

COMMISSIONER'S DECISION

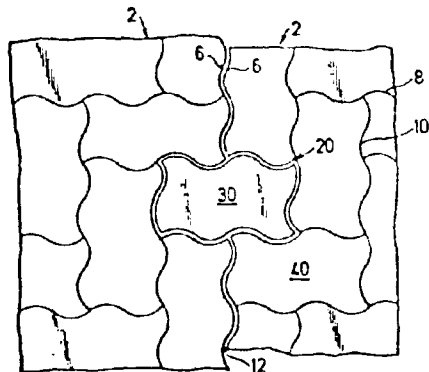
Obviousness: Composite Paving Blocks

The invention is a prefabricated pavement stone made with predetermined patterned rupture lines, along which the block breaks when put under stress, said rupture lines being so arranged that the fragments interlock to retain the basic shape of the pavement. Some of the more restricted claims were allowed.

Final Action: Reversed (in part)

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated September 22, 1976, on application 179,516 (Class 94-6). The application was filed on August 23, 1973, in the name of Reinhard Jordan et al, and is entitled "Composite Paving Structures And Units And Processes for Making Them." The Patent Appeal Board conducted a Hearing on July 12, 1978, at which Mr. Brian Long represented the applicant. Also in attendance was Mr. Fritz von Langsdorff, one of the inventors.

The application is directed to composite paving structures, relating in particular to a group of units which form a pattern, and are called "laying units." These units are placed on a prepared substructure. The units are made from a group of elements adjoining at their respective peripheries and are held together by predetermined rupture zones. Figure 8 shown below, is illustrative of that invention.



In the Final Action the examiner refused all of the claims in view of the following patents:

Austrian Patents

219,641	July 15, 1961	Kellner & Co.
208,915	Oct. 15, 1959	Plotner

French Patent

1,228,841	Sept. 2, 1960	Kellner & Co.
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British Patents

1,197,301	July 1, 1970	Meijden
1,156,654	July 2, 1969	Shute et al

United States Patents

3,340,660	Sept. 12, 1967	Acari
3,491,266	Feb. 10, 1970	Baumberger
3,304,673	Feb. 21, 1967	Ramonedá

Swiss Patent

446,416	Mar. 15, 1968	Frei
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Canadian Patent

89,407	Oct. 4, 1964	Porten
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The Austrian patent to Kellner shows a paving stone structure wherein offset stones are provided to connect precast sections. There is however, no teaching that the units are laid with the recesses facing each other. Figure 1 below shows that arrangement:

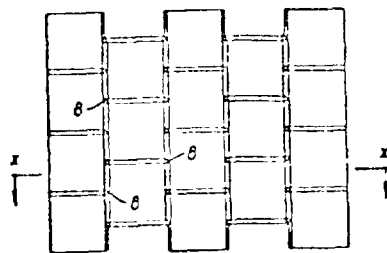


Figure 3 of that patent, shown below, also shows lines of weakness forming a unified pattern in the precast paving stone structure:

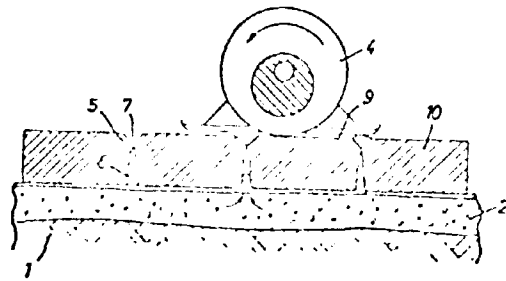
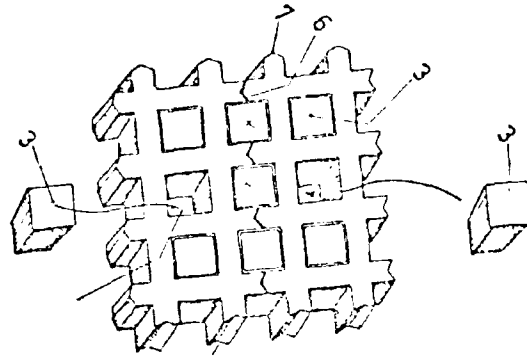


Figure 2 of Frei, below, shows the use of linking stones in precast concrete:



Patterned grooves are shown in a precast unit in the French patent to Kellner and the patents to Acari, Ramoneda and Plotner.

Baumberger and Meijden both show interlocking type blocks. The patent to Porten shows a hand-hold for a concrete block.

In the Final Action the examiner had, inter alia, this to say:

...

In reply to this separate linking stones are known in the precast concrete art and shown in the patents to Frei, Ramoneda and Shute et al and are considered common general knowledge in the art. The structure shown in Fig. 1 of Austrian patent 219,641 must be continuously offset to be interdigitated, having three projections and two recesses at each end. The use of linking stones in a structure such as that of Austrian patent 219,641 is not considered inventive in view of the patent to Frei. The patent to Porten shows a hand hold for a concrete block. To apply these teachings to a paving stone does not amount to invention.

Lines of weakness formed in the precast paving stone structure form a unified pattern in the Austrian patent to Kellner & Co. The formation of these lines of weakness, together with a detailed discussion of utility is found in the French patent to Kellner & Co.

The pattern of linking stones, whether interlocking or not is not mentioned in applicant's claim 1 and furthermore is not considered inventive in view of common knowledge in the art. No unobvious result occurs from using interlocking stones in view of the patent to Meijden which shows such an interlocking pattern. Applicant states in his disclosure that the pattern of the individual stones is known.

Patterned grooves are shown in a precast unit in the French patent to Kellner & Co. and in the patents to Acari, Ramoneda and Plotner.

Interlocking blocks are shown in the patents to Baumberger and Meijden.

The teachings concerning precast units with preformed lines of weakness are clear. To apply these teachings to an interlocking stone such as that of the patent to Meijden does not amount to invention.

...

Just prior to the Hearing the applicant submitted a new set of 29 claims and had this to say (in part):

...

In addition, the statement of invention bridging pages 1 and 2 is hereby amended to correspond to the new claim 1.

To facilitate examination of the new claims, it is firstly pointed out that the new claim 1 submitted herewith, which is the broadest claim in the application, is narrower in scope than the broadest claim which was in the application on issuance of the Final Action, and consequently no additional searching by the Examiner should be required as a result of this amendment.

New claim 1 has been amended to avoid reciting that the recesses in the lateral sides of "mirror images of each other" since such wording clearly excludes disclosed embodiments of the invention which it is clearly the applicant's wish to protect.

Further, the recitation of the rupture zones as being so disposed that individual stones form a herringbone pattern wherein a shorter side of each stones lies adjacent a longer side of another of the individual stone has been removed from claim 1 and is now included as claim 2.

New claims 12 and 27 have been rewritten in order to more clearly define the embodiments of the invention such as, for example, that illustrated in Figure 7 and 8.

The purpose of this amendment is to more clearly define the scope of the invention for which the applicants seek protection.

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The consideration before the Board is whether or not the applicant has made a patentable advance in the art.

At the Hearing Mr. Long argued strongly that the claims presented on July 7, 1978 were indeed directed to patentable subject matter. Mr. von Langsdorff demonstrated some features of his invention with some interesting models. He also discussed at some length the problem they faced in laying the "block clusters," and the solution or an improved solution to such problem. We are not convinced however, that the solution has anything to do with the matter defined in the present claims.

It is interesting to note that "corresponding patents to the present application" have issued in a number of countries, e.g. Germany, Switzerland, Britain, United States, Sweden and Australia.

The problem facing the applicant was that large format concrete slabs tend to break in unforeseeable places as a result of changes of temperature or movement of the subsoil. The applicant then developed rupture lines in a network of cross-sectional lines of weakenings extending through each laying unit in a regular and controlled pattern. The result of this is that the units break in a predetermined manner. When the breakage of the rupture lines has occurred the finished surface is comparable to one that has been laid with individual stones.

The Austrian Keller patent, supra, shows the use of laying units formed with rupture zones. This basic concept per se is known and the applicant agrees with this.

Mr. Long argued at the Hearing that none of the art cited shows the combination of his laying unit with the rupture zones and the recesses at the circumferences. The recesses serve a two-fold function, i.e. to effect the laying of the unit by accommodating a gripper, and to receive a linking stone to complete the assembly.

It is clear that the Irei patent, see Figure 2, supra, discloses the use of recesses in the circumference of the unit. It appears however, that these are not used for purposes of installation, but they are used to accommodate the linking or finishing stone.

The patent to Romoneda shows the use of a linking brick in wall structures and this must be considered at least in an allied art assuming arguendo that it may be considered a non-analogous art.

We have carefully read the disclosure and studied the prosecution of this application. We also studied the affidavit which was submitted on July 7, 1978, and signed by Mr. von Langsdorff. We note that patents were cited which originated in six different countries. We find that the applicant has designed his block to overcome a problem in the installation of these large units. The problem was one of placing the large units accurately in contacting relationship to one another.

One feature which was discussed at the Hearing was a lay-out called the "herring bone pattern." In this pattern the gaps between the stones are discontinuous. It was stated that this pattern, resulting in interlocking stones, was very useful in practice because "it provides a much stronger and more rigid paving." It was particularly emphasised that "the herringbone pattern not only extends over the individual slabs but when the linking stones have been fitted it also extends completely over the gap between individual slabs; the result is a completely uniform continuous arrangement of the herringbone. There is no interruption of the herringbone at the gap between the two parts. So the original, having this feature of the recess provided in the slabs, enables the herringbone feature to be adapted." The "interlocking" feature of this herringbone pattern was also stressed because of the added "strength" it provides, e.g. it is useful for the construction of "tank areas." The tank areas refer to war tank training grounds. This feature was also indicated as the "success in the market."

The applicant argued, and it was brought out at the Hearing, that commercial success or the potential commercial success is significant with licence agreements being taken out "all around the world."

When considering commercial success however, it is trite law that it is the precise form of the invention claimed in the application or patent which is to be considered in gauging the effect of commercial success. (vide. Weldey and Whites Manfr. Co. Ltd. v H. Freeman and Letruk Ltd. (1951) 48 R.P.C. 405 at 414, and Omark Ind. (1960) v Gauger Saw Chain Co. (1964 27 Fox P.C. 1 at 22)).

In the circumstances we are satisfied that an invention has been described in the disclosure and illustrated in the drawings. There is, in our view, sufficient ingenuity that the Commissioner ought not to refuse a patent (cf Crosley Radio Corporation v. Canadian General Electric (1936) S.C.R. 551 at 560). The specific question is then, what are the limits of the scope of monopoly of the invention which should be defined in the claims? In view of the above points discussed we are satisfied that the advance in the art is, inter alia, centered around the improved results obtained from having the rupture zones disposed in the units to form a herringbone pattern resulting in all the stones when in use, being in an interlocking mode.

We turn to the claims. Claims 1 and 2 read:

1. A composite paving for traffic areas or other graded or inclined ground surfaces, comprising laying units and linking stones, each said laying unit being a relatively large unitary slab transportable as a unit by being gripped mechanically at opposite lateral sides thereof, said slab having preformed therein elongated rupture zones sub-dividing it into adjoined stones and along which after being laid it is breakable under stress into laterally interengaged individual stones, each said laying unit having in opposed lateral sides each extending the full height of the respective laying unit and substantially corresponding in facial shape and size to one said individual stone or a fraction or multiple thereof, each said unit when laid having at least one lateral side thereof lying at and along, and having therein at least one said recess which confronts a respective recess in, a lateral side of at least one other said unit, each set of said confronting recesses being filled by at least one said linking stone inserted thereinto and which interconnects the respective juxtaposed laying units by extending across the gap

between them, each said linking stone having the same height as the laying unit and having substantially the facial shape and size of one said individual stone or of a fraction or multiple thereof.

2. A composite paving as claimed in claim 1, wherein said rupture zones are so disposed that said individual stones form a herringbone pattern wherein a shorter side of each stone lies adjacent part of a longer side of another of said individual stones.

Claim 1 is clearly too broad in scope in defining what, in our view, is the patentable advance or invention described, supra. This claim should be refused, because there is no mention of the interlocking herringbone structure in the combination.

Claim 2 defines the herringbone structure in combination, but requires one limitation to more distinctly define the invention, i.e. line 2 should be amended to read "... said individual 'interlocking' stones...." This claim, in our view, would then be in allowable form.

Claim 16 reads:

A composite paving as claimed in claim 15, wherein said rupture zones are so disposed that said individual stones form a herringbone pattern wherein a shorter side of each stone lies adjacent part of a longer side of another of said individual stones.

This claim is also found allowable when an amendment is made along the lines suggested for claim 2.

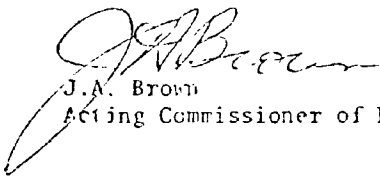
None of the remaining claims define what, in our view, is the invention described over the references cited.

To summarize, the claims refused in the Final Action were cancelled prior to the Hearing and form no part of this decision. Claims 2 and 16 of the present claims, when amended as suggested would, in our view, be allowable. Claims 1, 3 to 15 and 17 to 29 are, in our view, too broad in scope. We recommend that these claims be refused. Any claim or claims made dependent on claims 2 or 16 would also be given favourable consideration.



J.F. Hughes
Assistant Chairman
Patent Appeal Board, Canada

I have reviewed the prosecution of this application and agree with the recommendation of the Patent Appeal Board. Accordingly I will accept claims 2 and 16 when amended as suggested by the Board and any appropriate dependent claim or claims, but I refuse to grant a patent on claims 1, 3 to 15 and 17 to 29. The applicant has six months within which to submit the appropriate amendment, or to appeal my decision under the provisions of Section 44 of the Patent Act.



J.A. Brown
Acting Commissioner of Patents

Dated at Hull, Quebec

this 28th. day of July, 1978

Agent for Applicant

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