

Soft unripened cheeses: invent activity in Russia

Abstract

A retrospective statistical analysis of patent documents, started from the first publications of patent documents of Russia and the USSR (1924) and to 2014 was made. For information searching was used the international patent classification, subgroup A23C19/076. The formation of the information array for subsequent analysis was performed by public sources of patent information: official bulletins and databases of the Federal Institute of industrial property. It is established that the total number of initial claims in the subgroup soft unripened cheese, for the last 100years, represents a significant value for cheese making industry. For that period of time the most protected technical decisions are related to particular types of cheese, e.g. cottage or cream cheese.

Keywords: patent documents, soft unripened cheese, cottage cheese, cream cheese, retrospective, invention

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Introduction

The basis of this article was a retrospective statistical analysis of patent documents, started from the first publications of patent documents of Russia and the USSR (1924year). For the proper carrying out of information search it is necessary to determine the classification for searching subject. For this purpose we used the International Patent Classification (IPC). The IPC, established by the Strasbourg Agreement 1971, provides for a hierarchical system of language independent symbols for the classification of patents and utility models according to the different areas of technology to which they pertain. The IPC divides technology into eight sections with approximately 70000 subdivisions. Each subdivision has a symbol consisting of Arabic numerals and letters of the Latin alphabet. According to the IPC, soft cheeses classified as section A (human necessities), class 23 (foods or foodstuffs; their treatment, not covered by other classes), subclass C (dairy products, e.g. milk, butter, cheese; milk or cheese substitutes; making thereof), the group of 19 (cheese; cheese preparations; making thereof), subset 076 (soft unripened cheese, e.g. cottage or cream cheese). The formation of the information array for subsequent analysis was performed by public sources of patent information: official bulletins and databases of the Federal Institute of industrial property.

The obtained data was subjected to statistical analysis, and was primarily evaluated the dynamics of patenting. Under the dynamics of patenting is understood the reflected in the patent documents (patents for inventions and for utility models) changes in the inventive activity in the research field of technology for a certain period of time. In the study of the dynamics of patenting we determine which years have the most intense inventive activity for this type of technology, and what is (in quantitative terms) the state of patenting in the study area at the time of patent research.

Analysis of the dynamics of patenting has high practical significance.¹ Increased inventive activity in a certain area is testimony to the emergence of new problems or opportunities. As a rule, in such cases, the patent documents protect the original technical solution,

accompanied by a package of patents related to that technical solution, established in the initial development.²⁻⁵ According to the literature, the time of occurrence of such a package on average is 5-15years (depending on the technology field) ahead of the industrial output, which uses these technical solutions. To assess the dynamics of patenting formed us an array of patent documents has been subjected to statistical processing. With this purpose, estimates of their numbers were classified by year of registration of initial claims.

It was found that the analyzed subgroup before 1957 have not submitted a single application. Overall, the number of issued protected documents and published patent applications for the period 1924-1970years, in the subgroup of very small-five documents. In the next 20years (from 1971 to 1990years) there is almost a tenfold increase in inventive activity in the field of learning technology – search returned 47 documents. For the next 15years (from 1991 to 2007), there continues to be a high activity of the analyzed subgroup. For the period detected 55 documents. According to the summary data of the account of published patent documents (applications, patents and utility models, inventor's certificates) in the USSR and the Russian Federation was built total distribution schedule by year of registration of applications (Figure 1). Due to the fact that such documents in the first half of the twentieth century recorded very few (units), on the chart time interval begins with 1971.

Be aware that in the distribution of security documents by year of application not all documents are accounted for in the last years of searching, since it primarily depends on the duration of application processing. Also we should take into account that some decline in inventive activity in 90years may be associated with exit from the USSR a number of republics and transformation into an independent state with its own patent offices. These States geographically got firms and organizations that are significant in cheese making industry, e.g. Tbilisi Branch of All-Union Research Institute of Dairy Industry, Yerevan veterinary Institute, Georgian Food Industry Research Institute, Ukrainian Research Institute of Meat and Dairy industry, Kiev Technological Institute of Food Industry, Belarus Research and Technological Institute of Meat and Dairy Industry, etc.

It should be noted that the stable presence of inventive activity in the study area associated with the establishment of a favourable patent situation for new developments, as well as increasing commercial interest in quality products of the dairy industry, and as a result, the need for improved compositions and methods for obtaining new types of soft cheeses.

So, in total for the entire study period was discovered 154 primary applications for titles of protection.

It should be emphasized that the total number of initial claims in the subgroup soft unripe cheese, for the last almost 100 years, represents a

significant value for cheese making industry. If you search for the same period for the number of patent documents by other IPC subgroups within the group A23C (cheese; cheese preparations; making thereof), it remarkable fact will be obvious. The most protected for a specified period of time are technical decisions relating to particular types of soft unripe cheeses. The protection of new technical solutions in field soft unripe cheeses, cottage cheese, soft cheese is in second place among all technical decisions of the whole cheese making industry. This shows the relevance of new ideas for the production of soft cheeses with the active search by the inventors of ways to improve the technology and expand the range of these cheeses and indirectly confirms the demand for such products by consumers.

the number of publications

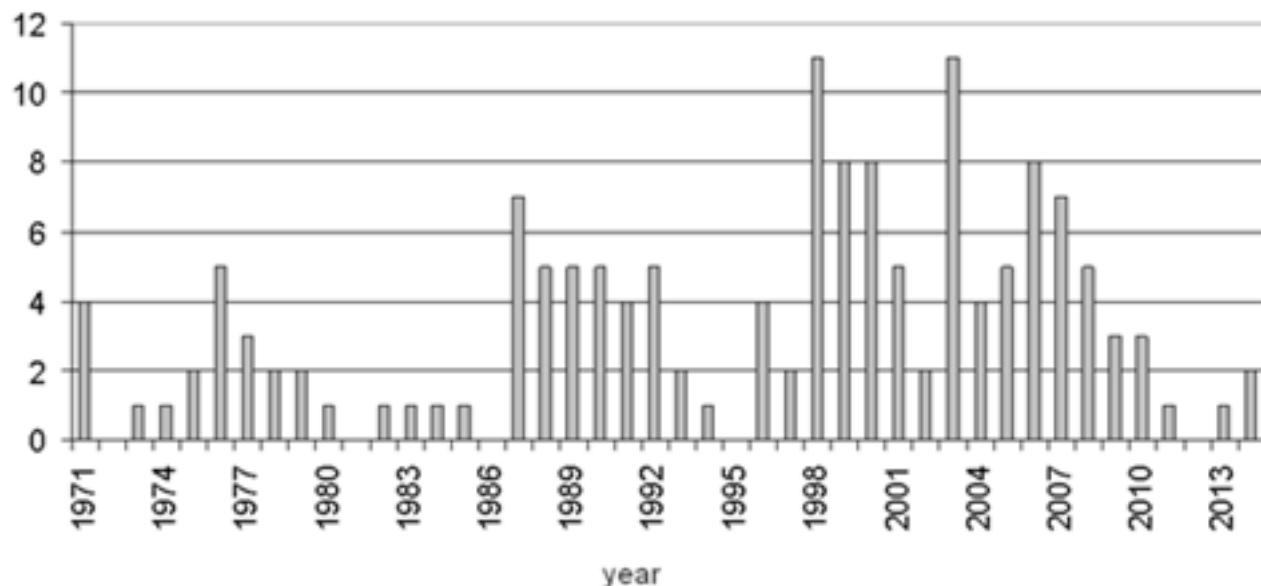


Figure 1 Graph of cumulative distribution of patent documents by year of applications registration under the IPC subgroup A23C19/076 for the 1971-2014.

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Conflict of interest

Author declares that there is no conflict of interest.

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