

(No Model.)

5 Sheets—Sheet 1.

E. ANTHONY.

NEWSPAPER SELLING APPARATUS.

No. 376,021.

Patented Jan. 3, 1888.

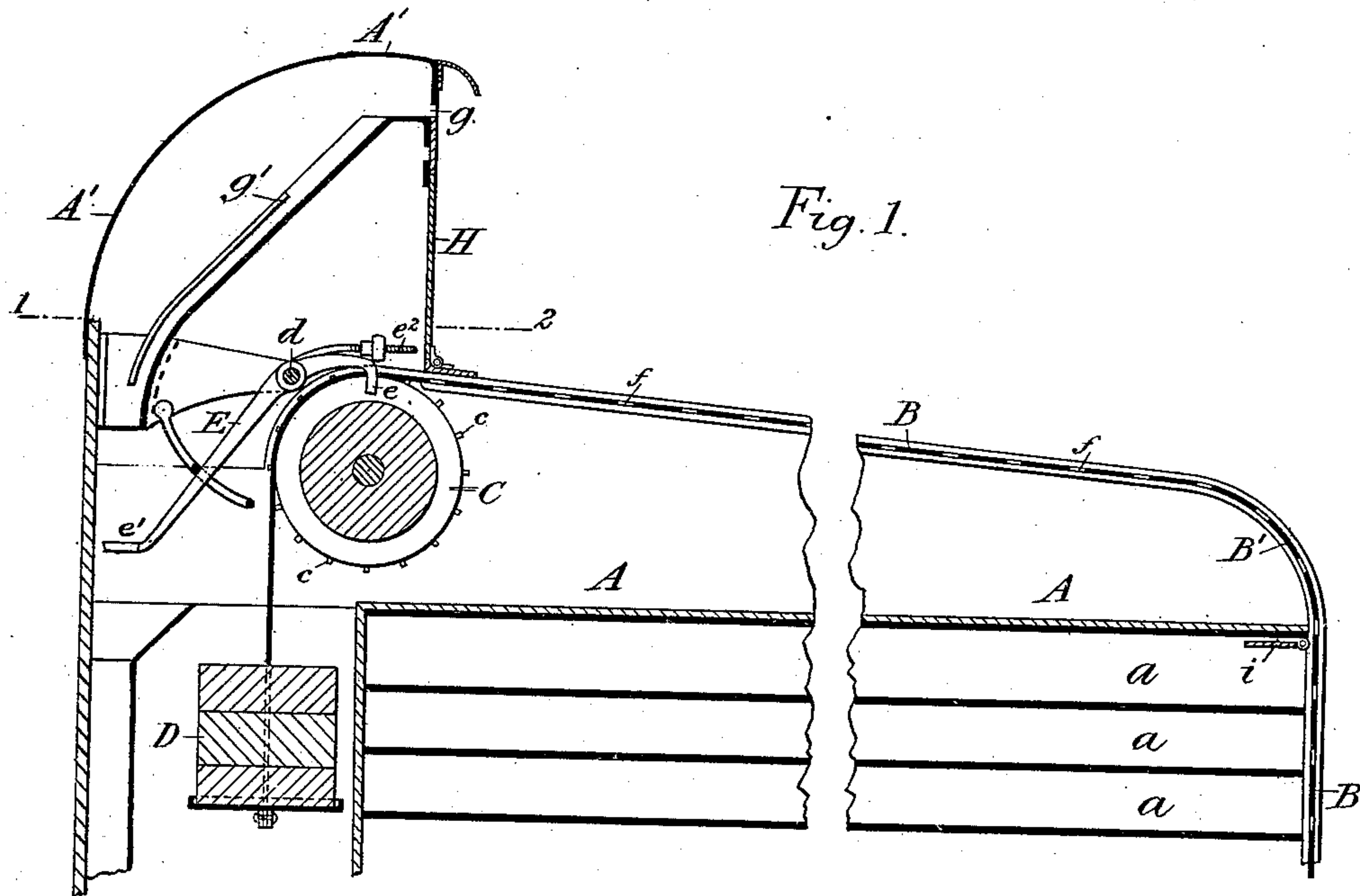


Fig. 1.

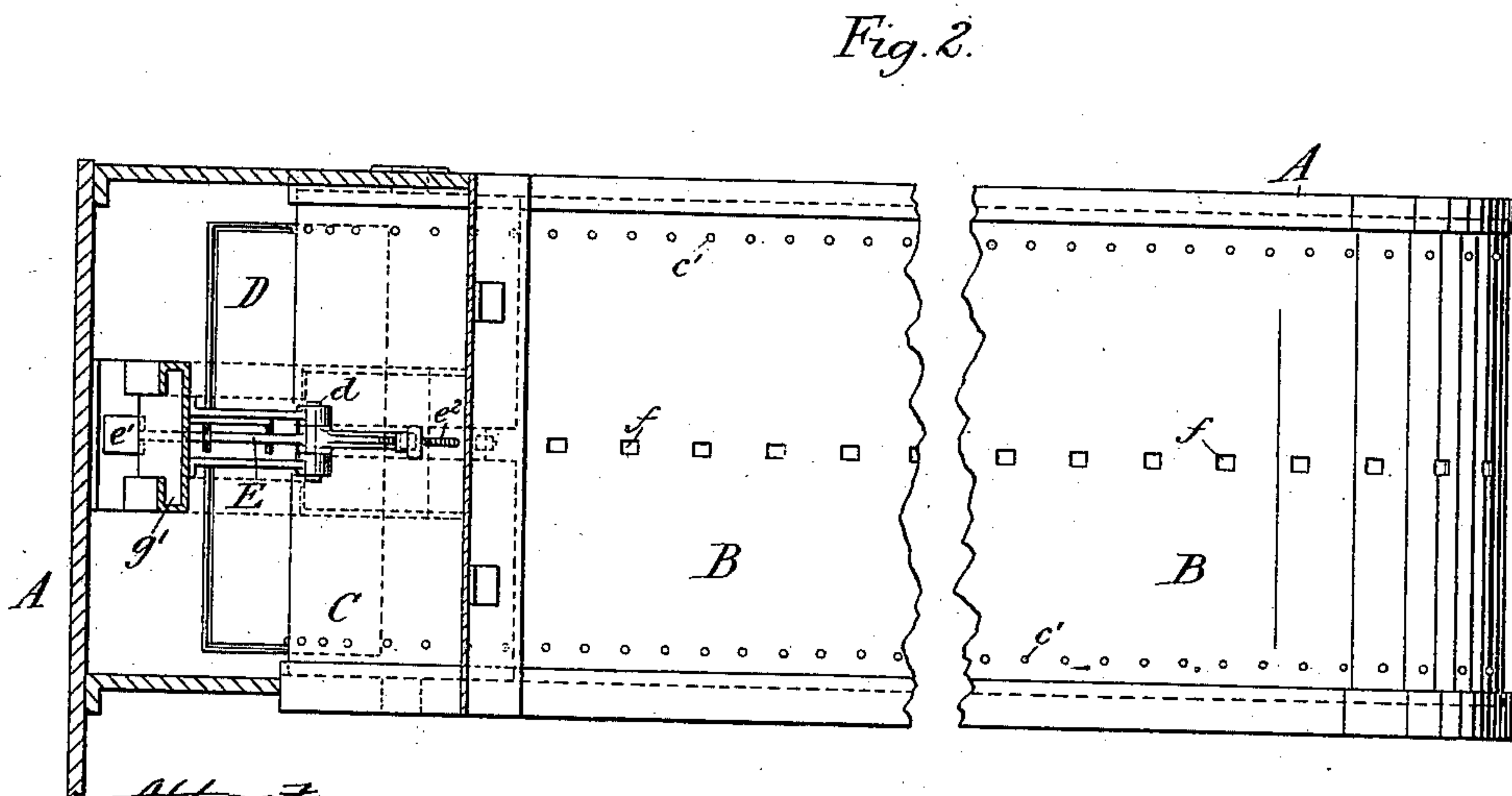


Fig. 2.

Attest
Halter & Sons
F. L. Middleton

Inventor
Edwyn Anthony
by S. S. Spear
Atty.

(No Model.)

5 Sheets—Sheet 2.

E. ANTHONY.

NEWSPAPER SELLING APPARATUS.

No. 376,021.

Patented Jan. 3, 1888.

Fig. 3.

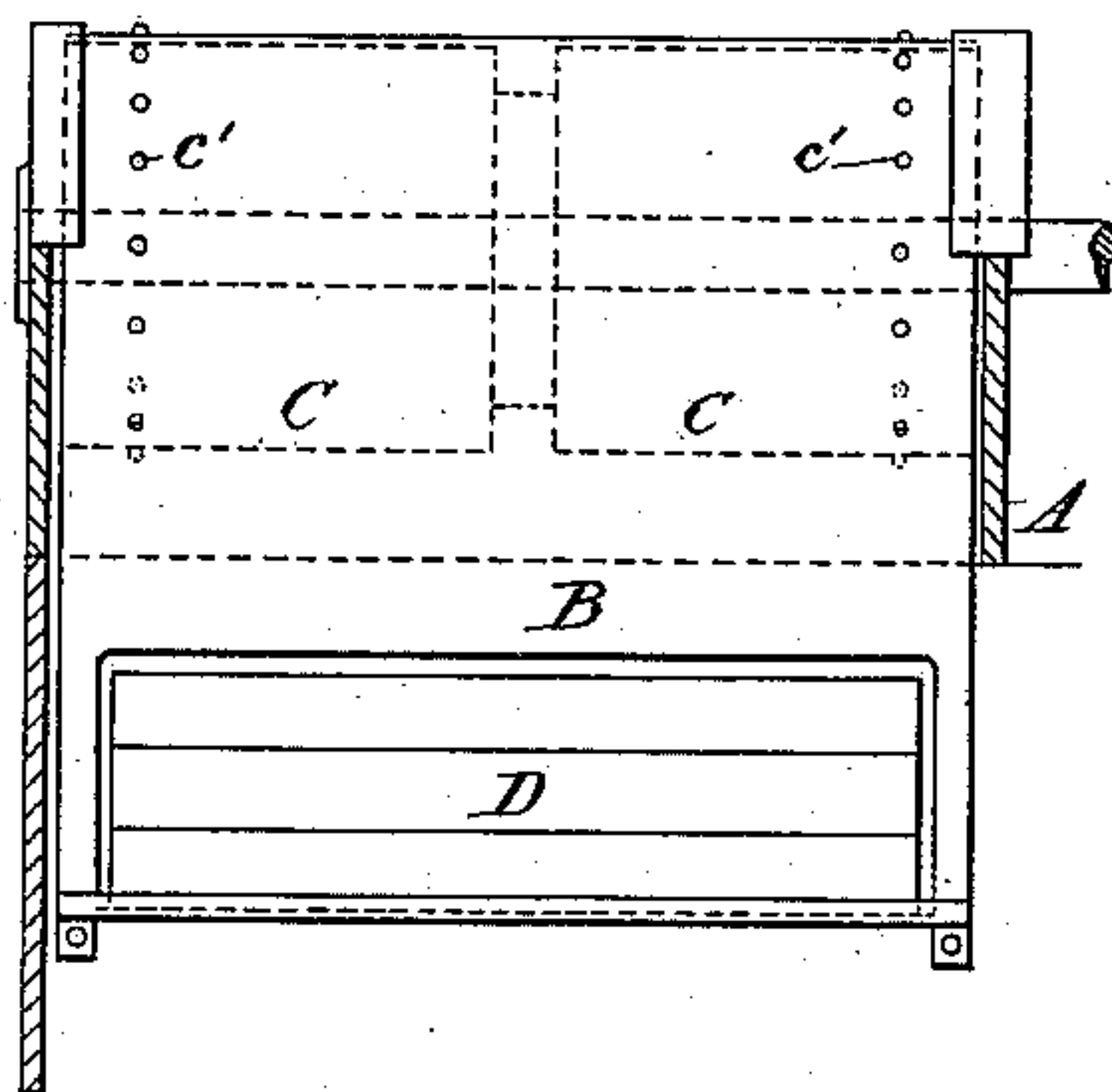
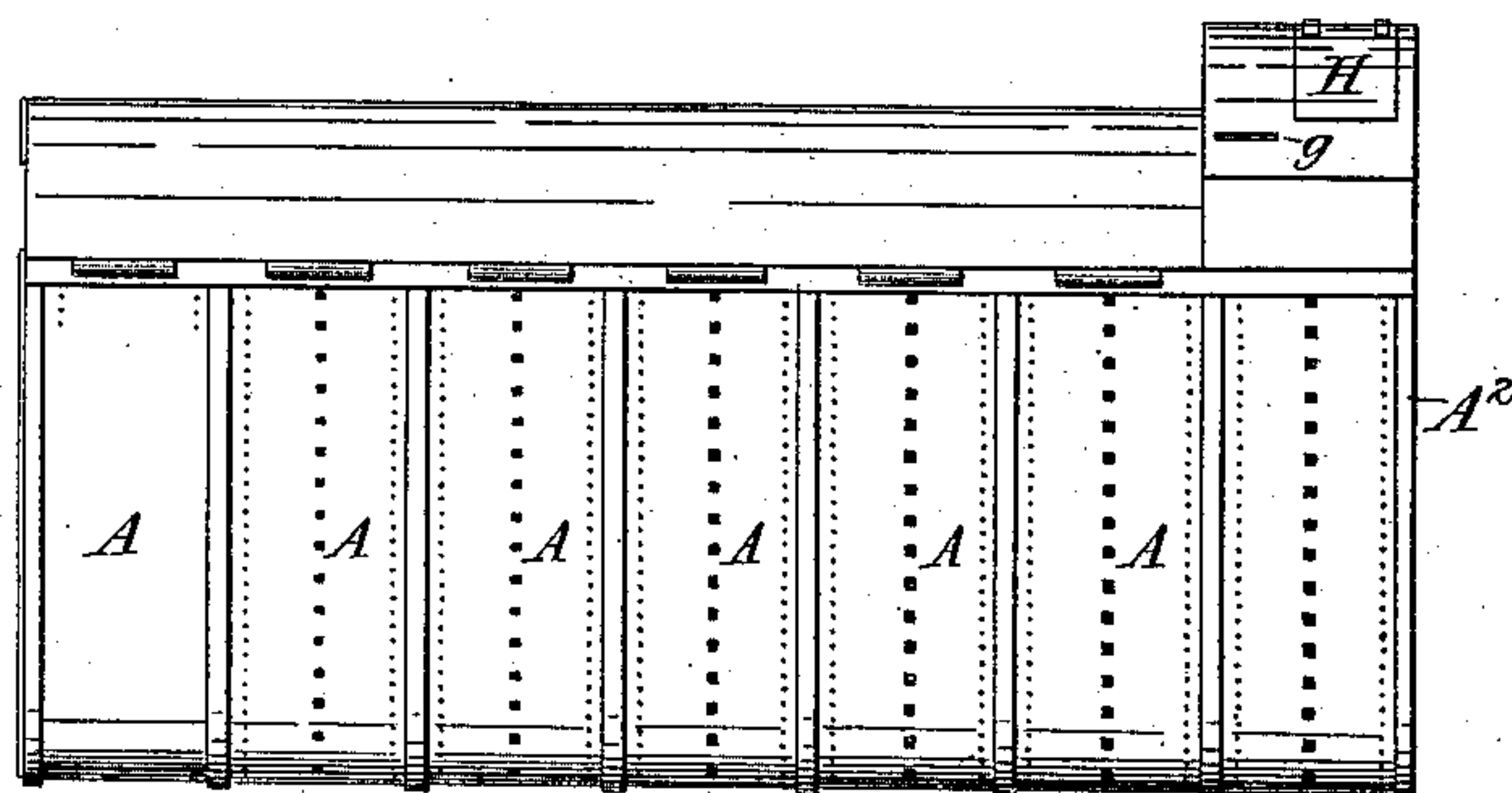


Fig. 5.



Attest
Haltera Donaldson
J. L. Middleton

Inventor
Edwyn Anthony
By Ellis Spear
Atty.

(No Model.)

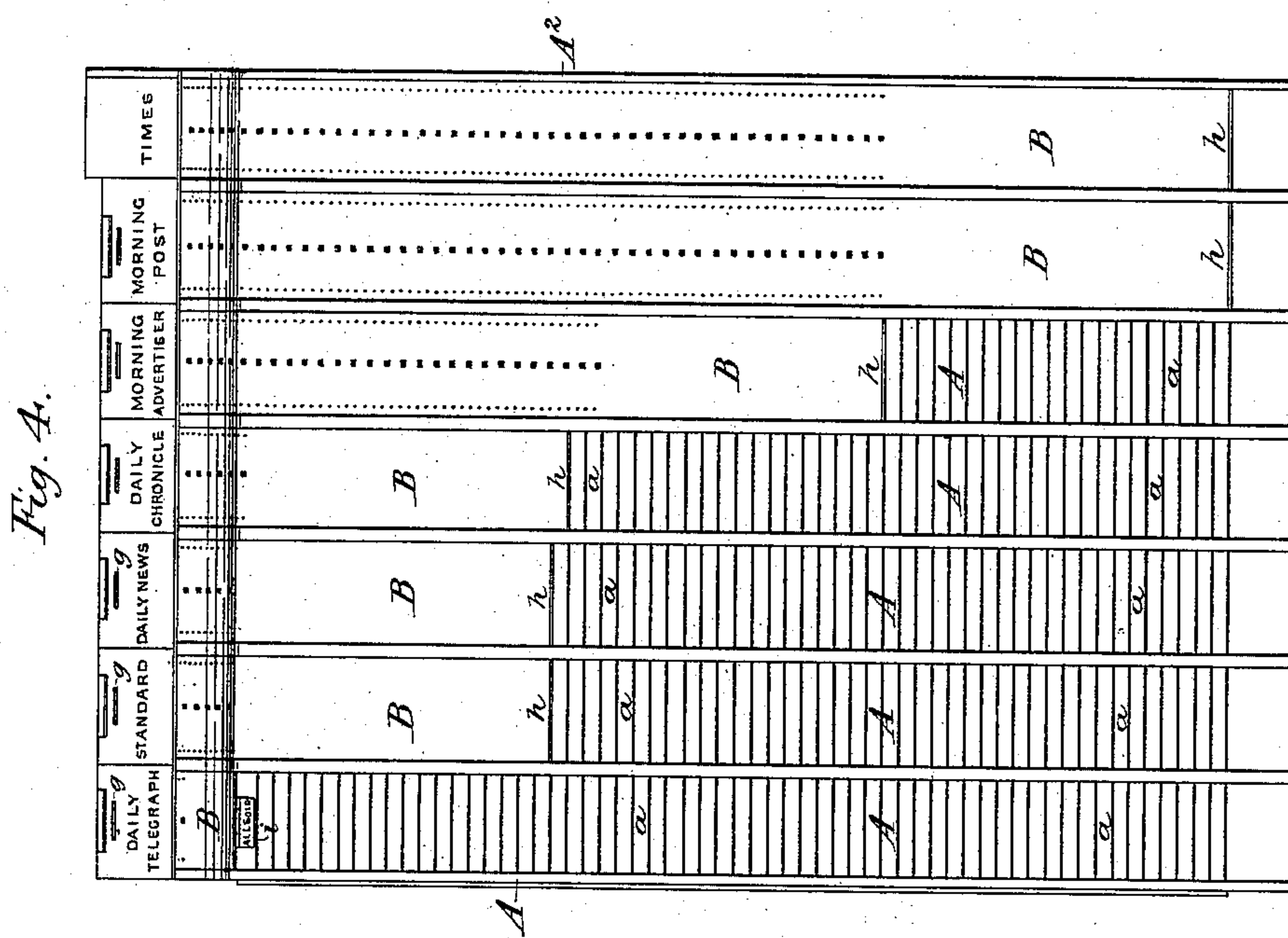
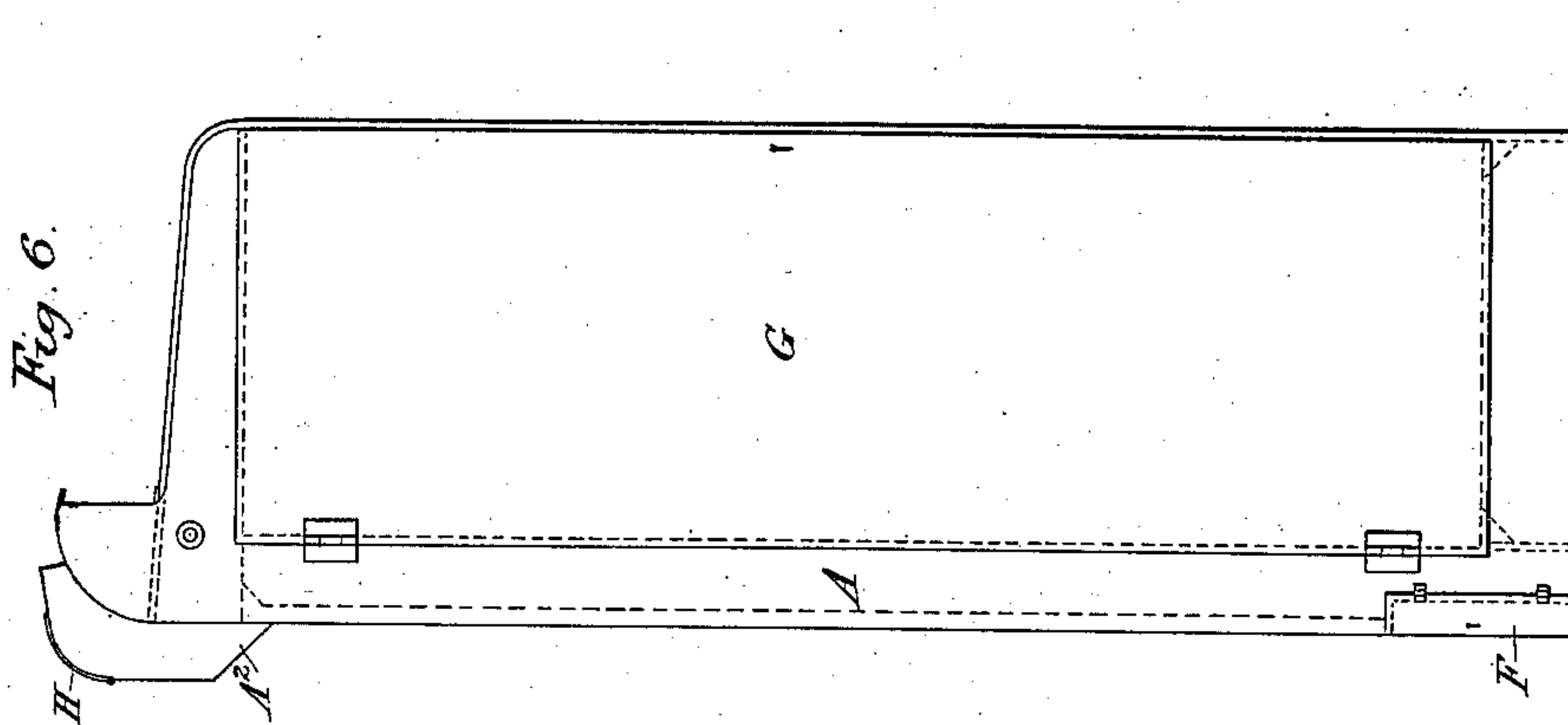
5 Sheets—Sheet 3.

E. ANTHONY.

NEWSPAPER SELLING APPARATUS.

No. 376,021.

Patented Jan. 3, 1888.



Attest
Haltermaldson
F. L. Middleton

Inventor
Edwyn Anthony
by Wm. Spear.
Atty.

(No Model.)

5 Sheets—Sheet 4.

E. ANTHONY.

NEWSPAPER SELLING APPARATUS.

No. 376,021.

Patented Jan. 3, 1888.

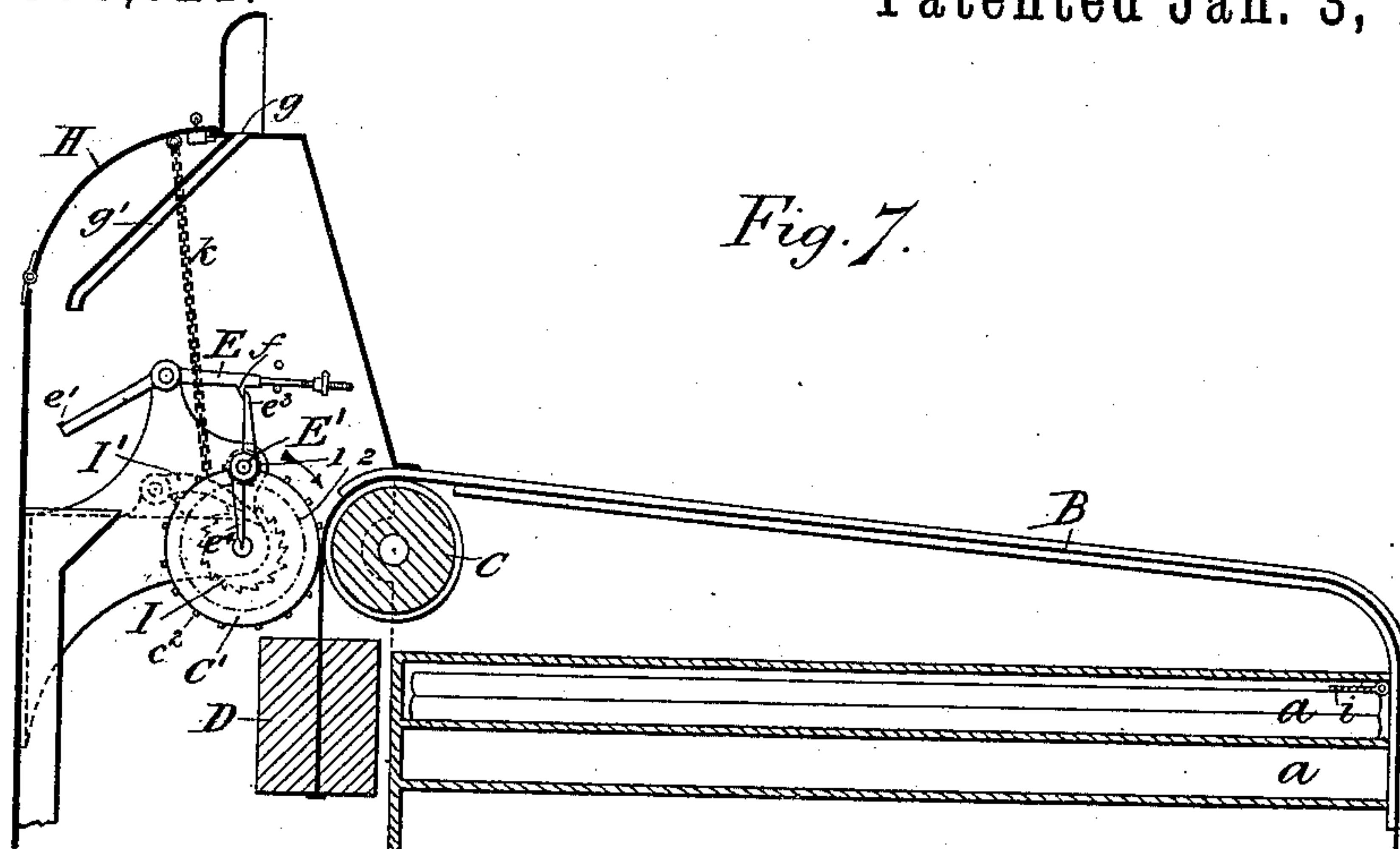


Fig. 7.

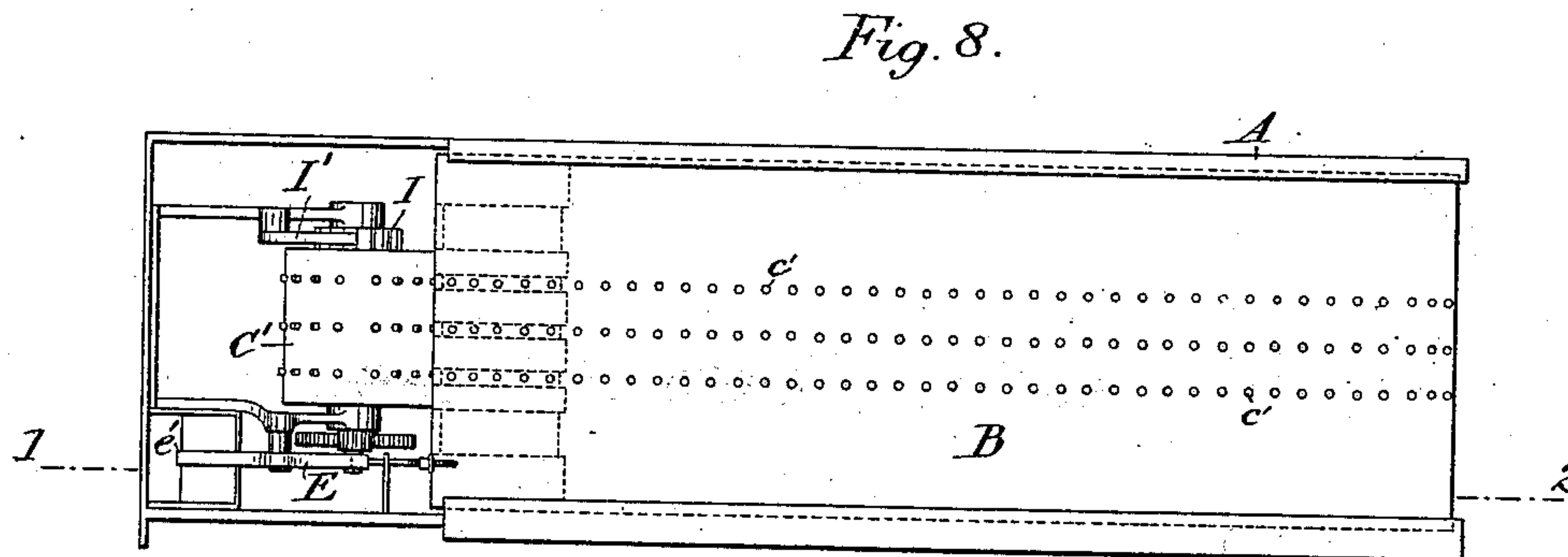


Fig. 8.

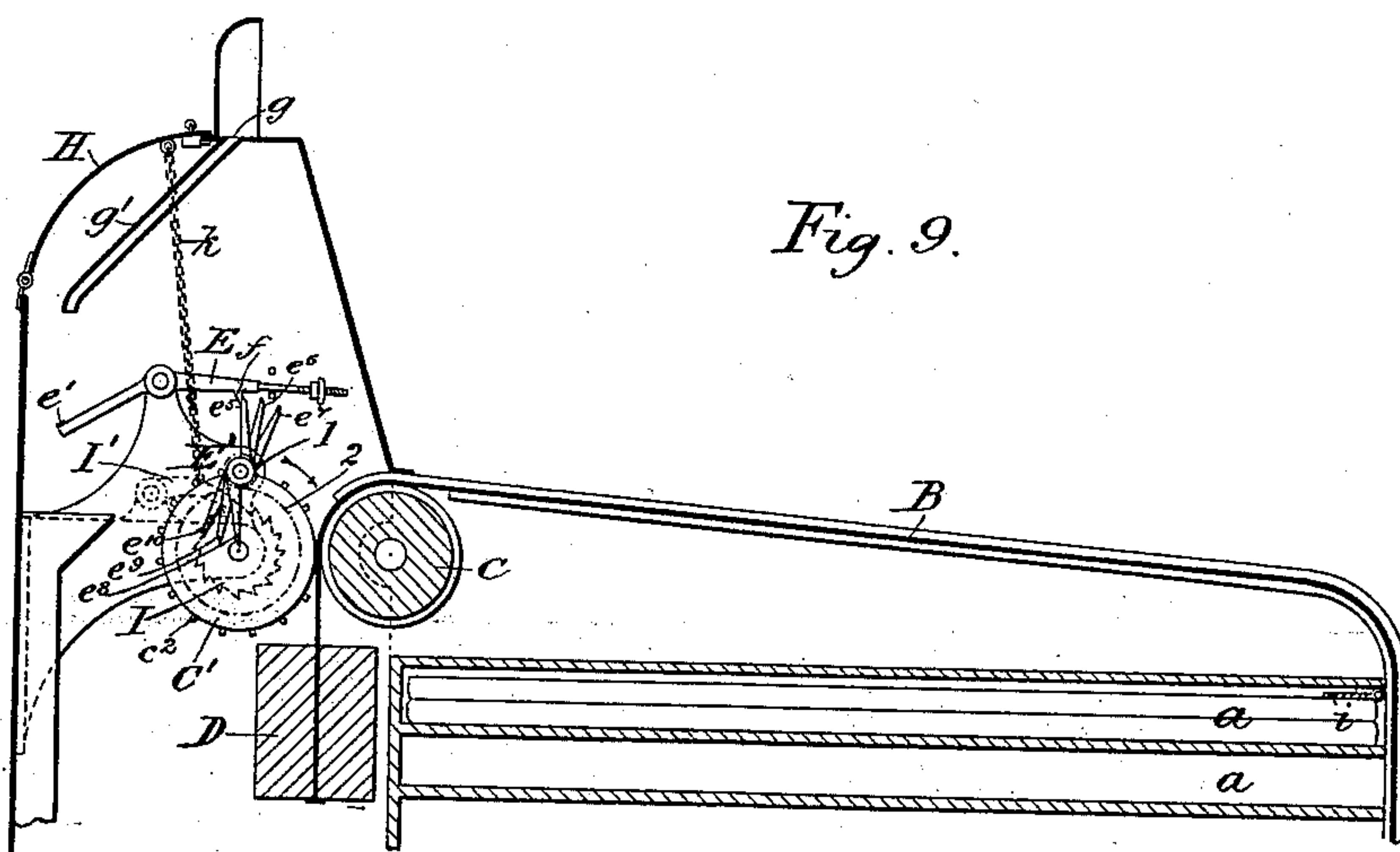


Fig. 9.

Attest
H. L. Madsen
J. P. Middleton

Inventor
Edwyn Anthony
By Wm. Spear, Atty.

(No Model.)

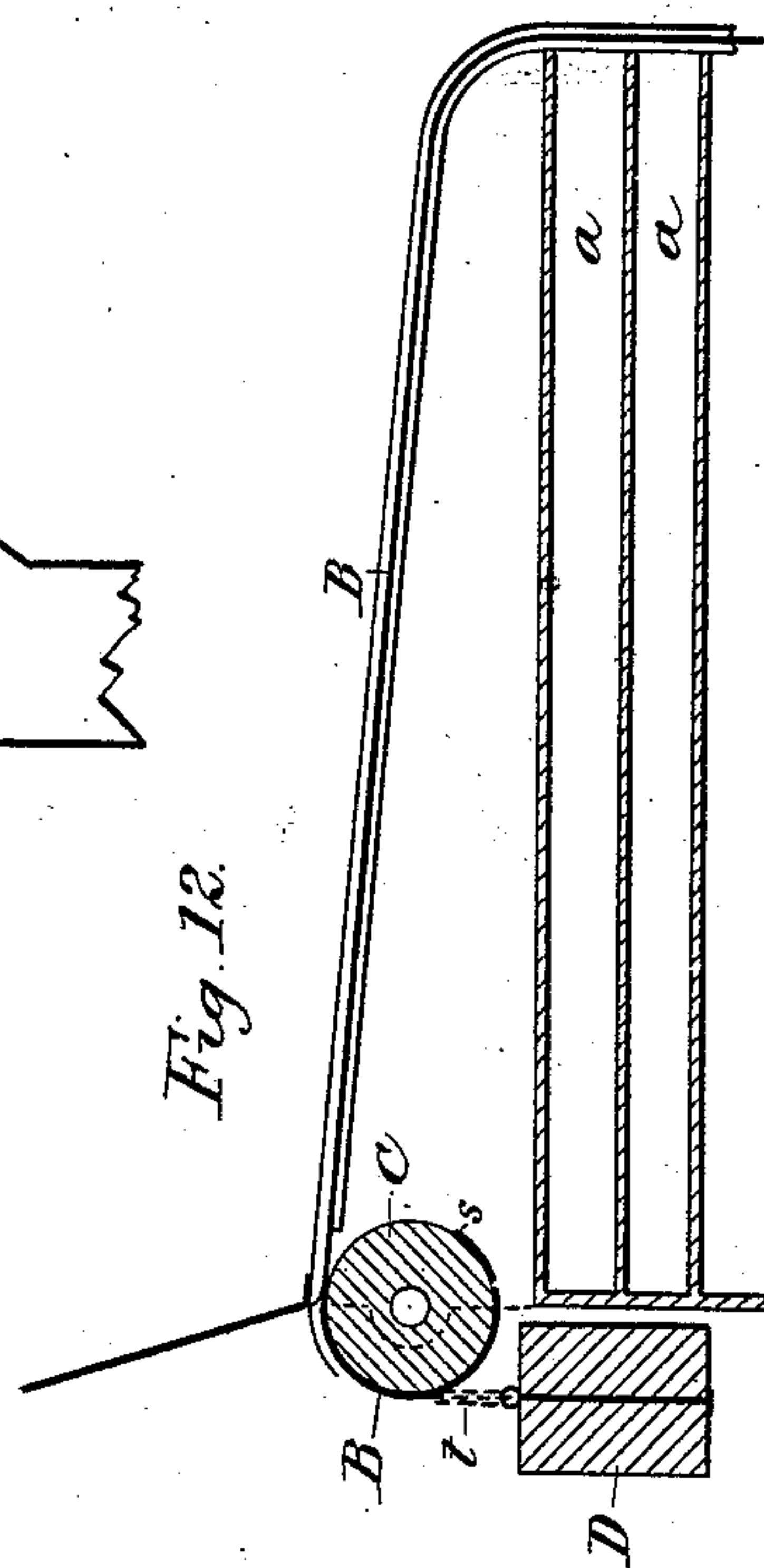
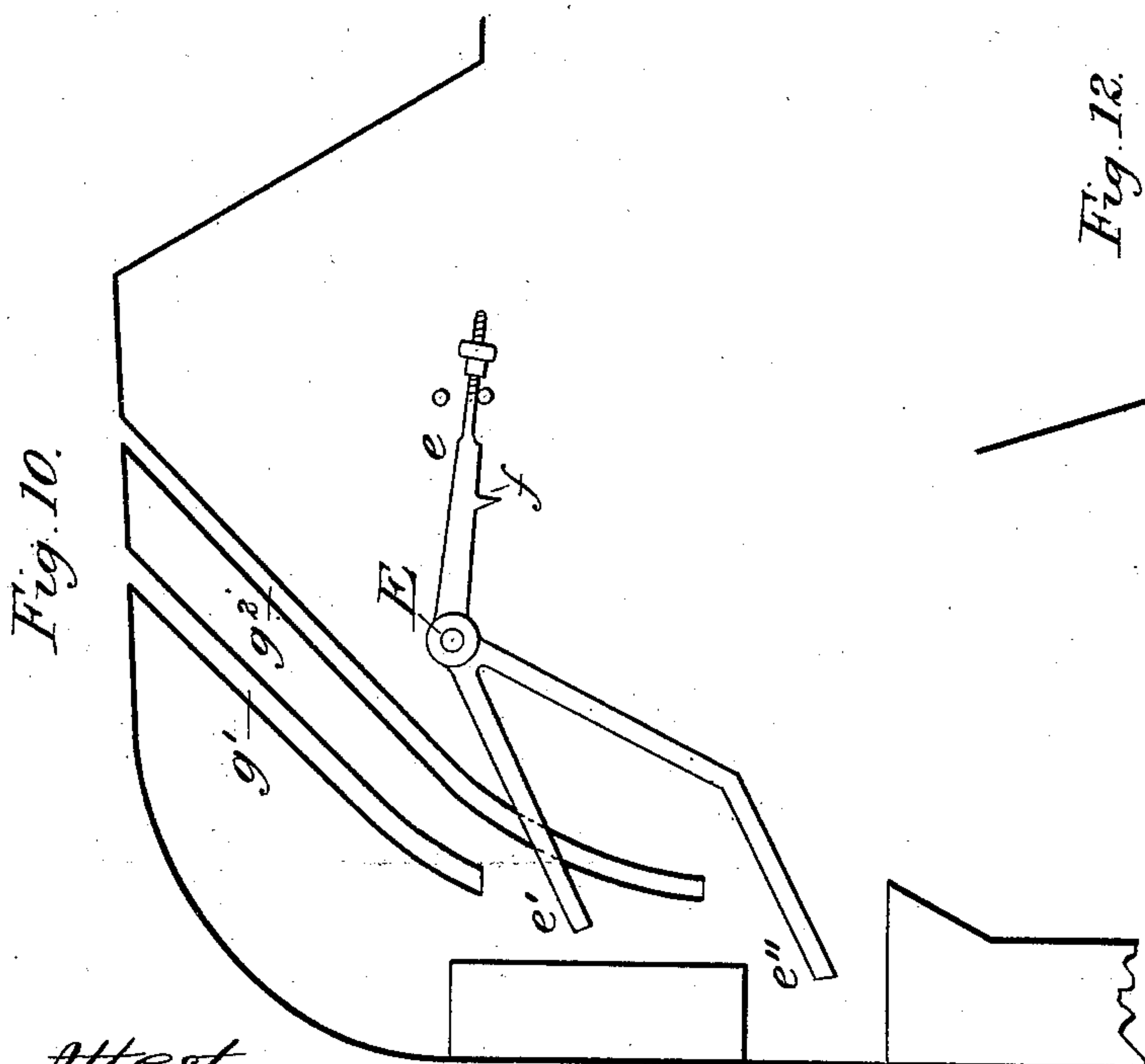
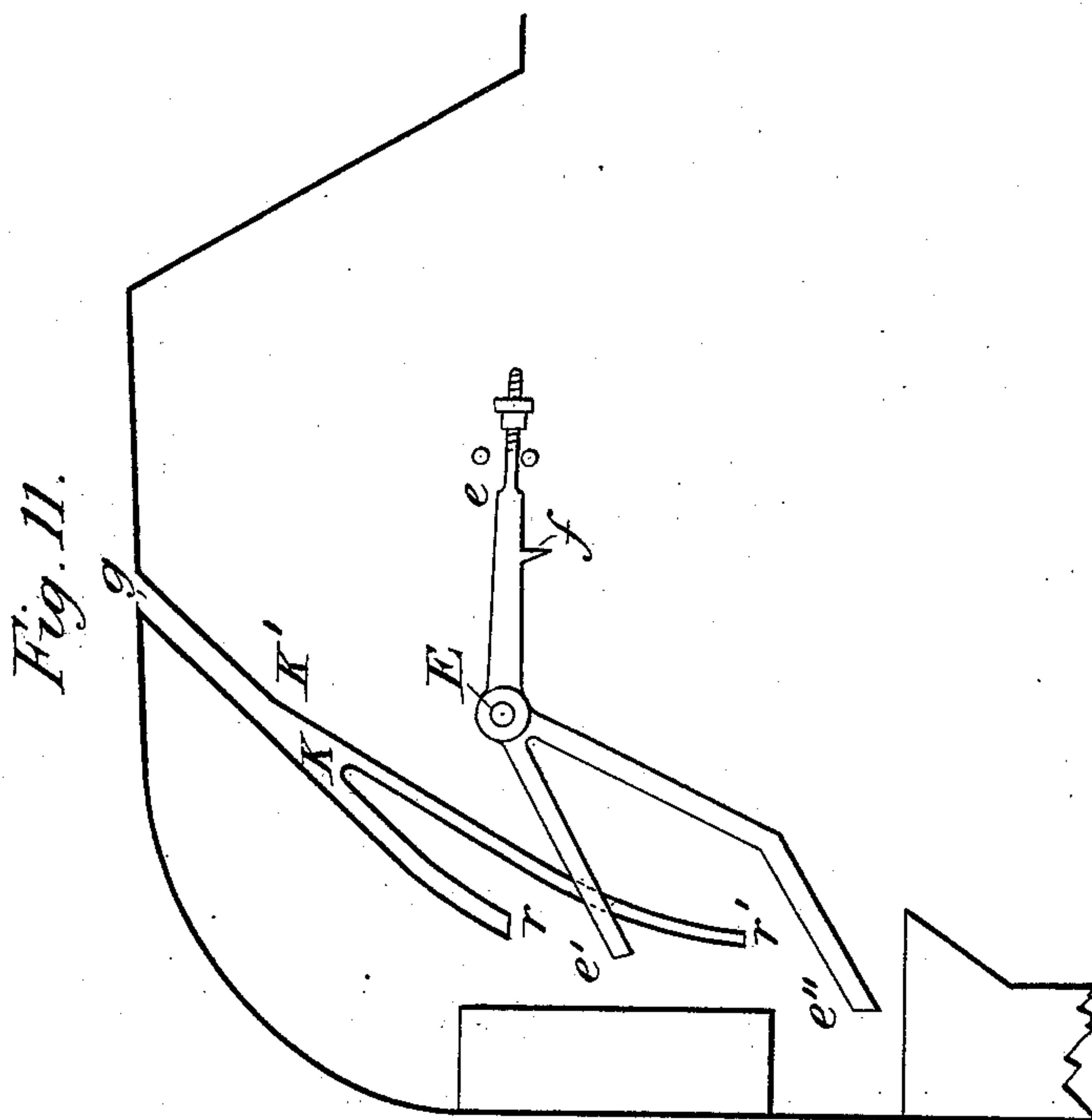
5 Sheets—Sheet 5.

E. ANTHONY.

NEWSPAPER SELLING APPARATUS.

No. 376,021.

Patented Jan. 3, 1888.



Attest
Walter M. M. M.
F. L. Middleton

Inventor
Edwyn Anthony
by *W. L. Spear*
Atty.

UNITED STATES PATENT OFFICE.

EDWYN ANTHONY, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

NEWSPAPER-SELLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 376,021, dated January 3, 1888.

Application filed June 23, 1887. Serial No. 242,242. (No model.) Patented in England July 10, 1886, No. 9,035.

To all whom it may concern:

Be it known that I, EDWYN ANTHONY, a subject of the Queen of Great Britain and Ireland, and residing at 7 New Square, London, in the county of Middlesex, England, have invented a new and useful Apparatus for the Automatic Sale of Newspapers and Periodicals, (for which I have applied for Letters Patent in Great Britain, No. 9,035, July 10, 1886;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to apparatus for the sale of newspapers and periodicals without the aid of an attendant, a coin or coins corresponding to the price of the newspaper or periodical being simply deposited in an opening or openings provided for its or their reception and the newspaper or periodical automatically exposed so that it may be withdrawn by the purchaser.

In carrying out my invention as applied, for example, to the sale of newspapers, I employ a stationary receptacle (either oblong or of any other convenient shape) divided into a series of compartments for the reception of the newspapers to be sold, each compartment containing one and only one newspaper. Completely covering the face of the aforesaid receptacle is a species of revolving or traveling shutter or band, which may be either endless or made capable of uncoiling from one roller onto another or of simply passing over a roller or rollers or other suitable guiding-bodies. The shutter or band has an opening therein just the size of the front of one of the said compartments, so that a newspaper can be withdrawn from whichever compartment the said opening faces, but from no other compartment, or (when the shutter or band is not an endless one) the opening in the shutter or band may be dispensed with, the newspaper being withdrawn from the compartment left uncovered immediately below the bottom of the shutter or band. The shutter or band is acted on by a weight or spring or other suitable device in such a manner as to tend to move in one direction, but is retained stationary by a catch or any other suitable device until the deposit of the required coin in an opening provided

for its reception releases the catch or other suitable device and the shutter or band is moved by the weight or spring or other suitable device the required distance, after which its motion is again arrested by the catch or other suitable device until another coin is inserted, and so on in succession until the supply of newspapers is exhausted, the coins descending into a receptacle below, whence the money may be withdrawn at intervals.

When the apparatus is designed for the sale of penny newspapers, the catch or other suitable device is so arranged that the shutter is moved a distance equal to the distance between two compartments of the receptacle each time that a penny is deposited; but in the case of newspapers of a higher price—say, for example, one penny half-penny, two pence, threepence, &c.—two, three, or more coins have to be deposited before the traverse of the shutter or band permits a newspaper to be withdrawn.

Provision is made for automatically indicating when the stock of newspapers in the receptacle has been exhausted.

In order that the said invention may be perfectly understood, I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several figures on the accompanying sheets of drawings, the same letters of reference indicating corresponding parts in all the figures.

Figure 1 of the accompanying drawings represents a vertical section of a portion of an apparatus for the automatic sale of penny newspapers constructed according to my invention. Fig. 2 is a sectional plan of the same. Fig. 3 is a vertical section, taken at right angles to Fig. 1, of the back portion of the apparatus with some of the parts removed. Fig. 4 is a front elevation, drawn to a reduced scale, showing a number of apparatus arranged side by side, those indicated by way of example being for the sale of the following penny newspapers—viz., "The Daily Telegraph," "Standard," "Daily News," "Daily Chronicle," "Morning Advertiser," and "Morning Post"—and for a three-penny newspaper, the "Times." Fig. 5 is a plan and Fig. 6 a side elevation, both corresponding to Fig. 4. Fig. 7 is a vertical section, drawn to a larger scale than Figs. 4, 5, and 6, illustrating a modification of the catch appa-

ratus shown in Figs. 1 and 2, also adapted for the sale of penny newspapers; and Fig. 8 is a plan of the same with a portion of the upper casing removed. Fig. 9 represents a vertical section of the apparatus for the sale of a three-penny newspaper. Figs. 10, 11, and 12 are diagrams illustrating further modifications.

Referring to Figs. 1 to 6, inclusive, A A A A A A are a set of stationary receptacles appropriated, for example, to the sale of the "Daily Telegraph," "Standard," "Daily News," "Daily Chronicle," "Morning Advertiser," and "Morning Post." Each of these receptacles is divided into a series of compartments, $a a$, for the reception of the newspapers to be sold, each compartment being of such a size and shape as to contain one and only one newspaper. The front of each compartment may be either equal to the width of the folded newspaper, as shown in the drawings, or to the length of the folded newspaper, if preferred. Completely covering the face of each receptacle A is a traveling shutter, B, which is fitted to guides in the sides of the receptacle and extends upward, suitably guided at B', along the upper part of the receptacle, over a roller, C, (which may be provided with suitable teeth, c , engaging with apertures c' in the shutter,) below which there is suspended from the shutter a weight, D. This weight is such that were the shutter free it would draw the shutter down at the rear, thus raising it at the front, uncovering the compartments, and exposing the newspapers contained therein. The shutter is, however, normally held stationary by a catch, E, which may consist of a lever mounted on a center or fulcrum, d , in a connection with the main framing, the fore extremity, e , of which lever, suitably weighted at e^2 , engages with one of a series of apertures, $f f$, in the shutter, the space between two apertures corresponding to the distance between two compartments, $a a$, while the rear extremity of the lever carries a tray or plate, e' . g is an opening in the upper part of the casing A' of the apparatus for the insertion of the coin, the price of the newspaper. This opening leads to a chute, g' , the lower end of which is situate immediately over the tray or plate e' of the catch E. The weight of the coin, acting on the extremity e' of the catch, turns the catch on its center or fulcrum d , thus lifting its fore extremity, e , out of the aperture f , in which it was engaged. The weight D then draws the shutter along until the next aperture f comes opposite the extremity e of the catch, and the coin having fallen into a cash-drawer or receptacle, F, below, thus relieving the rear extremity, e' , of the catch, its fore extremity, e , enters such aperture. This motion of the shutter has raised the bottom h thereof above the top of the lowermost filled compartment, a , and the newspaper which it contains may then be withdrawn. The fore extremity, e , of the catch being engaged in the said aperture f , the shutter is held stationary un-

til the catch E is again released on the insertion of another coin, when the shutter is again moved to uncover the compartment next immediately above, and so on in succession until the uppermost compartment is reached and the stock of newspapers is exhausted.

In the drawings, Fig. 4, I have represented the "Morning Post" receptacle as completely full and the "Daily Telegraph" receptacle as empty, the other receptacles for penny newspapers being partly full.

For the convenience of refilling the receptacles the case of compartments $a a$ belonging to each receptacle is by preference made portable and self-contained, so that the empty case may be withdrawn bodily at the side (for which purpose a door, G, is provided) and a similar filled case substituted therefor. A door is also provided at H in each receptacle for the facility of gaining access to the catch or other suitable device.

In order to indicate when the stock of newspapers has been exhausted a flap, i , is hinged to the top of the uppermost compartment, so as to be retained in a horizontal position when the compartment contains a newspaper, (as assumed in Fig. 1,) but to fall into a vertical position, and thus display the words "All sold," as shown in the case of the "Daily Telegraph" receptacle in Fig. 4, when the last newspaper has been withdrawn. The indicator may, however, be placed in a different position and actuated by the descent of a rod or bar, to which it may be connected, falling into a notch in the shutter, the said notch being so situate as to correspond to the time when the uppermost compartment has been uncovered, or any other suitable arrangement may be adopted for the purpose.

It will be obvious that the catch apparatus may be greatly modified in practice. I have shown in Figs. 7 and 8, by way of example, another modification, which may be adopted, designed for apparatus for the sale of penny newspapers. In this case, in lieu of the catch E engaging with apertures in the shutter, it is made with a projection, f , which engages with one or other of two arms, $e^3 e^4$, of a lever, E', except when the extremity e' of the lever E is acted on by a coin deposited in the opening g . The roller C, over which the shutter passes, in the present example is not toothed; but in connection therewith there is arranged a toothed roller, C', the teeth c^2 of which engage with apertures c' in the shutter, and this roller C' is moreover connected by gearing 1-2 with the lever E' in such a manner that the said lever and the shutter will move in unison. Assuming the projection f of the catch E to be in engagement with the arm e^3 of the lever E', the descent of the coin onto the tray or plate e' of the catch E has the effect, by tilting the said catch, of releasing the lever E', and under the action of the weight D the shutter will be moved the distance between two compartments, $a a$, or until the arm e^4 of the lever E'

arrives opposite the projection f of the catch E, when (as the extremity e' of the catch E has been relieved of the weight of the coin) the projection f will engage with the said arm e^4 and arrest the motion of the lever E' , and consequently of the shutter, until the catch is operated by the descent of another coin, when arm e^4 of the lever E' will be released and the shutter again moved, the motion being in turn again arrested when the lever E' has performed a semi-revolution, and so on in succession until the supply of newspapers has been exhausted. On the axis of the roller C' there is secured a ratchet-wheel, I, with which engages an ordinary pawl or detent, I' , to prevent the motion of the roller in the wrong direction. When the apparatus has to be reset at the time of replenishing the receptacles, it will be necessary temporarily to throw the pawl or detent I' out of gear. This may be conveniently done by the act of opening the door H, the pawl or detent being connected by a chain, k , to the door, so that the pawl or detent will be in or out of gear, according as the door is closed or open.

Fig. 9 illustrates a convenient arrangement of catch which may be adopted in the case of a newspaper—such as the "Times," the price of which is threepence—although obviously other forms of catch may be adopted in carrying out my invention. In this example the device is of the type illustrated in Figs. 7 and 8 as adapted for penny newspapers, the difference being that for a three-penny newspaper six arms, $e^5 e^6 e^7 e^8 e^9 e^{10}$, are required on the lever E' , instead of two arms, as in the case of a penny newspaper, the shutter being caused to travel the distance between two compartments, $a a$, by three increments of motion corresponding to three distinct operations of the catch by the insertion of three separate coins. Assuming the projection f of the catch E to be in engagement with the arm e^5 of the lever E' , the deposit of the first coin allows the lever E' to move the distance between arms e^5 and e^6 , the deposit of the second coin allows the lever E' to move the distance between arms e^6 and e^7 , and the deposit of the third coin allows the lever to complete the semi-revolution to e^8 , when the compartment will have been uncovered to allow the newspaper to be withdrawn. Similarly when another newspaper is required the lever will be moved the distance between arms e^8 and e^9 , arms e^9 and e^{10} , and arms e^{10} and e^5 by the successive descent of the three coins.

The "Times" receptacle is shown at A^2 in the general views, Figs. 4, 5, and 6, and in that example is represented as full in Fig. 4.

If the price of the newspaper be an odd number of half-pence, then the lever E should carry at its rear two arms, $e' e''$, (see Figs. 10 and 11,) instead of only one, and the surfaces through which the coins pass should be arranged so that the pennies fall first on the arm e' and afterward on the arm e'' , (thus producing two

oscillations of the lever E,) while the half-pence fall only on the arm e'' , and so produce only one oscillation of the lever E.

In Fig. 10 two distinct money-openings and chutes are shown—one, g' , for the pence, and the other, g^2 , for the half-pence. In Fig. 11 pence and half-pence are alike placed in the same opening g , the distance $K K'$ being so arranged that the pence will pass along $K r$, while the half-pence will fall through $K' r'$. In both cases the same sum of money (provided the coins are put in one at a time) will produce the same number of oscillations of the lever E, whether pence or half-pence, or a mixture of both be put in. For example: One penny or two half-pennies will produce two oscillations. One penny and a half penny or three half-pence will produce three oscillations. Two pennies and a half-penny or one penny and three half-pence or five half-pence will produce five oscillations, and so on.

The number of arms carried by the lever E' (not shown in Figs. 10 and 11) will, as before, depend on the price of the newspaper. Thus if the price be one and one half pence, it must have two groups of three arms each. If the price be two and one-half pence, two groups of five arms each, and so on. Often, too, it will be convenient to arrange the gearing so that one complete revolution of E' (instead of half a one, as shown in the drawings) shall cause the shutter or endless band or equivalent thereto to move the required space. Of course both in Figs. 10 and 11 the arm e' must be bent or shaped or perforated so as to allow the slot for the half-pennies to pass by it. Another way of producing a similar result is to arrange the money-chute and lever E so that the coins remain on the lever until they are thrown off by its motion, and to so poise it that it shall not move until the required weight (and therefore number) of coins have been deposited.

Fig. 12 is a diagram illustrating a modification in the arrangement of the shutter or band in relation to its carrier-roller and the operating-weight, the other parts of the mechanism not being shown in the figure. According to this modification the aperture c' in the shutter or band B, and the teeth on the roller C or C' for engaging in such apertures, are dispensed with, and the shutter or band B is fastened to the rollers C at s , so as to be capable of coiling round it. The weight D, in lieu of being attached to the shutter or band, may then be suspended from the roller C by one extremity of a chain or cord, t , the opposite extremity of which, after passing round the roller C, is attached to such roller. The weight D causes the roller C to rotate when permitted by the catch, and the shutter or band B is thus operated.

Similar apparatus to those hereinbefore described are also applicable for the automatic sale of periodicals.

It should be understood that my invention consists, essentially, in stationary boxes combined with revolving or traveling shutters or

their equivalents, and suitable mechanism whereby the deposit of a coin or coins (as the case may be) causes motion in the said shutters or their equivalents.

5 Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is—

1. The combination of a series of stationary
10 compartments for containing newspapers or the like, a traveling shutter or band covering said compartments, a coin-receptacle and intermediate holding devices between the receptacle and the traveling shutter adapted to be
15 operated by the weight of the coin to allow the shutter or band to automatically uncover a compartment, substantially as described.

2. An apparatus for the automatic sale of newspapers and periodicals, consisting of a
20 stationary receptacle divided into a series of compartments containing the newspapers or periodicals to be sold, a traveling shutter or band to cover the compartments, a weight to move the shutter to uncover the compart-
25 ments containing the newspapers or periodicals, a locking device to hold the weight out of action until the deposit of the required coin or coins which liberate the locking device and allow the weight to move the shutter or band
30 a sufficient distance to expose the newspaper or periodical, substantially as hereinbefore described.

3. An apparatus for the automatic sale of newspapers and periodicals, consisting of a
35 stationary receptacle divided into a series of

compartments containing the newspapers or periodicals to be sold, a traveling shutter or band to cover the compartments, a weight to move the shutter or band, a catch to hold the band, and a weight adapted to be released by
40 the descent of the required coin or coins, substantially as hereinbefore described.

4. The combination, in an apparatus for the automatic sale of newspapers, of a series of
45 compartments for containing the newspapers and a traveling shutter adapted to cover the same and to be automatically operated by the dropping of a coin to move intermittently to uncover at each step a compartment to allow
50 the newspaper therein to be withdrawn, substantially as described.

5. In combination, the stationary compartments *a*, for holding the newspapers, a traveling shutter covering the same and adapted to
55 be automatically operated by the dropping of a coin to uncover the said compartments, and a flap arranged in the top compartment, adapted to be operated by the withdrawal of the last paper to indicate that the papers in that series
60 have been exhausted, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWYN ANTHONY.

Witnesses:

EDWARD WALKER CAREW,

RICHARD HEMING,

Solicitors, 3 Berkeley Street, Gloucester.