

(No Model.)

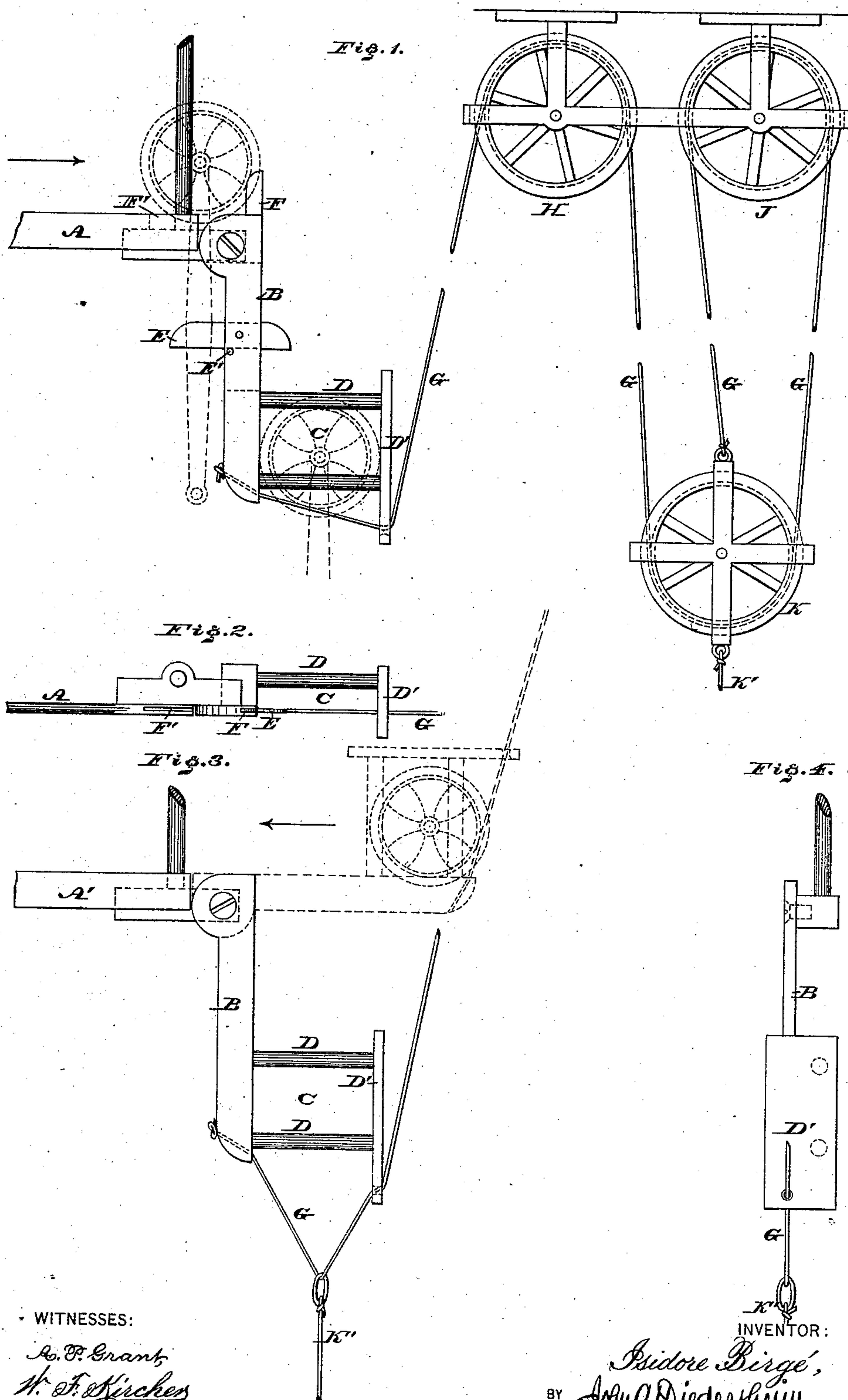
2 Sheets—Sheet 1.

I. BIRGE.

STORE SERVICE APPARATUS.

No. 291,280.

Patented Jan. 1, 1884.



WITNESSES:

A. P. Grant,
W. F. Kircher

INVENTOR:

BY *Ibidore Birge,*
John A. Diederstein ATTORNEY.

(No Model.)

2 Sheets—Sheet 2.

I. BIRGE.

STORE SERVICE APPARATUS.

No. 291,280.

Patented Jan. 1, 1884.

Fig. 5.

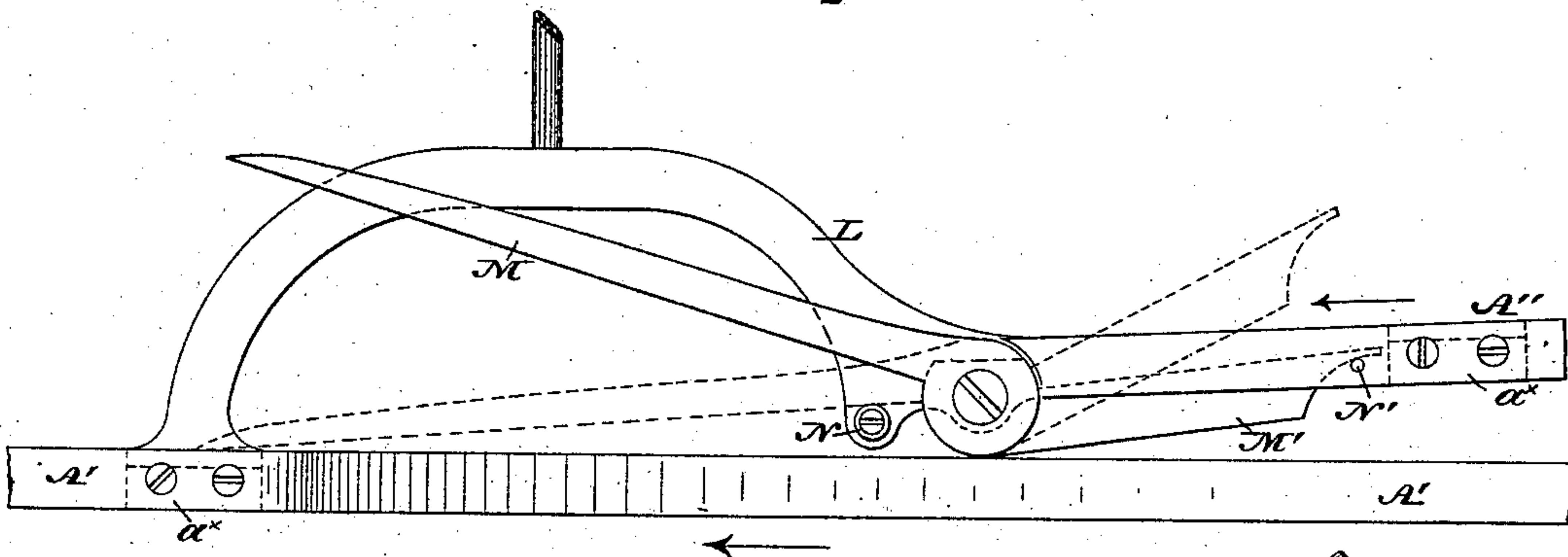
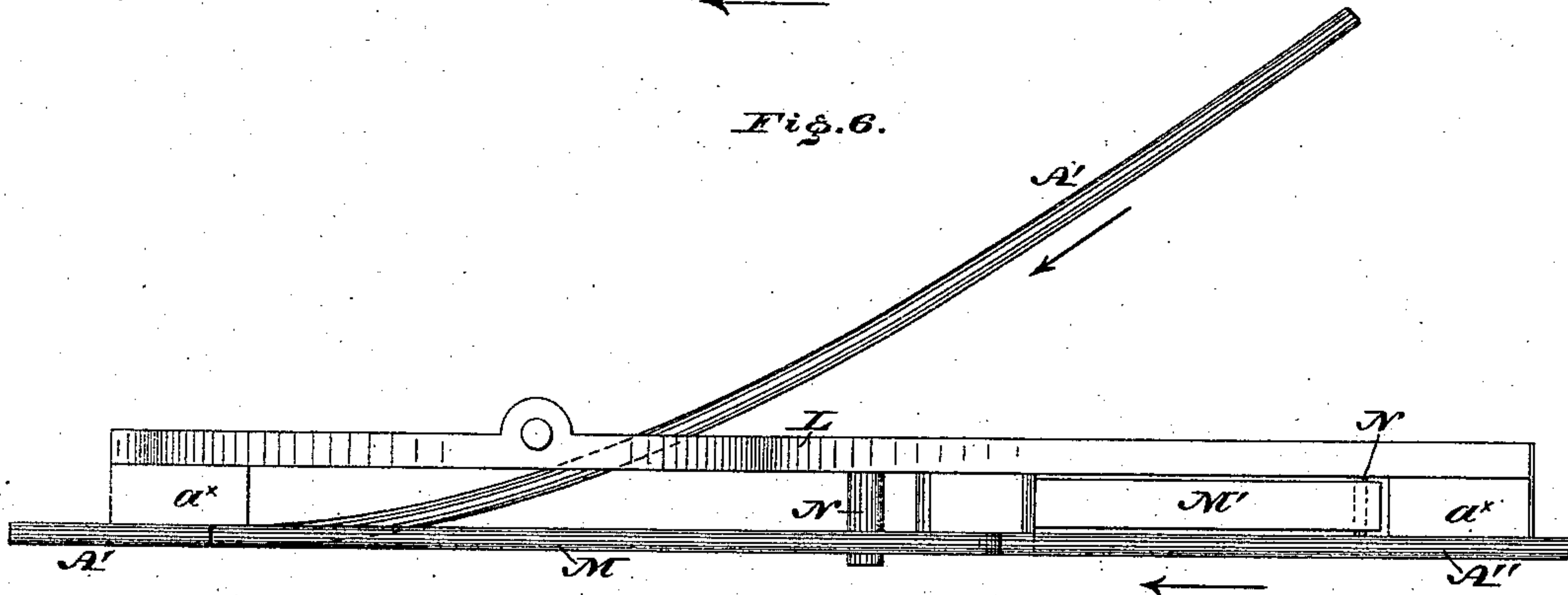


Fig. 6.



WITNESSES:

Ag. P. Grant,
H. F. Kircher

INVENTOR:

Ibidore Birge,
BY *John A. Diederstein*
ATTORNEY.

UNITED STATES PATENT OFFICE.

ISIDORE BIRGÉ, OF PHILADELPHIA, PENNSYLVANIA.

STORE-SERVICE APPARATUS.

SPECIFICATION forming part of Letters Patent No. 291,230, dated January 1, 1884.

Application filed November 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISIDORE BIRGÉ, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Store-Service Apparatus, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a side elevation of the receiving portion of a store-service apparatus embodying my invention. Fig. 2 is a top or plan view thereof. Fig. 3 is a side elevation of the dispatching part of the apparatus. Fig. 4 is a side elevation of Fig. 3. Fig. 5 is a side elevation of a switch embodying my invention. Fig. 6 is a top or plan view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

20 My invention consists of novel means for placing the carrier on the rail by which it is directed to its destination.

It also consists of means for removing the carrier from its track at the place of destination.

25 It also consists of a novel switch for store-service apparatus.

Referring to the drawings, A represents a rail properly suspended from the ceiling of an apartment where the apparatus is to be employed, and shown in Fig. 1 as coming from the cashier or receiver to the counter or clerk at the place of starting.

35 Pivoted to the end of the rail or the support thereof is an arm or bar, B, the normal position whereof is upright, to which is secured at its lower end a guard, C, which is formed of horizontal and vertical pieces D D'.

To the arm B is pivoted a stop, E, whose normal position is horizontal, the arm having a pin, E', so disposed that it sustains the stop in its horizontal position and permits it to be turned parallel with the arm, it being noticed that the end of the stop—in the present case the one on the right hand of the arm—projects from said arm, so that when the arm is placed in a horizontal position the stop may be struck by the carrier and lowered to permit the passage of the carrier, said stop then righting itself and preventing return of the carrier.

On the upper end of the arm B is an upwardly-projecting stop, F, so disposed that when the carrier reaches the end of the rail A it is prevented from further motion. The rail has a recess, F', into which the stop F is adapted to enter when the arm is in horizontal position, so that the carrier may leave the rail A and run on the arm B when so required.

G represents a cord, which is firmly connected with the lower end of the arm B and passed loosely through the lower end of the guard-piece D, said cord then running around pulleys H J, properly suspended from the ceiling or other support overhead, and around a rising and falling pulley, K, to whose yoke or bearings the end of the cord is attached, said yoke or bearings having connected with it a cord or rod, K', whereby the pulley K may be readily controlled. It will be seen that when the carrier reaches the stop F, the clerk lowers the pulley K, thus placing the arm B in horizontal position, the stop F slightly returning the carrier and entering the recess F', so that the arm B becomes a continuity of the rail A, whereby the roller or wheel of the carrier may leave the rail A and run on the arm B, it passing the stop E, as has been stated, and reaching the portion of the cord G which is stretched from the arm B and guard-piece D, it being remembered that said portion of the cord is in upright position. The weight of the carrier now superimposed on the arm B is greater than the weight of the pulley K, and the arm begins to lower, the carrier resting on the cord and running down thereon to the clerk or other person at the counter whereby said carrier may be removed and disposed of. The weight of the pulley K now becomes operative, and the parts are restored to their normal position, as shown in Fig. 1.

In order to dispatch goods, money, &c., to the cashier or other proper officer, or to return the same from the cashier to the clerk at the counter, I employ an arm, B, guard C, and cord G similar to those shown in Fig. 1, excepting that the stops E F are dispensed with. (See Fig. 3.) Pulleys similar to pulleys H J K are employed for the cord G. The cord or rod K", attached to the cord G, is lowered, thus forming a loop of the cord G, on which the

roller or wheel of the carrier is set. The pulley K is now lowered, thus raising the cord G and lifting the carrier through the space between the guard-piece D and the arm B, placing said arm in horizontal position, whereby the carrier immediately runs on the rail A', and is thereby guided to the destination, reaching the stop F of Fig. 1, the operation of lowering and removing the carrier being similar to that previously described. The arm B in Fig. 3 then lowers and the other parts assume their normal positions.

In order to adapt a single rail to convey carriers running from two or more branches, I employ a switch. (Shown in Figs. 5 and 6.)

Connected with the ends of the rail A' and branch rail A'', where they approach is an arched frame or bridge, L, it being noticed that the rail A'' is above the rail A'.

Pivoted to the bridge L at the end adjacent to the rail A'' is a gravitating arm, M. The end which is toward the rail A' in its normal position is elevated so that the carrier running on the rail A' may pass under said arm, said arm being, however, so disposed that when the carrier leaves the rail A'' it runs on the arm, the latter then lowering and becoming continuous of the rail A', whereby the carrier is switched from the rail A'' to the rail A'. When the carrier clears the arm M, the latter rises, owing to its counter-weight M' or, in lieu thereof, a spring suitably applied.

In order to prevent abrupt stopping of the arm M in its descent, an elastic or flexible buffer, N, is attached to the bridge L in such manner as to be struck by the arm, and the ascent of said arm is limited by a stop, N', attached to the bridge L, so as to be engaged by a proper portion of the arm. The bridge L, while supporting the ends of the rails A' A'', as at a a'', permits the carrier running on the main rail A' to pass under said bridge and the arm M without obstruction.

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

1. In store-service apparatus, a pivoted or swinging arm, provided with a cord adapted to yield and form a loop for supporting the carrier to be raised or lowered, substantially as and for the purpose set forth.

2. An elevating device for store-service apparatus, consisting of a pivoted or swinging arm, a guard, and cord, substantially as and for the purpose set forth.

3. A lowering device for store-service apparatus, consisting of a pivoted or swinging arm, a guard and cord, and stops on said arm, substantially as and for the purpose set forth.

4. In store-service apparatus, a pivoted or swinging arm provided with a stop, F, for preventing descent of the carrier from the rail, and a pivoted stop, E, for preventing return of said carrier from said arm to the rail, substantially as and for the purpose set forth.

5. In store-service apparatus, a switch consisting of a frame connecting the ends of rails of different elevations, and a descending arm adapted for directing a carrier from a branch to the main rail, substantially as and for the purpose set forth.

6. A gravitating arm or switch-rail, an arched frame, the main rail, and branch rail, combined and operating substantially as and for the purpose set forth.

7. Main and branch rails and a switch-rail, in combination with a bridge supporting the main and branch rails at the switch ends, and permitting the passage of the carrier thereunder, as stated.

ISIDORE BIRGÉ.

Witnesses:

JOHN A. WIEDERSHEIM,
CLARENCE B. WENGER.