

(No Model.)

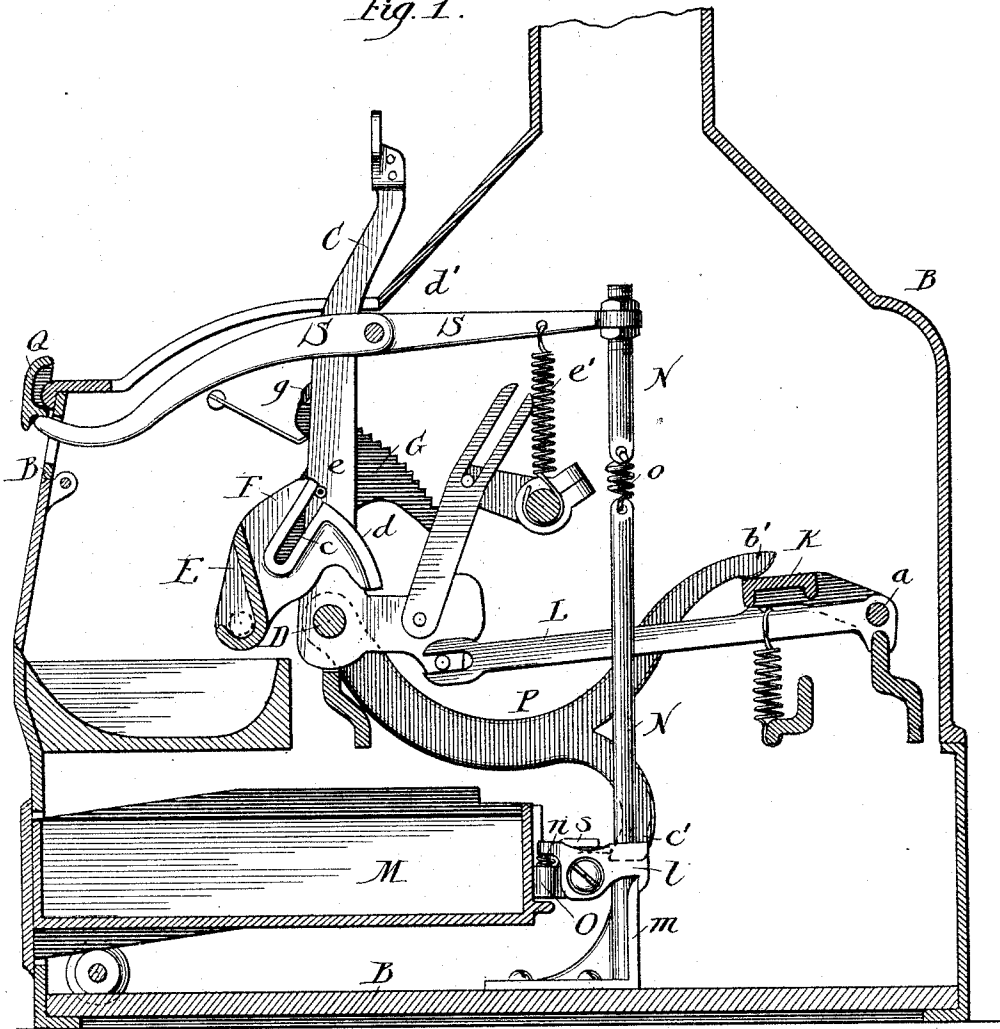
4 Sheets—Sheet 1.

T. CARNEY & E. SNYDER.
CASH REGISTER AND INDICATOR.

No. 428,269.

Patented May 20, 1890.

Fig. 1.



Witnesses:

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Inventors:

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Edward Snyder.

(No Model.)

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Fig. 2.

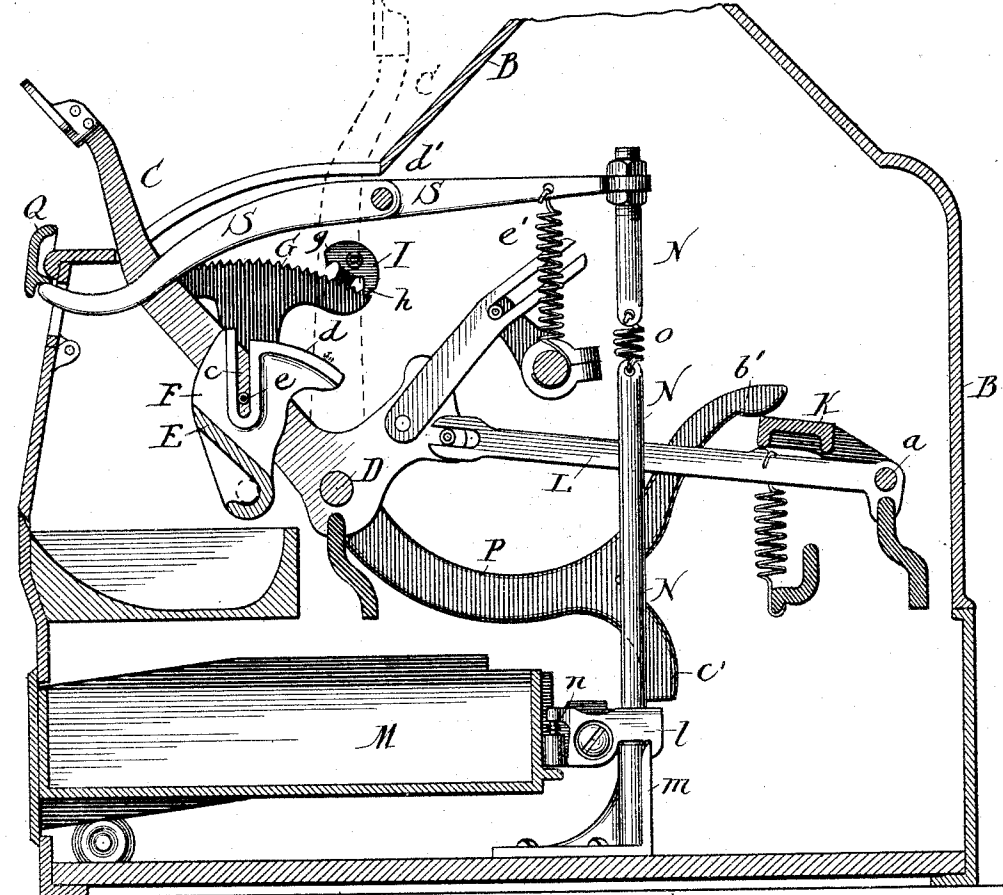


Fig. 3.

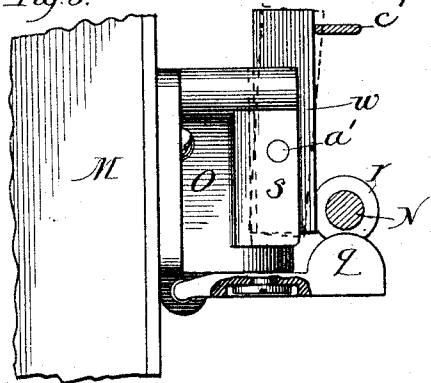
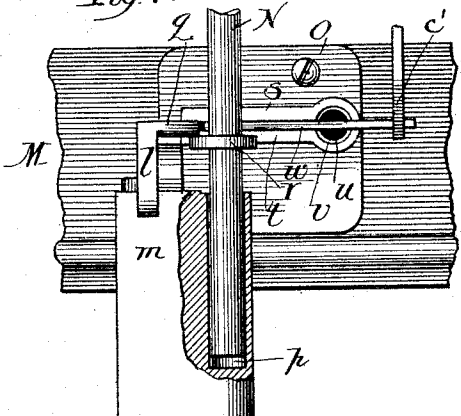


Fig. 4.



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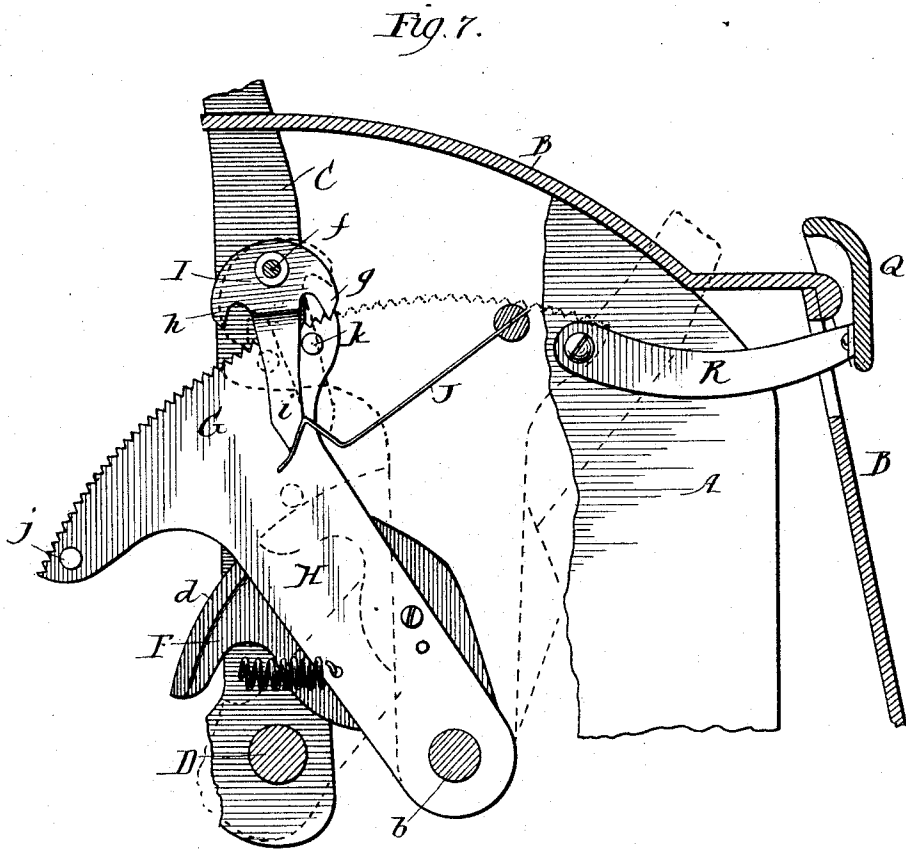
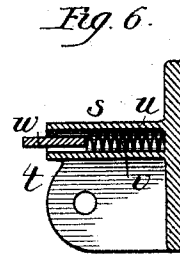
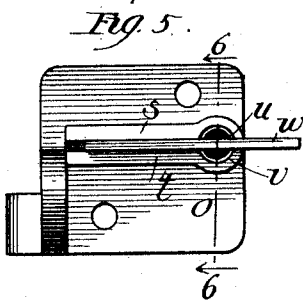
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Witnesses:
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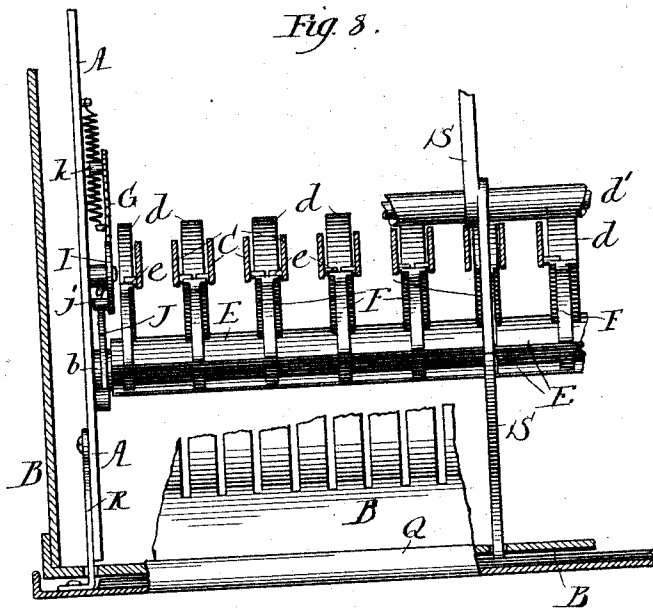
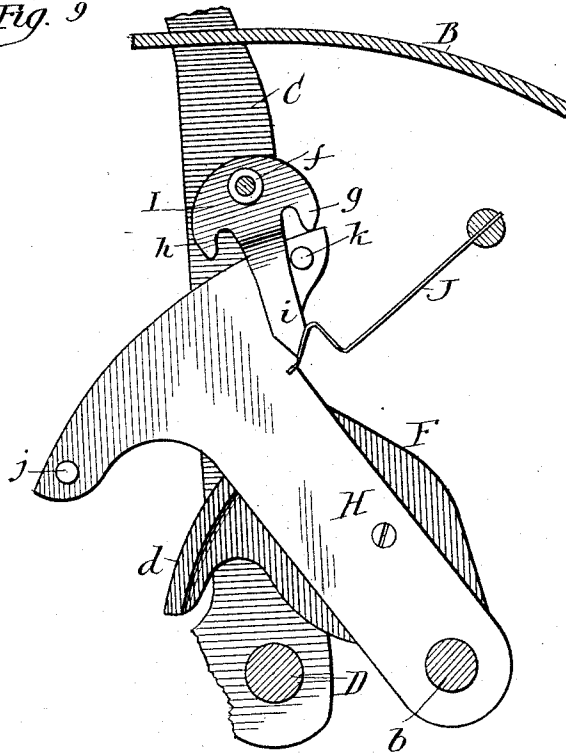


Fig. 9.



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UNITED STATES PATENT OFFICE.

THOMAS CARNEY AND EDWARD SNYDER, OF CHICAGO, ILLINOIS, ASSIGNORS
TO MOSES BENSINGER, OF SAME PLACE.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 428,269, dated May 20, 1890.

Application filed November 27, 1889. Serial No. 331,821. (No model.)

To all whom it may concern:

Be it known that we, THOMAS CARNEY and EDWARD SNYDER, residing at Chicago, in the county of Cook and State of Illinois, and citizens of the United States, have invented a new and useful Improvement in Cash-Registers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical cross-section taken near the center of the machine. Fig. 2 is a similar section, many of the parts being in a different position from that shown in Fig. 1. Fig. 3 is a detail, being a plan view of the device for locking the rod by which the catch which holds the drawer locked can be released. Fig. 4 is a detail, being a rear view, showing the catch which locks the drawer, the rod by which such catch can be released, and the device for locking the rod. Fig. 5 is a detail, being a rear view of the device for locking the rod by which the catch which holds the drawer can be released. Fig. 6 is a section at line 6 of Fig. 5. Fig. 7 is a detail, being an outside view of the key-arrester devices, showing also in section the bar by the movement of which the drawer can be unlocked. Fig. 8 is a detail, being a plan showing the devices for locking the keys and the bar for releasing the catch which holds the drawer locked, the keys being in section. Fig. 9 shows a modification of the key-arrester.

The objects of this invention are to provide improved devices by means of which when a key of the cash-register has been partially operated it cannot be returned to or toward its normal position, either by accident or otherwise, until its full stroke has been completed; to provide devices by means of which while one of a series of keys is being operated the others will be locked; to provide new devices for locking and releasing the cash-drawer used in connection with the register, all of which we accomplish as illustrated in the drawings and as hereinafter described.

That which we claim as new will be pointed out in the claims.

The operative parts of the machine are supported in a metal frame A, all being inclosed in the case B, as usual.

C are keys used for indicating and registering sales, which keys are pivoted on a fixed shaft D, as usual.

E is a swinging bar, the ends of which are provided with journals *b*, supported in the frame.

F is a series of plates, which are connected with and may be made integral with the bar E. Each of these plates is provided with a slot *c*. One wall at one end of this slot projects a little beyond the other wall, and the upper rear end of each plate is provided with a circular face *d*. These plates F, except at the ends of the machine, are located between two adjoining keys, and each key is provided with a pin *e*, arranged to enter the slot *c* in one of the plates.

G is a rack connected with the arm H, which is secured to one of the journals *b* of the bar E and to one of the plates F, so that the rack moves with the bar E and plates F.

I is a double pawl pivoted to the frame at *f*. The two points *g h* of this pawl are arranged to engage alternately with the rack G.

i is a tail-piece extending downward from the double pawl, the lower end of which is beveled on each side.

J is a spring, one end of which is secured to the frame and the other end is bent, as shown in Figs. 7 and 9, which bent end is arranged to engage with the tail-piece *i*.

j k are two pins secured at opposite ends of the rack G, which pins are arranged to engage with the tail-piece *i* of the double pawl.

The operation of this part of our invention is as follows: Whenever one of the keys C is operated, the pin *e* thereon will first enter the slot *c* in the adjoining plate F, causing the bar E to swing on its journals, carrying with it all of the other plates F, and the curved face *d* of each of such other plates will pass under the pin *e* on the key adjoining to such plate, thereby locking all the keys except the one being operated. While the key which is being operated is moving, the rack G will be carried along at the same time, and if from any cause the key should be released before it reaches the end of its stroke the end *g* of the double pawl I will engage with one of the teeth in the rack and prevent the return of the key to its normal position.

While the key is being operated the tail-piece *i* of the pawl will be relative to the bent end of the spring *J* in the position shown in Fig. 7; but just before the key reaches the end of its stroke the pin *j* will come into engagement with the tail-piece *i* and push it over into the position indicated by dotted lines in Fig. 7, and then the point *h* of the double pawl will come into engagement with the teeth of the rack, and the operated key can then return to its normal position; but while returning it cannot again be moved in the opposite direction, being prevented by the movement of the point *h* on the pawl. Just before the key reaches its normal position the pin *k* on the rack will engage with the tail-piece *i* of the double pawl and restore it to the position shown in full lines in Fig. 7. The bent end of the spring holds the pawl in either one of the two positions shown by full and by dotted lines in Fig. 7 until its position is changed by one of the pins *j* or *k*.

In Fig. 9 we have shown a modification of the key-arresting device, the only difference between the form shown in Fig. 9 and that shown in Fig. 7 being that in Fig. 9 there is no rack, the teeth being removed, and the ends of the double pawl are arranged to engage with a smooth face. When this form is used, it will be desirable to provide the ends of the double pawl with pieces of rubber.

K is the usual sway-bar, one of the offices of which is to operate the bell-striking parts whenever a key is operated.

L is a lever one end of which is pivoted at *a*. The other end is loosely connected with the short arm of a key *C*. There is such a lever for each key. These levers pass under and operate the bar *K* as usual.

M is a money-drawer, which is arranged to open by gravity when not locked.

l is a pivoted catch connected with a casting upon the rear of the drawer, which catch is arranged to engage with a casting *m*, which is secured to the case.

n is a spring to hold the catch in engagement with the casting *m*.

N is a rod, which, as shown, is made in two parts, and there is a spring *o* interposed between these two parts. The lower end of the rod *N* enters a socket *p* in the casting *m*.

q is a projection on the catch *l*, which projection is arranged to engage with a fixed collar *r* on the rod *N*.

O is a casting secured to the rear of the drawer. This casting is provided with two projecting flanges *s t*, and with a circular chamber *u* to receive a spring *v*.

w is a short plate, which is pivoted at *a'* to and between the flanges *s t*. One end of this plate is arranged to engage with the upper side of the collar *r* on the rod *N*.

P is a lever, one end of which is pivoted on the shaft *D*, which carries the keys. The other end of the lever is forked, and one arm *b'* is arranged to engage with the sway-bar *K*,

and the other arm *c'* when in its normal position passes down behind the narrow plate *w* and engages therewith.

Q is a bar, which is secured to and supported by two arms, one of which *R* is shown, which arms are pivoted to the frame. This bar extends across the front of the machine. It will be observed that the drawer is not directly released by the movement of one of the keys, but is released by the movement of the bar *Q* and other parts.

S is a lever pivoted at *a'*. The forward end of this lever passes under and engages with the bar *Q*, and the other end is connected with the upper end of the rod *N*.

e' is a spring arranged to act upon the lever *S*.

Many of the parts of the entire machine are omitted from the drawings, and some parts which are shown have not been described because they have nothing to do with this invention.

It is not essential that a collar be provided on the rod *N*. Two lugs—one to engage the catch and the other to engage with the plate *w*—will answer the purpose. Instead of the pins *j k* lugs on the rack or segment may be used.

If the forward end of the lever *S* were exposed, it could be operated without the use of the bar *Q*, but the bar *Q* is important, because with it the lever *S* can be operated at any point at the front of the machine.

The operation of the devices for locking and releasing the drawer is as follows: When the drawer is closed and the operating-keys are in their normal position, the catch *l* will be in engagement with the casting *m*, and the projection *q* on the catch will be in engagement with the collar *r* on the rod *N*, which will then be at its lowest point. At the same time one end of the plate *w* will be in engagement with the collar *r*, and then the rod *N* cannot be raised, and the lever *P* will be in the position shown in Fig. 1, the arm *c'* being behind and in engagement with one end of the plate *w*, as shown in Figs. 3 and 4, holding the other end of the plate in engagement with the collar *r*. When either one of the keys is operated, one of the levers *L* will act upon the bell-bar *K*, which will act upon the lever *P*, lifting its free end, so that the arm *c'* thereof will be released from the plate *w*, and then the action of the spring *v* on said pivoted plate will disengage the plate from the collar *r* on the rod *N*, and then this rod can be raised to lift the catch *l* and release it from the casting *m*. This rod *N* can be raised by pressing down the bar *Q*, which will depress the forward end of the lever *S* and raise the rear end thereof, which is in connection with the rod *N*, and such rod *N* will be moved upward a little, and the collar *r* being in engagement with the projection *q* on the catch *l* such catch will be lifted from engagement with the casting *m*, and then the drawer can

be opened, which, when the parts are constructed as shown in the drawings, will be accomplished by gravity.

What I claim as new, and desire to secure by Letters Patent, is as follows:

1. In a cash-register, the combination of a series of keys, a swinging rack or segment which moves with the keys, a double pawl pivoted to the frame and arranged to engage with the rack or segment, a spring J, arranged to engage with the pawl, and a swinging bar connected with the rack or segment moving therewith, and having plates for locking all the keys except the one being operated, substantially as and for the purpose specified.

2. In a cash-register, the combination of a series of keys, a swinging rack or segment which moves with the keys, a double pawl pivoted to the frame and arranged to engage with the rack or segment, a spring J, arranged to engage with an arm or tail piece *i*, connected with the pawl, pins or projections *j k* on the rack or segment, arranged to engage with the tail-piece of the pawl, and a swinging bar E, connected with the rack or segment, moving therewith, and having plates F for locking all the keys except the one being operated, substantially as and for the purpose specified.

3. In a cash-register, the combination, with a series of keys, each having a lateral pin *e*, of a swinging bar E, carrying a series of plates F, each having a curved face *d* to pass under the pin of a key, and a slot *c*, to receive the pin of a key, substantially as described.

4. In a cash-register, the combination of a series of keys provided with lateral pins *e*, the swinging bar E, having plates F and end

journals, an arm H, secured to one of said end journals and carrying a rack or segment G, a double pawl I, to engage the rack, and a spring J, to engage the pawl, substantially as described.

5. In a cash-register, the combination of a series of keys, a drawer, a catch connected with the drawer and arranged to hold the drawer in its closed position until the catch is released, a rod arranged to engage with the catch to release the same, and a pivoted lever connected with said rod for the purpose of lifting the same, substantially as and for the purpose specified.

6. In a cash-register, the combination of a series of keys, a drawer, a catch connected with the drawer and arranged to hold the drawer in its closed position until the catch is released, a rod arranged to engage with the catch to release the same, a pivoted lever connected with said rod for the purpose of lifting the same, and a bar Q, pivoted by means of arms to the frame and arranged to operate the lever S, substantially as and for the purpose specified.

7. In a cash-register, the combination of a series of keys, a drawer, a catch connected with the drawer to hold it when closed, a rod arranged to engage with and release the catch *l*, a swinging plate *w*, arranged to engage at one end with a lug on the rod, a bar K, a lever P, having two arms *b'* and *c'*, and a lever S, substantially as and for the purpose specified.

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Witnesses:

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