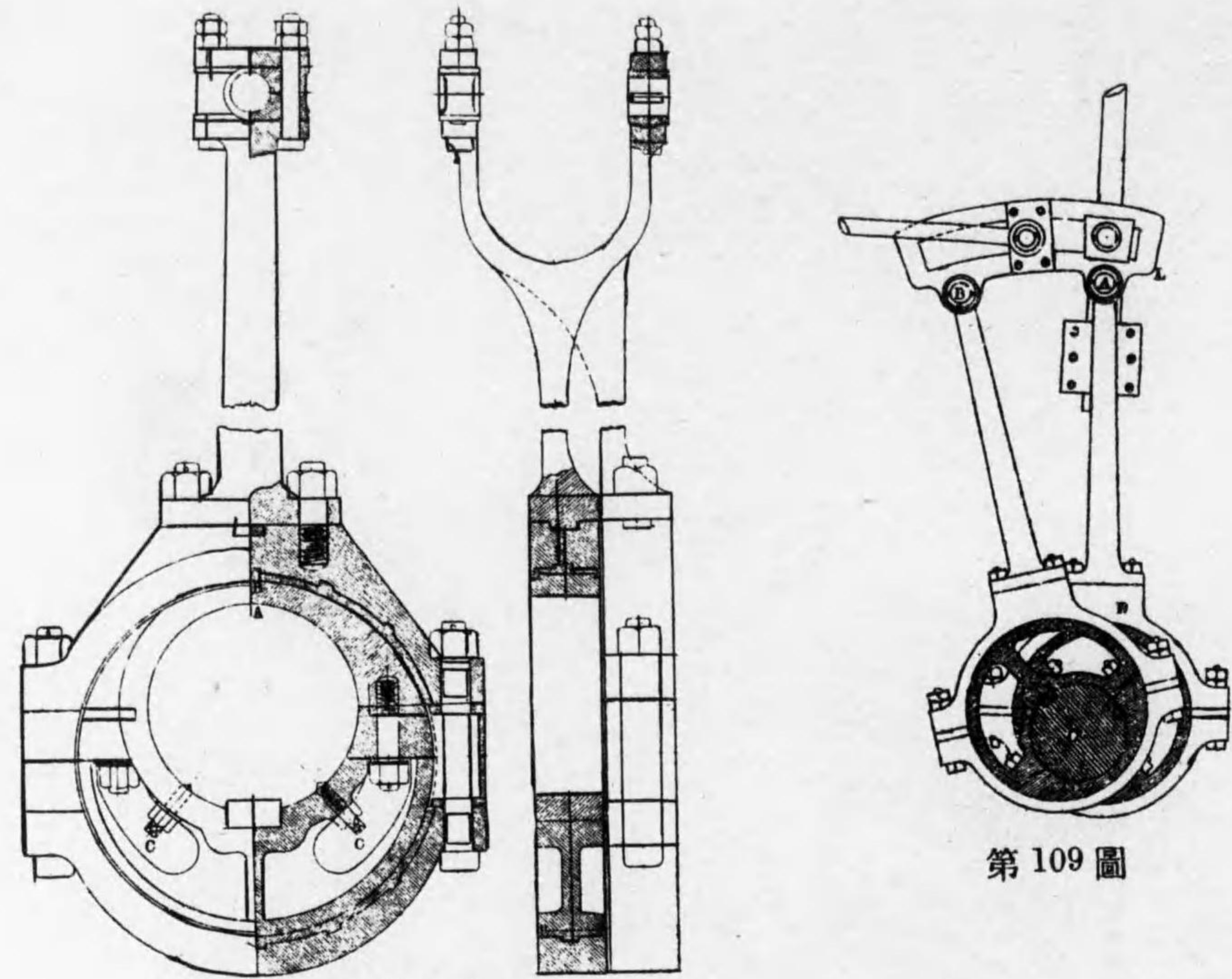


第 106 圖

C

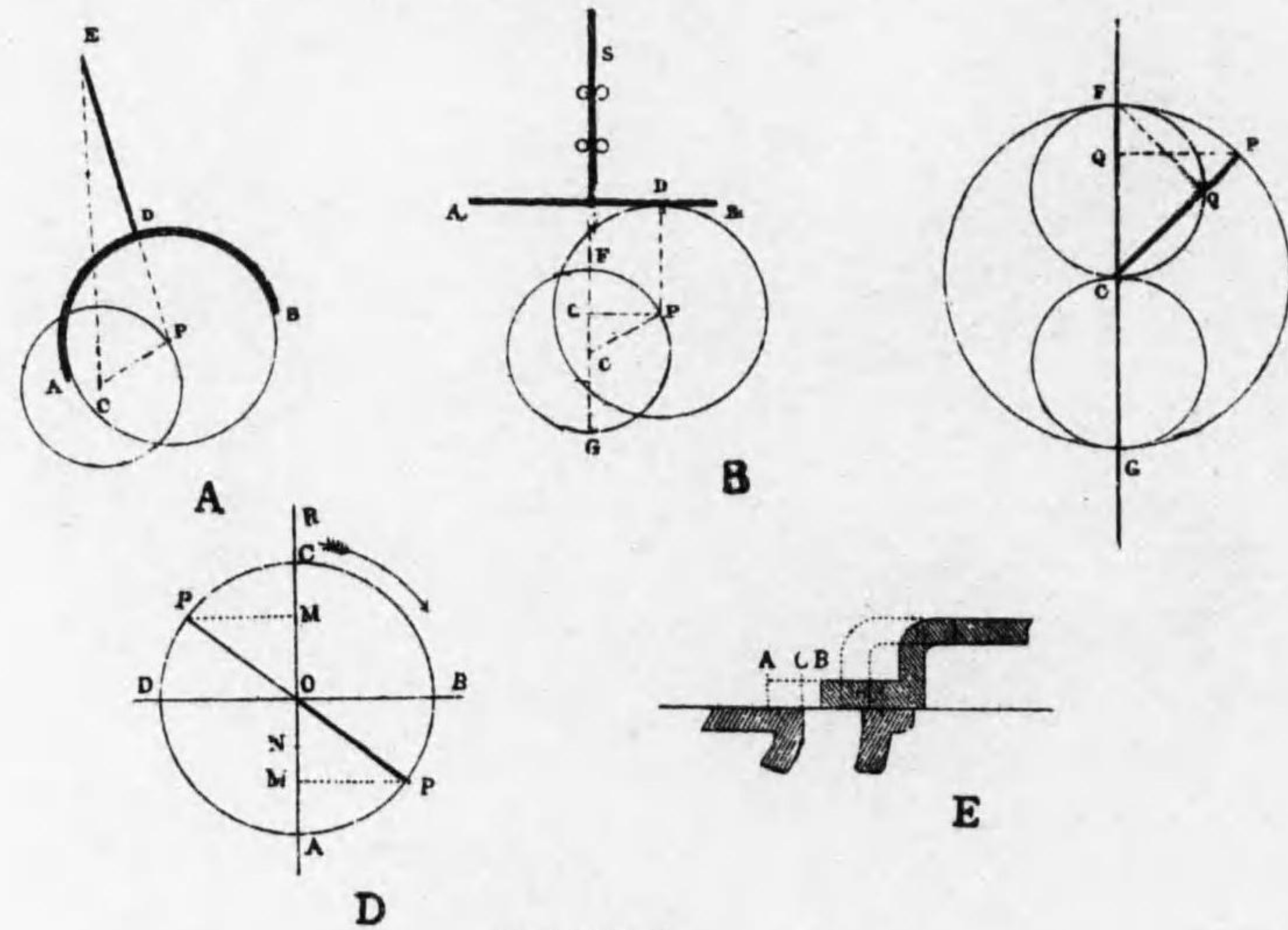


第 107 圖 A

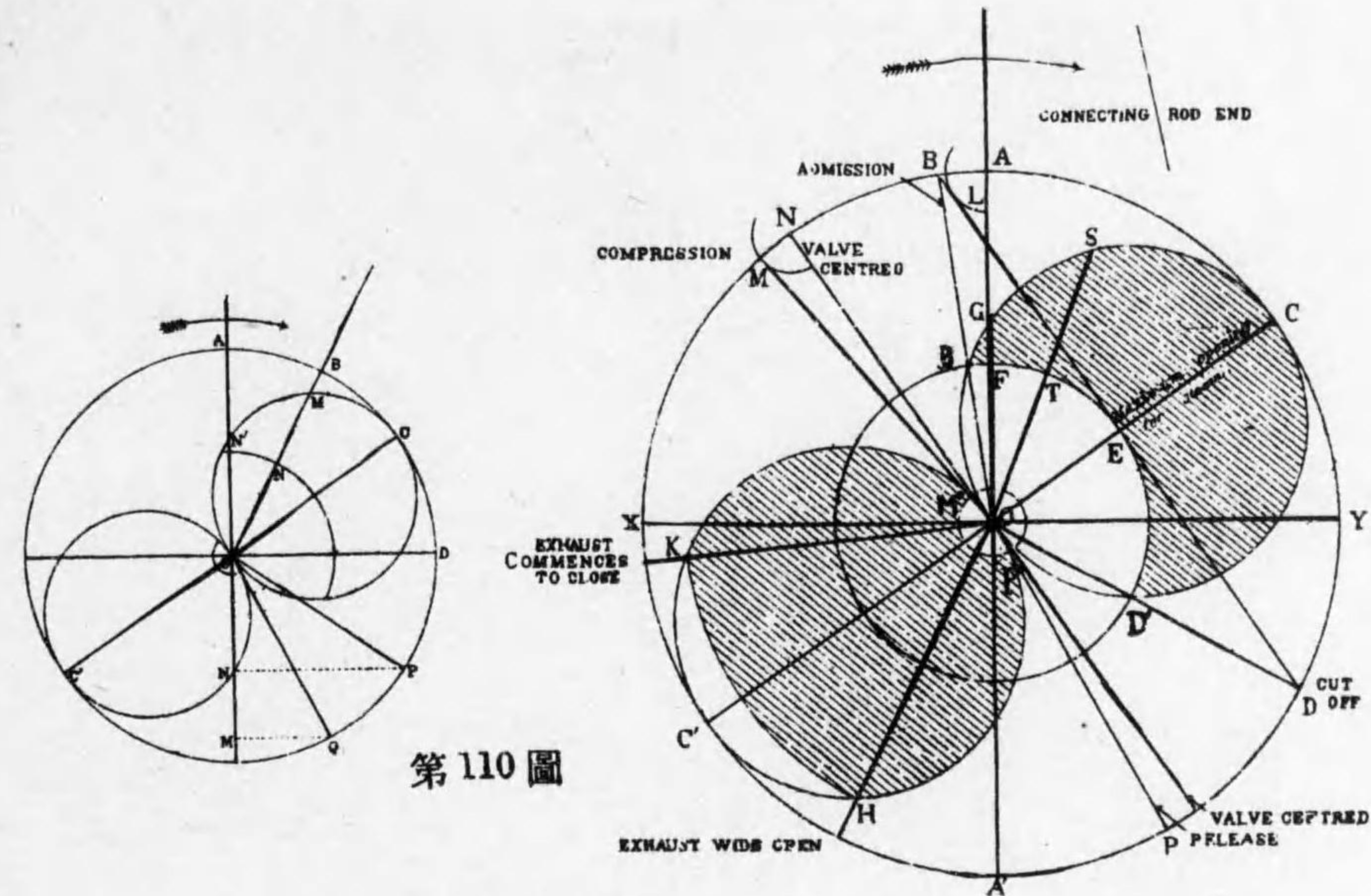


第107圖 B

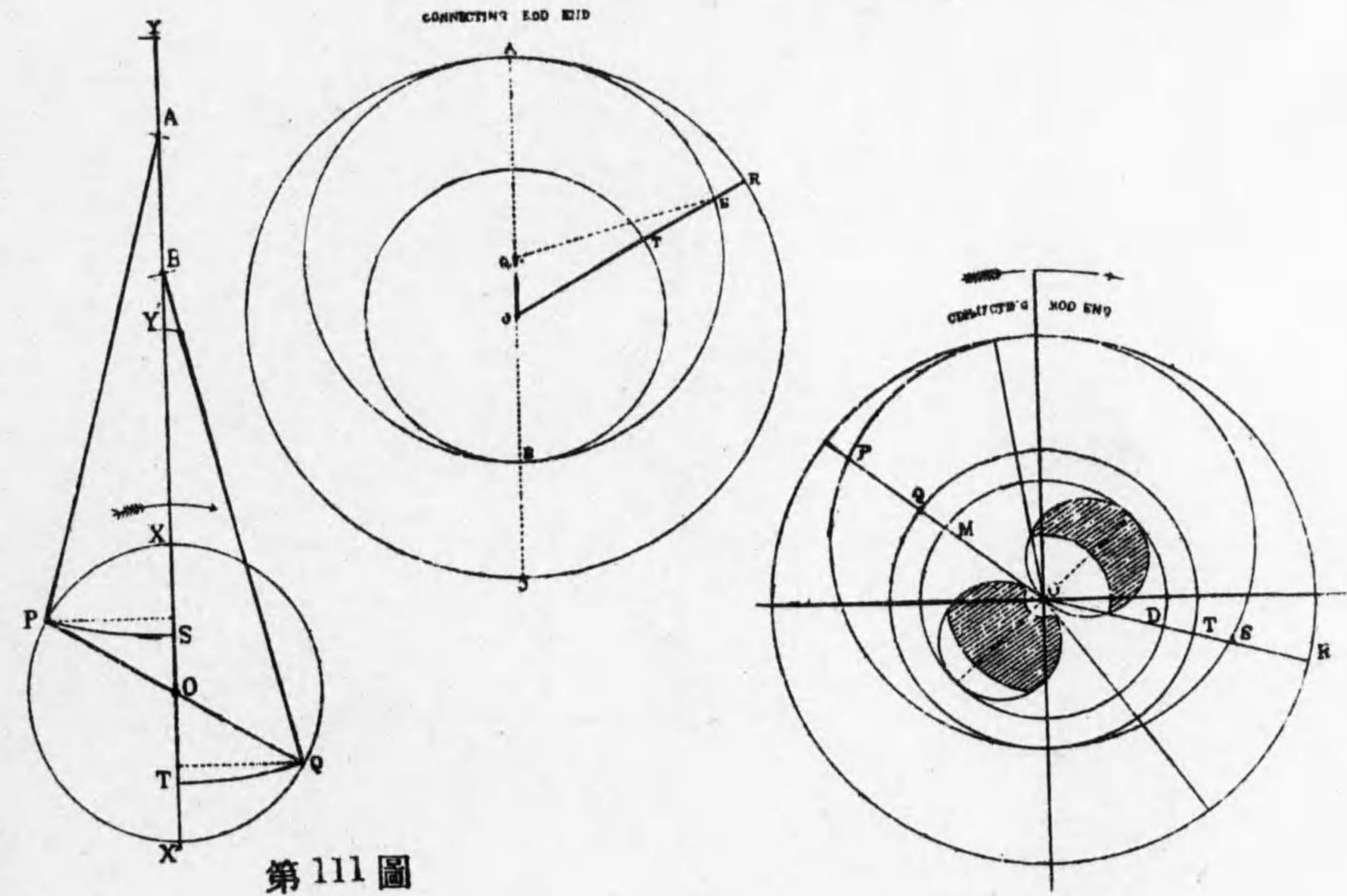
第109圖



第108圖

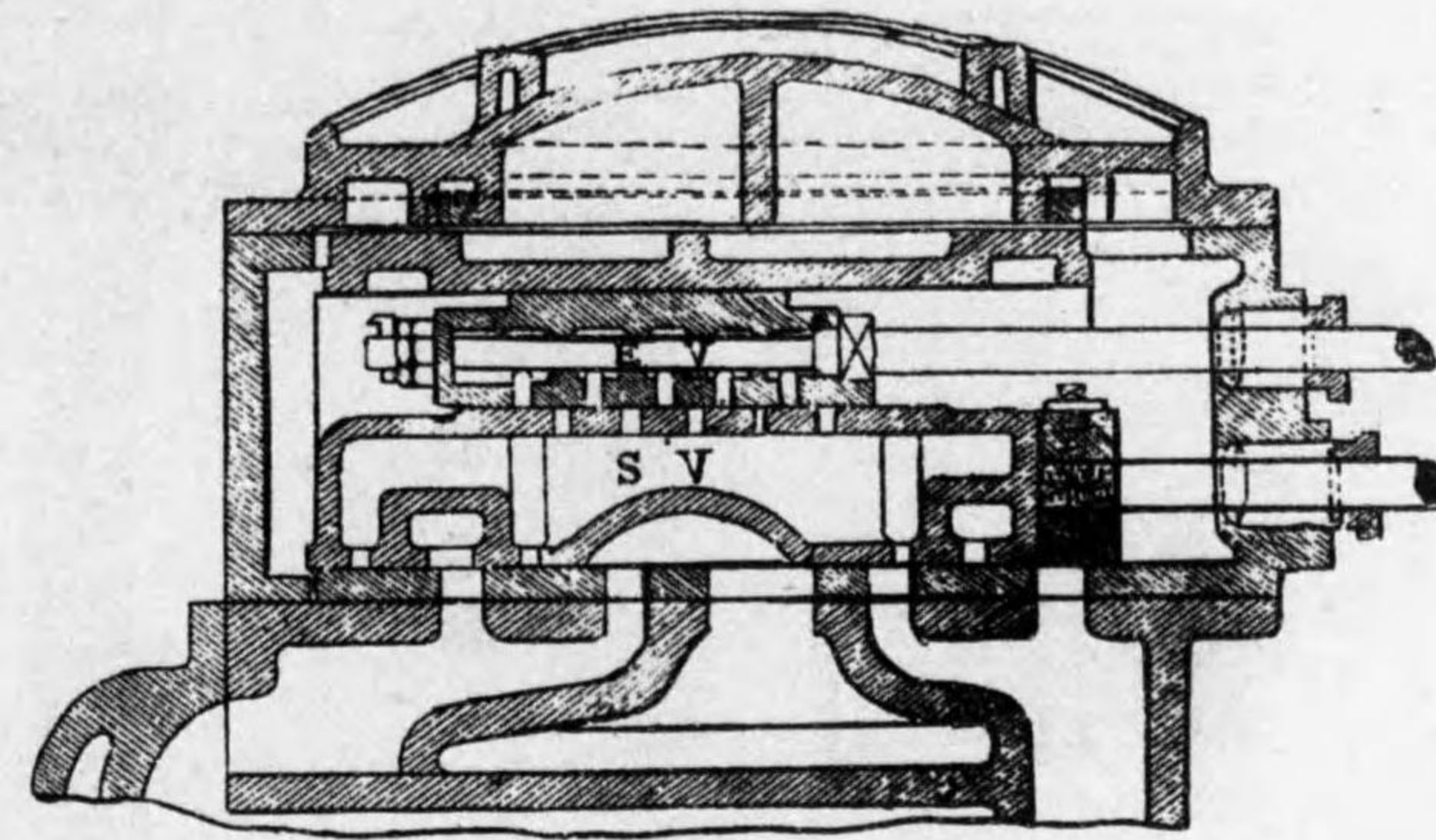
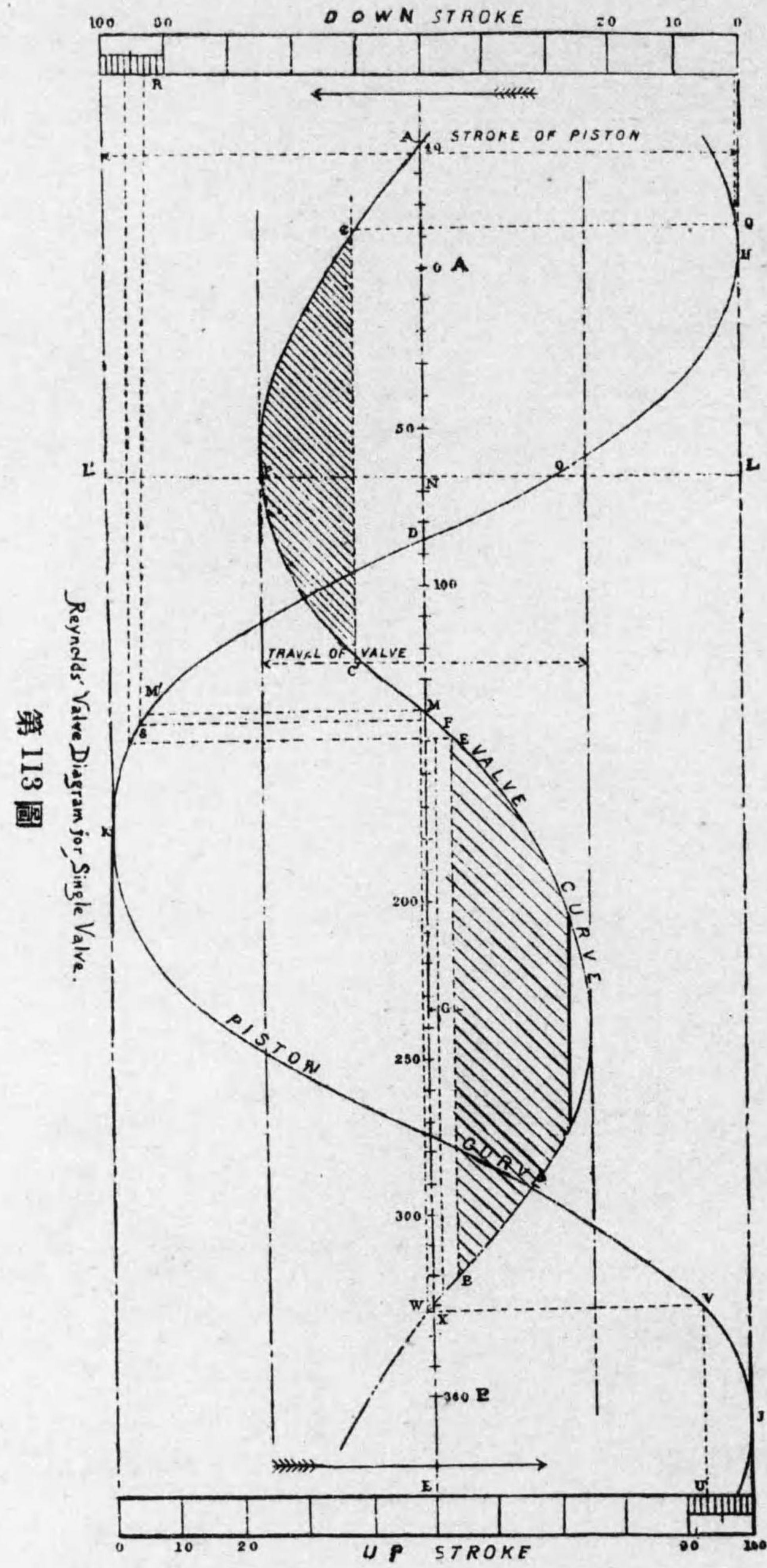


第110圖

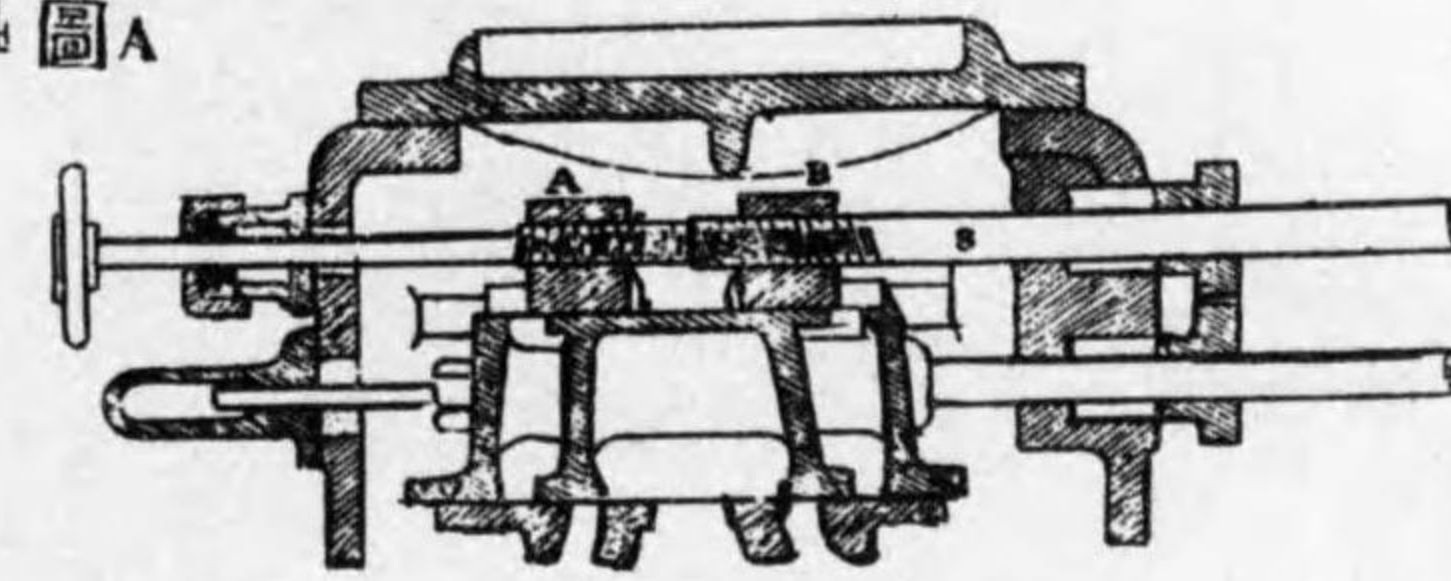


第111圖

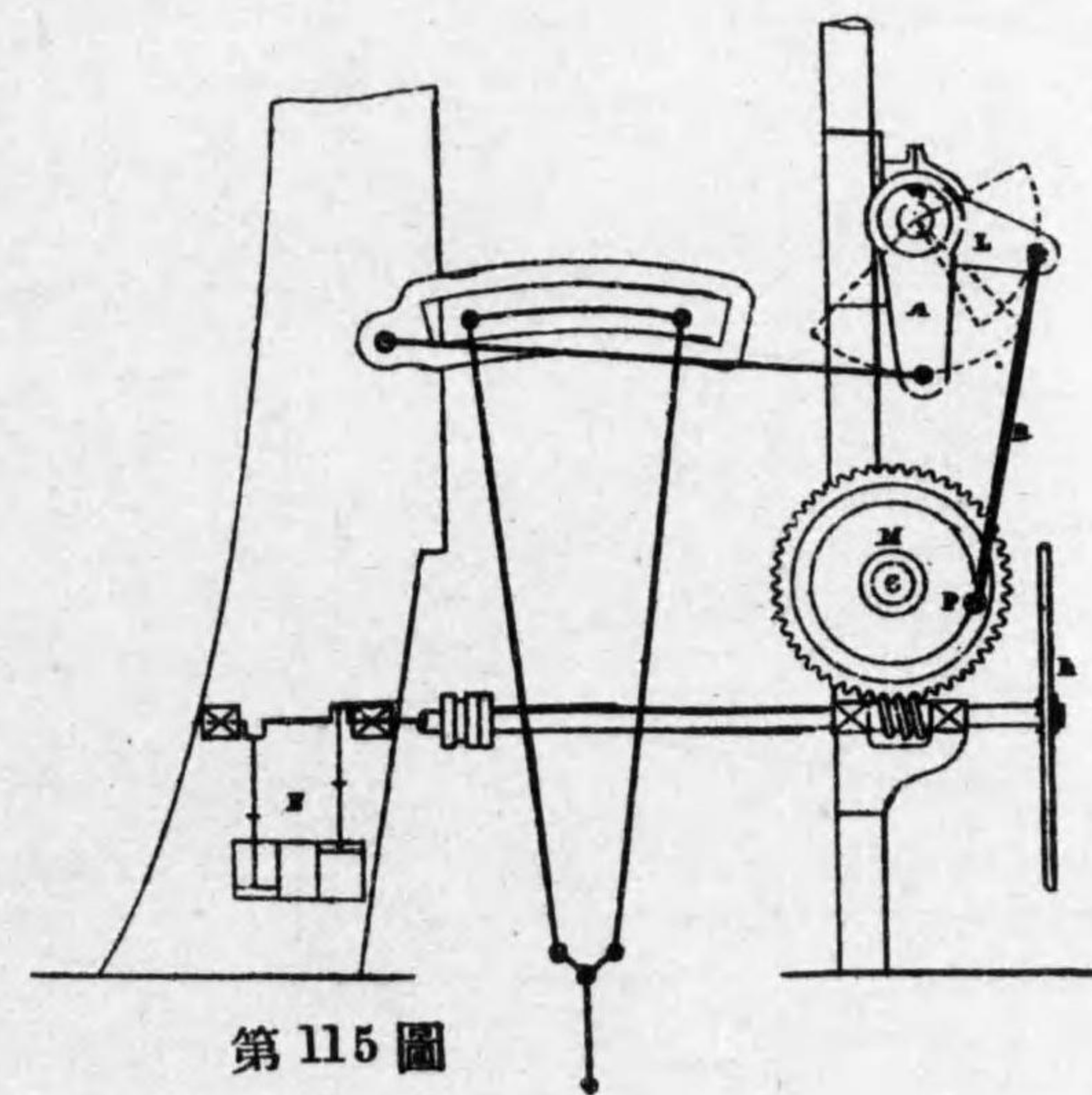
第112圖



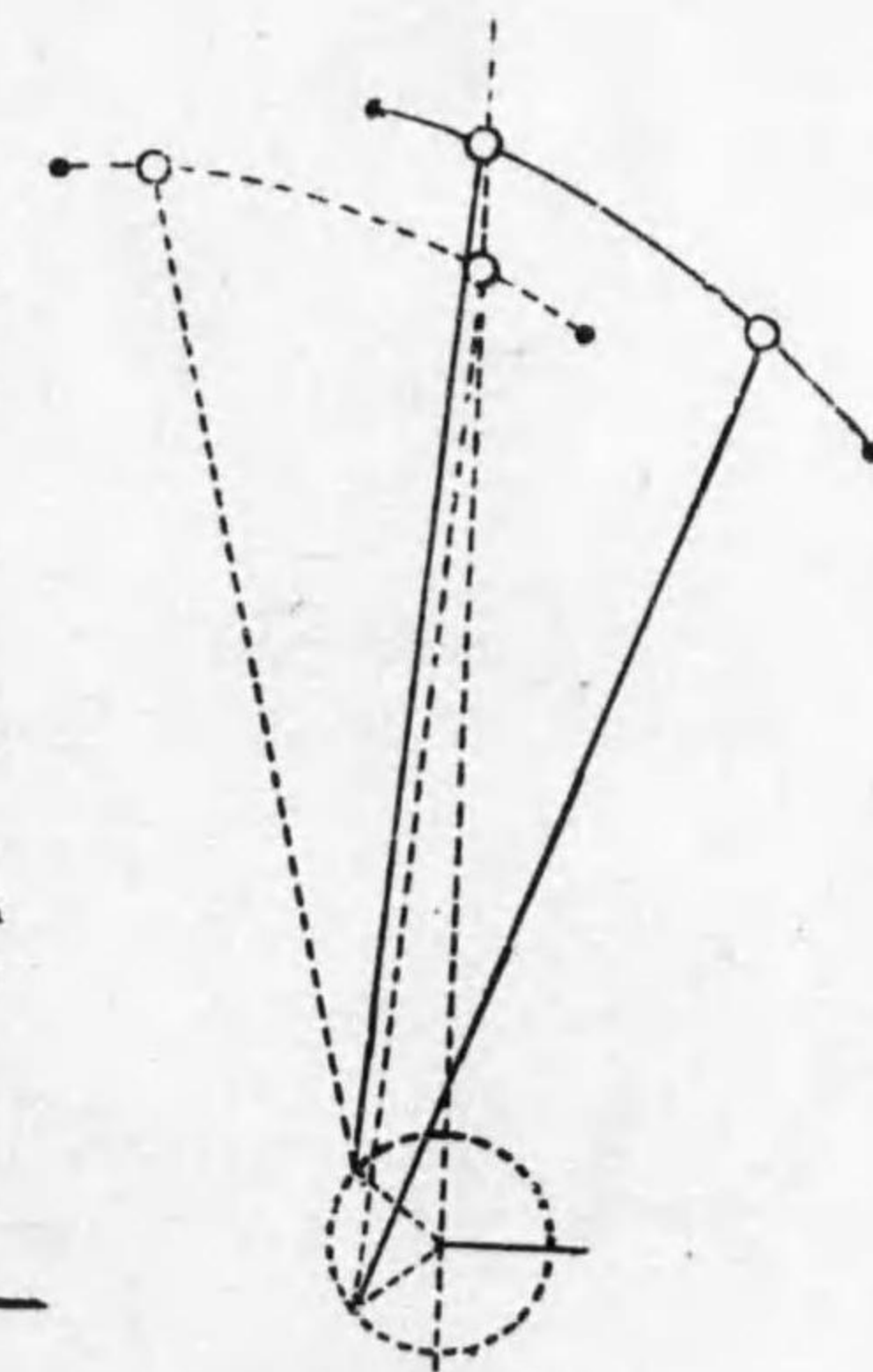
第114圖A



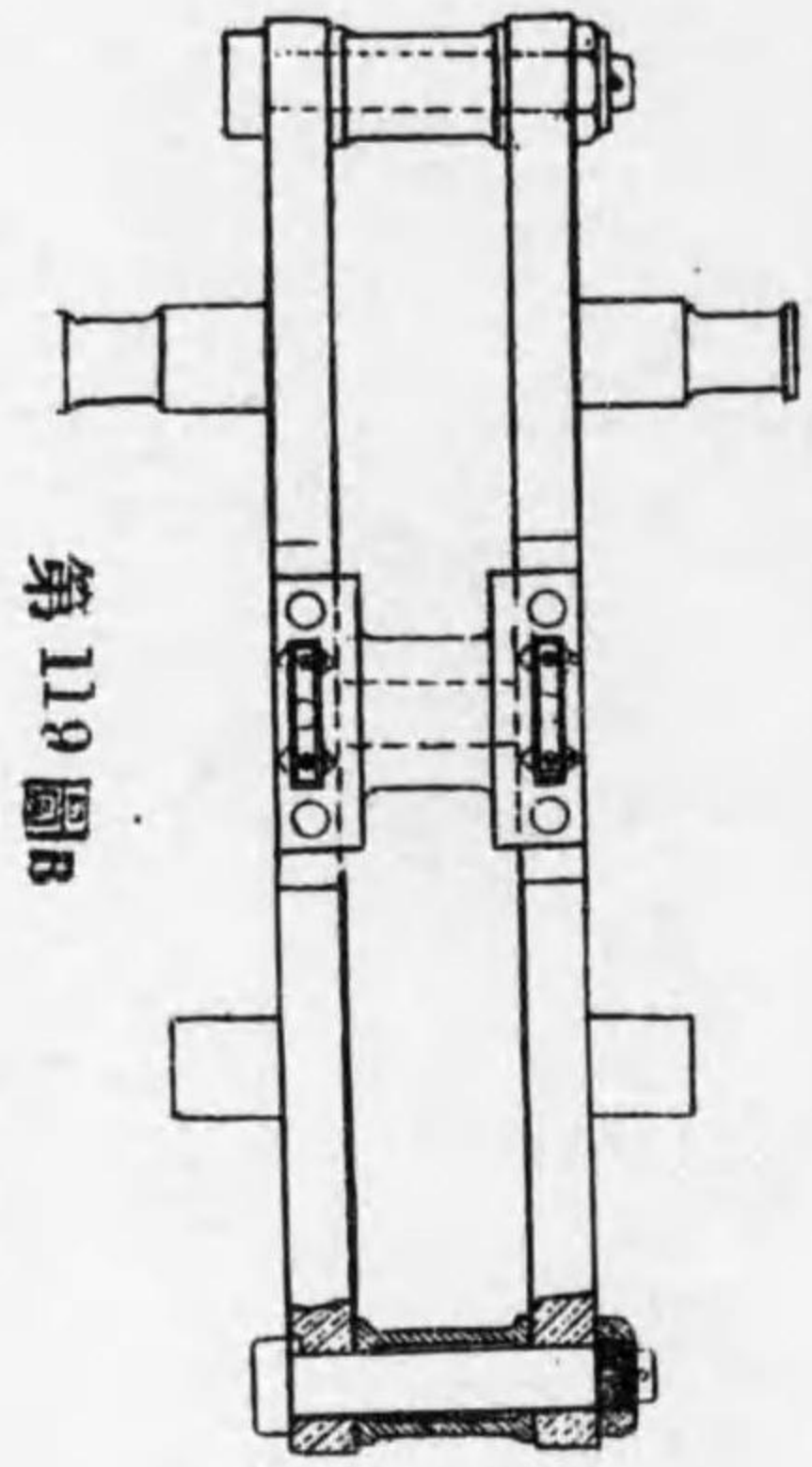
第114圖B



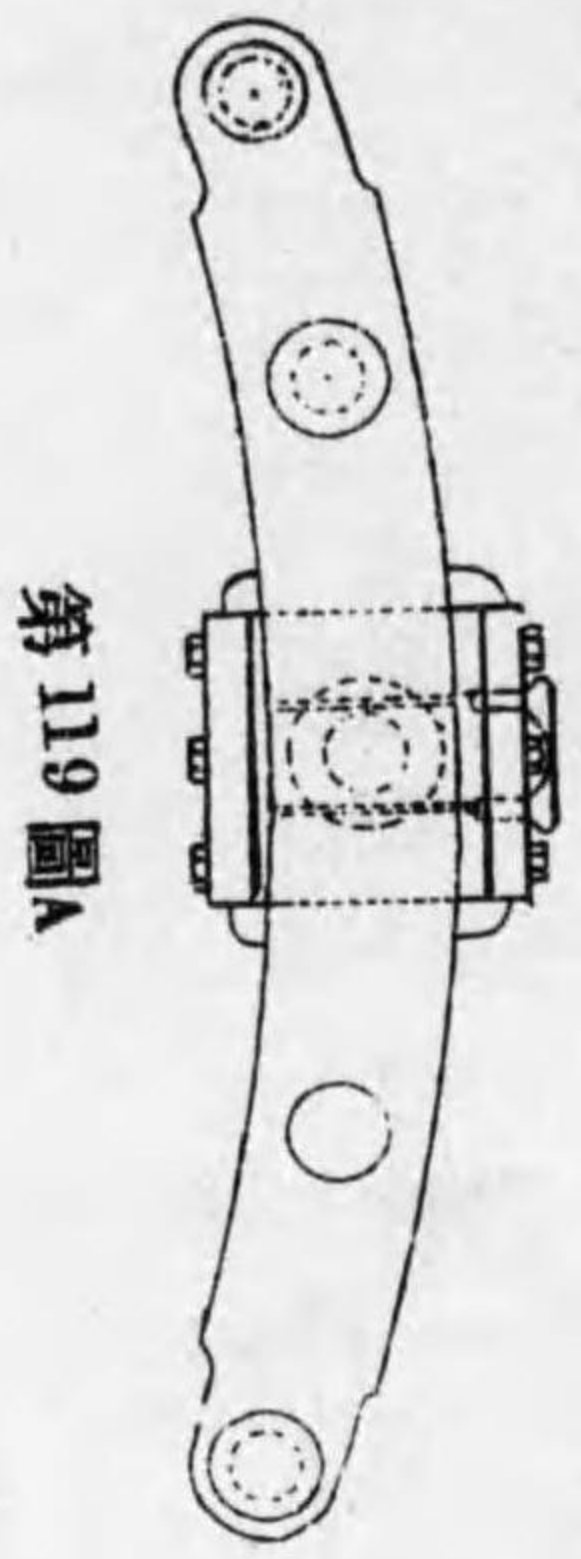
第115圖



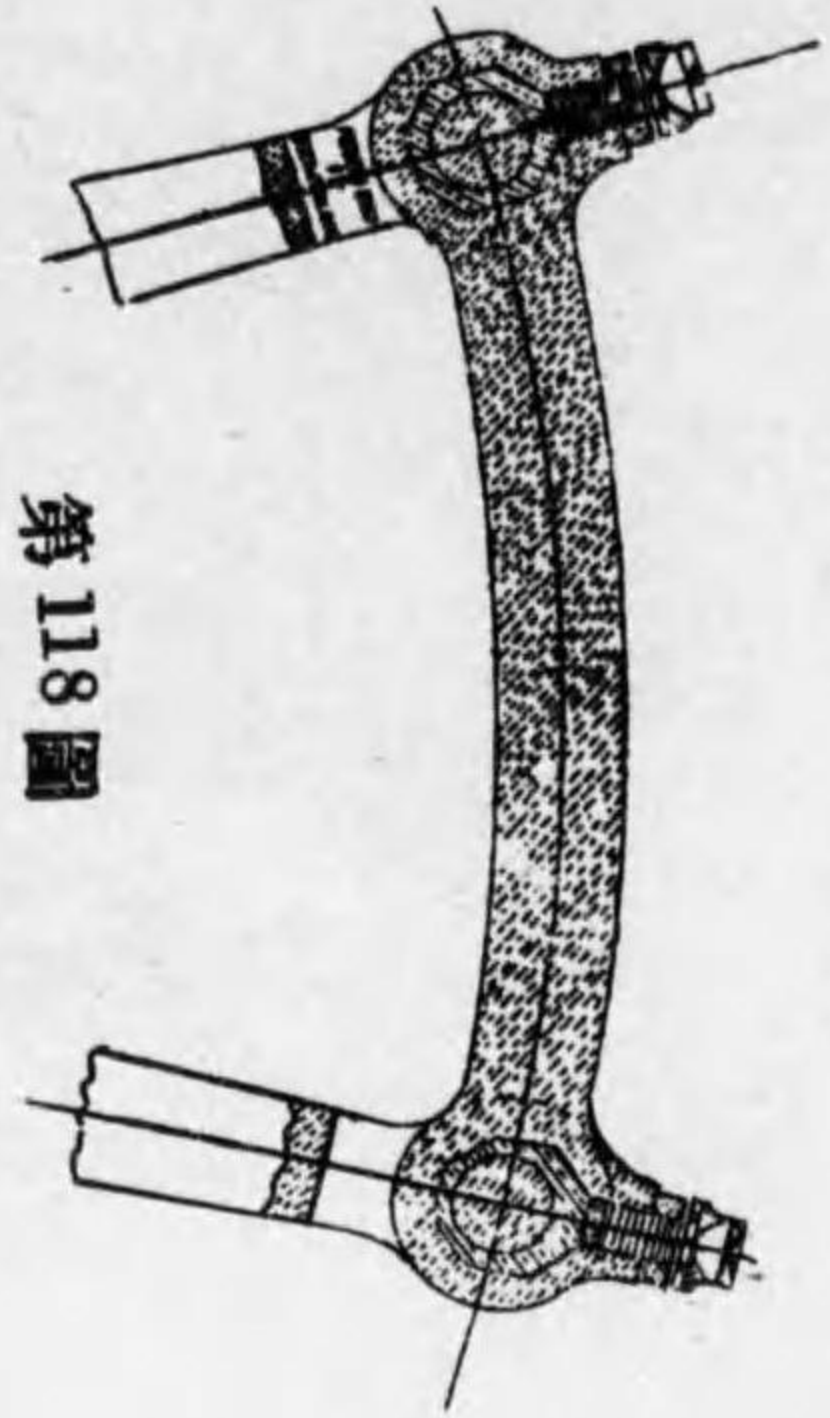
第116圖



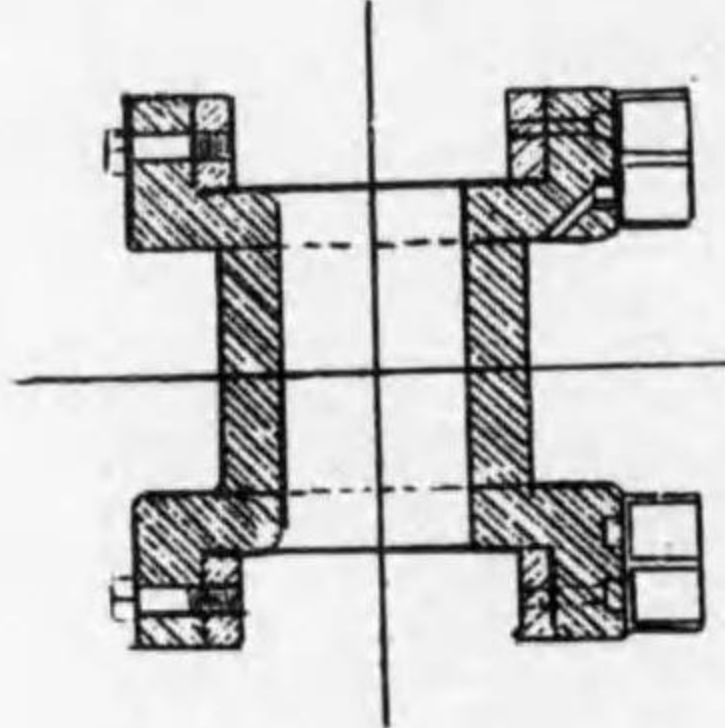
第 119 圖 B



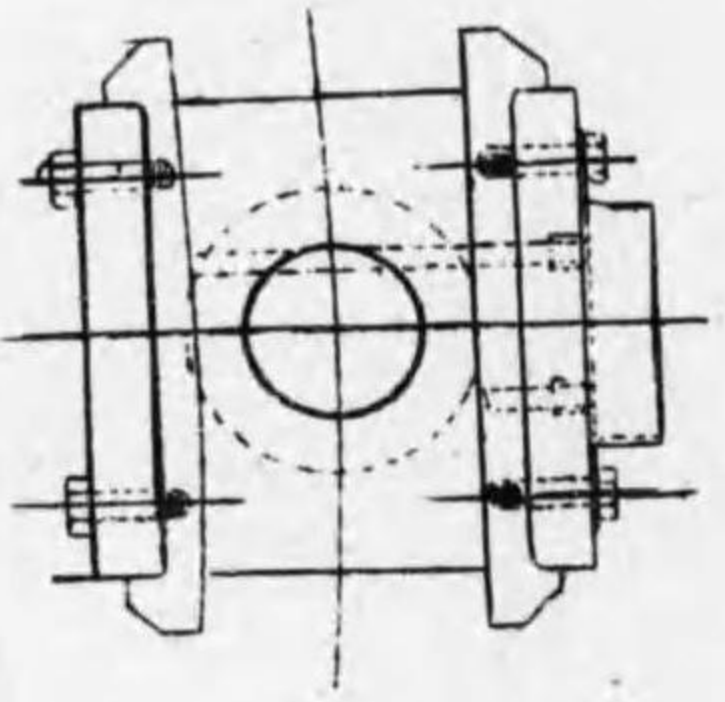
第 119 圖 A



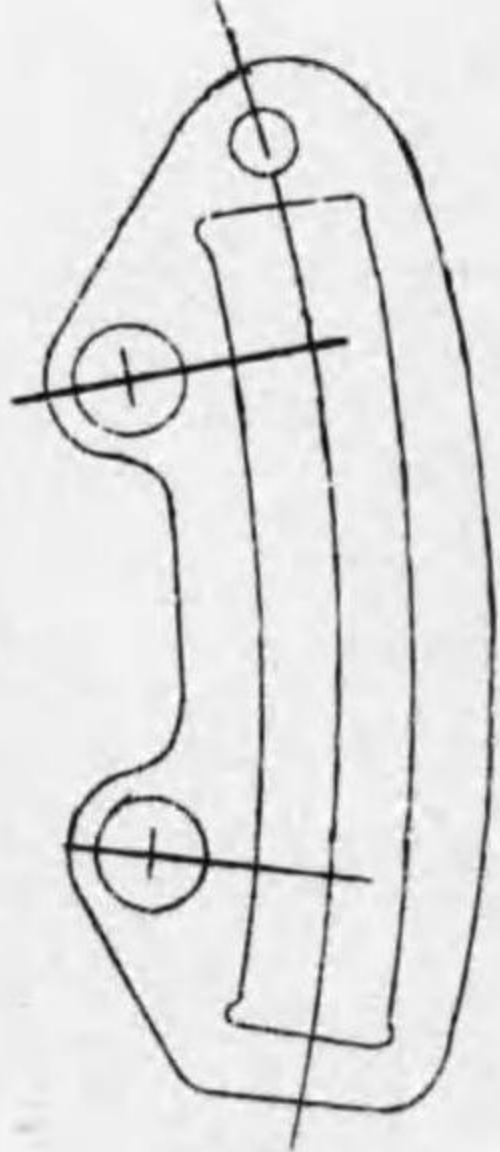
第 118 圖



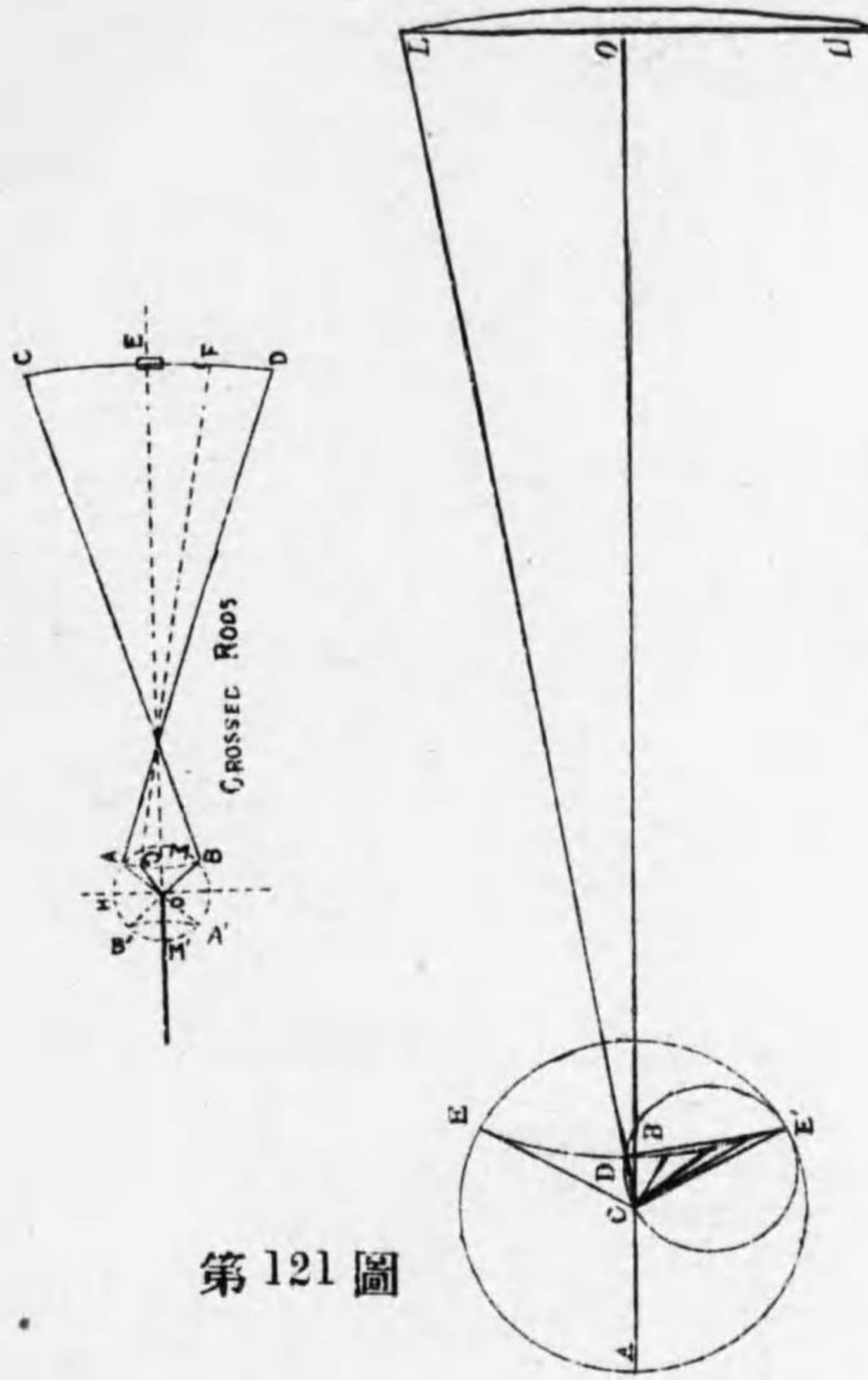
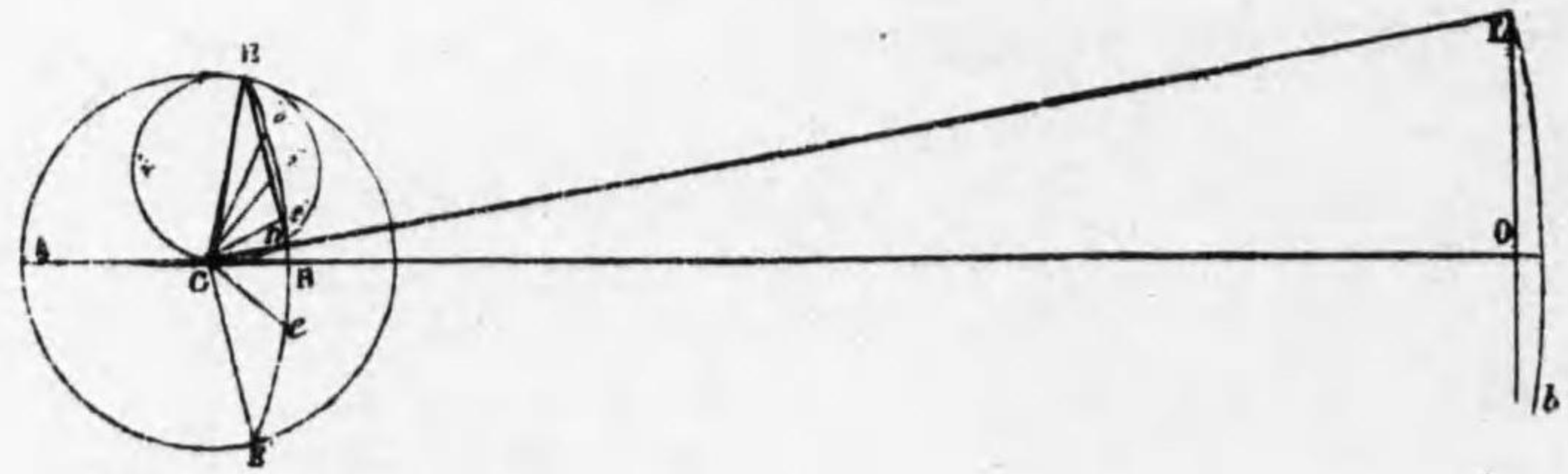
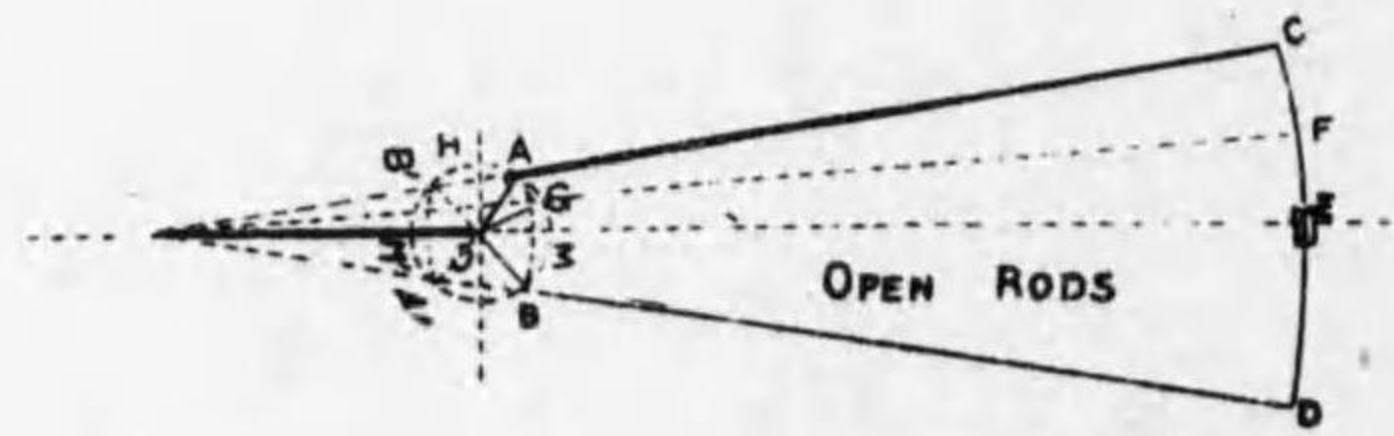
第 119 圖 C



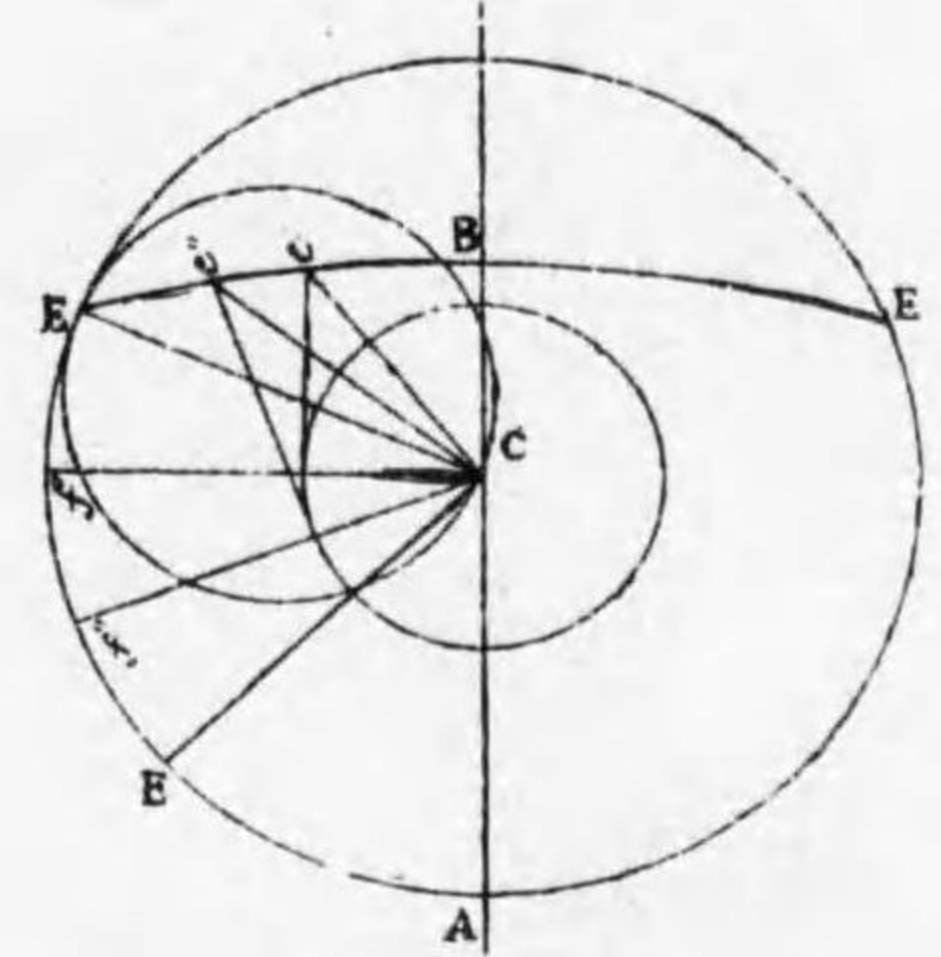
第 117 圖



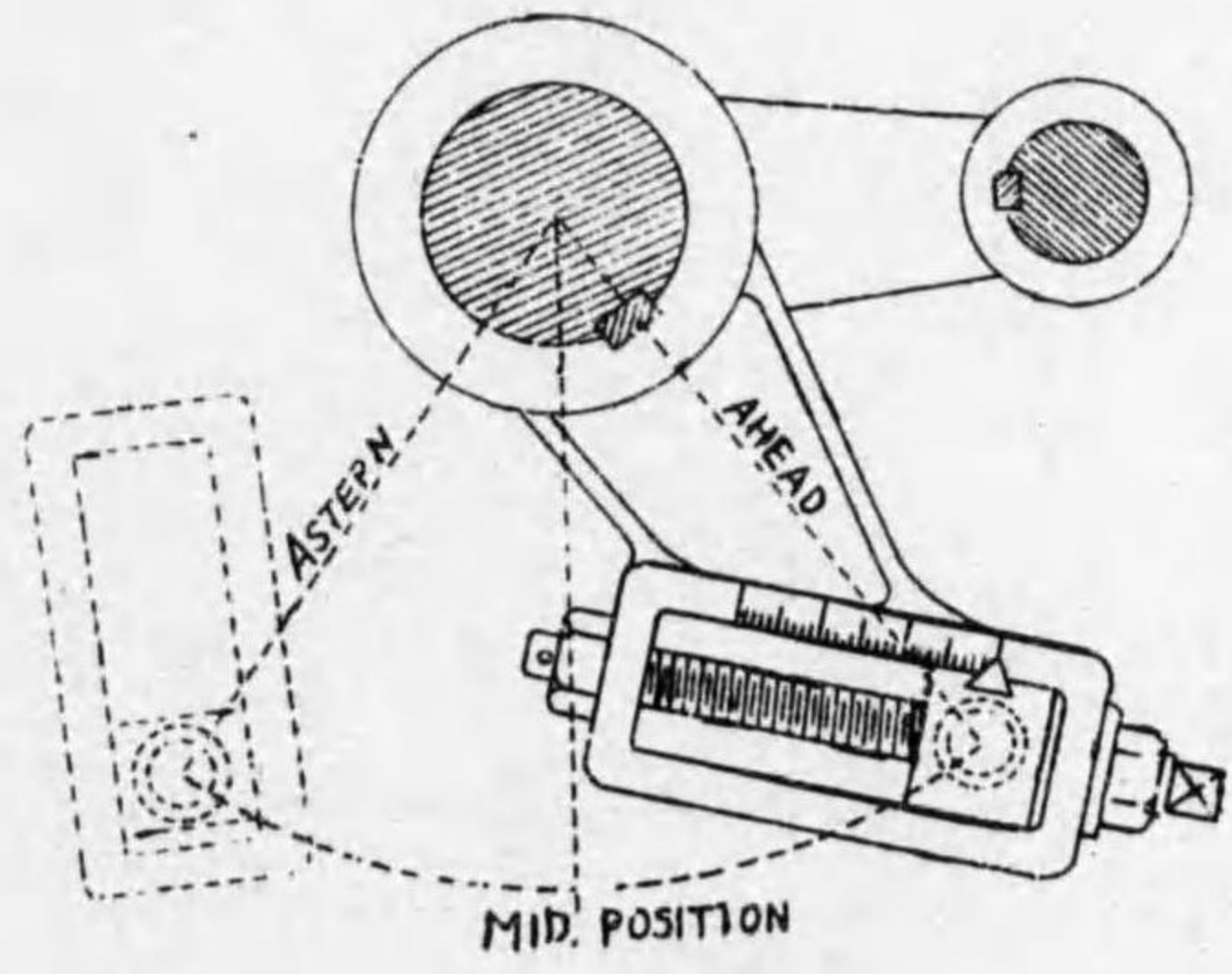
第 120 圖



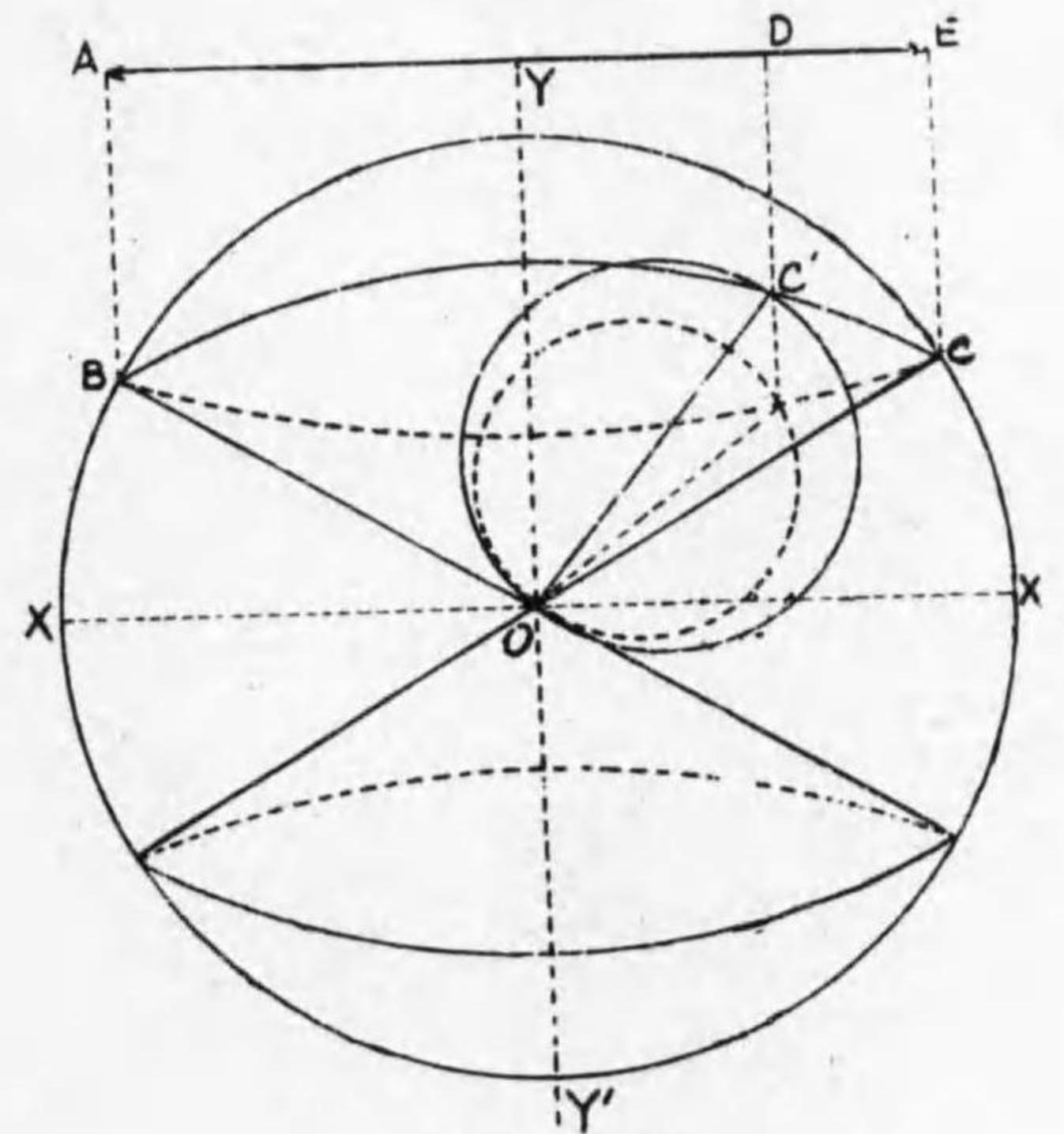
第 121 圖



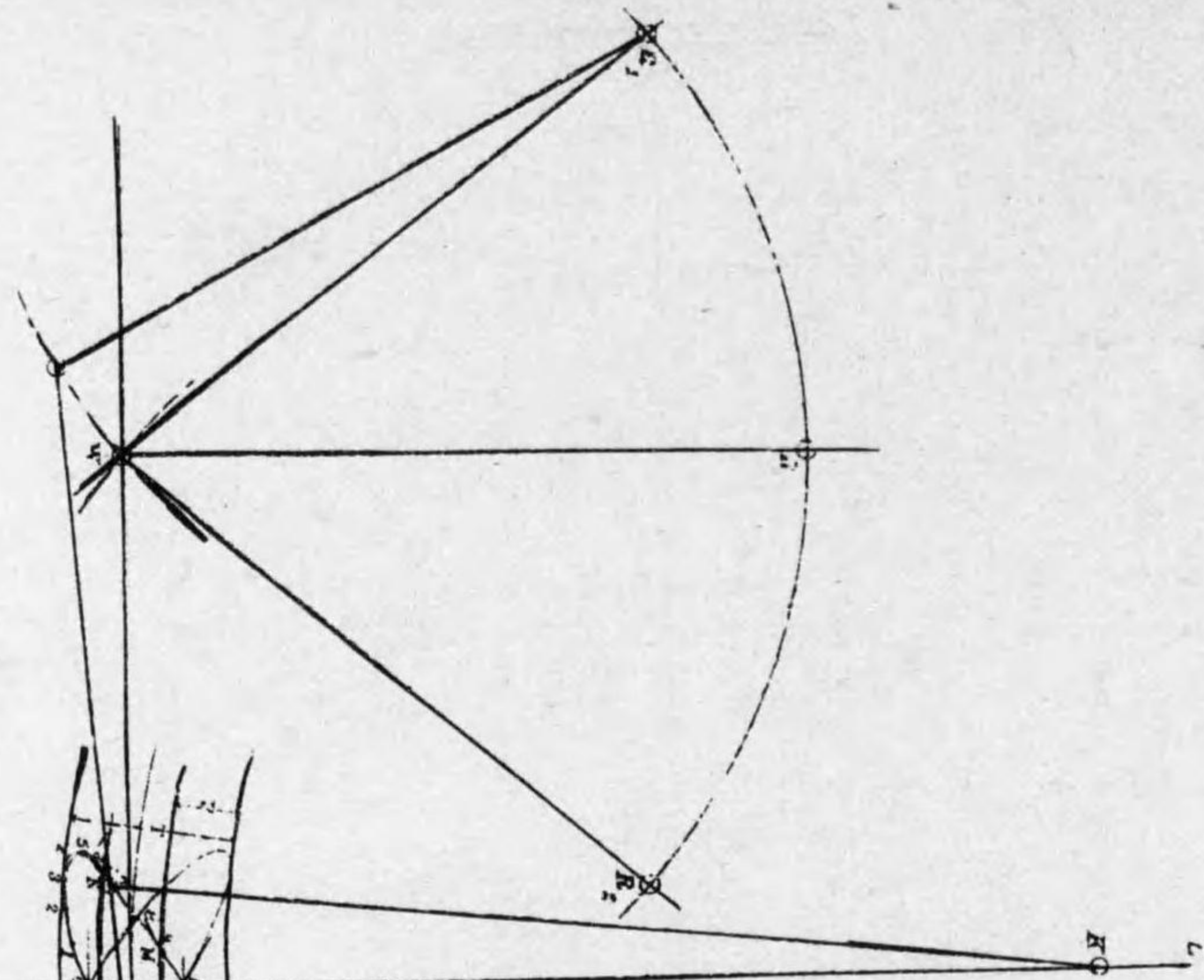
第 122 圖



第 124 圖

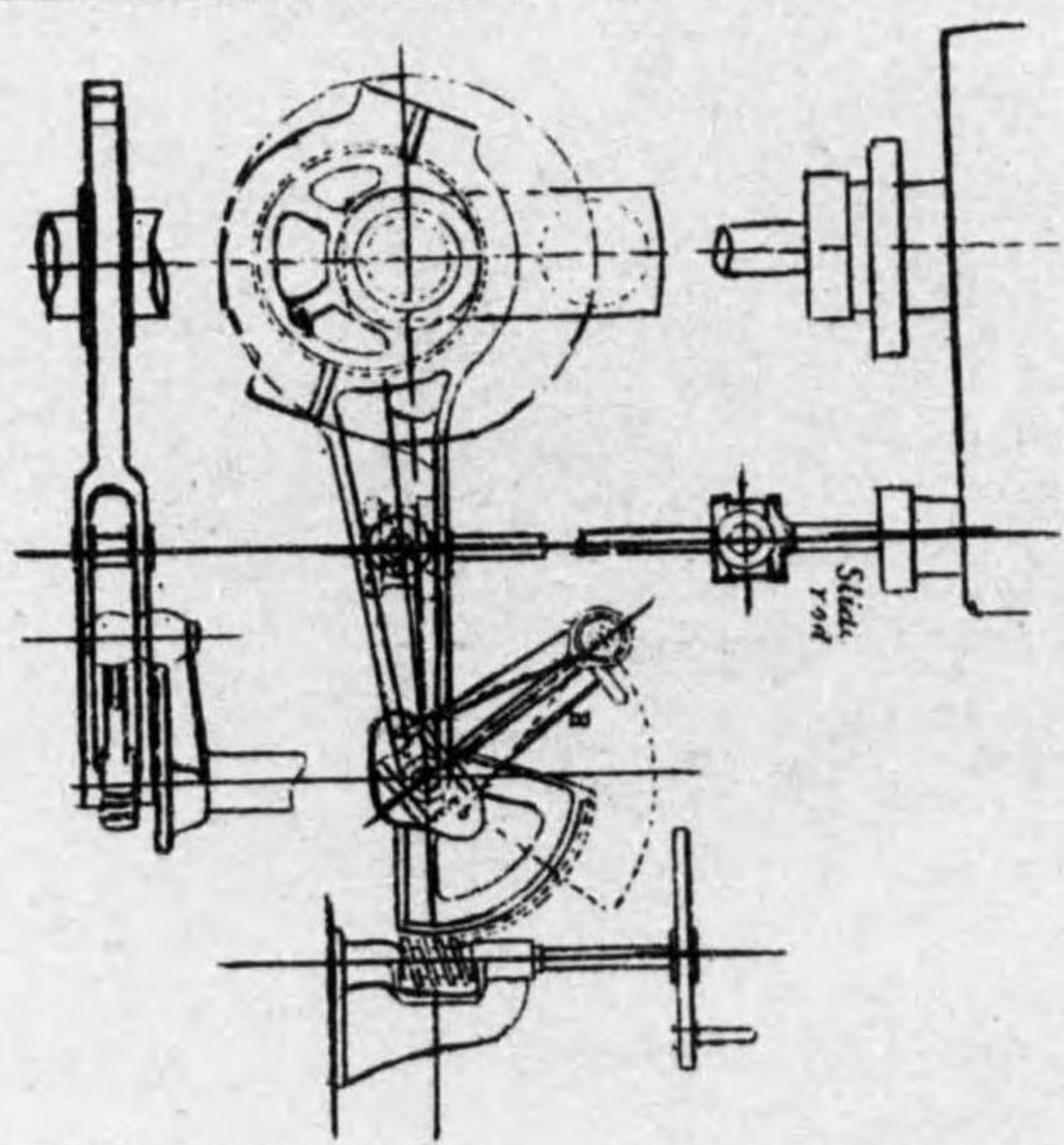


第 123 圖

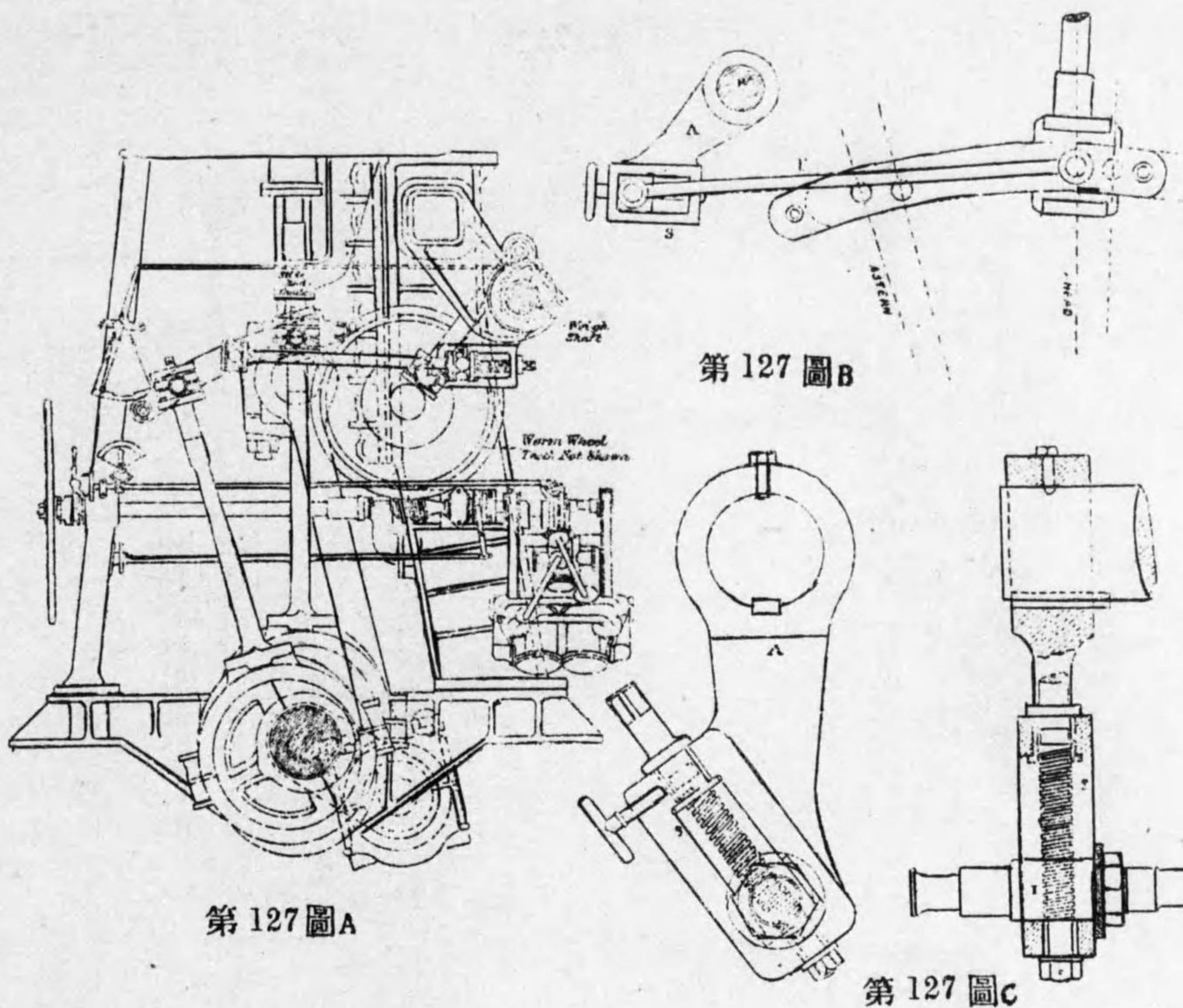
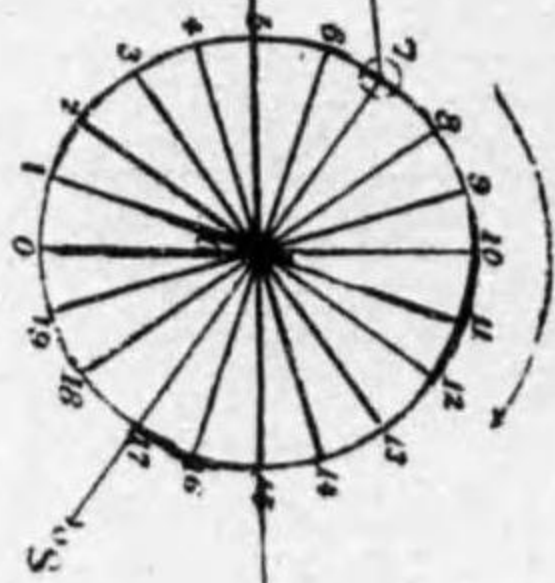


第 126 圖

C	Hub of the slide valve gear.
S	Center of crank shaft.
P	Center of piston pin.
W	Weight of piston.
WR	Weight of rod.
RG	Radius of gyration of rod.
PO	Point of crank pin.
RS	Radius of crank pin.
RL	Radius of crank pin.
R	Radius of slide valve.
D	Lead of slide valve.
F	Full diameter of steam port.
T	Point of slide valve.
M	Distance of steam.
N	Cut-off.



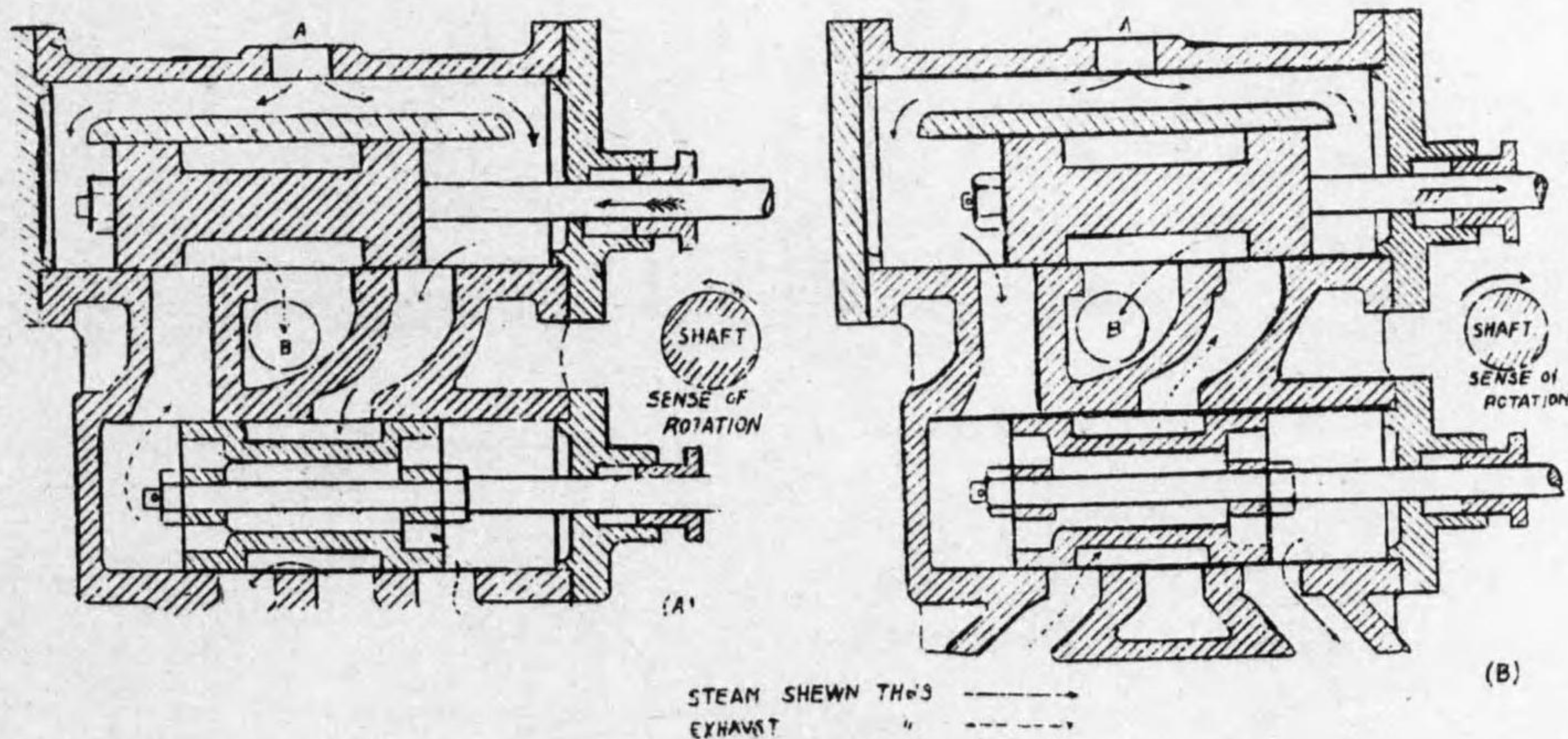
第 125 圖



第 127 圖A

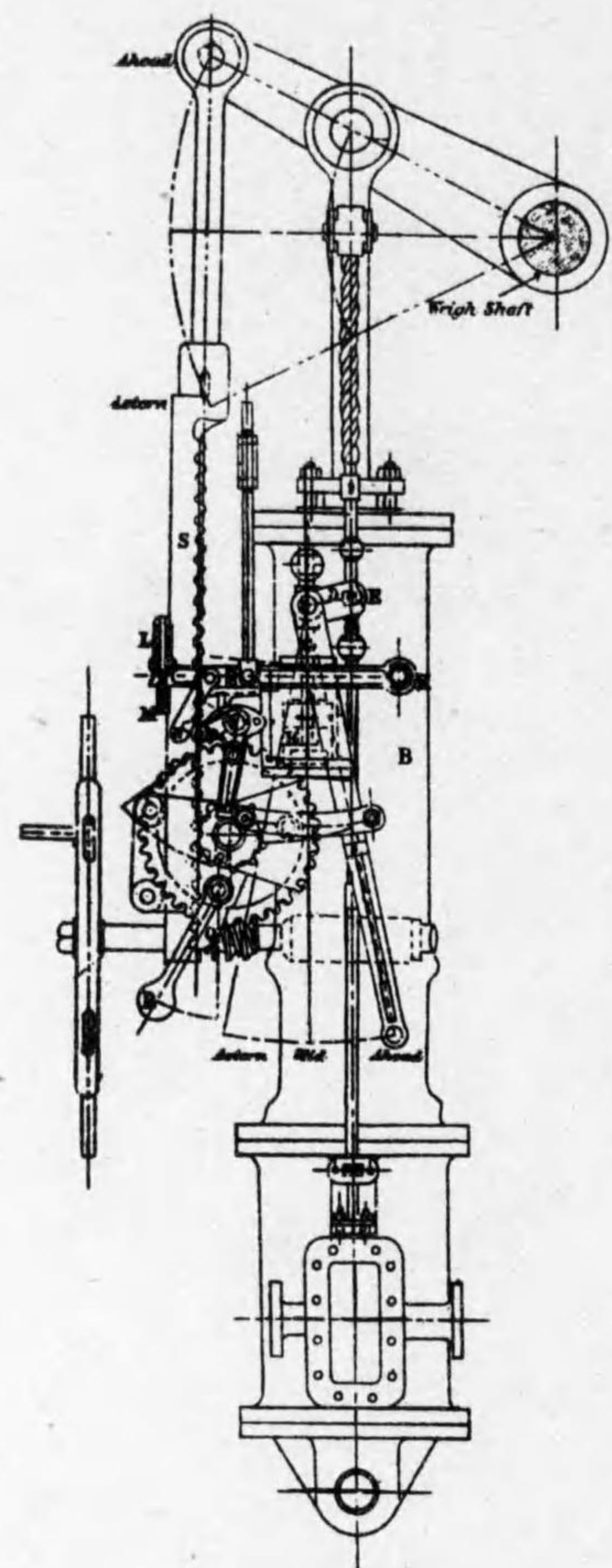
第 127 圖B

第 127 圖C

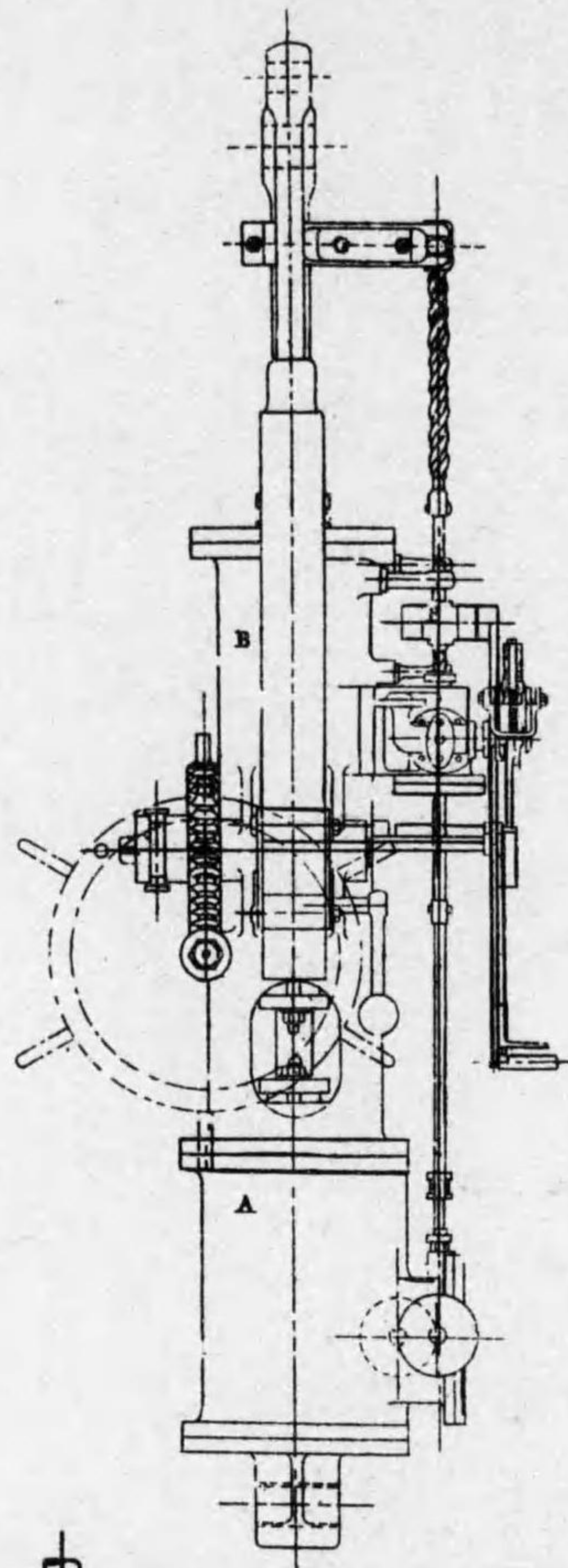


STEAM SHOWN THUS
EXHAUST " " " " " "

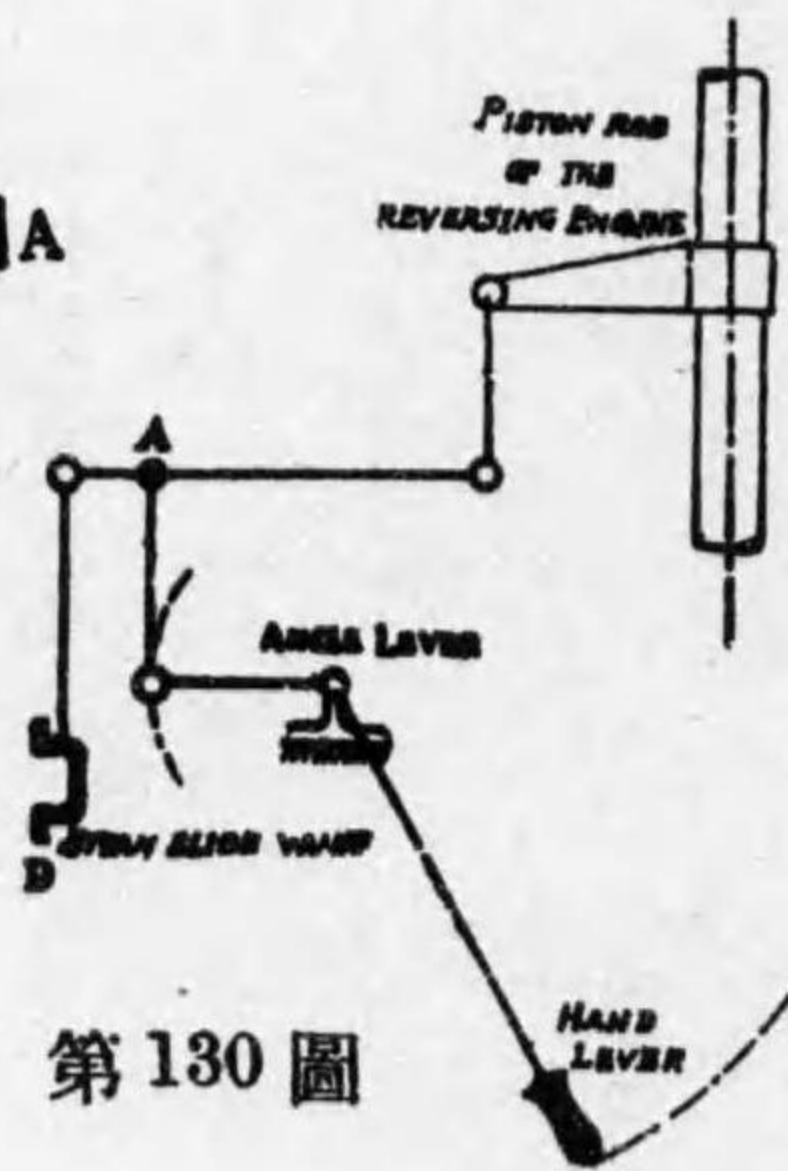
第 128 圖



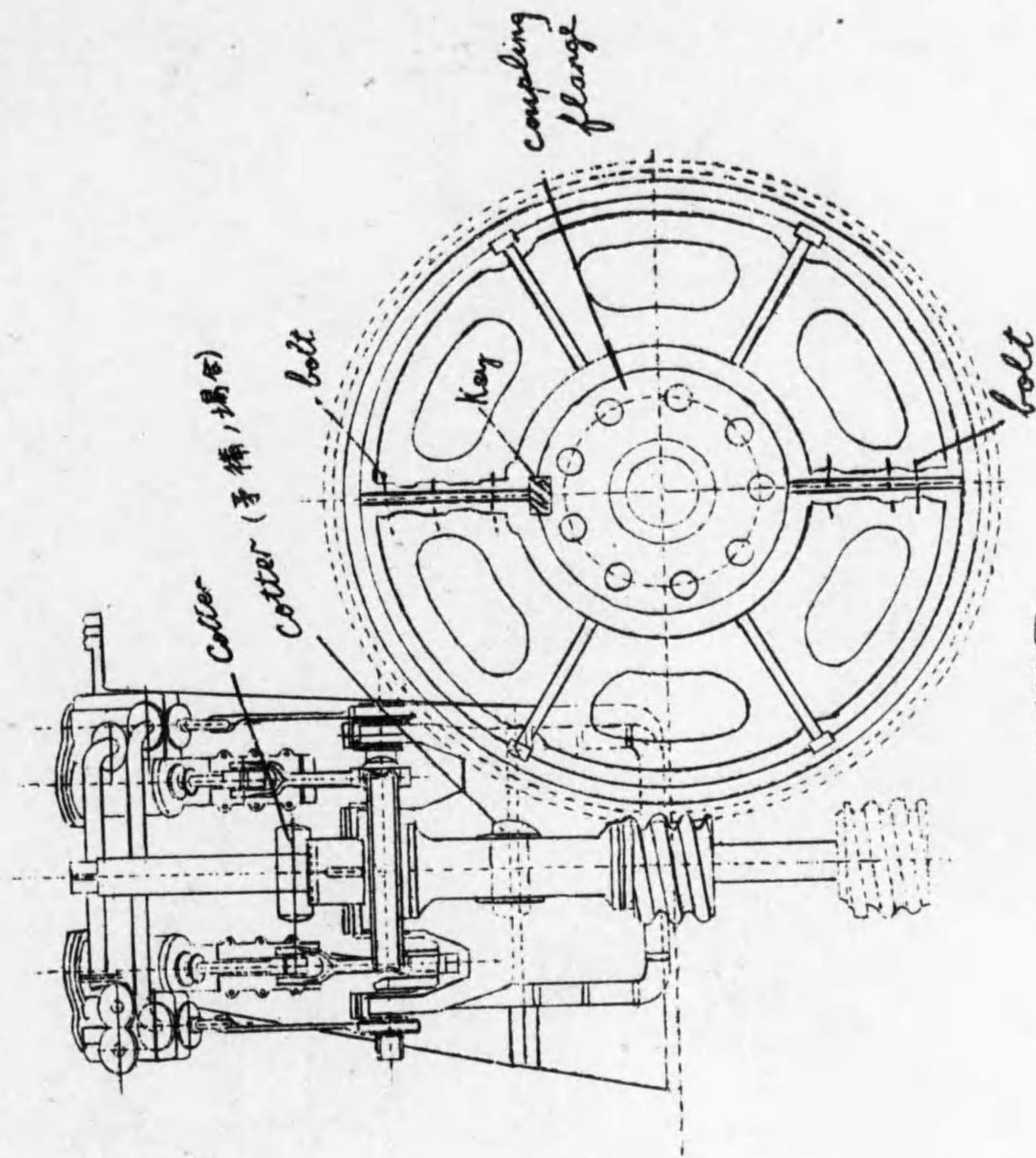
第 129 圖A



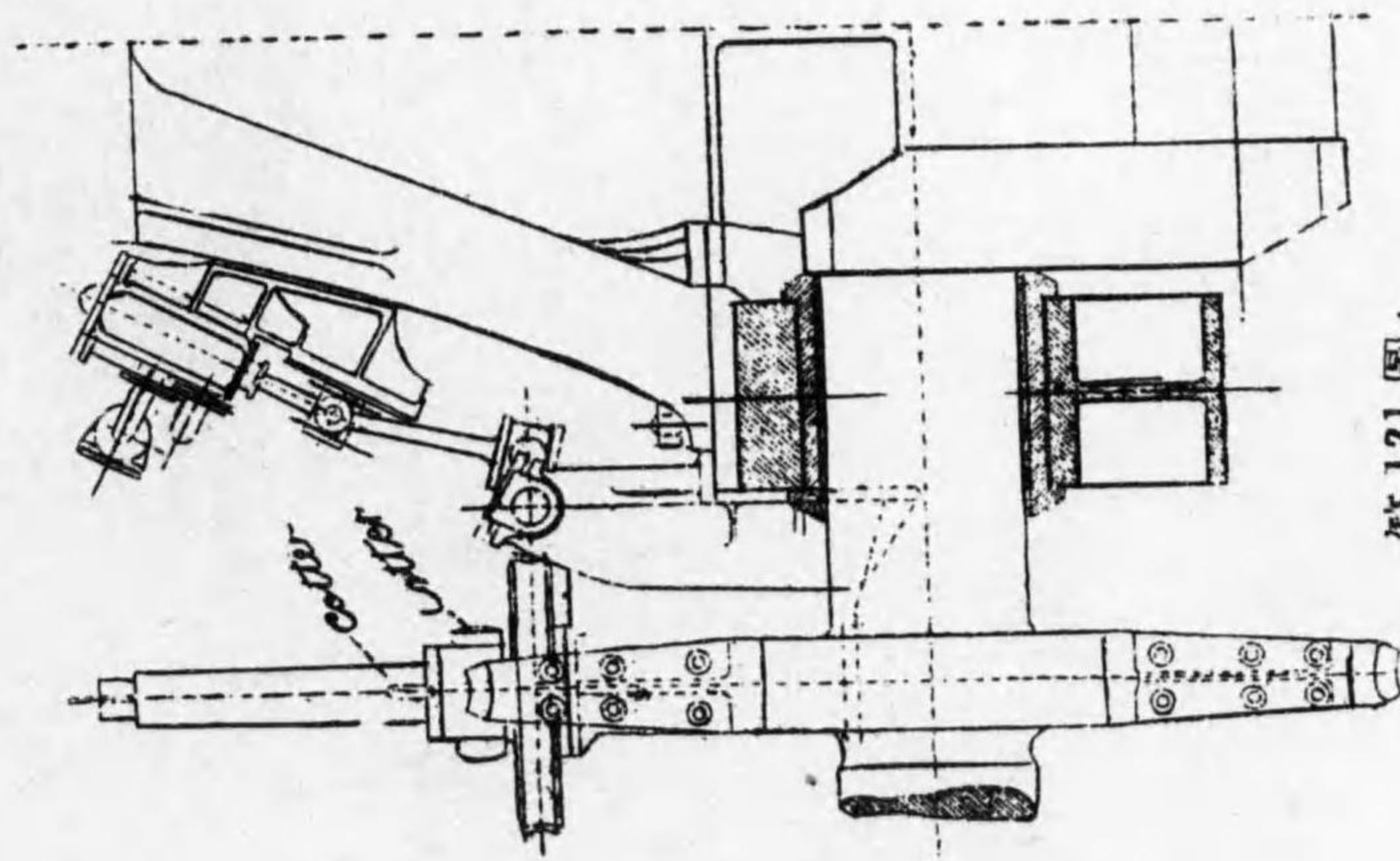
第 129 圖B



第 130 圖

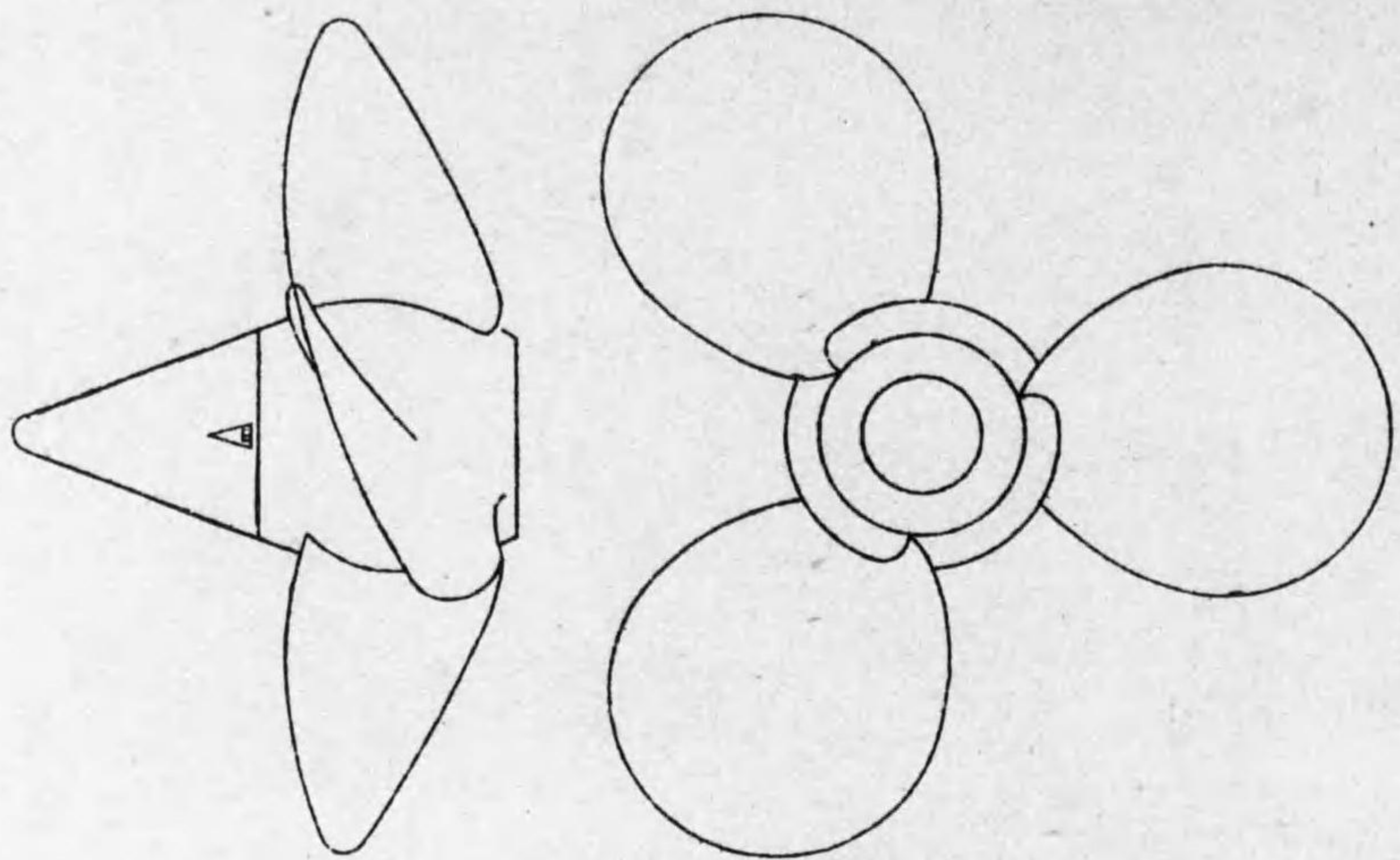


第 131 圖B

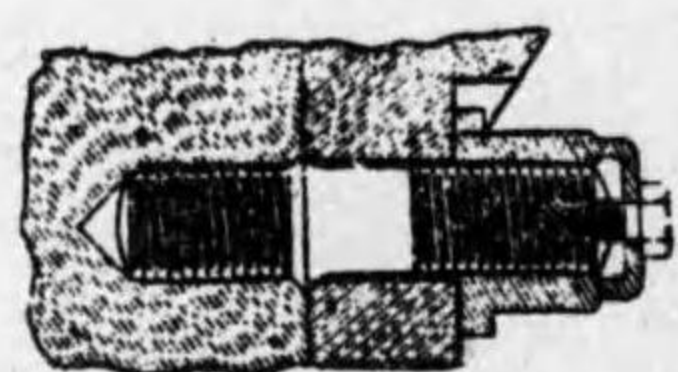
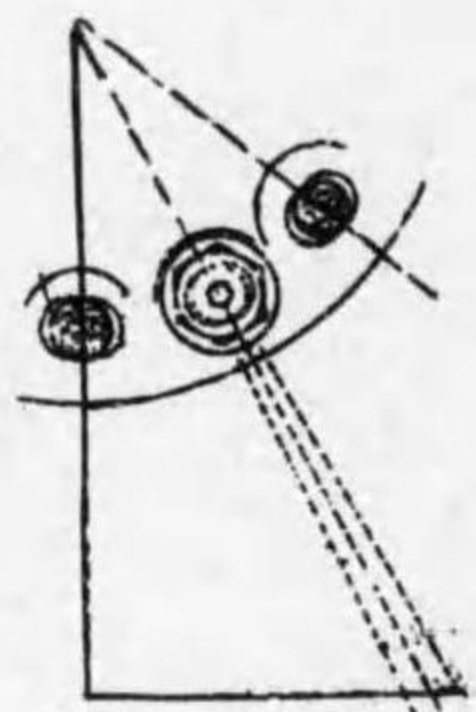


第 131 圖A

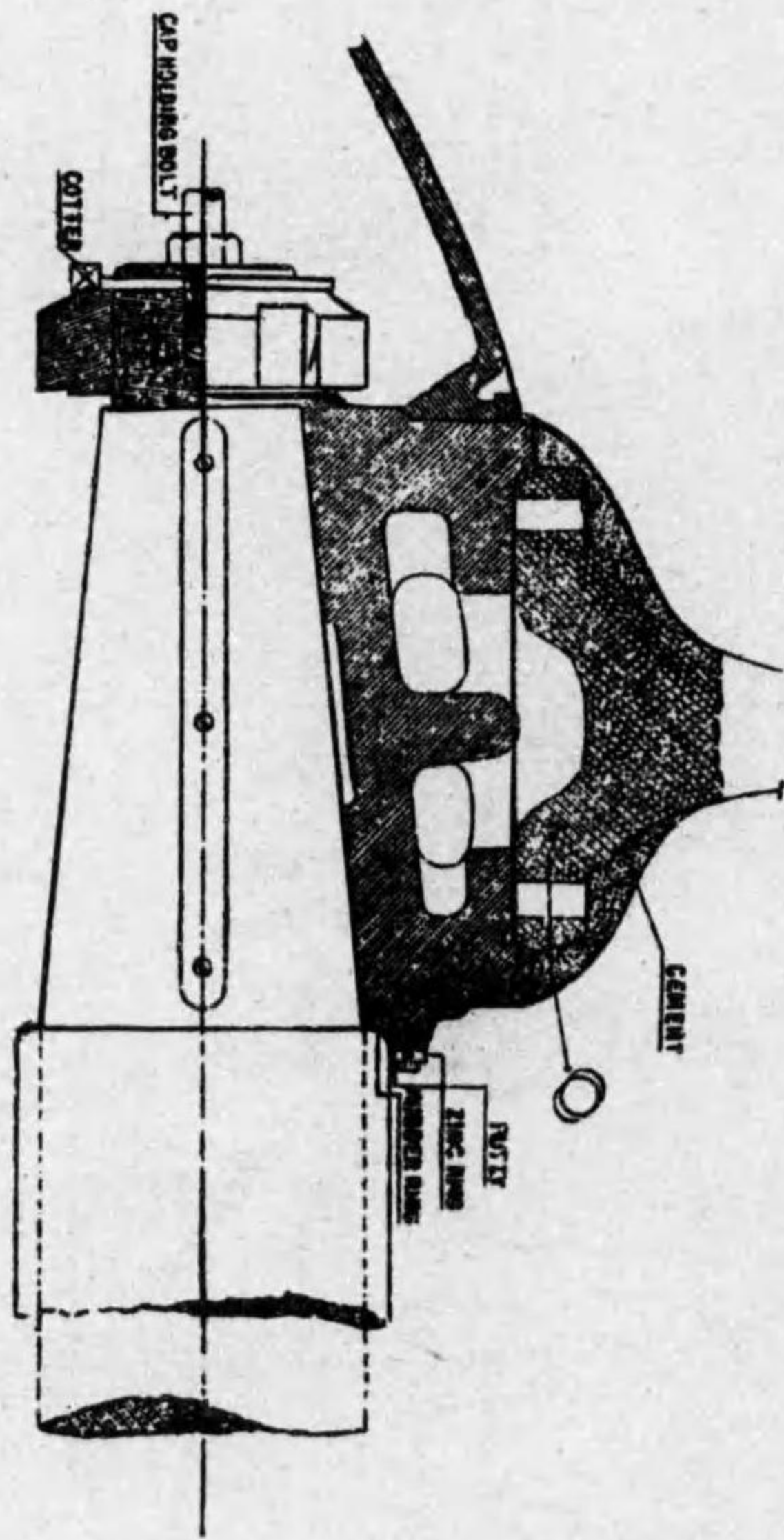
第 132 圖



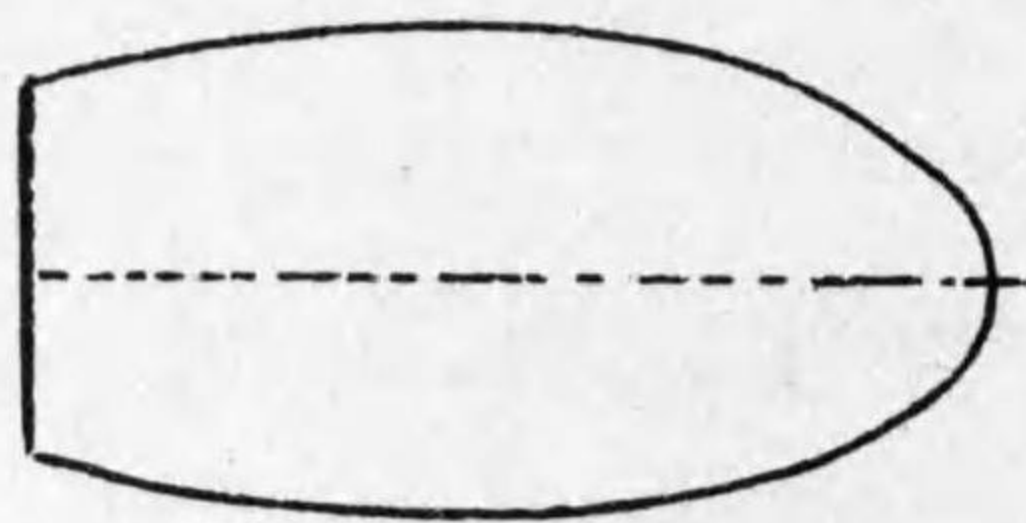
第 133 圖 B



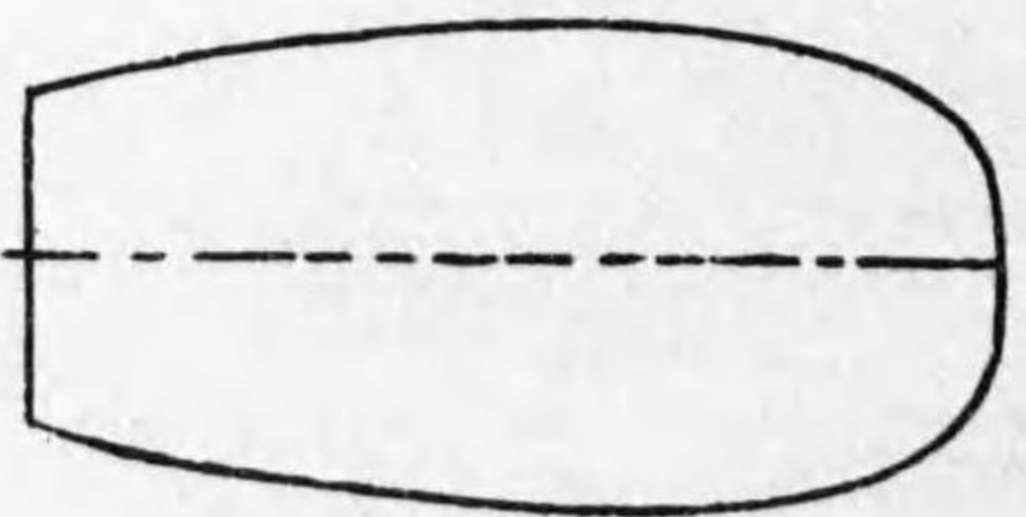
第 133 圖 A



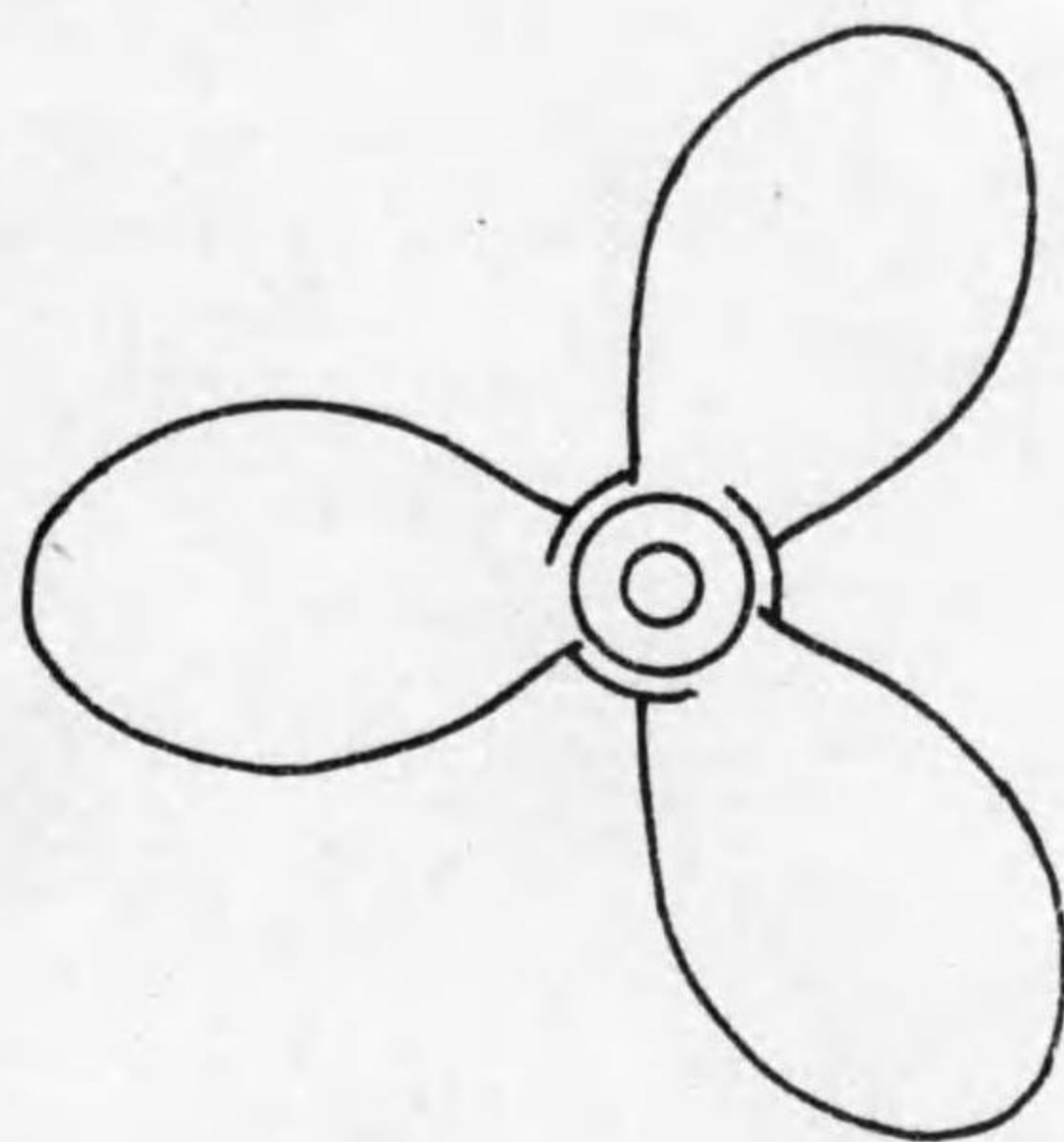
第 134 圖



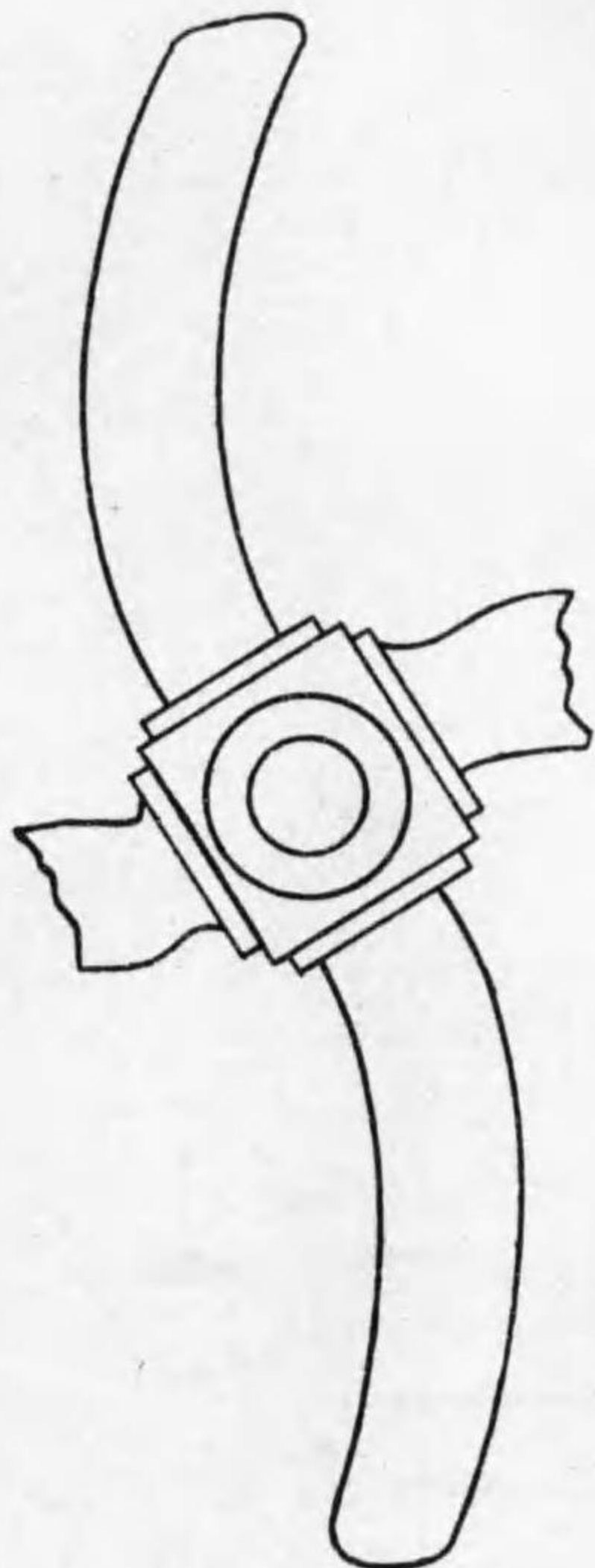
第 135 圖



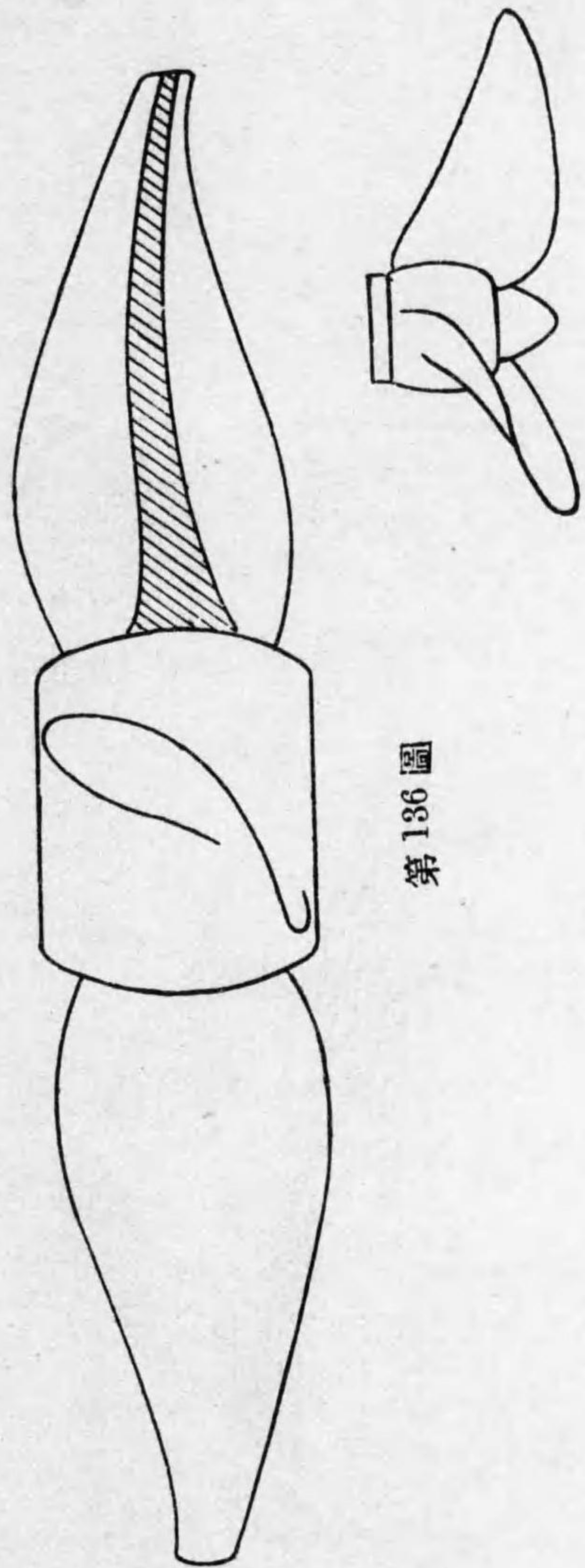
第 138 圖

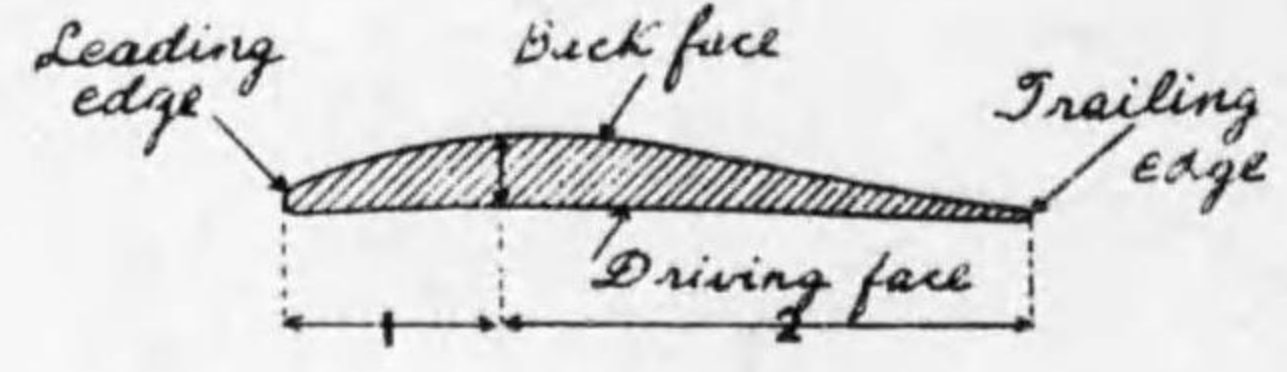


第 137 圖

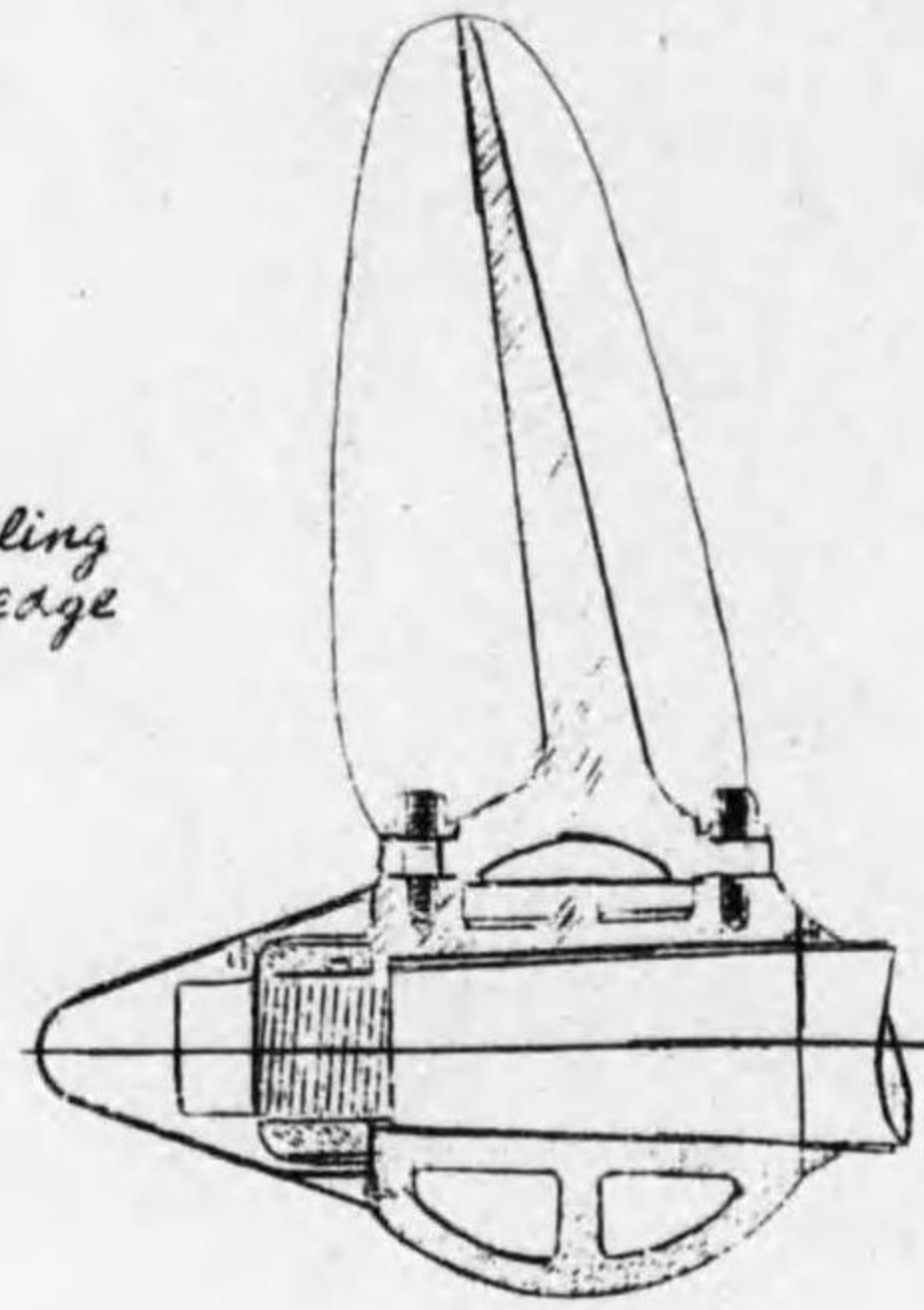


第 136 圖

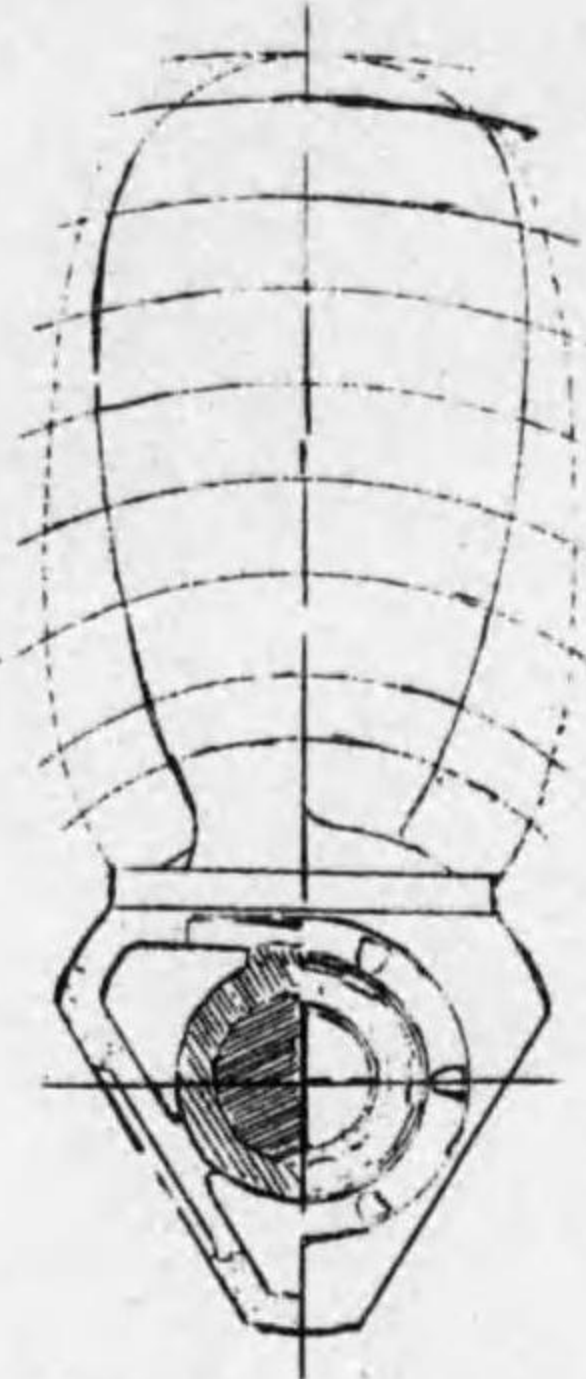




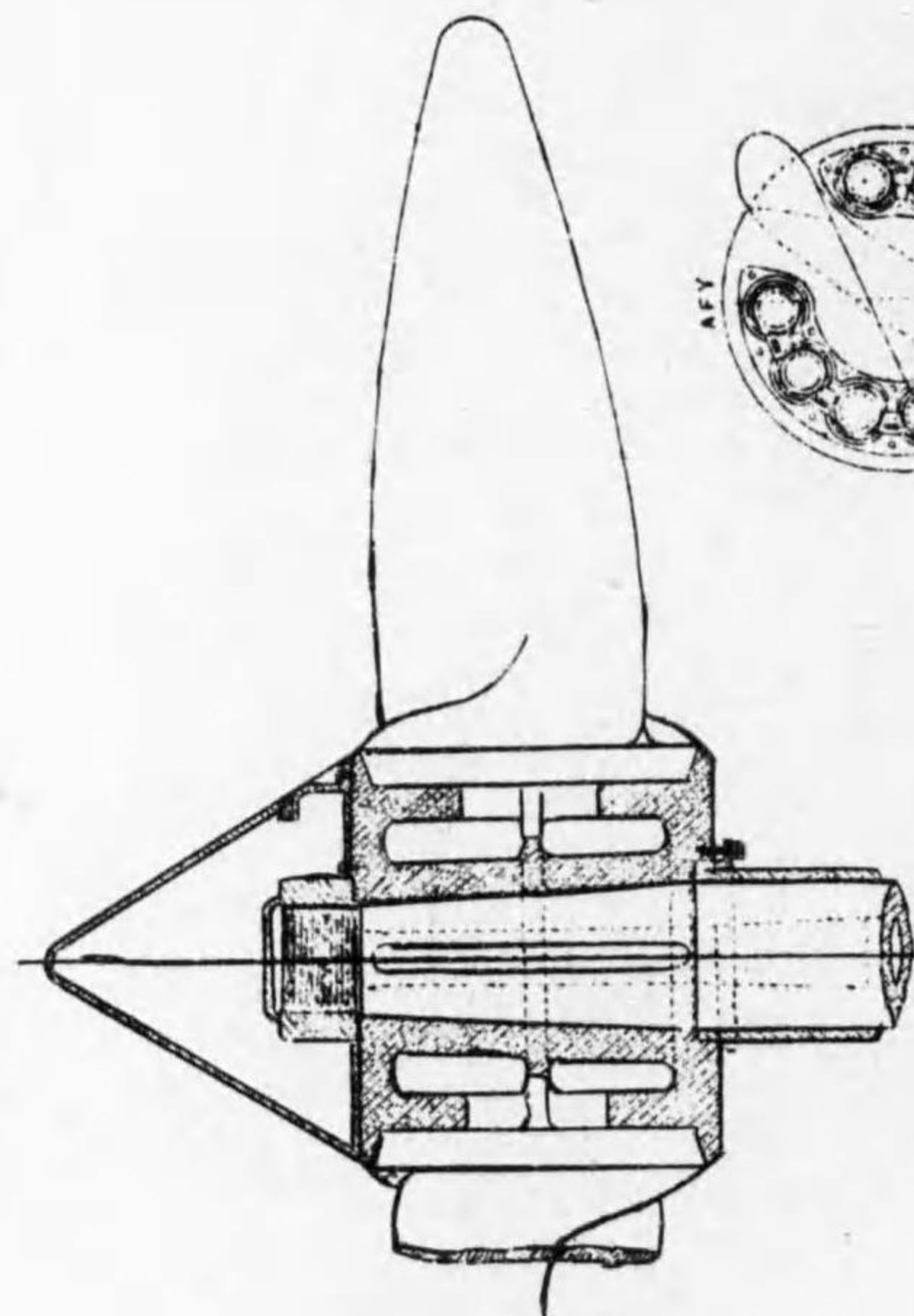
第 139 圖



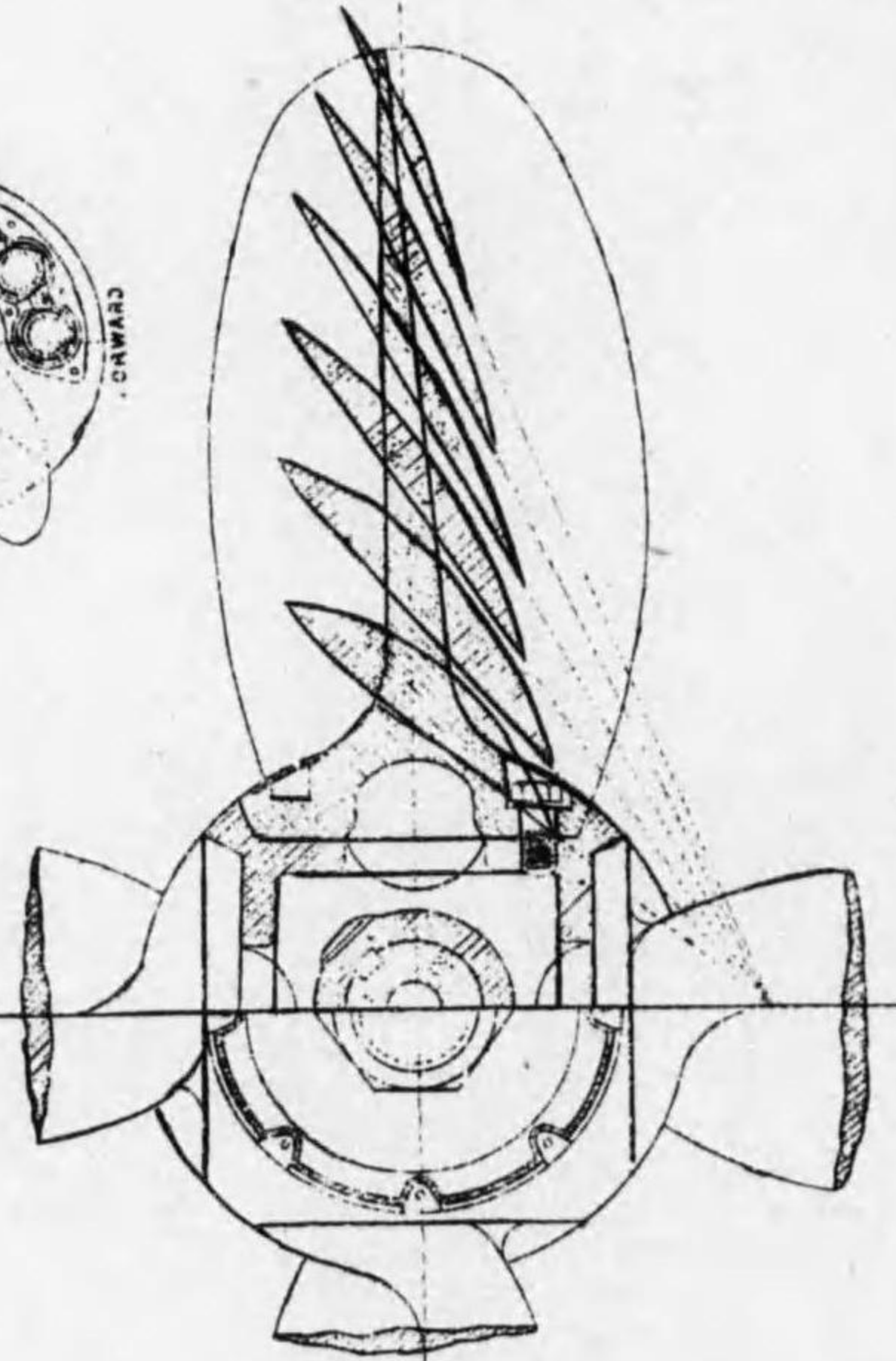
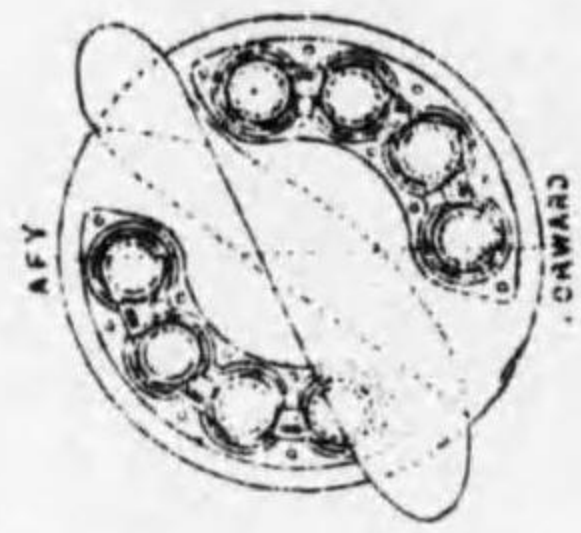
第 140 圖A



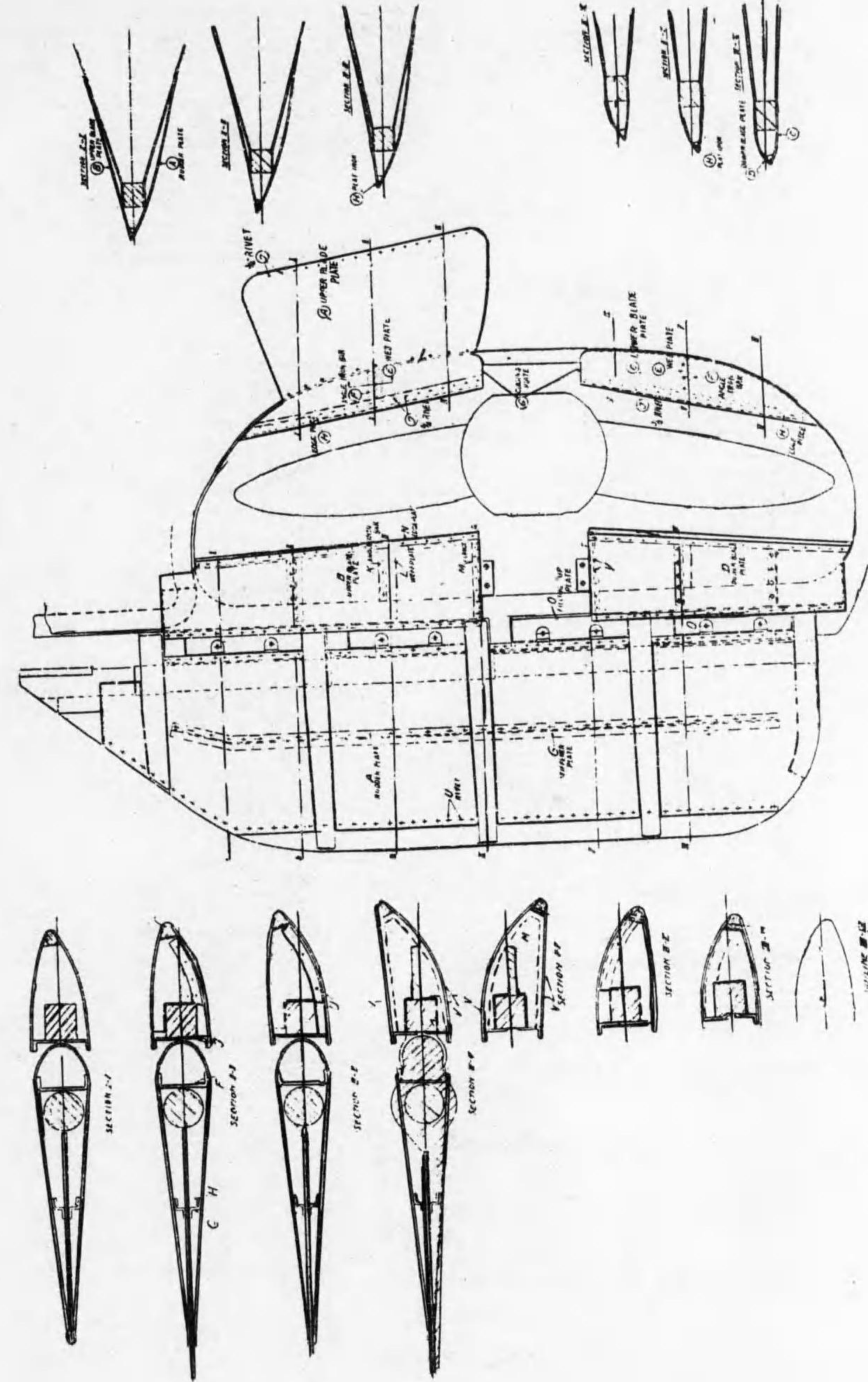
第 140 圖B



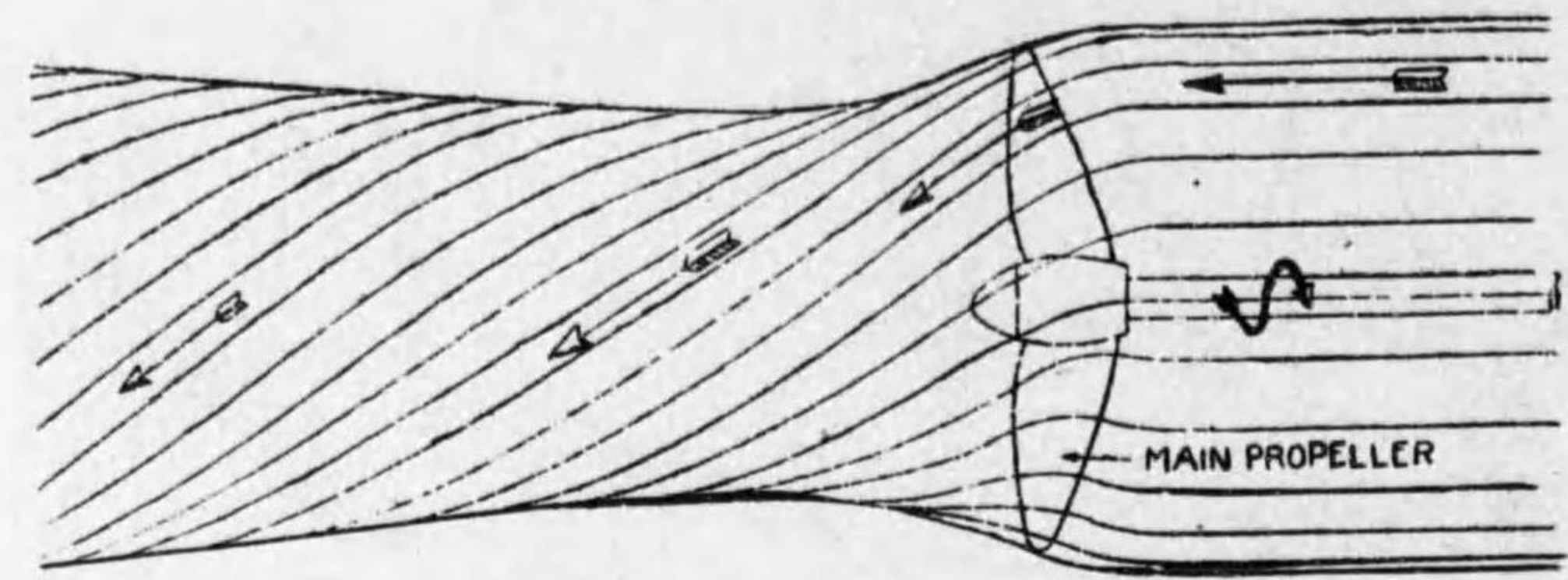
第 141 圖A



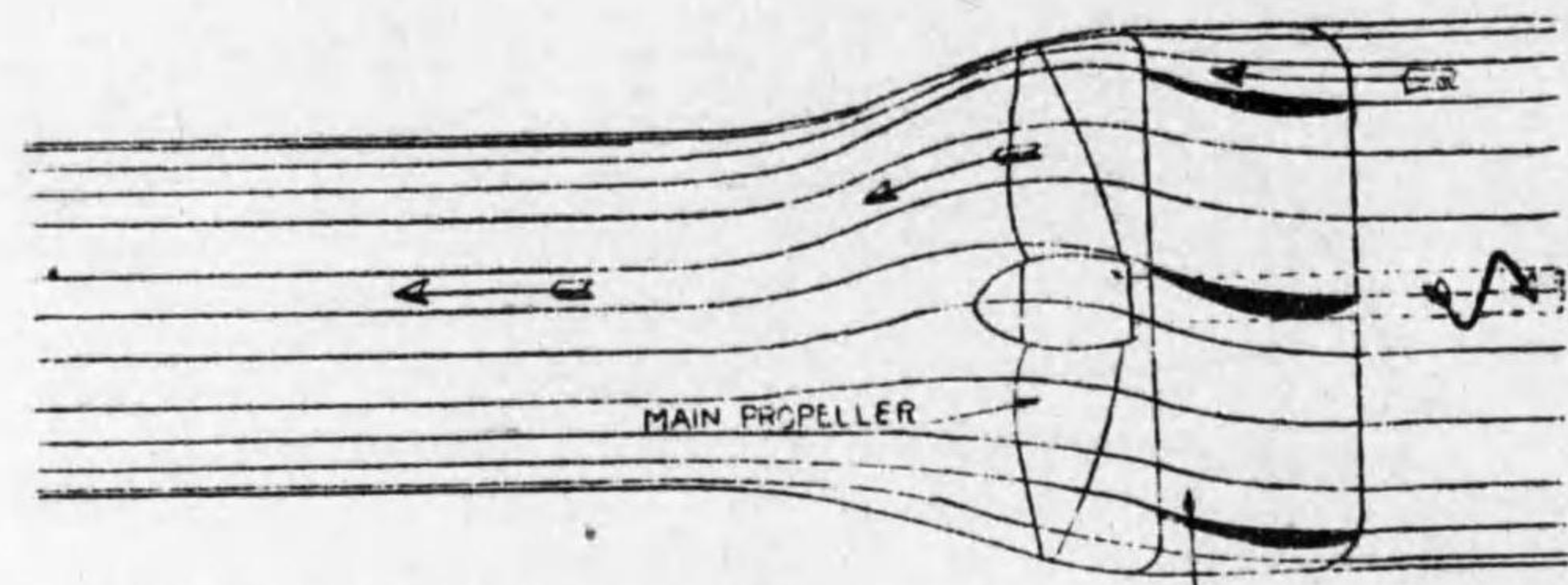
第 141 圖B



第 142 圖A

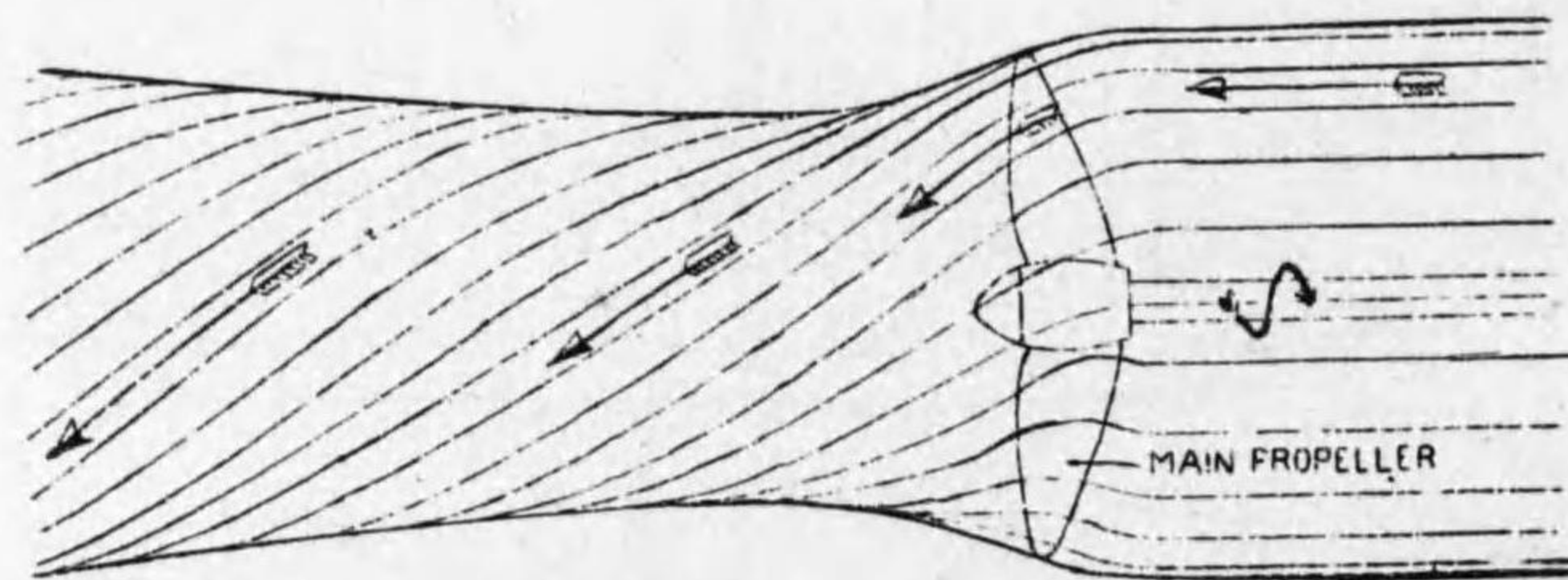


PROPELLER WITHOUT CONTRA PROPELLER.

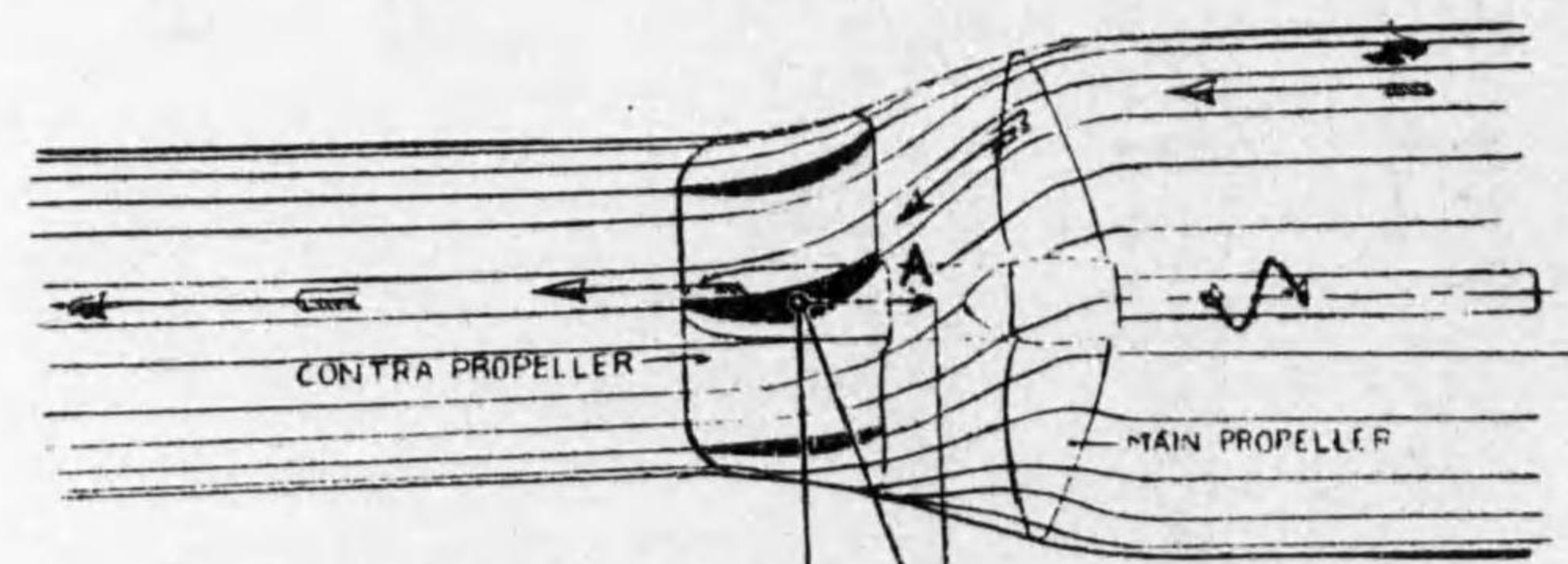


PROPELLER WITH CONTRA PROPELLER

CONTRA PROPELLER

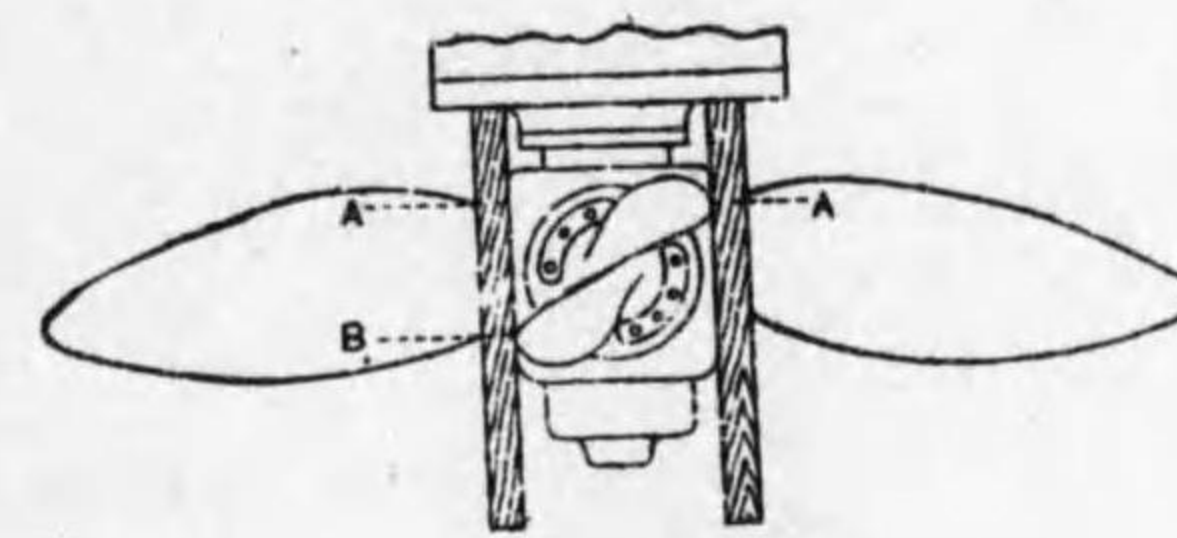
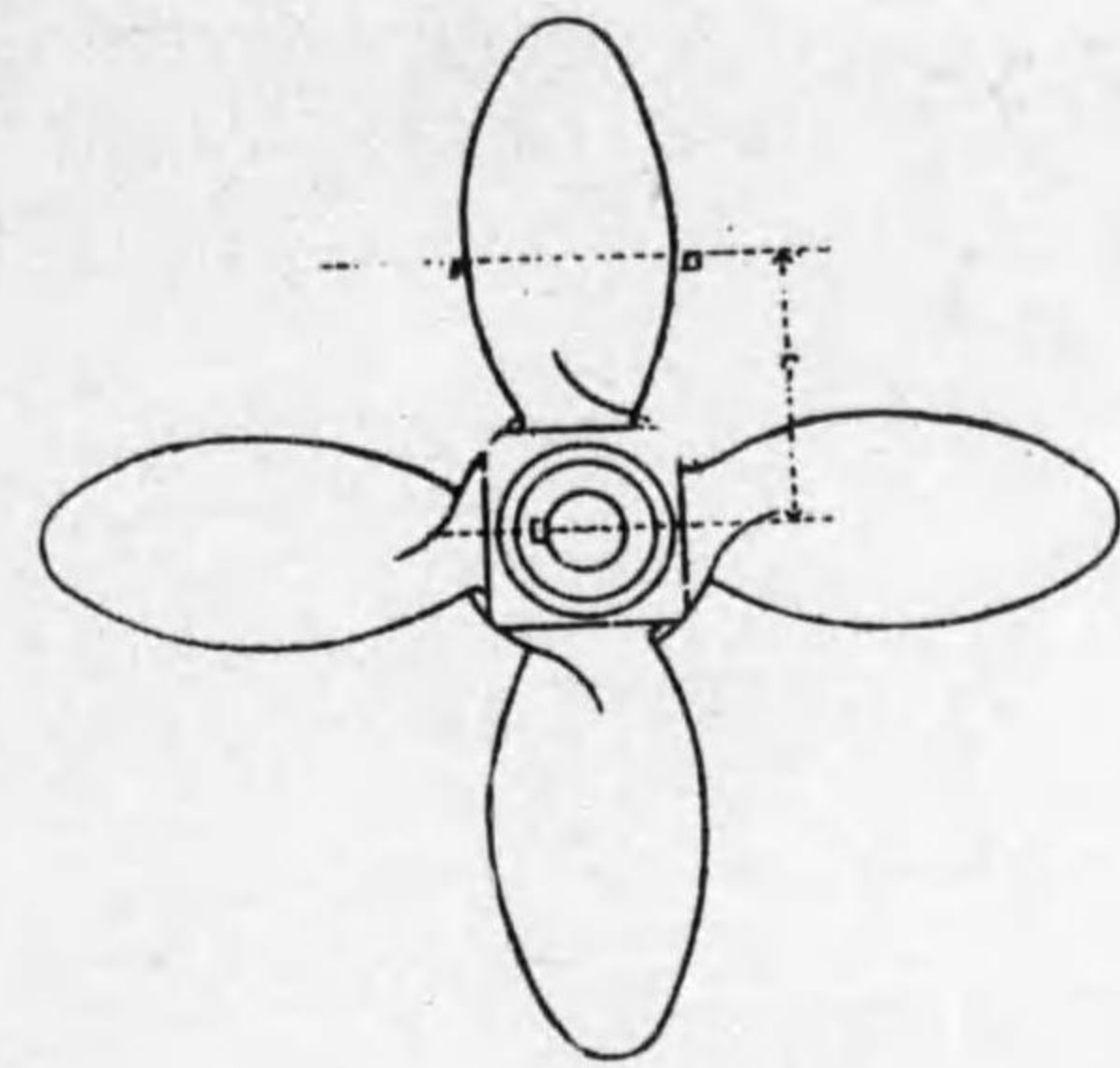


PROPELLER WITHOUT CONTRA PROPELLER.

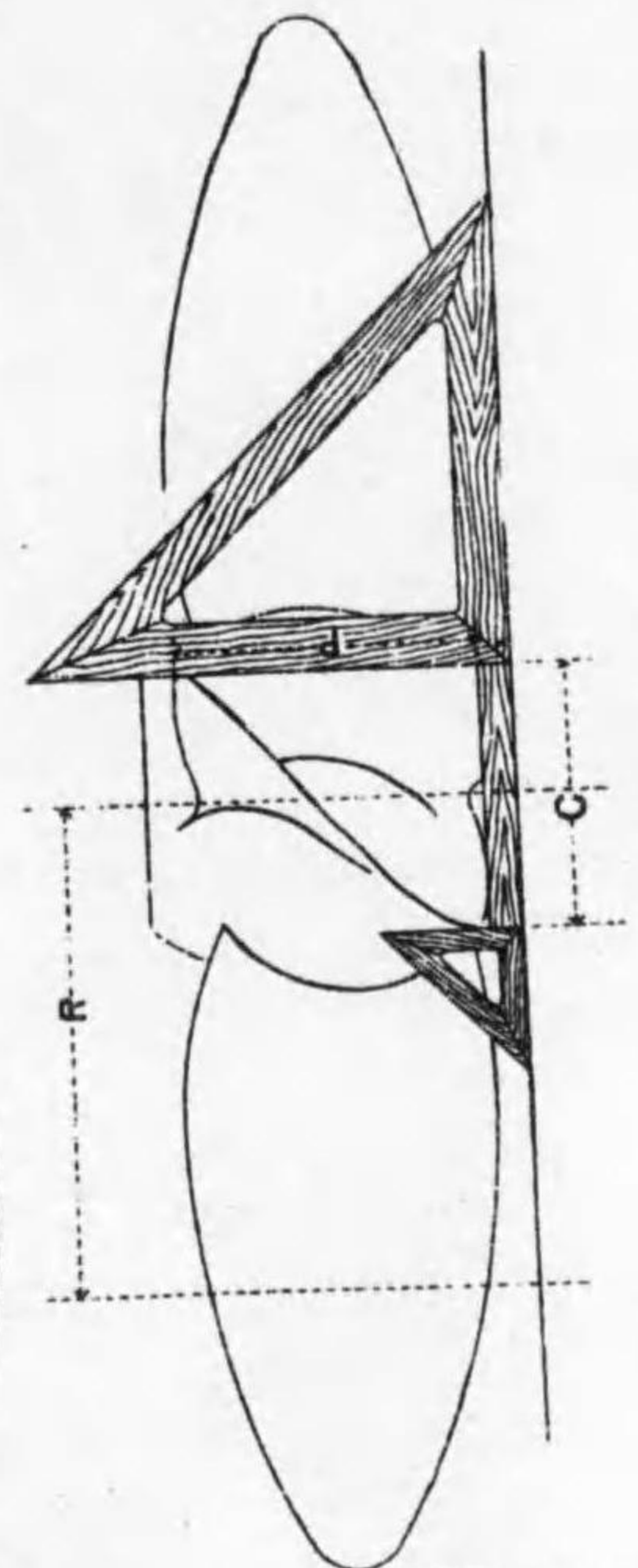


PROPELLER WITH CONTRA PROPELLER

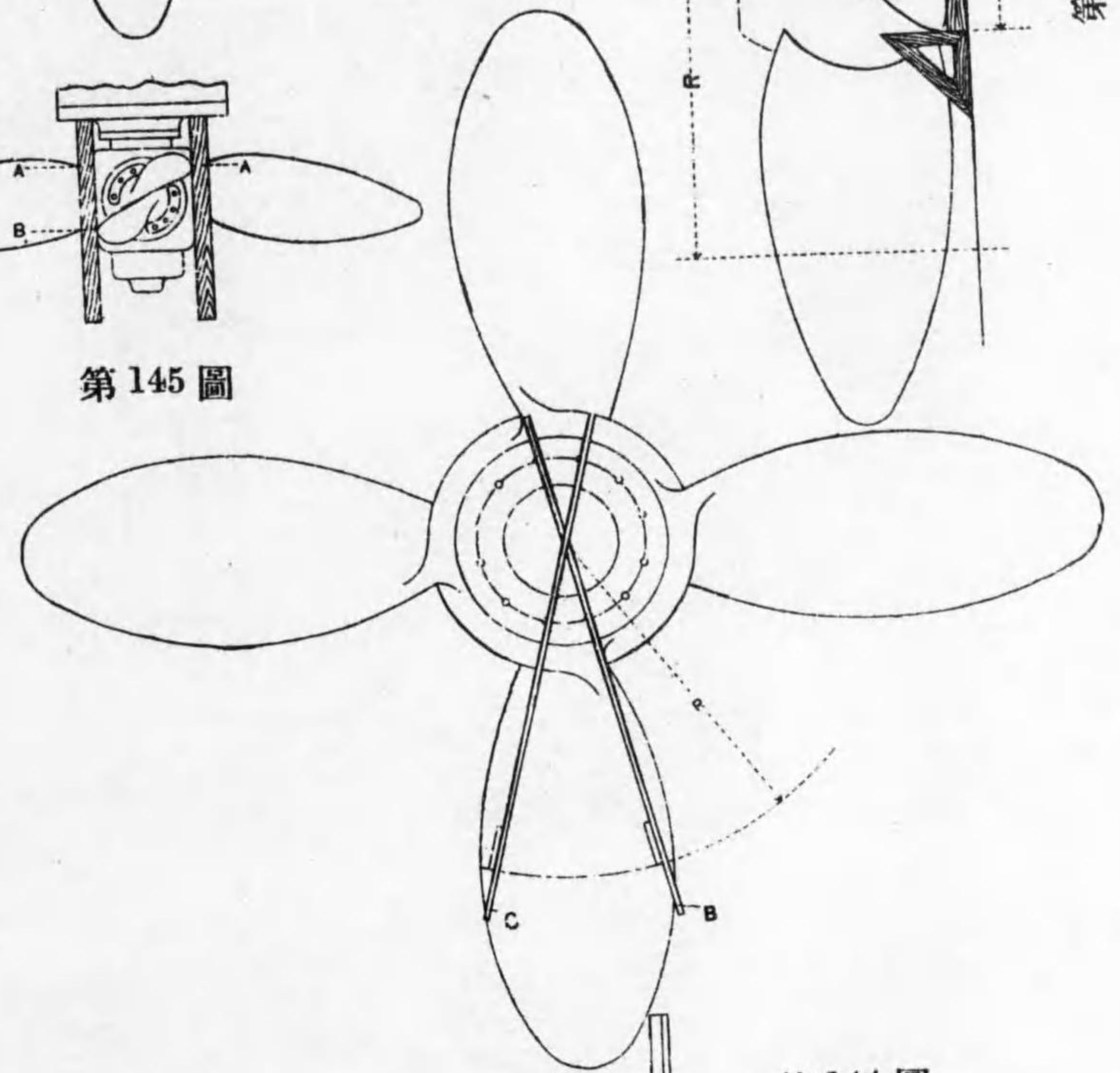
T R
第 142 圖 B



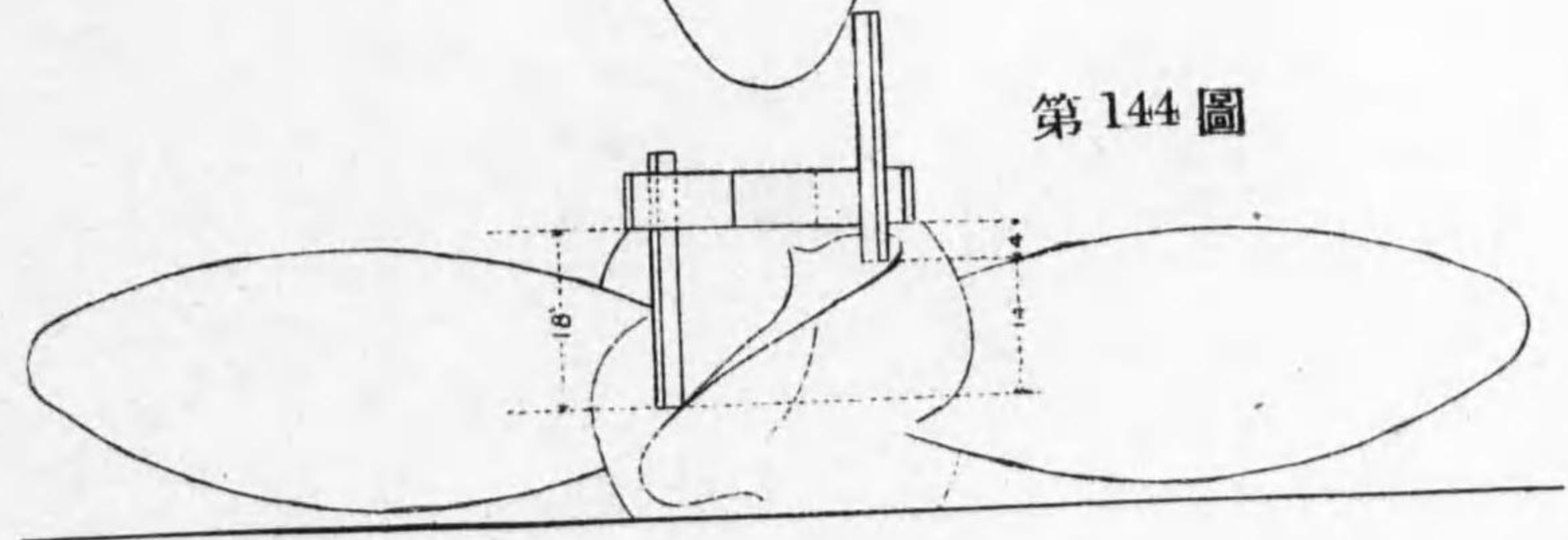
第 145 圖

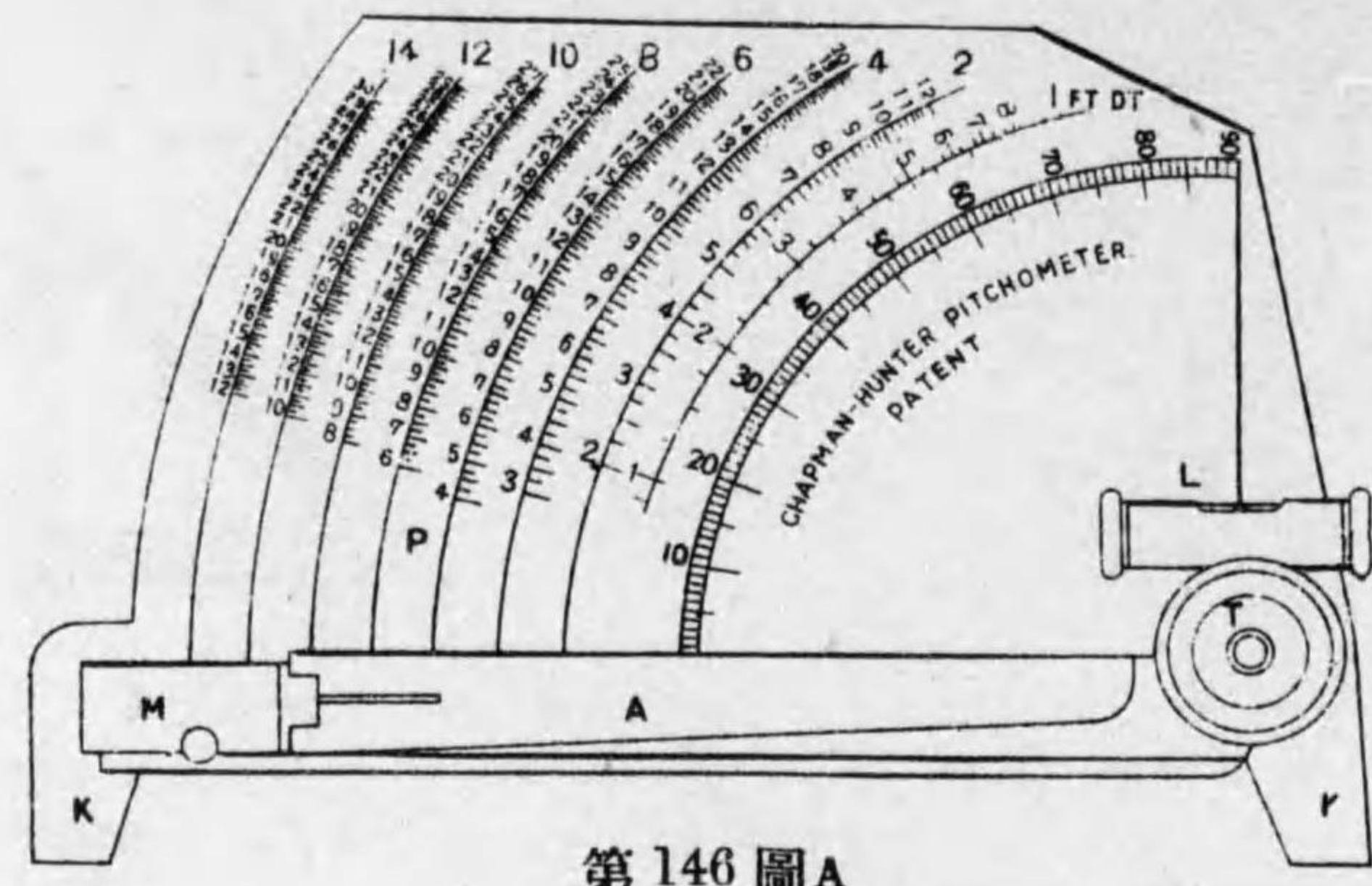


第 143 圖

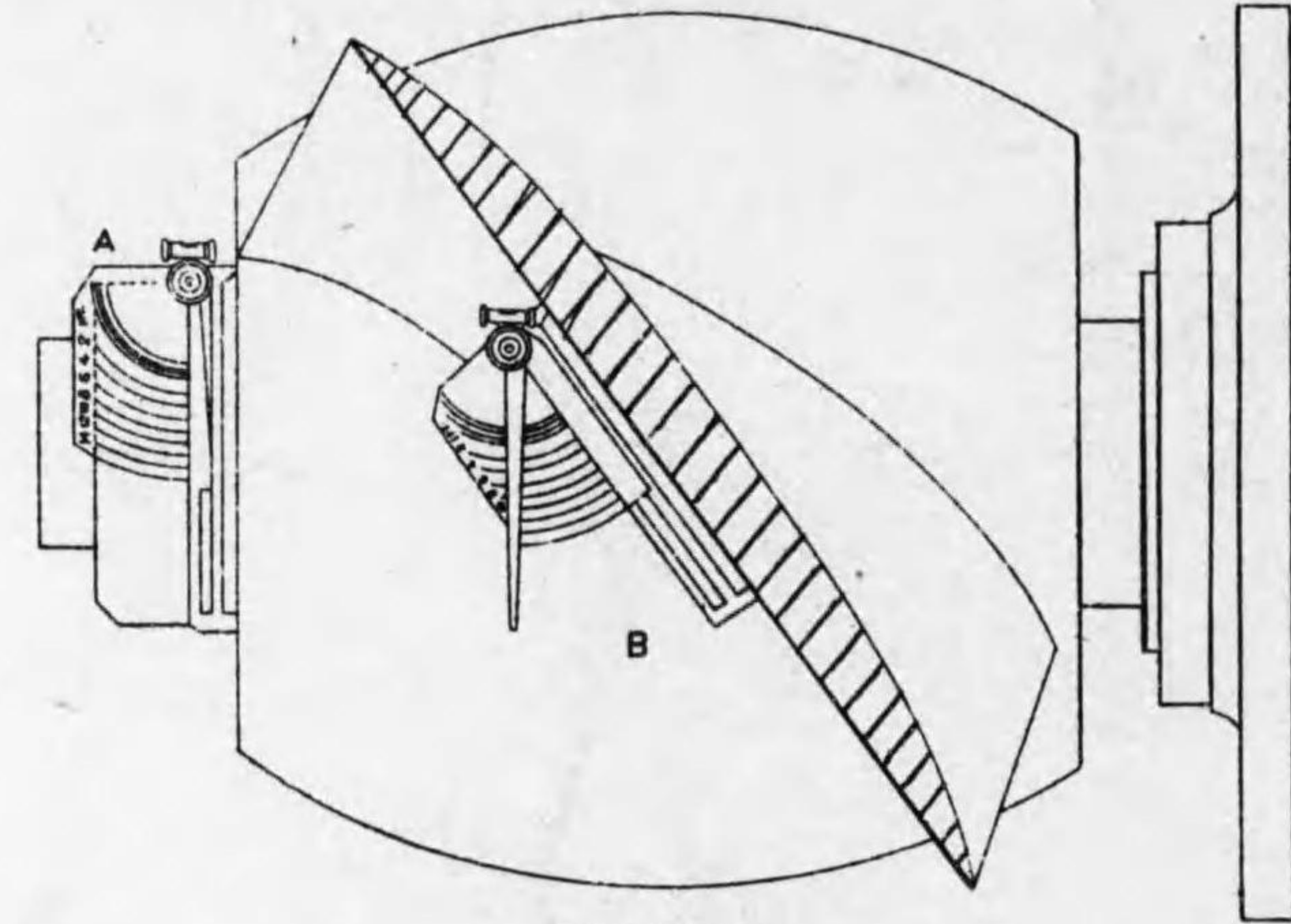


第 144 圖

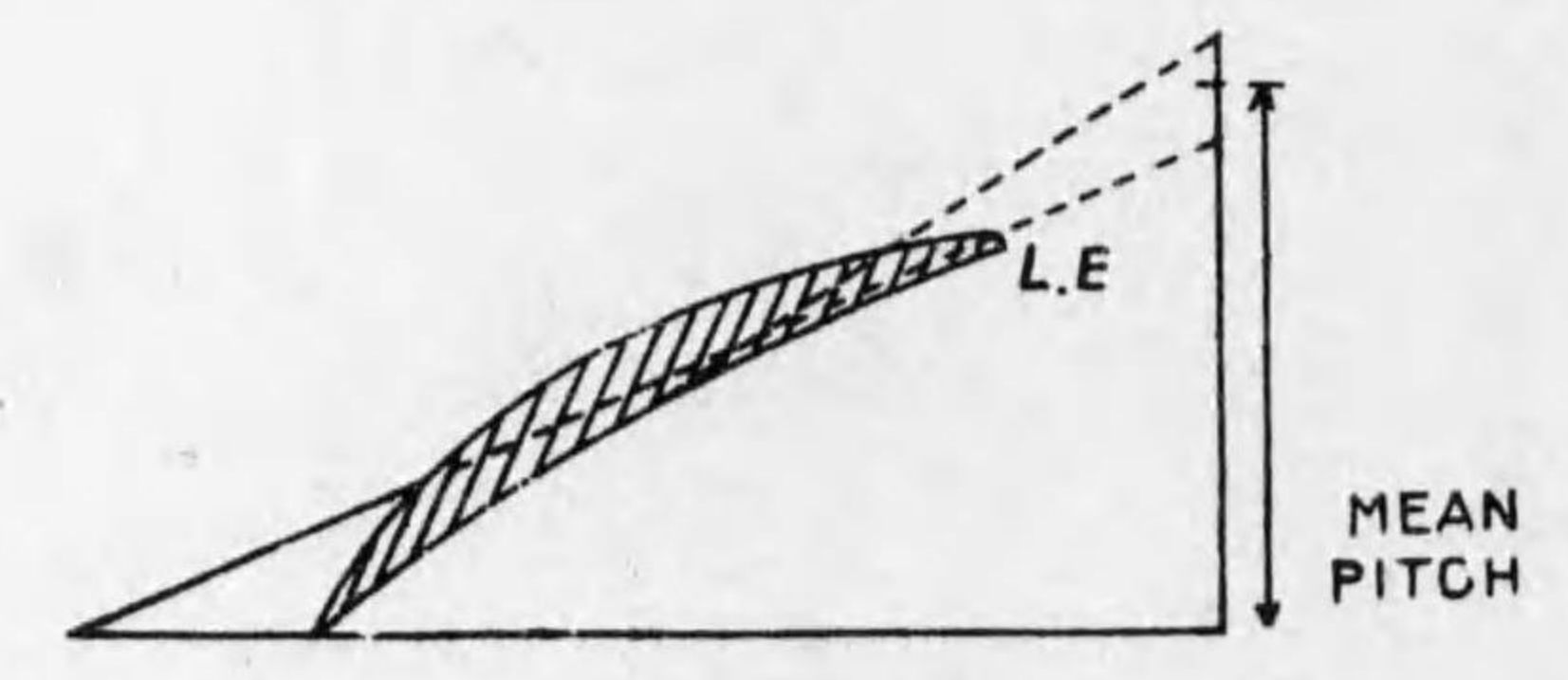




第146圖A



第146圖B



第147圖

昭和十四年七月十五日
 昭和十一年五月二十五日
 昭和七年六月二十五日
 昭和七年六月二十五日
 印刷
 發行
 增訂
 增發
 發行

臨時公立商船學校
 教科書編纂委員會

編纂者

發行者 賀集喜一郎
 東京市神田區小川町二丁目一番地

印刷者 川橋源三郎
 東京市京橋區築地一丁目十四番地

發行所 海文堂出版部

振替東京八〇九九三番
 電話神田二七〇二番

東京市神田區小川町二丁目一番地

特205

516

終