

# Research and Design of Financial Bill Management in Engineering\*

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**Abstract**—Financial management occupies an important role in modern engineering project management. Engineering financial bills management device should be studied and designed based on finance and accounting field and actual needs of engineering projects. Designing a device for the management of financial accounting bills will facilitate the collection and storage of engineering financial bills. The device mainly includes a box body, several partition plates, and several positioning pins, and its design scheme and steps are detailed in the following part: a box body, which includes a base, a lower plate and an upper composite plate, and a cavity is formed between the lower board and the upper composite plate; several partition plates, which are inserted between the lower board and the upper composite plate, and then the several partition plates divide the cavity into some storage chambers; the several positioning pins, which are arranged on the upper composite plate, and the gap on the upper part of the partition plate is clamped on the positioning pins. For the utility model of bill management device, easy installation and disassembly of partition plates will facilitate the engineering and financial personnel to classify and manage the bills, and the storage space is used reasonably.

**Keywords**—*engineering finance; accounting bills; management device; sorting and management*

## I. INTRODUCTION

The collection, collation, filing and archiving of engineering accounting files are important parts of engineering financial management, as well as the premise and basis for the formation of accounting files. Engineering financial files are important historical data and evidence to record and reflect the economic businesses of construction enterprises or units. Financial file management is a significant component of accounting work, so it is a vital task for engineering units to strengthen the management on engineering accounting files. In reality, however, the management of engineering accounting files is often neglected and becomes a weak link in project management and engineering financial management, which directly affects the quality and level of financial management of

engineering units.

## II. IMPORTANCE OF MANAGEMENT OF ENGINEERING FINANCIAL FILES

The management of accounting files is a vital task for Chinese enterprises including construction enterprises. Financial accounting files contain accounting documents, accounting books, accounting statements and various tax returns, and are a data resource critical to enterprises. The management of engineering financial files is strongly professional and requires accountants to learn and explore. Their professional skills and qualities can be improved through study and exploration. Therefore, strengthening the management of engineering financial files can not only promote the improvement of financial management level of engineering units, but also make the accounting file management better adapt to the development of the management by project .

In the process of financial accounting, the financial department in engineering units often has an inevitable connection with financial bills. Accounting bills are not only a critical voucher of engineering financial revenue and expenditure, but also the carrier and evidence of economic exchanges among engineering units, as well as the essential accounting files storage data stipulated by enterprise accounting standards. Reasonable bill storage and management device is related to the normal operation of financial works of engineering units and project management. Therefore, how to design a set of reasonable device for the management of engineering financial bills based on the characteristics and particularities of the project has become a realistic demand for the development of construction enterprises and units.

## III. THE DESIGN OF THE FINANCIAL BILL MANAGEMENT DEVICE OF ENGINEERING

The bill management device is mainly used to arrange and store the bills by accounting personnel; the existing bill management device has a relatively simple structure, a fixed internal space division, and an unreasonable storage during use, which makes the storage effect of the bill management device low, so the financial bills management device should be researched and designed comprehensively according to the needs of the accounting field and the project management. In order to achieve this goal, this study provides an

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accounting bills management device that facilitates the arrangement and collection of bills. The design and the step include: a box body, which includes a base, a lower plate and an upper composite plate, and a cavity is formed between the lower plate and the upper composite plate; several partition plates, which are inserted between the lower plate and the upper composite plate stated above, and the partition plates divide the cavity into several storage chambers; several positioning pins, which all are disposed on the upper composite plate stated above, and the notch at the upper end of the partition plate is buckled in the positioning pin.

First, the upper composite plate includes a top plate and a fixing plate for space, the positioning pin is movably disposed on the fixing plate, and a lower end surface of the positioning pin abuts against a bottom surface of the notch.

Second, the upper end of the positioning pin is mounted with a spring, the upper end of the spring abuts against the upper groove of the top plate, and the lower end of the spring abuts against the base shaft of the positioning pin.

Third, the spring is located between the top plate and the fixing plate.

Fourth, the fixing plate is provided with an upper straight groove, and the upper end of the upper straight groove and the partition plate have a clearance fit.

Fifth, the lower shaft of the positioning pin is movably disposed on the fixing plate, and the lower shaft extends to the upper straight groove.

Sixth, the lower plate is provided with a lower groove, and the lower end of the partition plate and the lower groove have a clearance fit.

Finally, there are several lower grooves and several upper straight grooves.

From the above technical design, we can see the design advantages of the bills management device as follows:

- Compared with the present technique, the utility model has several storage chambers that is convenient for accounting personnel to classify and manage the bills;
- The installation of the partition plate can be completed only by inserting it into the lower groove and the upper straight groove, and the disassembly of the partition plate can be completed only by strongly putting out the partition plate. The installation and disassembly of the partition plate is easy and simply.
- The partition plate can be installed according to actual use requirements, and the cavity can be divided into several storage chambers of different sizes, which satisfies the storage requirements for different bills in different storage spaces, so that storage space of the accounting bills management device becomes more reasonable.

In addition to the purpose, features and advantages described above, this utility model also has other purpose,

features and advantages. The details will be further described below in combination with the reference drawings.

#### IV. THE DESIGN DRAWINGS OF THE BILL MANAGEMENT DEVICE

In order to more clearly illustrate the technical design of utility model example or that in the present invention, this paper makes a brief introduction of the attached drawings to be used in the present invention. Obviously, the drawings described below are only some examples of this design, and other technicians or professionals in this field, also can obtain other drawings according to these drawings without creative labor. In the drawing:

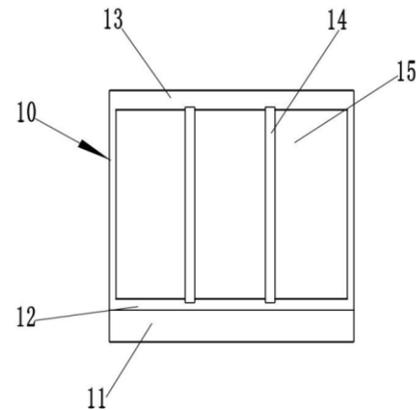


Fig. 1. Structure diagram of the accounting billing management device.

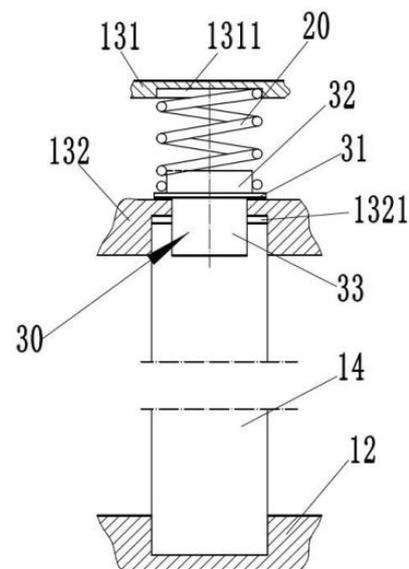


Fig. 2. Structure diagram of the accounting bill management device from partial cross-sectional view.

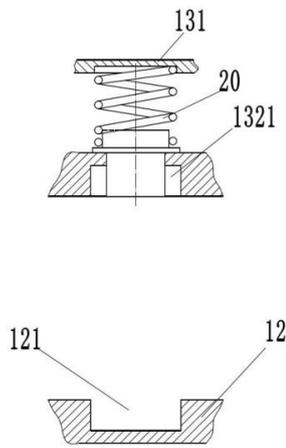


Fig. 3. Structure diagram of the lower plate and the upper composite plate of the accounting bill management device from partial cross-sectional view.

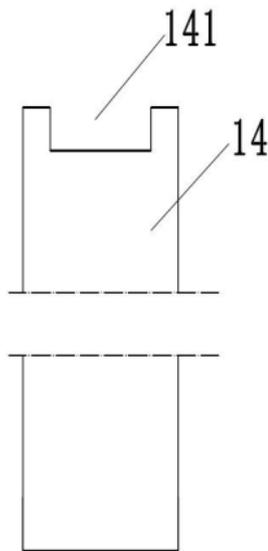


Fig. 4. Structure diagram of the partition plate of the accounting bill management device.

The marks in the drawings are: box body 10, base 11, lower plate 12, lower groove 121, upper composite plate 13, top plate 131, upper groove 1311, fixing plate 132, upper straight groove 1321, partition plate 14, notch 141, storage chamber 15. Spring 20, positioning pin 30, base shaft 31, upper shaft 32, lower shaft 33.

#### V. THE SPECIFIC IMPLEMENTATION MEHTOD OF THE ACCOUNTING BILL MANAGEMENT DEVICE

Then, in combination with the attached drawings in this design, this paper makes a clear and complete description of this technical design. It is obvious that the described below is only a part of the bill management device implementation examples, and not all the implementation steps and processes.

Referring to "Fig. 1" to "Fig. 4", an accounting bill management device as shown in Fig. 1 includes a box body 10, several partition plates 14 and several positioning pins 30,

among which the box body 10 includes a base 11, a lower plate 12, and a left board, a right board, a rear board and an upper composite plate 13; a cavity is formed among the left board, the right board, the rear board, the lower board 12 and the upper composite board 13; some partition plates 14 are inserted and connected between the lower board 12 and the upper composite plate 13; some partition plates 14 divided the cavity into several storage chambers 15; and the storage chambers 15 are arranged in plurality, so that the accounting personnel can easily sort and manage the bills; several positioning pins 30 are provided on the upper composite plates 13, and the notch 141 at the upper end of partition plates 14 are buckled on the positioning pin 30.

In this design, as shown in "Fig. 2", "Fig. 3", and "Fig. 4", the upper composite plate 13 includes a top plate 131 and a fixing plate 132; the positioning pin 30 is movably disposed on the fixing plate 132, and the upper end of the positioning pin 30 is provided with spring 20 that is between the top plate 131 and the fixing plate 132, the spring 20 is set correspondingly on the upper shaft 32 of the positioning pin 30; the upper end of the spring 20 abuts against the upper groove 1311 of the top plate 131, and the lower end of the spring 20 abuts against the base shaft 31 of the positioning pin 30; the lower shaft 33 of the positioning pin 30 is movably disposed on the fixing plate 132, and the lower shaft 33 extends to the upper straight groove 1321, and the lower end surface of the positioning pin 30 abuts against the bottom surface of the notch 141.

In the technical design, as shown in "Fig. 1", "Fig. 2" and "Fig. 3", the fixing plate 132 is provided with an upper straight groove 1321, the upper end of the partition plate 14 has a clearance fit with the upper straight groove 1321, and the lower plate 12 is provided with a lower groove 121; the lower end of the partition plate 14 has a clearance fit with the lower groove 121. When the partition plate 14 is mounted, the un-inserted end of the partition plate 14 is obliquely inserted into the lower groove 121 and the upper straight groove 1321, and the bottom surface of the notch 141 of the partition plate 14 is pressed upward against the pin 30, to make the pressed positioning pin 30 to upward compress the spring 20, leading to the spring 20 compressed and deformed, and then the partition plate 14 is pushed flat till the partition plate 14 tickles the rear board, and the deformed spring 20 will downward press against the positioning pin 30 to return to the original shape, then the lower end surface of the positioning pin 30 is tightly pressed against the bottom surface of the notch 141; when the partition plate 14 is removed, it can be pulled out, and the partition plate 14 can be installed and disassembled easily.

In the technical design, as shown in Fig. 1", "Fig. 2" and "Fig. 3", several lower grooves 121 are provided, and correspondingly several upper straight grooves 1321 are also provided, so that the partition plate 14 can be installed according to actual use requirements, and the cavity is divided into several storage chambers 15 of different sizes, to satisfy the storage requirements for different storage spaces of different bills, and make the storage space of the accounting bill management device more reasonable for use.

The above is only a preferred implementation example of the technical design, and is not the limit of the technical design; different modifications and changes can be made in the technical design by the technicians in the specialty, all modifications, equivalent replacement and improvements, etc. are included or belong to the expansion and extension only when they are based on the spirit and principles of this design.

## VI. CONCLUSION AND SUGGESTION

In conclusion, the management of corporate financial files is an important part of enterprise management construction, so with the increasing standardization of project management and increasing complication of enterprise cooperation, engineering units should strengthen the management of financial bills in engineering and the selection of bill devices, and fully recognize the significance of financial files management of engineering in the development of enterprises. At present, some Chinese enterprises are still operating accounting bills and the related data by manual processing in their financial department which easily results into bills confusion and hardly guarantee the quality of data storage. Therefore, the bill management device provided by the design can not only alleviate the confusion and reduce the workflow in the manual operation, but also facilitate the management and storage of the daily operating bills in the era of accounting informationization.

Financial file management must have a feasible and effective institutional guarantee, and must be provided with well-trained teams and specialized management devices. In order to strengthen financial bill management, engineering units must establish a sound financial bill management support system; enhance the awareness of enterprise managers for bill management, establish sound financial management rules and regulations, introduce financial information management system, optimize the bill management workflow, and improve the quality and ability of financial personnel. In short, the management of financial bills in an enterprise is inevitably a complicated system project, it requires the management and the executive of the enterprise make joint efforts to strictly control the bills management in each step, and adopt scientific and reasonable financial bill management devices and bills management system to ensure the legality and standardization of corporate financial management.

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