

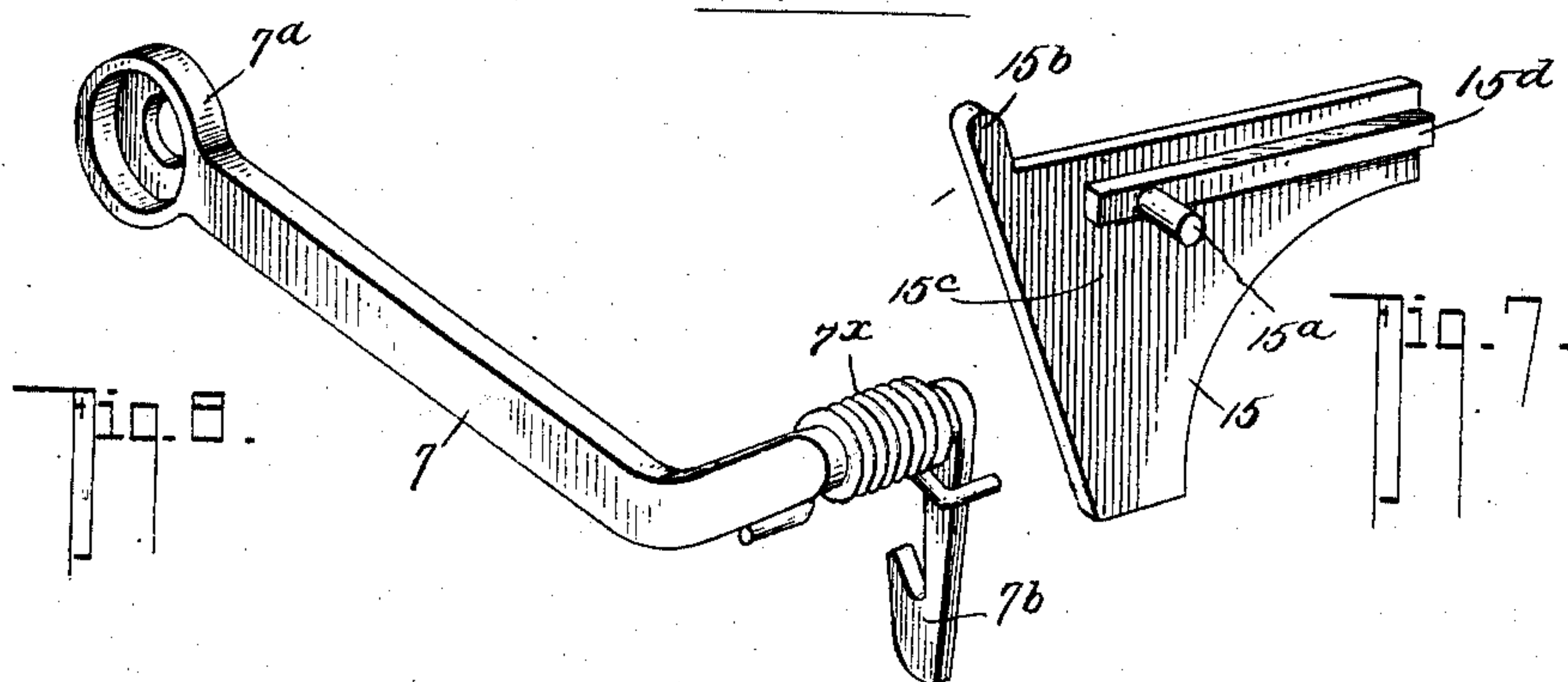
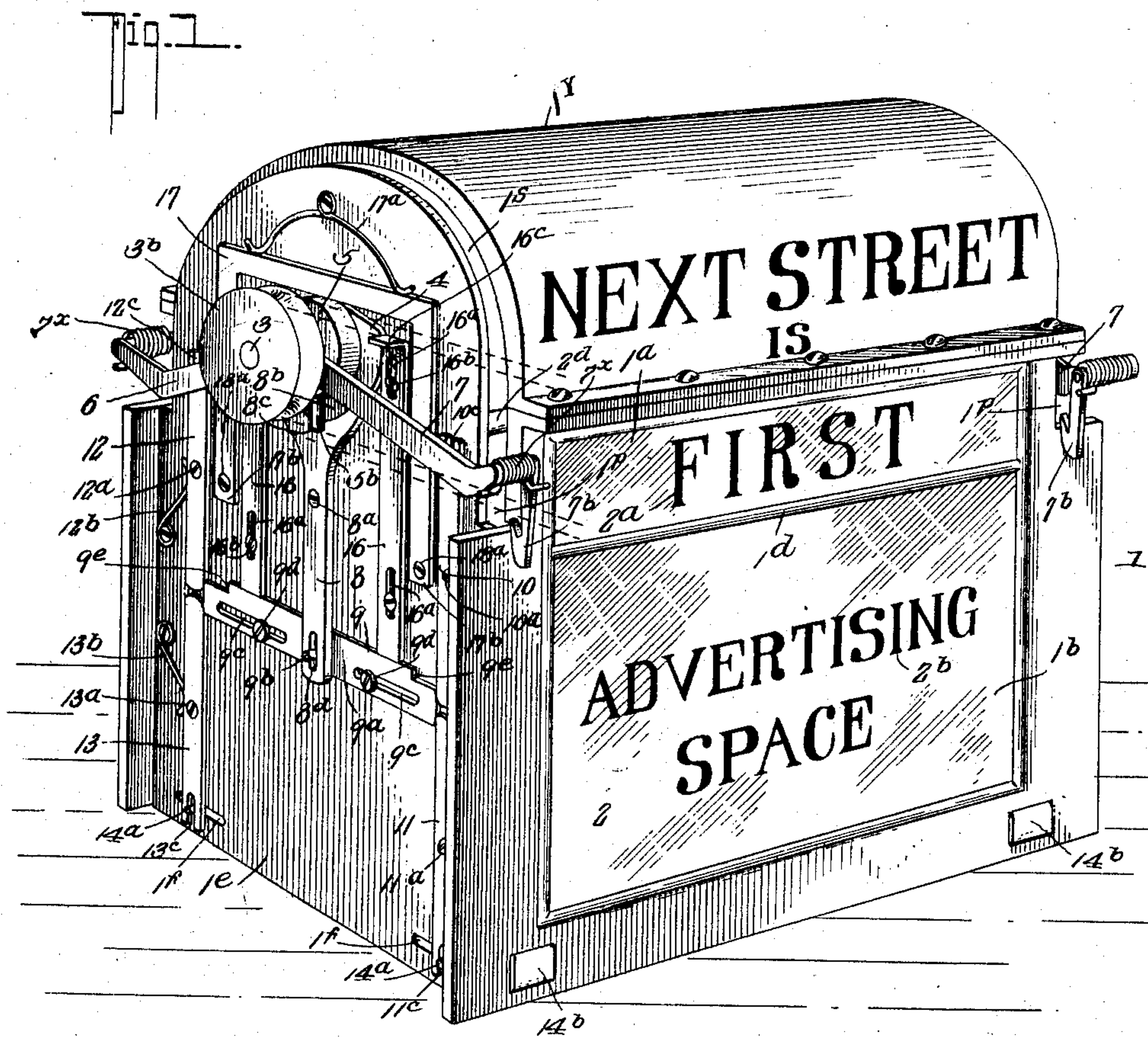
No. 864,247.

PATENTED AUG. 27, 1907.

H. M. LAMBERT.
STREET INDICATOR.

APPLICATION FILED JUNE 22, 1905. RENEWED MAY 7, 1907.

4 SHEETS—SHEET 1.



WITNESSES:

O. W. Holmes
John T. Schrott.

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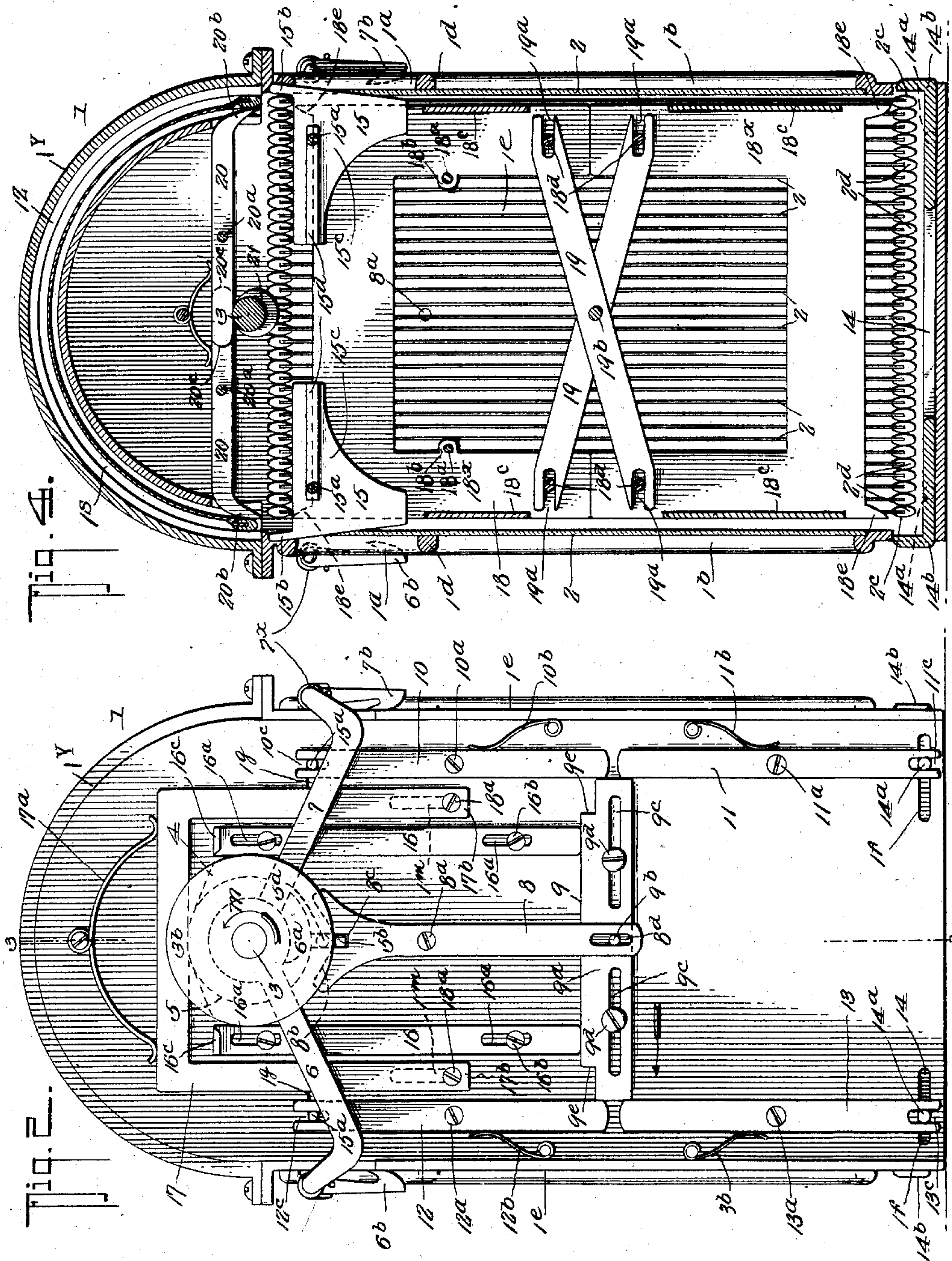
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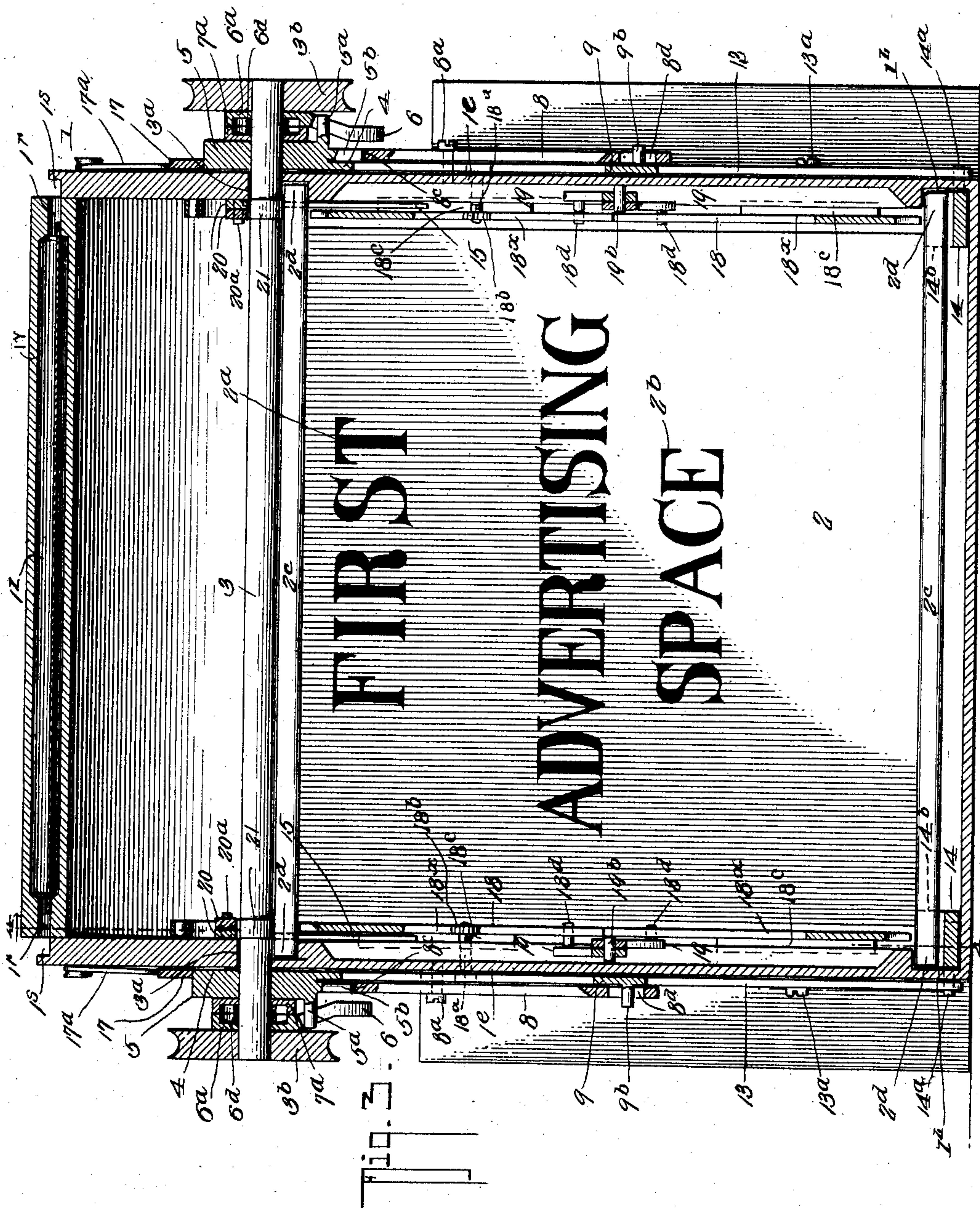
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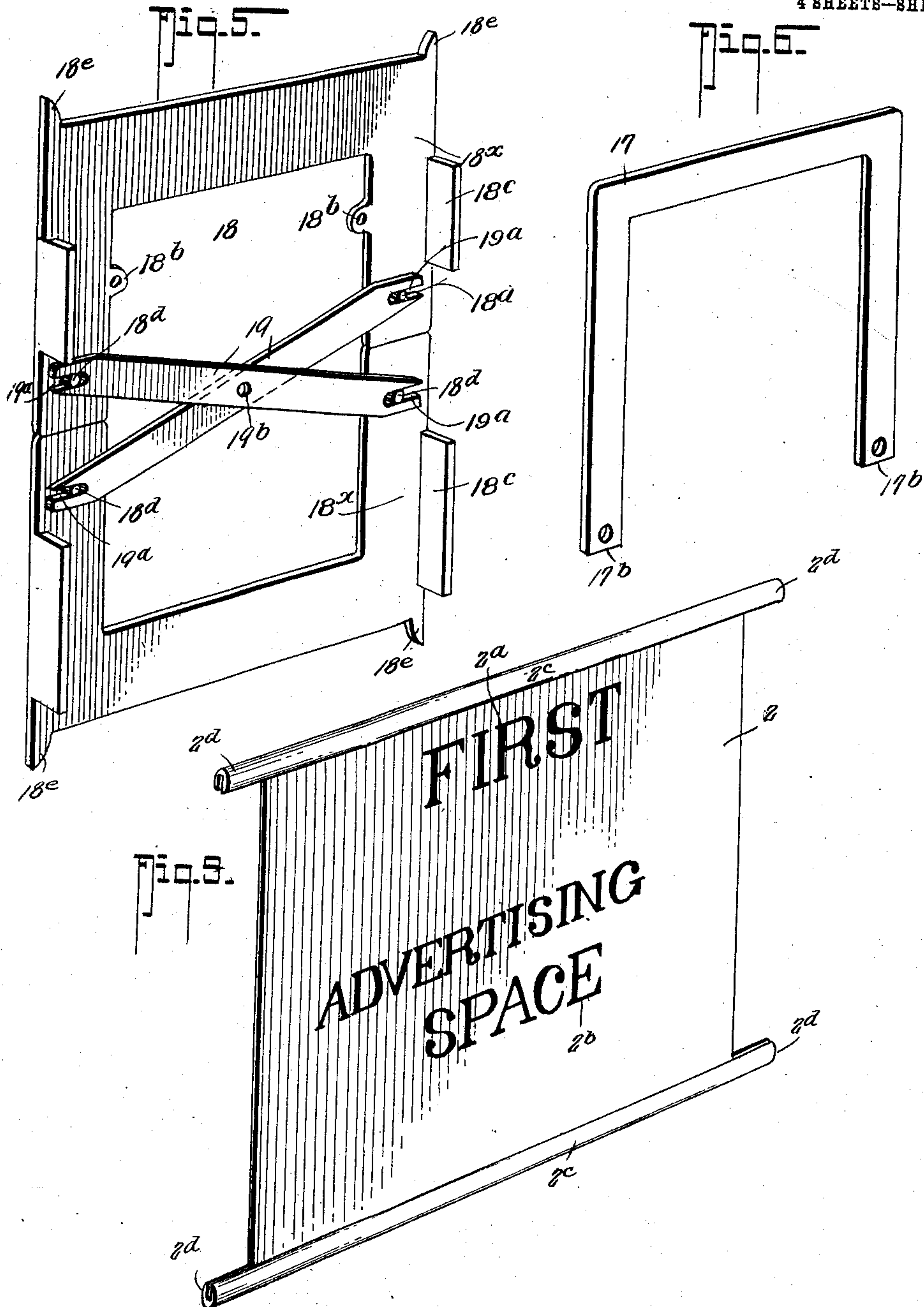
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UNITED STATES PATENT OFFICE.

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STREET-INDICATOR.

No. 864,247.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed June 22, 1905, Serial No. 266,396. Renewed May 7, 1907. Serial No. 372,341.

To all whom it may concern:

Be it known that I, HENRY M. LAMBERT, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Street-Indicators, of which the following is a specification.

My invention relates to certain new and useful improvements in indicating apparatus, and it particularly seeks to provide a device for indicating streets or stations for use in connection with railway systems.

My invention also has for its object to provide a changeable exhibitor in which means are provided for exhibiting advertisements and changing the advertising card at each change of the street indicating portion of the exhibitor.

This invention also has for its object to provide a changeable exhibitor of the character stated of a very simple and economical construction which will readily and effectively serve its intended purposes.

Generically, the invention comprises a casing or housing in which a plurality of indicating cards are movably mounted and means connected with the housing for moving the cards serially into position to be exhibited, and means for separating the respective cards from one another to insure an accurate and positive feed of the respective cards to the exhibiting position.

With other objects in view than have been heretofore enumerated, my invention includes certain novel construction, combination and arrangement of parts, all of which will be first described in detail and then specifically pointed out in the appended claims reference being had to the accompanying drawings, in which:—

Figure 1, is a perspective view, showing my invention applied for use. Fig. 2, is an end elevation thereof. Fig. 3, is a vertical section taken on the line 3—3 of Fig. 2. Fig. 4, is a cross section on the line 4—4 of Fig. 3. Fig. 5, is a detail perspective view of the card separator. Fig. 6, is a detail perspective view of the yoke member which is attached to the card separator. Fig. 7, is a detail perspective view of the card pusher. Fig. 8, is a detail perspective view of one of the operating arms for moving the cards out of their indicating position. Fig. 9, is a perspective view of one of the indicating cards.

Referring now to the accompanying drawings in which like numerals and letters of reference indicate like parts in all of the figures, 1 designates a housing having open fronts 1^a—1^b each divided by a cross bar 1^d—1^d to form two exhibiting spaces, the upper one serving to permit the street indicating portion 2^a of the card 2 to be viewed, while the lower space permits the advertising portion 2^b of the card 2 being seen.

Mounted in suitable bearings 3^a—3^a in the end walls 1^e—1^e of the housing 1, is a shaft 3 which carries a drive wheel 3^b at one or both ends.

Disposed at each side of the housing and between the drive wheel 3^b and the housing end 1^e is a cam wheel 4 and a disk 5 for a purpose presently understood.

Between the disk 5 and the wheel 3^b on each end of the shaft 3, the hub portions 6^a and 7^a of the operating arms 6 and 7 respectively are mounted.

5^a designates a pin on each disk 5 for engaging the arms 6 and 7 to operate the same in a manner presently more fully understood. Each disk 5 also has a dog 5^b for coöperating with a lever 8 pivotally mounted at 8^a on the end walls 1^e—1^e of the housing 1.

The lever 8 has a bifurcated end 8^b adjacent the disk 5 which is provided with a locking notch 8^c to receive the dog 5^b as clearly shown in Fig. 1. The other end of the lever 8 has a slot 8^d to receive the stud 9^b of a latch member 9 which comprises a body 9^a having horizontal slots 9^c—9^c to receive the screws 9^d—9^d by means of which the latches 9 are secured to the housing end walls 1^e—1^e. The latches 9 are also provided with shoulders 9^e—9^e at their ends for a purpose presently understood.

10 and 11 designate a pair of levers disposed at one side of the end walls 1^e—1^e of the housing 1 and in the same vertical alinement. The levers 10 are pivotally secured to the end walls 1^e—1^e of the housing 1 by pivot screws 10^a, as shown, while the levers 11 are similarly secured to the walls 1^e—1^e by pivot screws 11^a. The levers 10 and 11 lie with their adjacent ends against one end of the latch member 9, in which position they are normally retained by springs 10^b and 11^b respectively, as shown.

Opposite the levers 10 and 11 is a second pair of levers 12 and 13 of like construction, which are pivotally secured to the ends 1^e—1^e of the housing 1 by pivot screws 12^a and 13^a respectively and these levers 12 and 13 normally have their adjacent ends held against the other end of the latch member 9 by springs 12^b—13^b respectively, as shown. Each lever 11 and 13 has its lower end bifurcated as at 11^c and 13^c respectively, to straddle the projecting lugs 14^a—14^a of the lower card pushers 14—14, which lugs 14^a project through slots 1^f—1^f in the housing walls 1^e—1^e. The lower card pushers 14 each comprises a body plate having fingers 14^b—14^b at the ends to engage the projecting ends 2^d—2^d of the metal strips 2^c—2^c forming the card holders. The levers 10 and 12 have their upper ends bifurcated as at 10^c and 12^c respectively, similarly to the bifurcated ends 11^c—and 13^c of the levers 11 and 13 respectively, to straddle the projecting lugs 15^a—15^a of the upper card pushers 15—15 which are shown in detail in Fig. 7, by reference to which it will be seen that each pusher

15 comprises a flat body 15^c having a rib 15^d on one side to slide in guide ways of the housing, and the finger 15^b at one end to engage the projecting ends 2^d—2^d of the metal strips 2^c—2^c hereinbefore referred to. The lugs 5 15^a—15^a project through slots 1^s—1^s in the end walls 1^e—1^e of the housing 1.

16—16 designate drop slides having slots 16^a—16^a through which the securing screws 16^b—16^b pass, and these slides are adapted to drop at times to engage the 10 shoulders 9^e—9^e, in a manner presently more fully explained, of the latch 9 to hold the said latch to its adjusted positions. At the upper ends the slides 16—16 are each provided with angle portions 16^c—16^c to be engaged by the dog 5^b at times by means of which dog the 15 slides 16 are raised to release the latch member 9.

17 designates a yoke frame straddling the cam 4 and held to its downward position by a spring 17^a and the frame 17 has its lower ends secured to the card separator 18 by screws 18^a—18^a which pass through the ends 20 17^b—17^b of the frame 17 and through the slots 1^m—1^m of the casing 1^c and are secured to the lugs 18^b—18^b of the separator 18.

The separator 18 consists of a rectangular frame composed of a pair of yoke shaped sections 18^x—18^x of like 25 construction to form a rectangular frame each section 18^x has a pair of webs 18^e—18^e to slide in vertical grooves in the housing wall and each section 18^x—18^x is also provided with studs 18^d—18^d to engage the bifurcated ends 19^a—19^a of a pair of cross levers 19 fulcrumed at their center as at 19^b to the housing wall. At 30 each corner the separator frame 18 has a finger 18^e to enter between adjacent metal strips 2^c—2^c to prevent more than one card being fed at a time as will be more fully explained hereinafter.

20—20 designate levers fulcrumed at 20^a—20^a to the wall of the housing and having fingers 20^b—20^b to co-operate with the upper fingers 18^e—18^e of the separator 18 and the levers 20 have their adjacent ends 20^c—20^c 35 crossed to coöperate with a supplemental cam 21 on the shaft 3 as shown.

The housing 1 has a removable semi-cylindrical top 1^v having end walls and the housing and top are provided with grooves 1^r—1^r and the body portion of the housing is provided with cross grooves 1^z—1^z at the 45 bottom and top thereof. The cards 2 each comprise a body of flexible material having metal strips 2^c—2^c at the top and bottom which have projecting ends 2^d—2^d to ride on the grooves 1^r—1^r—1^z as shown. The arms 6 and 7 have hooks 6^b and 7^b pivotally secured to enter 50 the groove 1^s and engage the upper end 2^d of the strip 2^c to carry the card into the top of the housing and permit the next succeeding card to be exhibited, a slot 1^p being provided in the casing wall near the top to permit each hook 6^b and 7^b to enter the groove 1^s. A coil 55 spring 6^d within the hubs 6^a—7^a and attached with one end to each hub of the levers 6 and 7 serves to return them to their normal position when the operating power is released. Coil springs 7^x are provided to normally hold the hook 7^b against the casing to properly 60 engage the cards. The front and back walls of the casing may be projected at the ends as shown in Fig. 1, if desired, to hide and protect a portion of the operating mechanism.

So far as described, the manner in which my invention operates, will be best explained as follows:—A se-

ries of cards having suitable characters thereon to indicate the streets, and suitable advertising matter, is placed in the housing and the top screwed on. Any suitable power is imparted to the wheel 3^b to rotate it upon its axis say in the direction of the arrow in Fig. 2 70 and as this occurs the dog 5^b rocks the lever 8 which moves the latch 9 in the direction of the arrow. The latch 9 in turn moves the levers 12 and 13 to move their respective upper and lower card pushers 15 and 14 respectively from left to right in Fig. 2, thereby moving 75 the cards one step toward the right hand side of Fig. 2 with the exposed card in position to be engaged by the hook member 7^b of the arm 7. As the latch 9 is moved in the direction of the arrow, one of the slides 16 falls into position to engage the shoulder 9^e of the latch 9 to 80 hold it in its moved position. As the shaft 3 continues its motion in the direction of the arrow, the cam wheel 4 engages the yoke 17 and raises it, thus raising the upper half 18^x of the card separator 18 and lowering the lower half 18^x of the said separator 18, through the 85 medium of the levers 19, to cause the fingers 18^e to embrace the card pack and hold all the cards excepting the one being exposed, between the fingers 18^e—18^e. At the same time the supplemental cam 21 operates the levers 20—20 and causes their fingers 20^b—20^b to co- 90 operate with the upper fingers 18^e—18^e of the card separator 18. Now as the shaft 3 moves the cam wheel 4 in the direction of the arrow in Fig. 2, the pin 5^a on the disk 5 engages the arm 7 and moves it in a semi-circular direction, the hooks 7^b engaging the projecting 95 ends 2^d of the strip 2^c that is being exposed and carries the card around into the top of the housing thereby exposing the next card. As the arm is being swung in the direction of the arrow *m* in Fig. 2, the dog 5^b will engage the angle portion 16^c of the slide 16 and raise 100 it to its normal position, the springs 10^d, 11^b, 12^b and 13^b returning the levers 10, 11, 12 and 13, the latch 9, and the lever 8, to their normal position. After the arm 7 has been moved in the direction of the arrow *m*, in Fig. 2 to the limit of its movement, the power applied to the 105 wheel 3^b is released thus permitting the coil spring 6^d within the hubs 6^c—7^c to return the arm and the shaft to their normal positions, while the spring 17^a returns the yoke frame 17 and its attached parts to their normal position. As the next card is moved into the 110 housing top, its predecessor drops into place in back of the pack ready to be fed forward by the card pusher in the next place.

Should the power be applied to wheel 3^b to turn it in a direction opposite the arrow in Fig. 2, the same series 115 of operations take place except that the opposite parts of the mechanism operate to move the pack from right to left and to move the left hand one, this being exposed up into the top of the housing, the arm 6 in this case being the operating arm instead of the arm 7 as 120 will be clearly understood by reference to the drawings.

The cards are printed on both sides so that the printed matter will always be apparent through the side of the indicator which is exposed to view. When the 125 indicator is to be operated in the reverse direction, the cards are removed and turned around to bring their printed matter into proper alinement as will be readily understood by those skilled in the art to which the invention appertains. 130

It should be understood that a duplicate set of operating mechanism is provided, one set on each end of the housing and arranged to operate in unison with each other.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, operation and many advantages of my invention will be readily understood by those skilled in the art to which it appertains.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:—

1. In an apparatus of the class described, a housing having side and end walls and a top, said side walls having exhibiting openings, a shaft passing through the end walls of the housing, a cam on said shaft, a disk having a stud and a dog on said shaft adjacent said cam, a pair of arms on said shaft adjacent said disk, a pack of cards within the housing, pusher devices for feeding the pack laterally levers fulcrumed on the housing end for operating said pushers, means for operating said levers comprising a pivoted forked lever cooperating with said dog, a latch member cooperating with said forked lever, means for locking said latch member to its adjusted positions at times, said arms having hooks, means for turning said shaft to operate said cam, said disk and said arms, said arm hooks being adapted to engage said cards to remove them one by one from in front of the exhibiting opening in the side wall of the housing, a card separator within the housing for separating the cards from the pack, and means on the outside of the housing connected with the card separator and operated by said cam for operating said card separator, and means for returning the operating parts to their normal positions.

2. In an apparatus of the class described, a housing, said housing having exhibiting openings, a pack of cards within said housing, a rotatable shaft journaled in the end walls of said housing, a cam wheel and a disk secured to said shaft to turn therewith, a pair of arms loosely mounted on said shaft, spring devices for holding said arms in their normal position, a stud and a dog on said disk, a forked lever pivotally mounted on the end wall of said housing, for cooperating with said dog, a laterally movable latch secured to the free end of said forked lever, pusher members for moving the cards laterally, levers fulcrumed on the housing ends and connected with said pusher members and adapted to be operated by the said latch member, drop slides for engaging the latch member to hold it to its moved positions, said dog adapted to engage said slide at times to release the latch member, a card separator comprising an upper and a lower section, cross levers joining said sections together, said cross levers being fulcrumed at their crossing point to the housing end walls, said separator having fingers for entering between adjacent cards, supplemental levers having fingers for entering between adjacent cards, a supplemental cam on the shaft for operating said supplemental levers, a yoke straddling said first mentioned cam and operatively connected with said separator for operating said card separator, said arms having hook members for engaging the

cards, said stud on said disk adapted to engage said arms to turn the same about the shaft to move the cards out of the pack one at a time, and means for returning the operating parts to their normal positions substantially as shown and described.

3. In an apparatus of the class described, a housing having side and end walls and a top, said side walls having exhibiting openings, a rotatable shaft journaled in the end walls of the housing, a pair of arms on said shaft, a pack of cards within the housing, pusher devices for feeding the pack laterally, levers fulcrumed on the housing for operating said pushers, means for operating said levers, a latch member cooperating with said lever operating means, means for locking said latch member to its adjusted position at times, card engaging devices carried by said arms for engaging said cards to remove them one by one from in front of the exhibiting opening in the side wall of the housing, a card separator within the housing for separating the cards from the pack, and means connected with the card separator and cooperatively connected with the shaft for operating said card separator, and means for returning the operating means to their normal position.

4. In an apparatus of the class described, a card separator comprising a rectangular frame formed in sections, crossed levers connecting said sections together, a fixed pivot connecting said crossed levers together at their centers, and means connected with one of said frame sections for reciprocating such sections, said frame having separating fingers on each section, substantially as shown and described.

5. In an apparatus of the class described, a card separator comprising a rectangular frame formed in sections, crossed levers connecting said sections together, a fixed pivot connecting said crossed levers together at their centers, and means connected with one of said frame sections for reciprocating such sections, said frame having separating fingers on each section, and guide members on each section.

6. In an apparatus of the class described, a card separator comprising a rectangular frame formed in sections, crossed levers connecting said sections together, a fixed pivot connecting said crossed levers together at their centers, and means connected with one of said frame sections for reciprocating such sections, said frame having separating fingers on each section, guide members on each section said levers and said sections being arranged to reciprocate the second section as the first section is reciprocated substantially as shown and described.

7. In an apparatus of the class described, the combination with a casing, a pack of cards within said casing, pusher devices for feeding said pack laterally, means for successively feeding said cards longitudinally out of the pack from in front and replacing them in the pack at the back, means for holding the pack stationary at times while a card is being with-drawn therefrom, and means for operating and locking said last named holding means until the card has been partially with-drawn from the pack substantially as shown and described.

HENRY M. LAMBERT.

Witnesses:

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