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Mr. Minister President

Winfried Kretschmann

c/o GRÜNE parliamentary group in the

State Parliament of Baden-Württemberg

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Contribution to climate protection and sustainability

Presentation of my patent "self-adjusting sprocket" EP 2 594 824
Sale of the patent to industry

Dear Prime Minister Kretschmann,

while looking at your website I discovered, among other things, the saying:

“I want to bring all my experience, my passion and my political clout to bear so that we can make consistent progress on climate protection”.

and that tells me that it is high time for me to draw your attention to my patent **"self-adjusting sprocket" EP 2 594 824.**

Although I am not a Swabian-Badish tinkerer, I began to work intensively in my spare time on the problem of reducing wear on chains back in the early 1990s

and in 1993, as an employee of PWH - later Thyssen-Krupp - I applied for a patent for a "self-adjusting sprocket" through my employer at the time. The patent was granted and in 1996 Thyssen-Krupp transferred the patent rights to me.

In the time that followed, I "**ran my feet off**", so to speak, in order to make the patent of the time palatable to the chain manufacturers.

My idea of the "self-adjusting sprocket" was also immediately accepted by various large German manufacturers and they wanted to produce the sprocket.

However, as soon as it was noticed that the use of this hitherto completely unknown system extended the life of the chains by a **MUCH** greater amount, the idea of marketing the system was quickly abandoned.

At Ketten Wulf, a **2-year trial** was run on a **chain simulator** and after these two years, a **30% reduction in wear was** already observed. There is an investigation report on this. The trial was then immediately discontinued and the company "cheated" its way out of the license agreement.

The **company KETTEN RUD**, located in your **state of Baden-Wuerttemberg**, wanted to conclude a **license agreement** with me **MULTIPLE times**, but in each case after long time-consuming phases it did not come about. You will find more details in my book:

" Book: "Erfinder mit langem Atem" as PDF-file (German)

" Book: "Inventor with long breath" as PDF-file (English)

On YouTube, I posted a movie about this "self-adjusting sprocket" a few months ago:

" Movies on YouTube in different languages

NO CHAIN WITHOUT SPROCKET

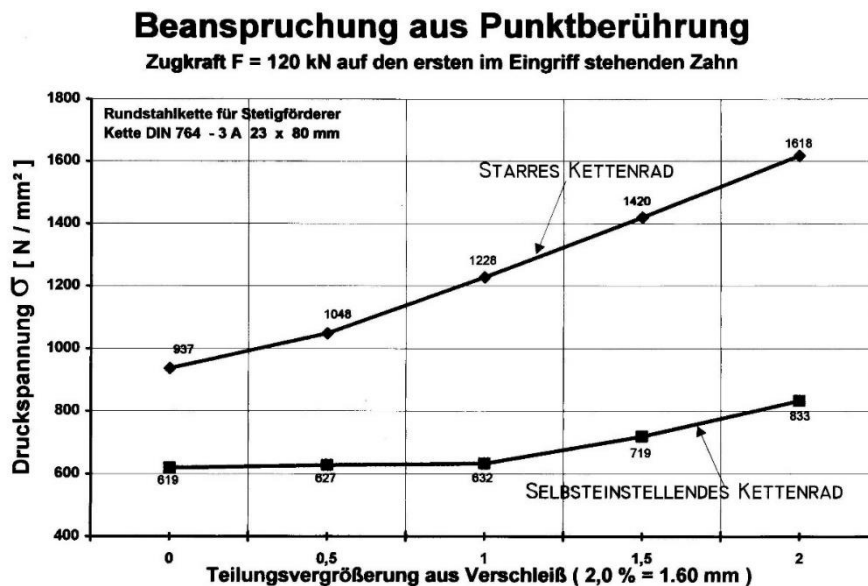
The peculiarity of this sprocket is that on this sprocket **ALL the** teeth are involved in **the transmission of power to the chain**, thus distributing the load on the individual teeth and the chain.

The reason is that the teeth of this sprocket are movable, whereas in a conventional sprocket the teeth are rigid and after a certain time due to this wear only the first tooth carries the entire load of the chain.



This means that **all the teeth of the sprocket are equally loaded by** the self-adjusting sprocket I invented. This leads to the fact that the chain, which is manufactured depending upon size with a **very high financial and labor expenditure**, whereby naturally **high energy costs result**, substantially longer lasts, since it is not so strongly loaded by the movable teeth of the chain wheel.

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Karl Herkenrath
Diagramm.xls

In 2001, this patent was installed in a portal scraper in the now closed power plant in Enddorf in Saarland, which - believe it or not - is still in operation, as I checked again a few days ago. The power plant itself has been closed for some time; apparently only the portal scraper is still working and in this portal scraper, **one and the same chain of the company Ketten Wulf with two of the**

self-adjusting sprockets developed by me has been working for almost 21 years.

In the year I filed a new and again improved **2011** patent application at the European Patent Office and this **new valid patent with the No. EP 2 594 824 was granted on January 7, 2015** and initially had protection rights in 10 European countries.

After the patent was granted, I offered the sale of the patent in the first step to all chain manufacturers, some of whom had known me for years, but, as you can imagine, the **chain manufacturers, who usually** also build sprockets, are of **course not interested in reducing wear**, because they want to sell chains and of course they are not supposed to last 20 years.

This attitude is in itself understandable from a manufacturer's point of view, but I think it is simply **no longer in keeping with the times**. As the new traffic light coalition says: **No more of the same. I can't wait to hear that!**

In the following period, I gradually dropped the property rights in 9 European countries, since it was my ambition from the very beginning to achieve an immense reduction in wear and tear here and to protect the environment as a result, because my patent means that the chains not only last much longer, but a lot of energy is also saved for their production.

This patent is therefore only protected in Germany.

This chain wheel, which was only installed in this portal scraper in Ensdorf, can be **used** in practically **all plants operated with chains**, as can be seen in the film.

It can be used, as it were, in everything from relatively **small chain saws and escalators** to **large earth-moving and open-cast mining machines** and, of course, in **wind turbines**.

The use of this self-adjusting sprocket brings not only a great cost saving for the operators of corresponding plants, but what becomes more important every day,

it would make a significant contribution to conserving resources.

If you are interested in further information, I am at your disposal at any time. I will post this letter as an "open letter", so to speak, in another film on YouTube, as there are certainly many companies in Germany that are interested in reducing their costs and want to make a contribution to climate protection.

I will also write to other ministers in the new traffic light coalition and the opposition.

I would be happy to present the patent to you in Stuttgart. On this occasion, you can then also take a look at the **investigation report of the company Ketten Wulf on the 2-year trial** at that time. This report was originally published on my homepage. After the company Ketten Wulf sued me for injunction, because they did not want this investigation report to be accessible to the public, I had to remove it from the homepage.

I would be very pleased to hear from you. For today I remain

With kind regards

Karl Herkenrath

Attachment: 4 pages of possible applications of the "self-adjusting sprocket wheel"