

(No Model.)

2 Sheets—Sheet 1.

E. FRIEDMAN & G. R. P. ENGERT.
BARREL OR PACKAGE REGISTER.

No. 583,111.

Patented May 25, 1897.

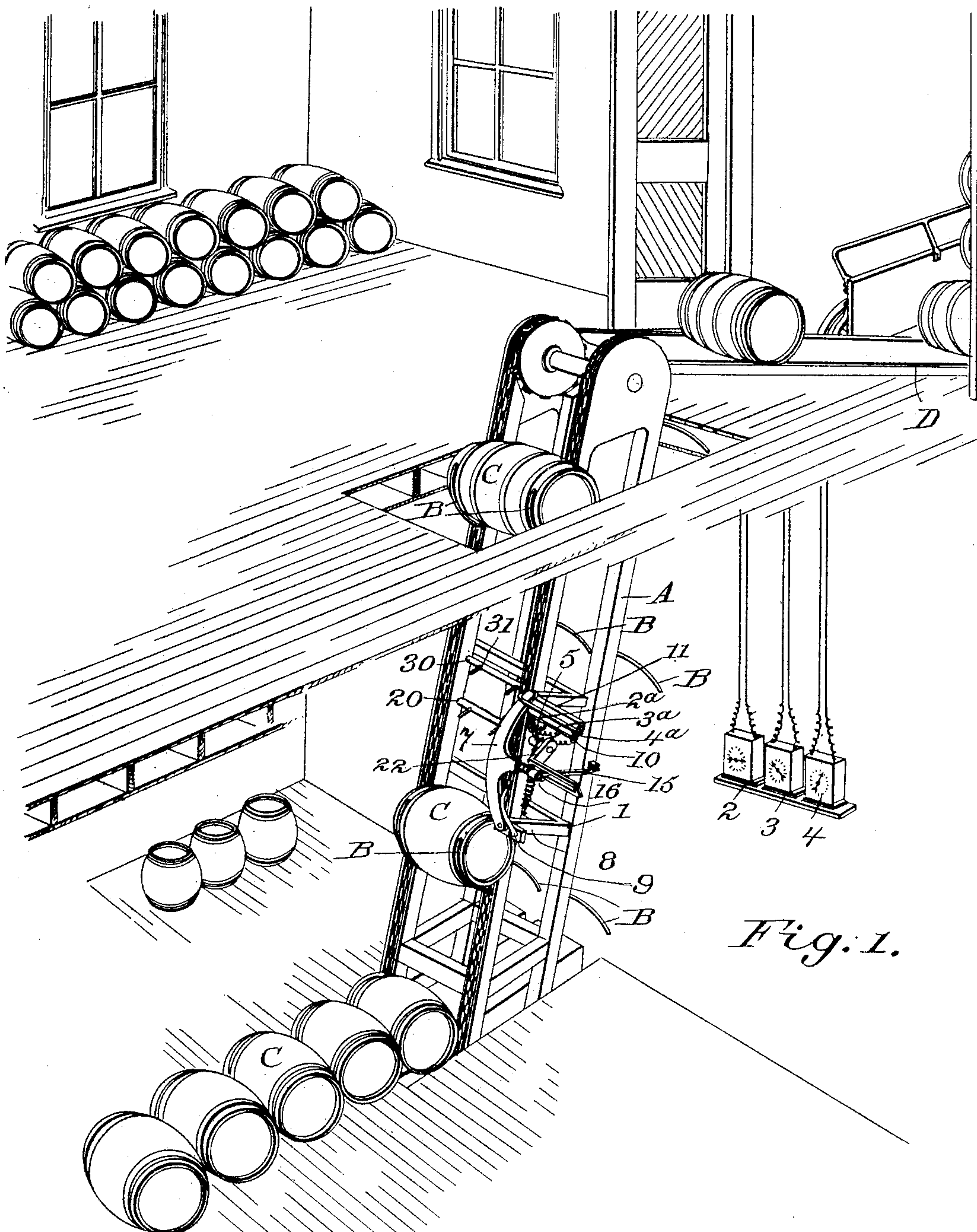


Fig. 1.

WITNESSES.

N. H. Humphrey.

Ch. V. Bidgood

INVENTORS
Edgar Friedman
Gustav Reinhard Paul Engert.
BY
Knights Bros
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

E. FRIEDMAN & G. R. P. ENGERT.

BARREL OR PACKAGE REGISTER.

No. 583,111.

Patented May 25, 1897.

Fig. 2.

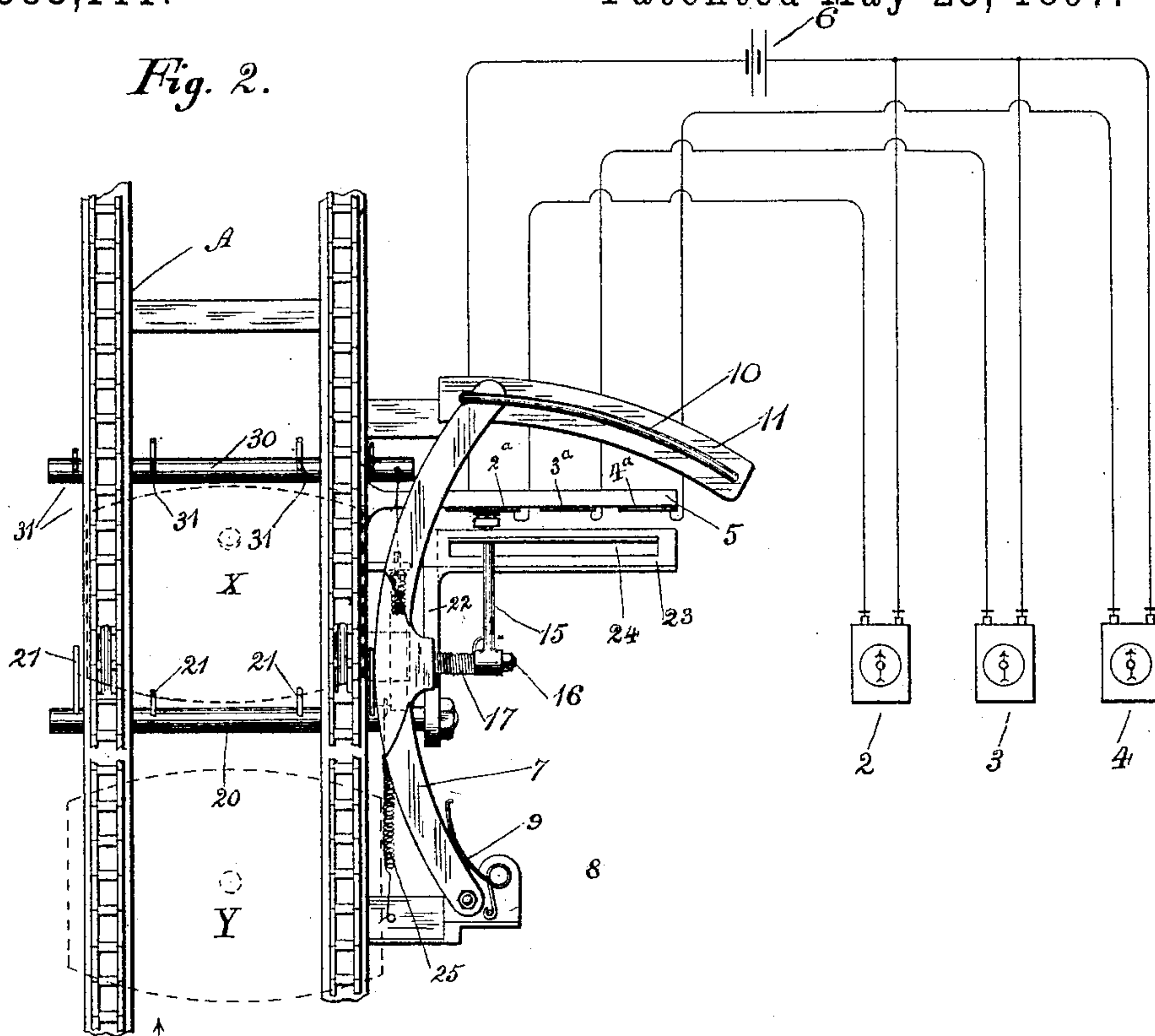


Fig. 3.

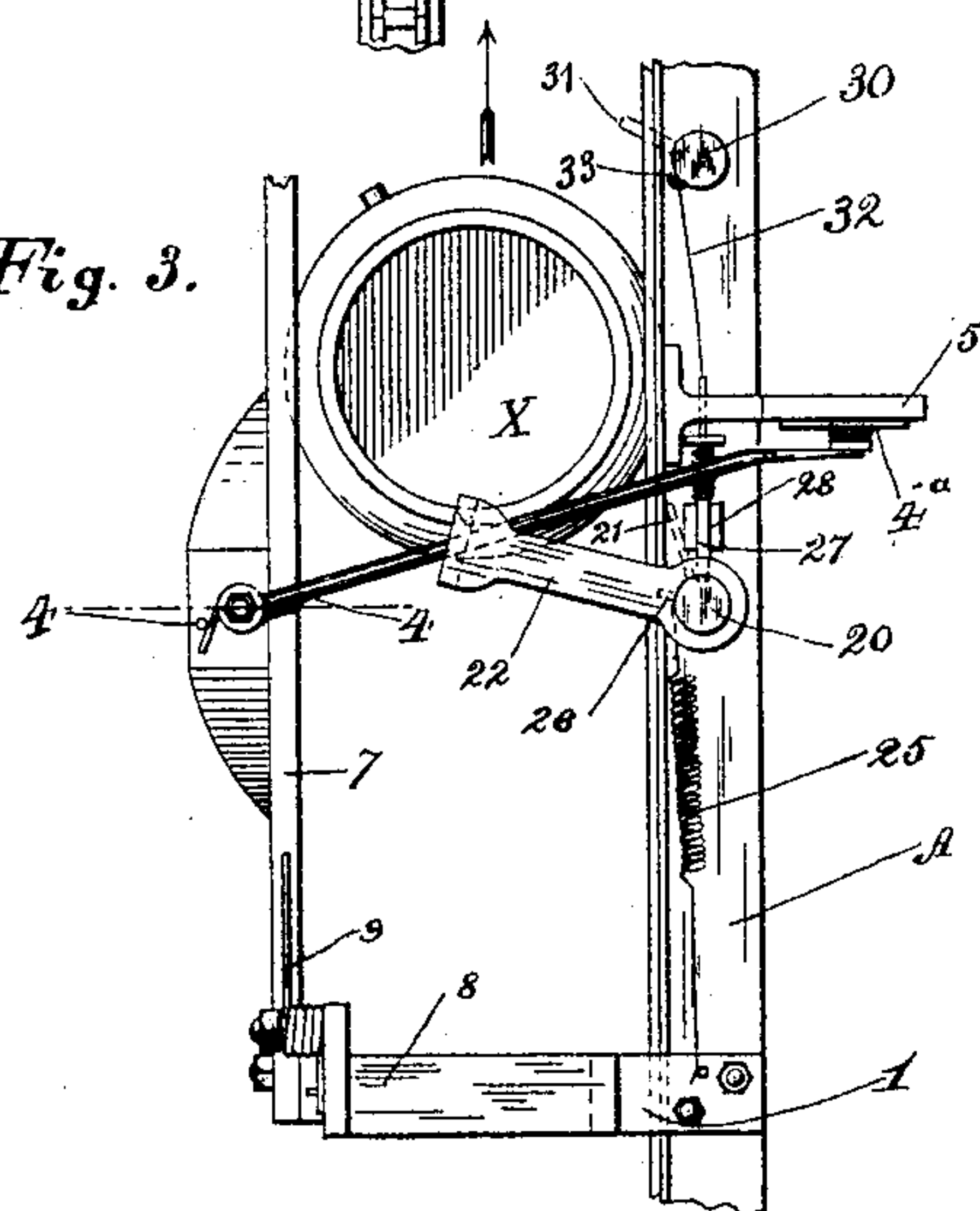


Fig. 4.

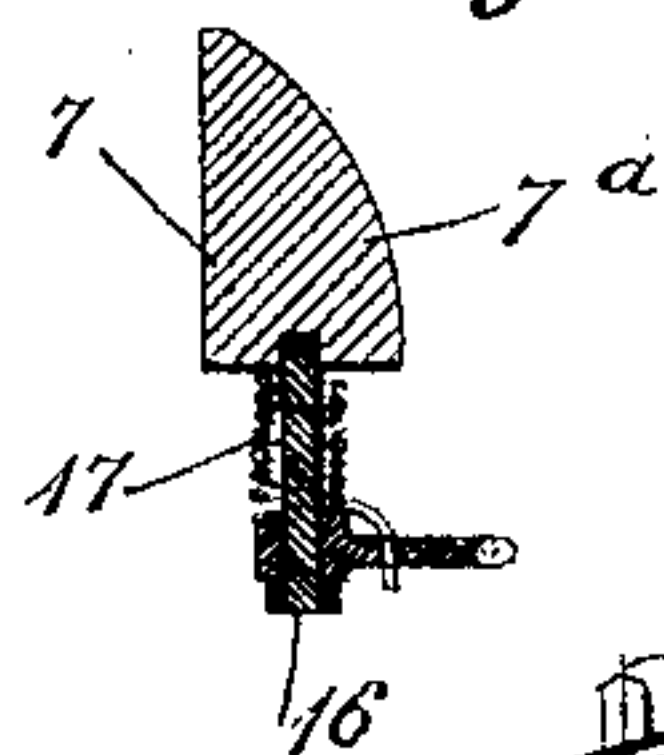
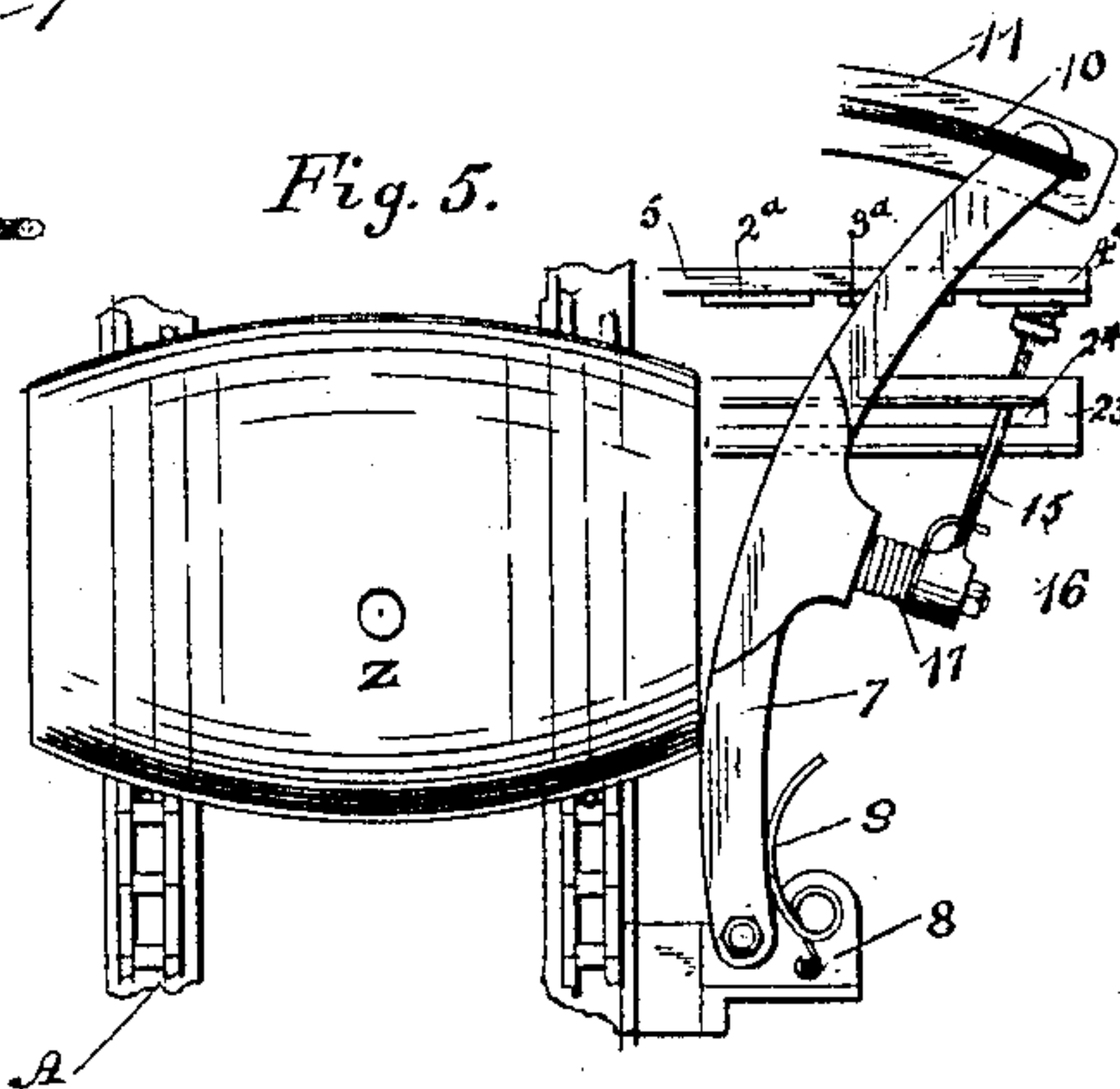


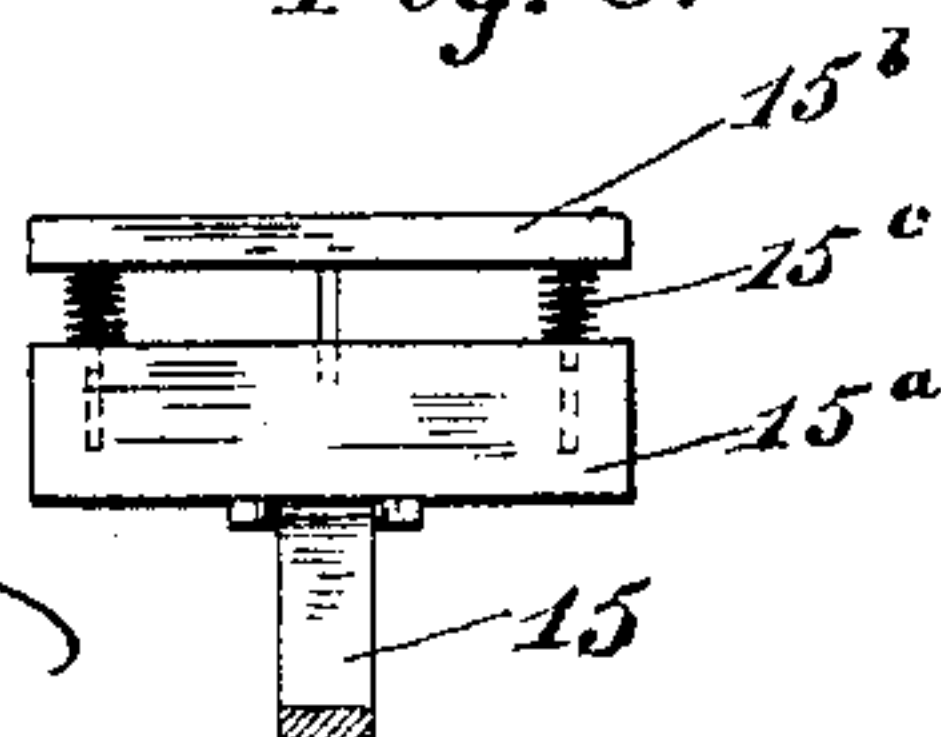
Fig. 5.



WITNESSES:

W. H. Humphrey
M. V. Bridgford

Fig. 6.



INVENTORS

Edgar Friedman
Gustav Reinhard Paul Engert
BY
Knight Bros
ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDGAR FRIEDMAN AND GUSTAV REINHARD PAUL ENGERT, OF DOBBS
FERRY, NEW YORK.

BARREL OR PACKAGE REGISTER.

SPECIFICATION forming part of Letters Patent No. 583,111, dated May 25, 1897.

Application filed July 11, 1896. Serial No. 598,821. (No model.)

To all whom it may concern:

Be it known that we, EDGAR FRIEDMAN and GUSTAV REINHARD PAUL ENGERT, citizens of the United States, residing at Dobbs Ferry, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Barrel or Package Registers, of which the following is a specification.

Our present invention relates to improvements in the style of barrel or package registers covered by our Patent No. 560,027, of May 12, 1896. This patent covers an improved register which is adapted to automatically register the size and number of barrels or packages as they are conveyed along a track or skid in either direction, the device comprising, essentially, a movable part supported in the path of the packages to be moved into proper position by the passing package to indicate the size of the package, and a second part pivoted to the first part adapted to be moved by a package for actuating a controller of an electric register. Owing to the slight difference in size between the sextel and viertel, much trouble has been experienced in properly registering these two sizes of barrels. Our present improvements remedy this trouble in this class of registers.

In our present improvements the registering device is so arranged that when a sextel or the smallest package to be registered is passed along the skid or conveyer it operates the registering device without moving or shifting the part of the mechanism which indicates the difference in size. The remaining sizes of packages differ from each other in a greater extent, and they are caused to shift the size-indicating device before they register.

The registering device comprises, preferably, a series of electric registers in proper electric circuit with a series of contacts or controlling devices. An arm is pivotally mounted upon a suitable support and retained in normal inoperative position by a suitable spring. Directly beneath the skid or conveyer in the path of the package is journaled an oscillatory shaft provided with arms or fingers adapted to be engaged by the passing package and with another arm, which engages the register-actuating arm. This oscillating

shaft is operated by all the packages in common. Supported on one side of the skid or conveyer is a pivotally-mounted spring-pressed arm or frame, upon which a register-actuating arm is pivotally mounted. This arm or frame is supported sufficiently near to the path of the packages to be registered to be engaged by the larger packages, but it is arranged to leave sufficient space for the free passage of the small packages. When a viertel or half-barrel passes, the arm or frame is engaged by the end of the barrel and is moved outwardly a sufficient distance to indicate the size of the barrel, carrying with it the register-actuating arm into the line of register for barrels of its size. Immediately after the arm or frame has been shifted the package comes into engagement with the oscillatory shaft, and the register-actuating arm is operated and the package is registered upon the register provided for barrels of its size.

To avoid the possibility of the vibration of the register-actuating arm after it has registered a passing package, we arrange an automatic spring-latch, which is adapted to lock said actuating-arm in operative position until the package has passed completely beyond the registering device.

In order that our invention may be fully understood, we will first describe the same with reference to the accompanying drawings, and afterward point out the novelty with more particularity in the annexed claims.

In said drawings, Figure 1 is a perspective sectional elevation of a barrel elevator and conveyer, showing our improved registering device applied thereto. Fig. 2 is an enlarged detail plan of the registering device. Fig. 3 is a detail side elevation of the same, and Fig. 4 is a detail sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a detail plan view. Fig. 6 is a detail of contact end of the register-actuating arm.

A is an endless-chain barrel-elevator provided with hooks B, adapted to convey the barrels C from one floor to another and deposit them upon a skid D or other suitable device. Mounted upon a suitable framework 1, secured to the frame of the barrel-elevator, is our improved registering device.

2, 3, and 4 are electric registering devices in electric circuit with a series of contacts or electric controlling devices 2^a, 3^a, and 4^a, respectively, which are mounted upon an arm 5, extending out to one side of the barrel-conveyer A.

6 is an electric battery included in the common return of the electric circuits for the registers.

7 is a curved arm or frame pivoted to an upright portion 8 of the framework 1 at one side of the barrel-conveyer A. The arm 7 has an undercut curved face 7^a (shown in Fig. 4) to facilitate the easy passage of the barrels as their ends engage the arm 7. The arm 7 is held in normal position by means of a suitable spring 9 and is guided in its outward movement by means of a guide loop or rod 10, mounted upon a bar 11 and engaging the free end of the arm 7.

15 is the register-actuating arm, loosely journaled upon a rod or bolt 16, extending outwardly from the arm or frame 7, and 17 is a spiral spring surrounding the bolt 16 and engaging the arm 15 for holding it in normal position. It will be observed that as the arm or frame 7 is shifted outwardly by the engagement of the ends of the passing barrels the register-actuating arm 15 will be carried with it to actuate the proper contact or controlling devices 3^a or 4^a, indicated by the size of the passing barrel.

20 is an oscillating shaft journaled in the frame of the barrel-conveyer, and 21 are fingers projecting from shaft 20 up into the path of the barrels or packages.

22 is an arm keyed to the end of shaft 20 and formed with a right-angled extension 23, which has a longitudinal slot 24, through which the actuating-arm 15 passes. By the oscillation of the shaft 20 by the passing barrel the extension 23 of the arm 22 will be caused to rock the actuating-arm 15 against the tendency of the spring and cause it to actuate one of the controlling devices or contacts.

25 is a suitable spring engaging a lug 26 and the frame 1 for holding the shaft 20 in normal position.

27 is a spring-pressed sliding bolt supported in suitable bearing 28 and engaging a recess or opening (indicated by dotted lines in Fig. 3) in the shaft 20.

30 is a rock-shaft journaled in the frame of the conveyer above the shaft 20 and formed with fingers 31, adapted to be engaged by the passing barrel or package for rocking the shaft.

32 is a rod or cord connecting the sliding bolt 27 with a finger 33 on the shaft 30, by means of which the rocking of the shaft 30 can effect the drawing of the bolt 27 from the recess into shaft 20 to allow said shaft 20 to resume its normal position.

In the operation of the device it will be clear that the sextel or smallest-size barrel will engage the fingers of the shaft 20 for

registering upon the register 2, and the position of the arm or frame 7 will not be changed. When the viertel or half-barrel passes, the end of the barrel engages the undercut portion of the arm or frame 7 and causes it to move outwardly away from the track to the proper position, depending upon the size of the package, after which the shaft 20 is rocked and a proper register is operated. x represents the sextel, y the viertel, and z the half-barrel. The sextel does not move the arm or frame 7, but causes actuating-arm 15 to engage controller 2^a to operate register 2. The viertel y shifts arm 7 to central position and causes arm 15 to actuate controller 3^a and register 3. The half-barrel z shifts arm 7 to extreme right-hand position and causes arm 15 to actuate controller 4^a and register 4. The spring 25 holds shaft 20 in normal position, and by reason of the engagement of the arm on said shaft with the actuating-arm 15 said arm is also held in inoperative position against the tendency of spring 17. When shaft 20 is oscillated, spring 17 assists in throwing arm 15 into operative position and holds it against the contact until drawn away by spring 25. In case the chain of the elevator sags or vibrates away from its support it is clear the arm 15 would not be moved as close to the contacts, because the barrel would be a greater distance from the rock-shaft 20 and could not move it as far as when close to the shaft. To prevent any irregularity in the operation from this cause, I mount a block 15^a upon the end of arm 15, and supported upon block 15^a is a plate 15^b, having pins which engage block 15^a, and spiral springs 15^c, interposed between the block and the plate upon said pins to afford a yielding support for the plate. The result of this arrangement will be that the electric contacts will be actuated by the plate 15^b, whether the chain vibrates or remains close to the track, and any vibration will be taken up by the springs 15^c and there will be no danger of making a plurality of contacts. Another advantage obtained by placing plate 15^b on end of arm 15 is that the plate extends sidewise of the arm and will be sure to register upon the proper registering device, notwithstanding the slight differences in the lengths of the barrels of same size and of the chance of getting the barrels upon the elevator-hooks closer to or farther away from the arm 7. Springs 15^c are assisted by spring 17.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a barrel or package register, the combination of a conveyer track or way for the passage of packages, a series of registering devices, a series of controlling devices for said register, an actuating-arm, an arm or frame supporting the actuating-arm and constructed to be shifted by the engagement of the ends of the passing packages, and means independent of the movable arm or frame and

actuating-arm also operated by the passing packages and engaging said actuating-arm for operating it, substantially as set forth.

2. In a barrel or package register, the combination of a conveyer track or way for the passage of packages, a series of registering devices, a series of controlling devices for said registering devices, a movable part lying in the path of the packages and adapted to be shifted by the passing packages, an actuating-arm pivoted to said movable part and adapted to actuate the register-controlling devices, and a device supported in the path of the packages independently of said movable part and adapted to operate said actuating devices, substantially as set forth.

3. In a barrel or package register, the combination of a series of registers, a series of controlling devices for said registers, an actuating-arm adapted to actuate said controlling devices, means for shifting the actuating-arm to different positions, a rock-shaft independent of said shifting means adapted to be rocked by a passing package, and means connecting said rock-shaft to the actuating-arm whereby it is caused to operate the controlling devices, whether in normal or shifted position, substantially as set forth.

4. In a barrel or package register, the combination of a track or way for packages, a series of registers, a series of controlling devices for said registers, a movable arm or support located at one side of the track or way and projecting into the path of the packages to be operated by the ends of passing packages, an actuating-arm carried by said movable support and adapted to actuate the controlling devices, and an operating device projecting across the track or way in the path of the packages and engaging the actuating-arm for operating it, substantially as set forth.

5. In a barrel or package register, the combination of a conveyer track or way for the passage of packages, a series of registers, a series of controlling devices for said registers, an actuating-arm mounted upon a movable support and adapted to actuate the controlling devices, a rock-shaft having fingers adapted to be engaged by the passing packages, and an arm upon said rock-shaft en-

gaging the actuating-arm for operating it, substantially as set forth.

6. In a barrel or package register, the combination of a conveyer track or way for the passage of packages, a series of registers, a series of controlling devices for said registers, an actuating-arm pivotally mounted upon a support and adapted to actuate the controlling devices, a spring for holding the actuating-arm in normal disengaged position, a rock-shaft having fingers projecting into the path of the packages, an arm keyed to said rock-shaft and having a slotted extension which engages the actuating-arm, substantially as set forth.

7. In a barrel or package registering device, the combination of a conveyer track or way, a series of registers, a series of register-controlling devices, an actuating-arm, a rock-shaft adapted to operate the actuating-arm, a spring-bolt adapted to lock the rock-shaft in position, a second rock-shaft adapted to disengage the spring-bolt when operated by a passing package, substantially as set forth.

8. In a barrel or package register, the combination of a conveyer track or way for the passage of packages, a series of registers, a series of register-controlling devices, an arm or frame pivotally mounted to one side of the track or way and adapted to be actuated by the engagement of the ends of the passing packages, an actuating-arm pivoted to said arm or frame and provided with a suitable spring for holding it in normal position, a rock-shaft having a slotted arm engaging said actuating-arm, substantially as set forth.

9. In a barrel or package register, the combination of a track or way for packages, a series of registers, a series of register-controlling devices, an actuating-arm supported in proper relation to the controlling devices, a resiliently-supported plate mounted on the end of the actuating-arm, and means for operating the actuating-arm, substantially as set forth.

EDGAR FRIEDMAN.

GUSTAV REINHARD PAUL ENGERT.

Witnesses:

G. R. WERRBACH,

JOHN GIBBONS.