Summary of Invention

Technical Problem

[0003]

However, in the case where an RF tag attached to a product is damaged, in the case where information within an RF tag has been illegally rewritten, or in the case where an RF tag is not attached to the product for some reason, the price of the product to be purchased by a purchaser cannot be ascertained by the RF reader. Moreover, in the case where there are a plurality of products collectively read by the RF reader, there will be cases where a store clerk cannot ascertain that products are present with an RF tag that cannot be read by the RF reader. Accordingly, in the case where there are products with an RF tag that cannot be read, when attempting to specify a total money amount by relying only on RFIDs, an amount less than the original total money amount will be specified, and will be a loss on the store side.

[0004]

Embodiments of the present disclosure seek to provide an inspection system that uses RFIDs to inspect articles such as valuables, and is capable of detecting that an article is present with an RF tag that cannot be read.

Solution to Problem

[0005]

Accordingly, in the present disclosure, an inspection device is provided that may determine whether or not weights of valuables calculated from information read from RF tags and the actual weights of the valuables are matching.

[0005a]

An aspect of the present invention provides an inspection system whose inspection target is a valuable object whose type is to be specified by weight difference and configured to inspect the valuable object including an RF tag configured to record information of the valuable object, the inspection system comprising an RF reading device configured to read information of valuable objects from RF tags of the valuable objects placed on a platform; a weight measuring device configured to measure weights of the valuable objects; a management control device configured to determine a calculated total weight of the valuable objects on the platform based on standard weights of the valuable objects obtained from the information read by the RF reading device and compare the calculated total weight with an actual total weight of the valuable objects measured by the weight measuring device; and a display device configured to perform a display reflecting a result of a comparison by the management control device, wherein the management control device is configured to make the display device to perform a display of a part or all of the information read by the RF

reading device when the calculated total weight and the actual total weight do not match with each other as the result of the comparison.

[0005b]

There is also disclosed a cash register system comprising the inspection system as described and a cash register device configured to perform an accounting process based on information of the money amount output by the management control device.

[0005c]

Another aspect of the present invention provides an inspection system whose inspection target is a valuable object whose type is to be specified by weight difference and configured to inspect the valuable object including an RF tag configured to record information of the valuable object, the inspection system comprising an RF reading device configured to read information of valuable objects from RF tags of the valuable objects placed on a platform; a weight measuring device configured to measure weights of the valuable objects; a management control device configured to determine a calculated total weight of the valuable objects on the platform based on standard weights of the valuable objects obtained from the information read by the RF reading device and compare the calculated total weight with an actual total weight of the valuable objects measured by the weight measuring device; and a display device configured to perform

a display reflecting a result of a comparison by the management control device, wherein the management control device is configured to make the display device to perform a display of a number of valuable objects read by the RF reading device when the calculated total weight and the actual total weight do not match with each other as the result of the comparison.

[0006]

There is also disclosed an inspection system having valuables where types capable of being specified by a weight difference are set as an inspection target, the inspection system for inspecting the valuables provided with RF tags on which information of the valuables is recorded, and including: an RF reading device for reading the information of the valuables from the RF tags of the valuables placed on a platform; a weight measuring device for measuring and recording weights of the valuables; and a management control device for using measurement results of the weight measuring device to ascertain a total weight of the valuables on the platform, in which the management control device includes a function for ascertaining the weights of the valuables on the platform based on standard weights of the valuables from the information obtained from the RF reading device, measuring the total weight of the valuables on the platform by using the measurement

valuables obtained from the RF reading device and the total weight of the valuables obtained from the measurement results of the weight measuring device, or types of the valuables not a cause of a mismatch, based on the excess weight.

[0013]

According to this configuration, since the management control device ascertains the weight for each of the types of the valuables, it can specify whether the RF tags of the valuables of some type can be read, or the RF tags of the valuables of some type cannot be read, by ascertaining the excess weight of the total weight measured by the weight measuring device.

[0014]

In the above inspection system, the management control device may include a function for ascertaining a total money amount of the valuables on the platform from the RF reading device.

[0015]

According to this configuration, since the total money amount of the valuables on the platform can be ascertained, this total money amount can be used to perform an accounting process.

[0016]

There is also disclosed an inspection system for inspecting valuables including RF tags, the inspection system including: an RF reading device for reading information of the valuables from the RF tags provided in the valuables; a weight measuring device for measuring weights of the valuables; and a management control device for ascertaining a total weight of the valuables by using measurement results of the weight measuring device, in which the management control device obtains the weights of the valuables based on the information read by the RF reading device, and compares the obtained weights and the weights measured by the weight measuring device to determine whether or not both are matching.

[0017]

According to this configuration, since the weights obtained from the RF tags and the weights measured by the weight measuring device are compared, it can be ascertained that valuables are present with an RF tag that cannot be read in the case where both are not matching.

[0018]

In the above inspection system, the management control device may obtain prices of the valuables based on the information read by the RF reading device, and may output information of the obtained prices.

[0019]

According to this configuration, the prices of the valuables can be obtained, by referring to the storage device based on the information stored in the RF tags.

[0024]

There is also disclosed a cash register system, this cash register system including: the above inspection system; and a cash register device for performing an accounting process based on the information of the prices output by the management control device.

[0025]

According to this configuration, the RFIDs and the weight measuring device can be used to inspect that an effective RF tag is included in all the valuables, and information of the prices stored in the RF tags can be used to perform an accounting process.

[0026]

An inspection system of the present disclosure includes: an RF reading means for reading RF tags of objects placed at a prescribed location; a detecting means for detecting at least a number of the objects placed at the prescribed location by a method other than an RFID; and an alarm means for generating an alarm in the case where the number of the objects with an RF tag that can be read by the RF reading means does not match the number detected by the detecting