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Report

drawn up on behalf of the Committee on Energy, Research
and Technology

on encouraging European inventors

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Or. Fr.

At its sittings of 8 April 1981 and 15 November 1981 respectively, the European Parliament referred the motion for a resolution tabled by Mr Klepsch and others (Doc. 1-116/81) and the motion for a resolution tabled by Mrs Walz and others (Doc. 1-813/82) pursuant to Rule 47 of the Rules of Procedure to the Committee on Energy, Research and Technology as the committee responsible and to the Legal Affairs Committee for an opinion.

On 27 October 1981, the Committee on Energy, Research and Technology decided to draw up a report and appointed Mr C. Calvez rapporteur.

The committee considered the draft report at its meetings of 3 November 1982, 2 December 1982, 15 March 1983 and 2 February 1984.

At the last meeting, it unanimously adopted the motion for a resolution.

The following took part in the vote: Mr Gallagher, acting chairman; Mr Seligman, vice-chairman; Mr Calvez, rapporteur; Mr Flanagan, Mr Fuchs, Mr Linkohr, Mr Marchesin, Mr Markopoulos, Mr Moreland, Mrs Phlix, Mr Pintat, Mr Purvis, Mr Sälzer, Sir Peter Vanneck and Mrs Viehoff (deputizing for Mrs Lizin).

The opinion of the Legal Affairs Committee is attached.

This report was submitted on 27 February 1984.

The deadline for tabling amendments to this report is indicated in the draft agenda for the sitting at which it will be debated.

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Annex: Motion for a resolution (Doc. 1-116/81)
 Motion for a resolution (Doc. 1-813/82)

Opinion of the Legal Affairs Committee

The Committee on Energy, Research and Technology hereby submits to the European Parliament the following motion for a resolution, together with explanatory statement:

MOTION FOR A RESOLUTION

on encouraging European inventors

The European Parliament,

- having regard to the motion for a resolution tabled by Mr Klepsch and others pursuant to Rule 47 of the Rules of Procedure on encouraging European inventors (Doc. 1-116/81),
 - having regard to the motion for a resolution tabled by Mrs Walz and others pursuant to Rule 47 of the Rules of Procedure on a European Invention Centre in Ispra (Doc. 1-813/82),
 - having regard to the report by Mrs Theobald-Paoli (Doc. 1-1313/82),
 - having regard to the report of the Committee on Energy, Research and Technology and the opinion of the Legal Affairs Committee (Doc. 1-1484/83),
- A. having regard to the rapidity of scientific and technical change and the growing intensity of industrial competition,
 - B. aware of the capital importance of invention to the political and economic future of Europe,
 - C. whereas international competition already depends on grey matter and will do so increasingly in the future,
 - D. noting that every effort must be made to realize the full potential of European grey matter,
 - E. recognizing that invention is at the basis of all innovation and is thus a requirement for holding a strong industrial position,
 - F. convinced that independent inventors have a by no means negligible contribution to make to economic growth and that their unique position in society therefore deserves widespread recognition,

G. whereas inventors should be encouraged by means of special incentives,

1. Considers that it is important to improve the image of the inventor by education and information campaigns;

(a) educating young people by familiarizing them with the concept of invention and more specifically by introducing legal training at universities and by encouraging young people to enter competitions for inventors (e.g. the concours Lépine for young people aged between 18 and 21),

(b) campaigns to inform and alert public opinion, round tables, etc.;

2. Maintains that the necessary stimulus for invention depends on a number of back-up measures being taken such as:

- financial support for inventions, in the form of an invention premium, a special premium for taking out patents and aid for patent applications in other countries;

- consolidation of the scientific training of inventors by retraining courses, the organization of meetings, seminars, etc.;

- safeguards ensuring better legal protection for inventors and patents through a patent advisory service, thorough training in the field of industrial property, the creation of a European patents data bank and the establishment of a European arbitration institute;

3. Proposes that closer links should be forged between inventors and high-technology industries by means of a policy of financial incentives such as investment premiums, tax relief on expenditure on applied research programmes and measures to encourage the setting-up of risk capital enterprises;

4. Recommends the setting up of a 'European agency for industrial innovation' which would help to finance firms geared to innovation and which, in conjunction with specialist trade organizations in each of the Member States, could coordinate the approach to problems of trade outlets, patent policy and relations with the universities, public authorities, etc.;
5. Instructs its President to forward this resolution to the new Parliament, to the Commission and the Council of the European Communities and to the national parliaments.

B

EXPLANATORY STATEMENT

I. INTRODUCTION

1. Scientific and technical changes, tightening of links between research and technological change, growing intensity of competition by innovation are some of the main phenomena now making an impact on the industrialized world.

The European Community and its Member States, whose research and innovation potential are among the best in the world, have nevertheless succeeded in falling technologically behind other countries, especially the United States and Japan.

2. At a time when a grave threat is posed to European industry, a European industrial policy, the need for which is now greater than ever, would be inconceivable without a research policy which in turn must comprise a policy on inventions and innovations.

New inventions are a basic requirement for holding a strong industrial position; every effort must be made to take full advantage of European grey matter, and individual, independent inventors can often make a by no means negligible contribution. They should therefore be accorded their rightful place in the overall plan for the development of a supporting infrastructure for innovations and technology transfers (1983-1985).

3. In the first part of this document we shall be concerned with new inventions in relation to innovation; the second part deals with the inventor, his image and - a subject that is always of direct relevant to him - patents.

The final part concerns possible measures that might be taken to encourage independent inventors.

II. GENERAL CONSIDERATIONS

A. Inventions

4. Invention is the act of producing by one's own means an original object or process, or more generally, of producing or creating by using the imagination: to invent a machine, to invent an excuse.

The term also has a legal meaning: it means the conception of an idea and a means or instrument whereby a result is obtained by application of the idea. By extension, it applies more particularly to the act of inventing or creating a real product.

It is at once obvious that invention is linked to two factors: to the characteristic of originality of an act of the intellect, and to a possibility of realization, i.e. of action on the external world.

It thus depends initially on an individual act of rational use of the imagination, and then on its socialization, i.e. on its acceptance by the social group: an invention only exists when it has been distributed, even if only among a few specialists. In today's high-technology societies, the invention process brings into play not only the creative abilities of various researchers, but also the complex structure of industrial firms and their laboratories having at their disposal a huge complex of machinery which could well culminate, if not in the production of 'inventing machines', then in the elaboration of a methodology of discovery where data processing techniques would increasingly be used by teams of inventors.

5. At all events, in contemporary society invention is an arduous and multifarious process in which intellectual and material components must be combined in complex ways: a brilliant and simple idea such as the ballpoint pen had to pass from the stage from precision technology to mass production on a giant scale. There is little scope for the isolated inventor compared with the large firm's laboratory with its teams of research engineers, documentation departments, development specialists, drafters of patents and lawyers. It should therefore come as no surprise that for every 500 new ideas,

perhaps fifty actually reach the laboratory, five are patented, two are turned into industrial prototypes, and perhaps one or two are actually put on the market.

6. However, the time-limits available for completing this process are becoming shorter from one year to the next, and this seems to be one of the criteria of industrial development. 'We invent everything we can', the Du Pont de Nemours firm is quoted as saying, 'the problem is to invent it before it has gone out of date'. The time scale of fifty years in the age of hydraulic machinery was shortened to about twenty in the age of the phonograph and has fallen to only a few years in the age of the laser.
7. Invention therefore depends on the creativity of some individual or other. In theory, this could be anyone, although there are those who have a natural talent for invention. Some individuals have a greater creative ability than others, but no one lacks it altogether. Some inventors are highly productive, while others have perhaps only one invention to their credit, but one that has revolutionized established patterns.
8. One of the main problems affecting new inventions in industrialized society is the need to create a usable product, and more specifically, a product that exactly matches requirements. The problem is one of situational creativity in a given intellectual environment where research is oriented towards an objective that is, by definition, still unknown: if you knew what it was you would already have reached it.

This is the kind of difficulty encountered by industrial firms in their efforts to bring about technological development.

How is the inventor to be correctly oriented and still retain his creative powers?

B. Innovation in relation to invention

9. A new invention is thus a new technical idea that can lead to useful results. It is a starting point for innovation: the genesis of innovation consists of all the scientific and technical data that have concurred in its formation.

A thorough understanding of this preliminary phase, difficult though it is to observe in operation, is essential to any attempt to anticipate and direct the flow of technical change.

10. What might be called the 'heroic' phase of invention, the era of the inventor genius has given way to a collective research and development process on a massive scale which can be theorized under three closely inter-linked phases: fundamental research, which is theoretically 'neutral'; applied research oriented towards the solution of a technical problem; development, i.e. the phase of implementation (including prototype-construction and pilot installations). At this stage new problems of economic calculation are raised: what are the optimum amounts of finance that should be allocated to research? What are the most profitable projects? How should they be managed?
11. Innovation is thus a process which has its starting point in an idea and passes through the phases of research, development and experiment to the stage of marketing and distributing a new product or process. Research, development and demonstration are integral parts of the process to the extent that they lead to a process, a change in a product or an invention, and bear witness to its commercial viability.
12. However, research, development and demonstration do not contribute directly, from the economic point of view, to industrial development unless integrated with the industrial process and unless a new, improved product, or a new manufacturing process is successfully innovated.

13. It is for this reason that there is more to technological innovation than pure invention or the discovery of new knowledge. It implies a series of determining factors involving not only technology but also production and marketing, factors that are inseparable from the economic, political and social environment. At the same time, invention and innovation are closely bound up with each other, and the imposition of 'material' constraints on an area traditionally - and superficially - regarded as one where there has always been a free and objective flow of ideas, has profoundly changed the attitude of economic agents to the creation of new technologies. Independent inventors, academies, learned societies, etc. have been substantially displaced by those who can command large amounts of capital, basically the major capitalist enterprises and the state.

But what is the current position of the inventor and what are the existing rules and regulations?

III. THE SITUATION OF INVENTORS AND THEIR PROBLEMS

A. The image of the inventor

14. The position of inventors in society has been a difficult one in all ages and cultures. On the one hand they are considered as the representatives of the genius and creativity of a nation, and on the other they are located on the margins of society: they are non-conformists.

In a word, they are misunderstood. In this sense their situation is comparable to that of artists whom most people regard as self-indulgent individuals who cannot be taken seriously. Only rarely have inventors been recognized and encouraged by the state.

15. Encouragement of inventors - on a private scale - is rare, but has often had a decisive effect. Encouragement to inventors by undertakings and employers presupposes some interest in innovation and a desire to collaborate with the inventor, relatively rare occurrences. Where the law has taken an interest in inventors, usually with the aim of protecting the rights of individuals,

With a view to conferring social recognition on the inventor and securing him or her an income, it has usually been salaried inventors who have benefited from the measures taken.

The unflattering image of the inventor in society is the result of the caricatural and ridiculous manner in which inventors and their inventions are represented, especially small, independent inventors. This represents a devaluation - not to say deformation - of individuals and their work, the source of which is difficult to grasp or to individualize.

Clearly, large-scales inventors have a higher status and are more highly regarded, especially after their death, and when their work has brought tangible results (the steam engine, the motor-car, the aeroplane, the telephone, television). But the incongruity of discovery is compensated by the benefits of realization and distribution.

16. However, it has generally been considered that inventors should be encouraged by some privilege or other. Since financial reward for inventions is neither automatic nor in proportion to the value of the work done, it was decided that the inventors should be granted a temporary monopoly on the exploitation of their inventions which would both be automatic and in proportion to its value. This also protected the invention from competition. Recognition of the principle of privilege led directly to the institution of the patent.

B. Patents

17. A patent is a title to temporary ownership guaranteed by law. It serves a dual function: on the one hand it ensures publicity for an invention and consequently brings about a wide distribution of the advantages of the technical progress resulting from it, and on the other it reserves for the inventor the exclusive right to exploit the invention for a fixed period which varies from one country to another (20 years in France), after which the invention becomes public.

1. Conditions for patenting

18. Before it can be patented the invention must have industrial applications, it must be new and be the result of inventive activity, i.e. it must not be a technically obvious extension of existing technology. Some such definition is applicable in most countries that have adopted national legislation on patents and have acceded to an international scheme for the protection of industrial property.

Under some rules and regulations, in the Federal Republic of Germany for example, the supplementary concepts of 'high inventiveness' has been introduced as a means of designating a level of inventiveness that is not eligible for a patent but only for a certificate or utility model.

Conditions for the issue of a patent vary from one country to another and fall into three main categories,

- Issue on simple application subject only to formal inspection: this simple and rapid procedure amounts to no more than a form of registration; the industrial property rights conferred are weak, and in no circumstances can there be any guarantee as to the value of the patent; it also provides an extensive facility for foreign applications, and effectively penalizes national inventors.

- Issue after examination for patent involving a search for antecedents; this is a slow, ponderous and burdensome process, but one that guarantees the seriousness, if not the intrinsic value, of the patent once it has been issued. This system operates in the United States, Japan and the Federal Republic of Germany.

It secures a high level of protection for patents and can also be used to control the introduction of foreign techniques. It has undoubtedly been a significant factor in the industrial development of the countries that have adopted it.

- Issue after documentary opinion, requiring a search for antecedents, but without the power to reject other than for reasons of form. This is the compromise adopted by France since 1968. It represents some progress on the previous situation by discouraging registrations for inventions of doubtful value.

2. Current rules and regulations

19. The internationalization of trade in goods and technology and its constant development, the emergence of additional countries as industrial powers, and the problems of transfers of technology to developing countries have resulted, over the last decade or so, in profound changes in national and international rules and regulations governing industrial property.

(a) In the case of Europe, the Munich Convention on the award of European patents (signed on 5 October 1973) and hitherto ratified by 11 European countries (Belgium, Federal Republic of Germany, France, United Kingdom, Italy, Luxembourg, Netherlands, Austria, Liechtenstein, Sweden and Switzerland) institutes a single application and issue procedure for patents.

The European patent is a patent based on examination. The rights conferred by the European patent in each of the contracting Member States in respect of which it is issued are the same as those that would be conferred by a national patent issued in any such state and are therefore subject to its national legislation.

The approximate costs varies between 1,500 and 2,000 ECU depending on the number of countries in which the applicant wishes his invention to be protected. But the European patent can provide such protection in a large number of countries at one and the same time, and there is generally held to be a financial interest in at least three or four countries being designated by the applicant.

20. As an indispensable complement to the Munich Convention, a convention signed in Luxembourg in 1975, provides for an extension to the European patent in the form of a Community patent, also based on examination, application for which is restricted to Member States of the Community.

To eliminate distortions of competition within the Common Market and obstacles to the free movement of goods, the ten national patents as a whole are condensed into a single patent.

The effect of the Community patent will be the same in all the Member States: it constitutes a whole and can only be transferred or revoked as a whole. Whereas the European patent can in principle be overruled by the different national legislations, the Community patent goes beyond this by establishing a Community legal right and recognizing the authority of the European Court of Justice.

21. There is thus a difference between the institution of a joint procedure and the implementation of a single body of law. As a consequence, an application for a patent for one or more Member States would be tantamount to an application in respect of Ten.

The Luxembourg Convention also provides for the following:

- prohibition on walling-off the Common Market into national markets; products protected by the Community patent can move freely as soon as the holder of the patent has allowed them to be traded on Community territory.
- a compulsory licensing system allowing exclusive rights conferred by the award of a Community patent to be restricted where the activity concerned is prejudicial to the public interest.

22. This means that in principle infringements of national sovereignty cannot be invoked against the Munich Convention, although the power to grant monopoly rights on national territory is in fact conferred on an international authority.

23. The establishment of a European patent led to the institution of a European Patent Organization (EPO) in Munich. One of its bodies is the European Patent Office which issues patents protecting inventions in all countries acceding to the Convention, or simply in contracting countries chosen by the applicant. There are joint rules on the duration of the patent which is fixed at 20 years and criteria for revocation that may be invoked by the Convention.
24. All applications are considered both in terms of their conformity with the prescribed formalities and of the novelty of the product or process. This scrutiny is conducted in The Hague by the former international patents institute, which has been converted into a Directorate-General for Research and an Applicants Office within the European Patent Office.
25. The right conferred by a patent in respect of a process also applies to products obtained directly from this process.
26. The Convention came into force on 7 October 1977 and the first applications were received on 1 July 1978.
27. The first European patents were issued early in 1980. Since then the number of submissions has increased spectacularly. By the end of 1981 they had reached more than 1,500 per month, coming from small inventors and large undertakings alike. The European patent is nevertheless not cheap.
 - The setting up of Revocation Divisions and Revocation Boards, special bodies of the European Patents Office to be empowered under a uniform procedure applicable to all Community countries to rule in first and second instance respectively on the revocation of a European patent; their decisions will be subject to an appeals procedure before the European Court of Justice;
 - The option open to the Council of Ministers of the Community to request any State having acceded to the Convention of Munich and forming a customs union or free-trade zone with the Ten to open negotiations with the view to its accession to the Luxembourg Convention;

- In the case of inventors whose only concern is with their national market, national patents are to be maintained, but in conjunction with provisions limiting their impact on the smooth functioning of the Common Market to a minimum.

28. Although the instruments of ratification have still not been deposited, the Parliaments of the countries concerned, with the exception of the Netherlands, Denmark, Ireland and Greece, have already adopted the law on ratification, considering the Community patent as the natural second stage in the establishment of a genuine European law on industrial property in the spirit of the Rome Treaty.

(b) At international level efforts have been going on for a considerable time to approximate legislation on patents. The 1883 International Convention of Paris for example, which is the oldest international document on patents and has been amended a number of times, in particular at the 1967 Stockholm Conference, allows inventors in upwards of 90 signatory countries to lodge an application for a patent in any one of these countries, though without going so far as to admit the equivalence of different national patents.

29. Since 1976 in particular the Convention has been the subject of difficult review negotiations with the objective of adapting international rules on industrial property to the local needs of developing countries, especially those that have recently industrialized. These countries in fact hope that special conditions will be adopted in their exclusive interest enabling them, among other things to take out compulsory licences on a patent or to declare a patent expired when it can be considered as no longer being exploited locally after a certain time limit.

30. For their part the Soviet Union and most of the planned-economy countries seek recognition of the same international rights in respect of the 'author's certificate' as for the patent.

A second diplomatic conference in Nairobi (October 1981) failed to reach an agreement, and a new session was opened in Geneva on 7 October 1982.

3. Financial aspects

31. In the case of the independent inventor the cost of protection obviously constitutes the main obstacle to taking out a patent and can well be an impediment to innovation.
32. It is in fact becoming necessary to seek protection in a growing number of countries and in increasingly burdensome circumstances, since it is a matter not only of meeting the miscellaneous expenditure entailed in lodging an application for a patent (national taxes, external deposits, European patents) but also annual renewal fees to maintain the validity of patents, quite apart from any legal expenses in the event of litigation.

Moreover, recourse to bodies specializing in patents is usually essential for inventors, and procedural expenses and fees are high (5,000 francs in France).

33. The total cost of taking out a patent is therefore considerable. The burden on the small independent inventor is particularly heavy when it is considered that taking out a patent is only the beginning of his exploit.
34. The problems outlined above have a determining impact on the situation of inventors, especially independent inventors. Something should therefore be done to stimulate the inventive and creative spirit that can mean so much to Europe.

IV. MEASURES TO ENCOURAGE INVENTORS

A. Improving the image of the inventor

35. We have seen how outdated is the image of the inventor as a misunderstood and quite possibly disreputable character. What can be done to improve this image? Only by making the right impact on the education of young people and by correctly informing public opinion can these prejudices be gradually eliminated.

1. Educating young people

36. Here the main objective will be systematically to introduce the concept of invention into the school system, both in the likes of art courses and courses in physics and chemistry, stressing the capital importance of this concept for the future of human society. To stimulate and encourage creative judgment in a manner interesting to young people represents a vitally important potential for the future.

Similarly education by play (toys, board games, etc.) is a means of developing creativity in children and introducing them to the concept of inventiveness.

But action of this kind should also be extended to professional schools, and to technical colleges and universities with the introduction into the education system of a form of legal training (legislation on patents for invention and on inventors, knowledge of the texts of current international and European treaties on patents, etc.).

37. It is worth pointing out in connection with youth motivation and training that a competition for young inventors aged between 18 and 21 has just been announced in France. It goes without saying that this kind of initiative presupposes a certain awareness of the importance of new inventions on the part of the educational establishment.

2. Informing public opinion

38. The public in fact has very little awareness of the kind of people inventors really are, or of their problems or the type of things they invent. There is therefore considerable scope for campaigns to inform and alert the public on the subject of famous and anonymous inventors, discoveries, inventions and innovations. They could be launched both by associations of inventors and by other organizations or public services (ministeries of research and technology for example) with the cooperation of journalists and specialized consultants.

It would of course be necessary to use all the different media (TV, radio, press, posters, etc.). Public meetings, round tables and seminars could also be organized.

There would be room for campaigns of this sort at national level, but fruitful activity could also be organized at European level to involve both training and information.

B. Obtaining a socio-economic consensus

39. The problems are partly socio-cultural and partly psychological. New inventions, novelty, innovation in all fields are received with suspicion by the public and some industrialists, and are perceived by many European trade unions as a serious threat to employment and the quality of life, etc. These ideas and attitudes should be countered by a wide-ranging, comprehensive and pointed information programme, and by meetings and discussions with employers and trade unions alike.

Without a general socio-economic consensus on the need to encourage inventions and inventors, these measures will be of doubtful value.

C. Giving the right impetus to inventors

1. Motivating the inventor

40. Before inventors can be motivated it is necessary to know who they are. Yet it appears to be impossible to get any information from which to build a profile of the European inventor:
- numbers,
 - breakdown by various criteria (age, sex, locality),
 - status (wage earners, self-employed, etc.),
 - profession and sector of activity,
 - type of inventions (in isolation or linked to particular research work),
 - membership of associations.
41. At all events, however independent the inventor may be - and this conforms to the image that is often projected of the inventor as a kind of artist passionately committed to his art and concerned only with making an artistic breakthrough - the fact remains that he or she must submit to cultural, economic, social and moral constraints and should therefore be encouraged by measures in his or her favour.

For the independent inventor there exists in different countries, in France for example, public organisms set up to promote new inventions and innovations by giving advances (up to 50% of the programmes), to be reimbursed if the project is successful. This formula could readily be extended to all the Community countries where it is not yet available. But the problem for the independent inventor is to find the balance of finance, and consideration could be given to setting up a system comprising in particular:

- an invention premium covering the full cost of protection, including cover for consultants' charges in addition to other fees;
- a special premium for taking out a patent: this should not duplicate the invention premium but should be sufficient to cover all expenditure incurred in applying for a patent and renewing it for the first three years.
- aid for applications in other countries to encourage and facilitate registration of patents abroad, in particular in countries to which access is difficult, with the setting up of a premium linked to the issue of a patent in certain foreign countries within the European framework, e.g. the United States and Japan.

2. Scientific training

42. The type of training that the inventor has been through is interesting from various angles. The lone inventors are exposed to the prejudice that a gulf is generally believed to exist between their professional abilities and the object of their inventions. This means that industrial exploitation of a proposed invention may well fail to be taken with appropriate seriousness.
43. In general terms, independent inventors are not adequately informed about existing techniques, as regards either their publication or their actual industrial exploitation, especially in the research field. To give more weight to independent inventors and their inventions, it will be necessary:

- (a) to encourage inventors - through inventors' associations for example - to keep themselves up to date with developments in their field;
- (b) to provide inventors with a cultural background (literary, scientific, contacts with colleagues, etc.) that will act as an intellectual stimulus;
- (c) to establish in each country a kind of national library of scientific and technological knowledge as a repository of the results of research, whether originating in theoretical work, publications or current practical work, together with the field of application of exploitable patents.

3. Legal protection for inventors and protection of patents

44. The legal aspect of new inventions - essentially the question of patents - is of capital importance for the independent inventor as a means of ensuring a satisfactory transition from the stage of innovation to the stage of distribution. The lone inventor is not necessarily well informed as to pure legal questions, and specific problems of protecting his inventions. He needs advice and help with the procedure for submitting applications for patents and their financing.
45. In this context, the following measures could be envisaged:
- (a) the option in certain cases of limited consultation with experts on patents and the legal situation free of charge;
 - (b) low-cost assistance by consultants and lawyers, and wider access to information about the law;
 - (c) selective aid to certain inventions, in particular in the case of European applications and assistance with the cost of patent applications;
 - (d) creation of a patents application premium which would cover the cost of documentary research, in whole or in part;
 - (e) at all events, it will be necessary to give some training in the field of industrial property, by creating appropriate places in the syllabuses of engineering, technical and commercial schools, and in universities and research institutes, for education oriented not only on the technical and legal aspects of patents, but also on their use as economic and commercial instruments;

- (f) creation of a European patents data bank giving access, in the initial stage, to basic information on patents applied for in each country and at European level, and in the longer term constituting a repository of patents classified by technical sector; this would mean that brief information on patents applied for could be provided rapidly, as could the texts of patents existing in certain countries, along with general information on the state of technical development in the sector concerned;
- (g) the rights of inventors to be protected in the event of litigation by the establishment of a European arbitration institute.

D. Creating appropriate conditions for the innovation stage

46. Important though it is to implement measures to facilitate developments at the invention stage, the fact remains that the success of an invention ultimately depends on how the transition is made to the stage of product innovation. In other words, how can the inventor be put in a relatively strong position to negotiate the industrial exploitation of his or her idea?
47. Everything in fact depends on a prototype or an idea that will take months or years to show results, while consuming capital in the meantime. The prospect is not necessarily attractive to a potential investor whose only guarantee of success is a single individual and an extremely narrow market, where the slightest mistake can signal the end of the entire enterprise.
48. At the same time, in the 'economic warfare' now being waged, innovation is clearly a decisive weapon. Before the fruits of research can be converted into concrete products and transactions leading to a new invention, there must be a supporting national market on which to launch and develop new technologies before taking on the external competition.
A good knowledge of the market is thus absolutely essential.

The main performers in this innovation process are obviously the big national public and private undertakings that have at their disposal considerable resources in terms of manpower and grey matter, along with materials and investment, and who play an important part in stimulating industrial research, promoting new techniques and spreading extensive technological progress through the whole fabric of industry.

But the role of the small and medium-sized business should not be forgotten, for in certain areas the latter can play a key role in technological innovation. But lacking the financial resources of the big national firms,

the smaller firms should be protected by some form of insurance against the risk implicit in using machinery or products at an early stage in their industrial development. This would mean that whereas attitudes to patents for invention and their use are often extremely narrow in some countries, a policy of financial stimulus could well bring many businesses to review their positions.

49. It would be appropriate to consider in particular the above measures - or their possible improvement if they have already been implemented - having regard to the economic and political situation in each European Community country:
- (a) investment premiums for research and development, or arrangements for immediate depreciation against expenditure committed by undertakings, especially smaller firms, under research programmes;
 - (b) tax relief on expenditure on research programmes, whether sub-contracted by firms to specialized organizations, or carried out by the firms themselves; such a measure has just been introduced in France and provides for a tax rebate at 25% on the increase in volume terms in experimental research and development expenditure over the previous year. This covers: expenditure relating to research staff, prototype construction and pilot installations and operational expenditure, as well as the cost of taking out and renewing patents for invention;
 - (c) improvements in the conditions relating to the capital funding of undertakings, allowing them to take risks; measures to encourage the establishment of risk capital enterprises as a means of removing the typical financial obstacle to the survival of the smaller firm, while leaving it free to develop in its own way;
 - (d) improvements in the infrastructure necessary for transferring results to undertakings (e.g. innovation consultancies, documentation systems), especially in a transnational and European framework.
50. By adopting such measures, the undertaking would become more open to new ideas, new inventions and to the inventors themselves. This will greatly facilitate dialogue between the inventor and the innovator and help to lay down a serious basis for putting a new industrial process to profitable use.

The inventor could then take out a contract with the undertaking, acting in a consultant role, in order to transfer his know-how and guarantee continuity in the work undertaken by him. And if he has an entrepreneurial flair, the inventor can become an innovator himself and set up his own business with the help of various incentives.

At the very least, a study should be initiated to survey measures taken in Community countries to encourage innovation. Even more useful would be a recapitulatory study of the major innovations (products and processes) that have been carried out, the extent of their success or failure, and those responsible.

This would allow guidelines to be laid down on the best ways of making an innovation succeed.

51. We should like to conclude by taking up the suggestion made by the French economist, Michel Albert, in his latest book 'Le pari français' of setting up a European agency for industrial innovation. He suggests that such a body could be attached to the European Investment Bank. It would provide loans with interest-rate subsidies for investment projects for European undertakings geared to innovation, exports and vocational training (i.e. capable of creating new skills in liaison with universities, colleges of higher education, etc., and of forging closer ties within Europe). The projects should also have a European dimension and mobilize production capacities and finance from more than one country.

A premium fund of 100 million ECU annually should be sufficient to generate 1 - 2 thousand million ECU of supplementary investment. This would enable several hundred thousand new, highly-skilled jobs to be created over a period of a few years.

E. The stage of commercial distribution

52. This relates basically to a marketing of inventions and innovations (distribution, stocking, customers). This raises the problem of determining whether independent investors are in a position personally to secure national and European commercial exploitation of their product. Their participation in exhibitions, inventors' fairs or international showrooms, and in competitions (e.g. concours Lépine) could in fact be secured through inventors' associations organizing such events.

However it would be difficult for lone and independent inventors to take on the sales aspect. Here it might be possible to establish a specialized trade body in each country working in close collaboration with the European Agency for Innovation and taking responsibility for trade outlets and finance and relations with banks. This body would also be responsible for policy on patents and licences as well as for contacts with technological universities, public authorities and heads of undertakings.

53. All the measures proposed above will require investment. These are long term measures which must be located in a European context. However, it would be interesting and useful to have the opinion of independent inventors - through existing inventors' associations in each country - and to proceed to a joint review of the existing situation and relevant problems and proposals.

V. C O N C L U S I O N

54. Looking ahead to the year 2000, it is highly probable that a new industrial revolution will take place in the next 10 years.

Technological innovation, which can be expected not to slow down - will once again revolutionize production processes on finished products.

A good number of industrial products remain to be invented, and in a world where international competition can only be expected to accelerate, a capacity for invention and innovation will be essential in a Europe not lacking in the intellectual resources essential for this type of initiative.

No single aspect of the problem should be neglected, and the inventor, as the first link in the chain, plays a crucial role.

For these reasons the Committee on Energy and Research approves the motion for a resolution (Doc. 1-116/81) calling on the Commission to arrange a hearing for the inventors' associations of the Member States of the European Community

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MOTION FOR A RESOLUTION (Doc. 1-116/81)

tabled by Mr KLEPSCH, Mr ALBER and Mr JANSSEN VAN RAAJ

on behalf of the Group of the European People's Party (Christian-Democratic Group)
pursuant to Rule 25 of the Rules of the Procedure on encouraging European
inventors

The European Parliament,

- whereas the safeguarding and strengthening of economic prosperity continue to be linked to technological progress as regards the development of new methods of production and new final products,
 - having regard, in particular, to the fact that more conscious and active participation by individuals in the production process constitutes an indispensable means of promoting the humanization of work,
 - whereas the levels of progress already attained by science and technology make it increasingly difficult for the individual to have at his disposal the knowledge and equipment which is an essential basis for further innovation,
 - whereas, even when the individual is capable of reaching the innovation stage on the basis of his own scientific know-how and material resources, the structure of modern economic life makes it difficult for the innovation to be incorporated into the production process,
1. Calls upon the Commission to arrange a hearing for the inventors' associations of the Member States of the European Community, with a view to devising a set of measures designed, in particular to:
 - (a) promote the image of the inventor (information resources, education in schools, etc.);
 - (b) foster a social climate favourable to innovation (employers' associations, trade unions, etc.);
 - (c) provide the initial impetus required for stimulating invention, through the encouragement of inventors and incentives for invention - e.g. awards, training facilities, inventors' associations, organizations concerned with invention problems, legal protection of inventors, protection of patents, licences, etc.;
 - (d) provide the initial impetus required for stimulating innovation, as regards capital, credit facilities, tax concessions, market research, etc.;
 - (e) provide the initial impetus required for publicizing inventions (advertising, trade fairs and exhibitions, distribution, storage, etc.);
 2. Instructs its President to forward this resolution to the Commission and the Council of the European Communities.

MOTION FOR A RESOLUTION (Doc. 1-813/82)

tabled by Mrs WALZ, Mr ESTGEN, Mr VANDEWIELE, Mr KLEPSCH, Mr PEDINI,
Mr PROTOPAPADAKIS, Mrs MOREAU, Mr ALBER, Mr LIGIOS, Mr CROUX, Mr LANGES,
Mr HERMAN, Mr WAWRZIK, Mrs PHLIX, Mr SALZER, Mr K. FUCHS, Mr RINSCHÉ and Mr BROK
on behalf of the Group of the European People's Party (C-D Group)

pursuant to Rule 47 of the Rules of Procedure

on a European Invention Centre in Ispra

The European Parliament,

- A - having regard to the motion for a resolution by Mr KLEPSCH (Doc. 1-116/81),
 - B - having regard to the report by Mr CALVEZ on encouraging European inventors,
 - C - having regard to the communication from the Commission to the Council and proposal for a Council decision concerning a plan for the transnational development of the supporting infrastructure for innovation and technology transfer (1983-1985) (COM(82) 251 final),
 - D - having regard to the Commission document on stimulating the Community's scientific and technical potential (COM(82) 493 final),
 - E - having regard to the Japanese Institute for Invention and Innovation, founded in 1904, the successful scheme of tax incentives to promote the founding of innovative undertakings in the USA, the National Research Development Council (NRDC) in Great Britain, the National Office for the Promotion of Research (ANVAR) in France, the Scandinavian Institute for Creativity and Patents, the strongly supported inventors' movement in East Germany, the Patent Office for German Research run by the Fraunhofer Society, the invention centre of Lower Saxony and other centres in the Federal Republic of Germany,
 - F - having regard to the negative situation concerning patents in most of the Member States of the European Community (see the recent report by the Banque de France, 1981, on the high degree of dependence on technology),
 - G - having regard to the conceptual and fiscal barriers facing inventors which must be abolished in order to strengthen motivation,
1. Notes that the Research Centre in Ispra could take over the following basic duties at European level where they are not already covered in the individual Community countries:

- specialist advice for inventors who are interested in this service on prior consideration of their proposals to eliminate futile projects,
 - possibilities for the development of small prototype units following authorization by the relevant body within the invention centre,
 - provision of training courses in the fields of energy, research and technology,
 - assistance with obtaining patents and licences,
 - establishment of contacts with the appropriate sectors of European industry,
 - assistance with the provision of information on technical problems,
 - following the successful commercialization of an invention produced at the invention centre, transfer of a share of the profits to the invention centre;
2. Notes that a further task could be transnational cooperation between the invention centres and other services for the promotion of innovation and technology transfer;
 3. Sees the possibility of making appropriate provision for this European Invention Centre in the Commission's plan for the infrastructure for innovation;
 4. Instructs its President to forward this resolution to the Commission and Council of the European Communities.

OPINION OF THE LEGAL AFFAIRS COMMITTEE

Draftsman: Mr G. H. DONNEZ

On 15 July 1981, the Legal Affairs Committee appointed Mr Donnez draftsman.

It considered this draft opinion at its meeting of 30 and 31 March 1982 and adopted it unanimously.

Present: Mrs Veil, chairman; Mr Luster, Mr Turner and Mr Chambeiron, vice-chairmen; Mr Donnez, draftsman; Mrs Baduel Glorioso (deputizing for Mrs Cinciari Rodano), Mrs Boot, Mr Dalziel, Mr D'Angelosante, Mr Geurtsen, Mr Habsburg (deputizing for Mr Gontikas), Mr Janssen van Raay, Mrs Macciocchi, Mr Malangré, Mr Megahy, Mr Poniridis, Mr Prout, Mr Sieglerschmidt, Mr Tyrrell and Mrs Vayssade

I. INTRODUCTION

1. There is no doubt that encouragement of inventors falls within the sphere of the Communities' activities.

This opinion constitutes an initial review of the question; consequently, the Legal Affairs Committee has, for the time being, confined itself to the specific subject on which its opinion was requested.

The desire to achieve technical progress and to develop new methods of production at Community level is consistent with the aims of the Treaty and thereby contributes to the creation of a unified economic area.

II. THE LEGAL BASIS

2. The preamble of the EEC Treaty declares a determination 'to ensure (the) economic and social progress ... by common action', and this clearly includes European inventors.

Article 2 of the Treaty deals, to a certain extent, with the subject of inventors in so far as it states that the Community shall have as its task to promote a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living - aims which imply that strong emphasis should be placed on the policy to encourage innovation.

3. Consequently, freedom of movement for workers, the right of establishment, services and, to a certain extent, capital are directly affected by the development of the activities of inventors whose work benefits from the various freedoms laid down in the Treaty. Moreover, the protection of inventions by the system of patents and licences has a bearing on the operation of the common market.

4. The creation of a unified economic area undoubtedly requires close monitoring of the development of the uniform patent law by the national courts of the Member States as this is vital to small companies' invention and individual inventors, as well as encouraging the movement towards the Community Patent system, although the latter will benefit primarily the larger companies.

5. We recommend the encouragement of facilities for small inventors to exhibit their new proposals in international trade fairs; this has a legal aspect because the uniform patent law of the Member States provides protection for a limited time for exhibitors of new inventions.

III. CONCLUSIONS

6. The Legal Affairs Committee considers that it is consistent with the aims of the Treaty for the Commission of the European Communities to organize a hearing of associations of inventors in the Member States of the Community. It delivers a favourable opinion on this motion for a resolution and draws the attention of the Committee on Energy and Research to the following points:

- (a) In the context of a Community research policy, legal (Articles 100 and 235) and budgetary instruments can make a useful contribution to the encouragement of inventors at Community level;
- (b) The common policies laid down in the EEC Treaty are also directly affected by the encouragement of inventors (agriculture, transport, social policy, etc.) as are the various freedoms established by the Treaty (persons, services, capital and goods).

