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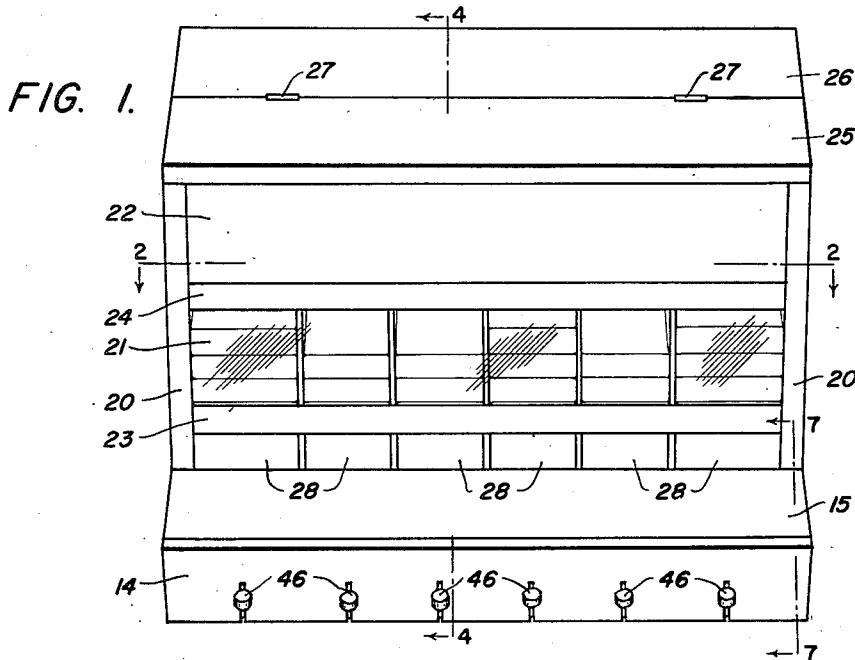
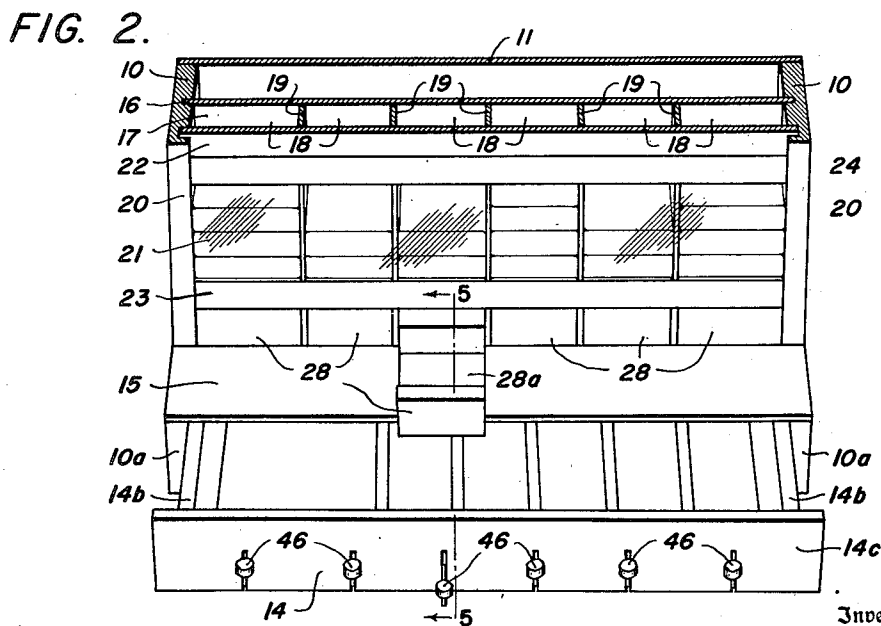
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SELECTIVE DISPENSER FOR MERCHANDISE

Filed Sept. 25, 1951

2 SHEETS—SHEET 1



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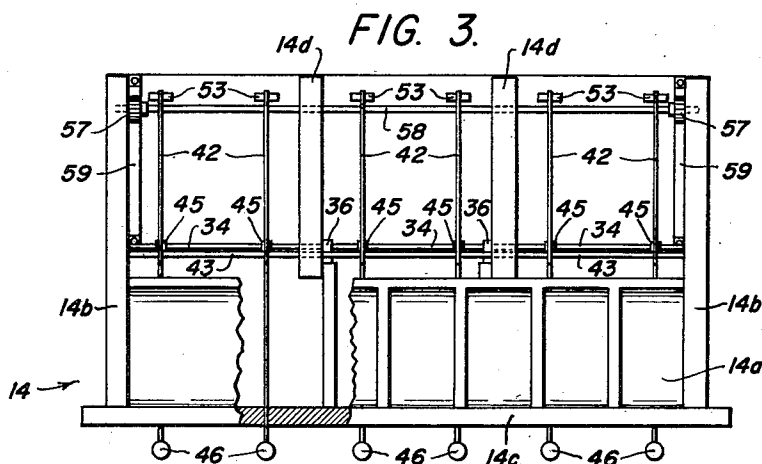
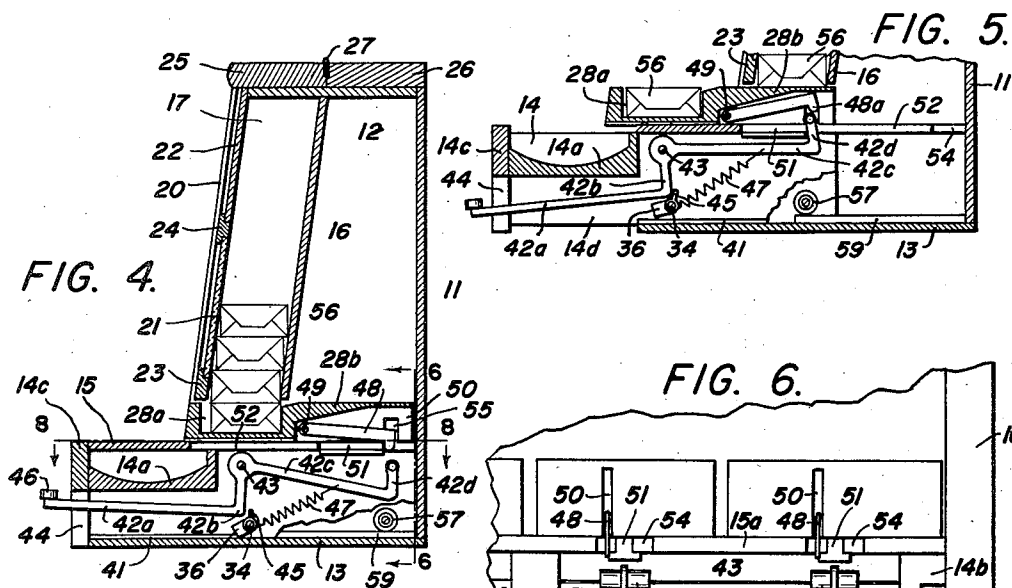
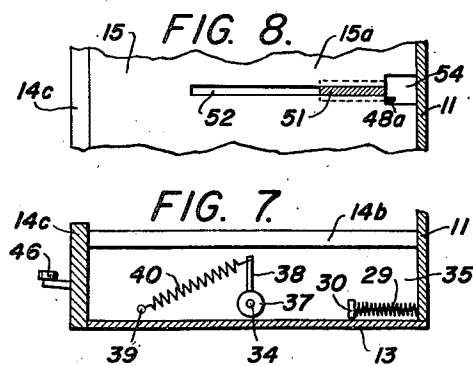
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2 SHEETS—SHEET 2



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UNITED STATES PATENT OFFICE

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SELECTIVE DISPENSER FOR MERCHANDISE

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12 Claims. (Cl. 312—67)

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This invention relates to apparatus for selectively dispensing different brands of a particular kind of merchandise, such as packaged cigarettes, razor blades, and the like, from respectively segregated supplies of same, and is concerned primarily with such apparatus for use by clerks behind the counters of stores, cafes, bars and similar establishments, rather than by the ultimate consumer. As such, and from a more specific standpoint, it has particular reference to combined merchandise dispensers and cash receptacles.

As a wholesaler of cigarettes, I have found that more and more retail establishments which sell cigarettes primarily as a convenience for their customers are installing self-help coin dispensers, even though the profit margin is less than if sold over the counter. This is particularly true of bars selling beer and liquors, for the reason that bartenders have made a habit of helping themselves to packages of cigarettes for their own use. Proprietors find that profits are quickly eaten up by this purloining of merchandise, but have so far been unable to stop the practice, because of the lack of any adequate means of accounting for inventory as against cash receipts.

In accordance with this invention, I provide selective dispensing apparatus for use behind the counter by a bartender, waiter, or other sales clerk of a retail establishment, such apparatus preferably including, as a part thereof, a cash drawer having compartments correlated with respective columns for the reception and selective dispensing of merchandise. Selectively releasable latch mechanism locks the cash drawer against opening, except when one of a correlated series of manually actuatable release members is operated. Each release member of the series is associated with a different column of merchandise and with a carriage underlying the particular column concerned, and the latching arrangement is such that travel of the cash drawer from closed to open position, and vice versa, effects a corresponding travel of the particular carriage concerned, thereby removing a single article from the bottom of the particular column concerned and carrying it to a position of availability correlated with a corresponding compartment of the cash drawer.

Thus, all the sales clerk need do is pick up the particular article of merchandise selectively made available to him in the above manner, and complete the sale. The money received from the customer must be placed in the appropriate com-

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partment of the cash drawer, if inventory and cash receipts are to tally at the end of the working day. The proprietor can make such tallying between cash receipts and inventory a condition of employment, and is thereby able to protect himself from unauthorized removal of articles from the apparatus.

Features of the invention reside in the dispensing mechanism per se, and in the combination of same with a cash drawer and with selective latching mechanism therefor.

Additional objects and features of the invention will become apparent from the following detailed description of the preferred and typical embodiment illustrated in the accompanying drawings to exemplify the generic inventive concepts involved.

In the drawings:

Fig. 1 represents a front perspective view of the merchandise dispensing apparatus of the invention as it appears containing merchandise and ready for use;

Fig. 2, a fragmentary view corresponding to that of Fig. 1, but illustrating the apparatus during use, with the cash drawer open and one of the merchandise dispensing carriages in a forward and open position, rendering available a single article of merchandise from the particular column concerned, the upper part of the cabinet being shown in horizontal section taken in the line 2—2 of Fig. 1;

Fig. 3, a top plan view of the cash drawer per se showing selective latch mechanism carried thereby, an intermediate portion of the cash-receiving part of the drawer being broken out to reveal an otherwise hidden portion of the mechanism;

Fig. 4, a vertical section taken on the line 4—4 of Fig. 1;

Fig. 5, a fragmentary vertical section taken on the line 5—5 of Fig. 2;

Fig. 6, a somewhat enlarged, fragmentary vertical section taken on the line 6—6 of Fig. 4; and

Fig. 7, a fragmentary vertical section taken approximately along the line 7—7 of Fig. 1, showing the cash drawer in end elevation; and

Fig. 8, a fragmentary horizontal section taken on the line 8—8 of Fig. 4.

Referring to the drawings:

In the embodiment illustrated, the apparatus of the invention is in the form of a cabinet, having opposite, externally recessed side walls 10, a back wall 11, a top wall 12, and a bottom wall 13, see particularly Fig. 4.

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The lower part of the cabinet is formed to receive a cash drawer 14, which mounts much of the operating mechanism of the apparatus. For this purpose, the side walls 10 are extended forwardly, as at 10a, and a wall 15 is provided to close the upper part of this forwardly projecting, lower part of the cabinet. Such wall 15 provides a forwardly placed shelf, serving to receive—and as a slideway for—the individual carriages which dispense the merchandise.

A partition 16, extending from side wall to side wall of the cabinet, defines a forward section 17, which is divided into individual columns 18 by a series of partitions 19.

Two uprights 20, Figs. 1 and 2, at opposite sides of the cabinet, define respective slideways for the reception of panel members making up a front wall for the cabinet. As illustrated, such panel members comprise a lower glass pane 21, providing a window through which the columns of merchandise may be seen, and an upper panel 22, which is preferably of plywood or composition board, for the reception of an advertising placard or the like. A bottom strip 23 serves as a rest for the pane of glass 21, while an intermediate strip 24 serves as a spacer between such pane and the panel member 22. The top wall 12 is surmounted by heavy, transversely extending panels 25 and 26, hinged together, as at 27, Fig. 1, enabling opening of the forward panel 25 to permit raising or withdrawal of the upper panel 22 at such times as it is desired to fill or refill the individual columns 18 with merchandise.

Between the cash drawer 14 and the open bottoms of the merchandise-receiving columns 18 are positioned respective tray-like carriages 28. These are slidably arranged, so as to be normally positioned immediately below the respective columns 18, and so as to be slidable forwardly upon the shelf 15 when actuated by mechanism about to be described.

For the sake of appearance, and also for effectiveness in operation, the tray-like carriages 28 have a forward portion 28a recessed to receive and carry the individual items to be dispensed. A rearward portion 28b, having its upper surface substantially flush with the recess opening of the forward portion 28a, provides a limit stop determining the normal position of the carriage, as well as a temporary support for the merchandise in the particular column 18 concerned when the carriage is in forward, dispensing position.

The drawer 14 comprehends the entire lower part of the cabinet, but its cash-receiving portion is limited to the forward and upper part. The remainder carries operating mechanism. As so constituted, the drawer 14 comprises a cash-receiving tray 14a extending between the forward portions of opposite side walls 14b. A front wall 14c is secured to such side walls 14b, and completes the cash-receiving portion of the drawer. Intermediate partition walls 14d extend from front to back of the drawer below and rearwardly of the cash-receiving tray 14a, for the purpose of structural reinforcement and as intermediate bearings for elongate shafts of the operating mechanism.

The operating mechanism comprises resilient means normally urging the drawer 14 to open position, and selectively releasable latch mechanism normally latching the drawer in its closed position against the force of the resilient means. Such latch mechanism includes components individually correlated with the respective carriages, for coupling the drawer and a selected

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carriage together during an unlatching operation.

In the illustrated instance, see particularly Fig. 7, the resilient means comprise a pair of springs 29, disposed within the lower part of the cabinet at respectively opposite sides of the drawer 14 and operable between the back wall 11 of the cabinet to which they are attached, and respective abutment members 33 fixedly secured to and projecting outwardly from opposite side walls 14b of the drawer.

The latch mechanism includes an elongate rocker shaft 34 extending transversely of the drawer 14, and journaled in the side walls 14b and in intermediate partitions 14d, with its ends projecting into respective external recesses 35, see Figs. 6 and 7, of the side walls 14b of the drawer. Latching elements 36, Figs. 4 and 5, are secured to shaft 34 at widely spaced intervals along its length. On the projecting opposite ends of such shaft 34 are secured respective collars 37, having respective lever arms 38 projecting rigidly therefrom. Tensioned between the lever arms 38 and anchor pins 39, see Fig. 7, are respective coil springs 40, which serve to normally rotate shaft 34 so that the latching elements or lugs 36 bear forcibly downwardly. Accordingly, when the drawer 14 is in closed position within the lower portion of the cabinet, see Fig. 4, the latching elements or lugs 36 bear downwardly against the bottom wall 13 of the cabinet, and catch behind respective keeper strips 41 which are secured to such bottom wall 13 and extend from the front toward the rear thereof. Such elements or lugs 36 thereby lock the drawer in its closed position, as against the opening urge of springs 29.

For the purpose of unlatching the drawer 14 while selectively coupling such drawer to a particular one of the carriages, a series of levers 42 are fulcrumed by rotative mounting intermediate their lengths on an elongate shaft 43 which extends transversely of the drawer between the side walls 14b and the intermediate partition walls 14d. Such levers 42 comprise forwardly extending arms 42a, which have elbows 42b and which protrude through respective slots 43 formed in the front wall 14c of the drawer, and rearwardly extending arms 42c, which terminate in respective upstanding portions 42d designed to engage the respective carriages 28 when the respective protruding ends of the forward lever arms 42a are manually depressed. The elbows 42b are arranged to engage and trip respective projections 45 (extending upwardly from fixed securement to the rocker shaft 34), when the respective levers 42 are manually actuated by pressing the keys 46 fixed to the protruding ends of lever arms 42a. Tripping of a projection 45 will rotate the rocker shaft 34 clockwise, and raise the latching elements on lugs 36 to release the drawer for forward propulsion under the action of spring 29.

Each lever 42 is resiliently biased to normally retain its key 46 in raised position, for example, by means of a spring 47 tensioned between the rearward lever arm 42c and the rocker shaft 34, see especially Figs. 4 and 5.

For preventing any forward opening movement of a dispensing carriage 28, except by the pressing of its associated key 46, each carriage is provided with latching means arranged to be automatically unlatched when the key is pressed. In the form illustrated, such latching means comprises a catch 48 pivoted at 49 within a downwardly open slot 50 formed in the rearward por-

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tion 28a of the carriage, longitudinally thereof.

The catch 48 of each of the carriages 28 is adapted to latch over a keeper provided by a rearward extension 15a of the shelf 15, see especially Fig. 8, and, for this purpose, has a hooked end 48a.

Attached to the bottom of the rearward portion 28a of each carriage, paralleling and to one side of the slot 50, are respective elongate slide members 51, advantageously of inverted T-formation, which fit and slide within respective elongate slots 52, Fig. 3, provided in the rearward extension 15a of the shelf 15.

These guide members are selectively engaged by the upstanding portions 42d of the respective operating levers 42 when the latter's keys 45 are depressed, and such engagement results in forward propulsion of the particular carriage concerned upon opening of the drawer 14 under the impetus of springs 29, it being noted that the upstanding portion 42d of the particular lever 42 concerned is accommodated by a corresponding one of the slots 52 during forward travel of the drawer and dispensing carriage.

For the purpose of automatically releasing the corresponding catch 48, so that the drawer and the particular dispensing carriage 28 concerned can move forward in the manner above explained, respective cross-members 53 are secured to the upper ends of the upstanding portions 42d of the operating levers 42, and accommodating apertures 54, Fig. 8, are provided in the rearward extension 15a of the shelf 15, and accommodating recesses 55, Fig. 4, in the respective carriages 27.

Accordingly, when a selected one of the keys 45 is pressed, the corresponding lever 42 operates to release the catch 48 of the corresponding dispensing carriage 28, and to, at the same time, engage such carriage, so that forward propulsion of the drawer 14 under the impetus of springs 29 will also move such carriage forward to dispense a single package 56 of merchandise from the bottom of the particular column 18 concerned.

For the purpose of enabling the drawer 14 to travel easily and smoothly, it is preferably provided with rollers 57 mounted at opposite ends of an elongate shaft 58 and adapted to run along respective tracks 59 secured to the bottom wall 13 of the cabinet.

I claim:

1. Apparatus as described, comprising a cabinet having a plurality of merchandise receiving and dispensing columns arranged side by side, and a drawer spaced below said columns, the width of said drawer comprehending the several columns; a like plurality of dispensing carriages positioned between said columns and said drawer in registry with the respective columns for forward and rearward movement with said drawer, each of said carriages having a forward merchandise-dispensing portion and a rearward stop portion, said stop portion being adapted to support merchandise within its corresponding column when the carriage is in dispensing position; latch mechanism mounted in said drawer for movement therewith, said latch mechanism comprehending the plurality of carriages; selective operating means for the latch mechanism; and keepers disposed in fixed relationship with the respective carriages, for selective coaction with said latch mechanism in coupling the drawer with a selected carriage.

2. The combination set forth in claim 1, wherein the drawer is provided with a like plurality

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of cash-receiving compartments substantially registering in positions with the respective carriages.

3. The combination set forth in claim 1, wherein the cabinet has a forwardly protruding portion in which the drawer is mounted; and wherein the carriages are slidable forwardly upon the top of said protruding portion.

4. The combination set forth in claim 1, including, additionally, latch and keeper sets for the respective carriages, one component of each of said sets being fixed to the cabinet for locking said carriages against unauthorized opening; and unlatching means for said sets operably associated with the selective latch operating means.

5. The combination set forth in claim 1, including, additionally, latch and keeper means for the drawer; and unlatching means therefor operably associated with the selective latch operating means.

6. Apparatus as described, comprising a cabinet having a plurality of merchandise receiving and dispensing columns arranged side by side, and a drawer spaced below said columns, the width of said drawer comprehending the several columns; a like plurality of dispensing carriages positioned between said columns and said drawer in registry with the respective columns for forward and rearward movement with said drawer, each of said carriages having a forward merchandise-dispensing portion and a rearward stop portion, said stop portion being adapted to support merchandise within its corresponding column when the carriage is in dispensing position; manually operable latch mechanism mounted in said drawer for movement therewith, said latch mechanism comprising a series of latches and correlated operating levers corresponding in number and location with said columns and said carriages, said operating levers extending beyond the front of said drawer for selective manual operation; a similar series of keepers associated with the rearward stop portions of the respective carriages for coaction with corresponding latches of said series of latches; resilient means normally urging said drawer into open position; latch means for locking said drawer in closed position; and release means associated with the respective operating levers for releasing said latch means when a selected lever is operated.

7. The combination set forth in claim 6, wherein the several operating levers are mounted intermediate their respective lengths on a common fulcrum shaft extending across the width of the drawer, and have their power arms protruding at the front of the drawer for selective manual actuation; wherein the several latches comprise upstanding portions of the work arms of the respective levers; and wherein the several keepers are associated with the rearward stop portions of the respective carriages in registry with the said latches, for engagement by the respective latches of selected levers when the power arms thereof are manually depressed.

8. The combination set forth in claim 7, wherein the cabinet includes horizontal, stationary, slideway means immediately above the drawer, forming trackways for the respective carriages; and wherein the carriages include respective slides mounted in said trackways.

9. The combination set forth in claim 8, wherein the several carriages include respective catches, and the slideway means includes respective keepers for said catches positioned for coaction

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with said catches at the closed positions of the carriages and within the respective paths of action of the upstanding latch portions of the work arms of the operating levers, so that the selected carriage will be released for forward movement with the drawer by the latching engagement of the selected operating lever with said selected carriage.

10. The combination set forth in claim 9, wherein the slideway means is a horizontal partition wall of the cabinet; wherein the trackways are slots through said partition wall, arranged in spaced parallel relationship commencing at the rear of said partition wall and extending toward the front thereof; wherein the said partition wall is provided with apertures rearwardly thereof at the commencements of the respective slots, said apertures being wider than their respective slots; wherein the catches are positioned sidewardly of their respective slots but within the areas comprehended by the respective apertures, whereby the edges of said partition wall defining the respective apertures, forwardly, become keepers for the respective catches; and wherein the latches of said operating levers include respective sidewardly extending members comprehending the respective catches, as release means for said catches.

11. The combination set forth in claim 6,

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wherein the latch means for the drawer comprises lugs fixed to a rocker shaft journaled transversely of and in the drawer, and respective keepers secured to the bottom wall of the cabinet; wherein resilient means normally bias said lugs downwardly for latching coaction with said keepers; wherein a series of oppositely extending lugs are secured to said rocker shaft in registry with the respective operating levers; and wherein portions of said operating levers are positioned to trip the respective lugs of said series of oppositely extending lugs on the operating strokes of said levers.

12. The combination set forth in claim 6, wherein a cash tray is provided in the forward and upper part of the drawer; wherein the front wall of the drawer is slotted along its height in registry with the respective operating levers but below said cash tray; and wherein the power arms of said levers protrude through said slots for manual actuation at the front of said drawer.

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