

Karl Herkenrath

In der Hardt 23

56746 Kempenich, the 4. February 2022

Tel. 0049 2655 942880 and 942889

E-mail: info@selbsteinstellendes-kettenrad.com

www.selbsteinstellendes-kettenrad.com

Mr. Minister President

Hendrik Wüst

**c/o State Chancellery of the State of
North Rhine-Westphalia**

Horionplatz 1

40213 Düsseldorf

in advance by E-mail: presse@stk.nrw.de

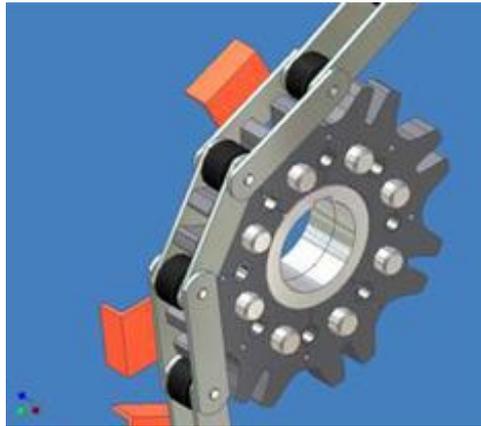
Suggestion regarding climate protection and sustainability

**Use of a patent developed by me "self-adjusting sprocket" EP 2 594 824Sale
of the patent to the industry**

Dear Prime Minister Wüst,

today I allow myself once, to draw your attention to an invention of mine which has actually been known to German chain manufacturers and also to many operators for years, but since the problems concerning climate protection are becoming more and more urgent - just think of the flood disaster in the Ahr valley and in North Rhine-Westphalia only a few months ago, but also in many other regions in Germany and worldwide - I think that my patent **could at least make a small contribution to climate protection and sustainability.**

I am the owner of the patent EP 2 594 824 "self-adjusting sprocket", filed by me in 2011, patent granted in 2015, which is still patent protected in Germany for almost 10 years.



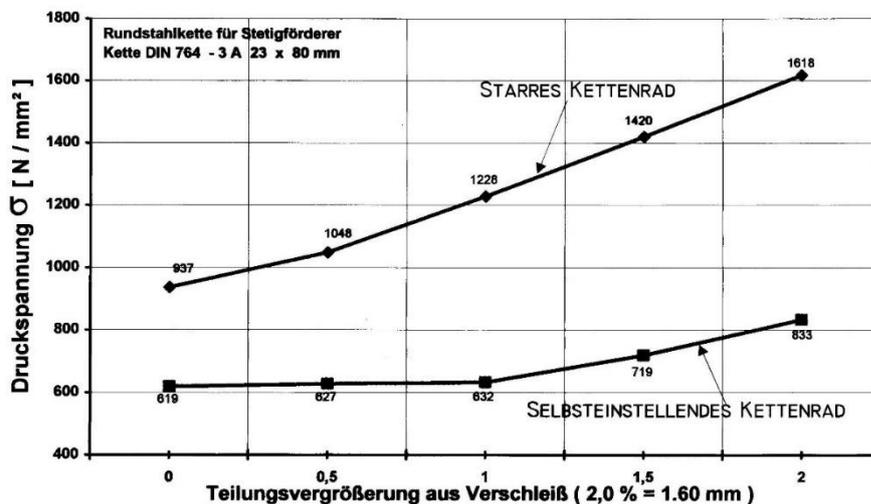
Originally, the patent had protection rights in 10 European countries. Since it was my goal from the beginning that as many operators as possible would benefit from this **cost-saving patent**, I gradually dropped nine of these property rights and publicized the special features of the patent worldwide.

The special feature of the "self-adjusting sprocket" developed by me is that on this **sprocket ALL the teeth are involved in the transmission of power to the chain and** thus the load is distributed to the individual teeth and the chain.

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Beanspruchung aus Punktberührung

Zugkraft $F = 120 \text{ kN}$ auf den ersten im Eingriff stehenden Zahn



Karl Herkenrath
Diagramm.ds

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, which leads to the fact that the chain must be replaced after a few years.

After all, in this day and age it has become enormously important to **contribute to the environment and climate protection**. In addition, all operators of plants operated with conveyor chains, drive chains, etc. would see a considerable **cost saving**, as **EVERY CHAIN WOULD LAST SIGNIFICANTLY LONGER than is currently the case**.

When replacing a chain, the two sprockets are also replaced. Especially the cost of a new chain is very high depending on the chain size, the equipment can not be operated for several days, which leads to significant costs.

I have been dealing with the problem of wear reduction of chains for more than 30 years and have already applied for a first patent "self-adjusting sprocket" in 1993 via my employer at that time. In 1996, the patent rights were transferred to me and since then I have "run my feet off" to have this patent built and distributed by a chain manufacturer.

The interest from the German chain industry was very great. The company RUD from Aalen wanted to conclude a license agreement with me several times, but then backed out every time, because a chain manufacturer naturally wants to produce and sell chains first and for commercial reasons, of course, no one is interested in a sprocket, through the use of which a chain runs several years longer than with a conventional sprocket.

A large chain manufacturer is **located in your state**, namely the **company Ketten Wulf from Eslohe**, which **tested my then patent over a period of 2 years on a chain simulator together with a conventional sprocket**. Already after **these 2 years, a wear reduction of 30%** was found. **As a result, the test was immediately discontinued**. There is also a test report on this, but Ketten Wulf does not want it to be published. This is subject to the so-called "small coin".

A license agreement was also concluded between Ketten Wulf and me at that time, and Ketten Wulf wanted to build and sell the "self-adjusting sprocket" according to the patent at that time. There is an interesting publication about this, which has been on my homepage for years. After the two-year trial, of course, they "cheated" their way out of this license agreement.

Before this test took place on the chain simulator, two sprockets were manufactured by the Koch company in Wadgassen for the Ensdorf power plant in Saarland according to my patent at that time and installed in a new portal scraper - that was in 2001 and - you wouldn't believe it - this portal scraper is obviously still in operation today, and according to my research with **one and the same chain from the Ketten Wulf company** as well as my **two sprockets, without the chain or the sprockets having to be replaced even once in all that time.**

The Ensdorf power plant was shut down some time ago, but the portal scraper is probably still in use, as I checked again a few days ago.



In 2016 I wrote a book about the history of the "self-adjusting sprocket", which also includes my sometimes unbelievable experiences with the German chain industry, see the two PDF files below:

» [Buch: "Erfinder mit langem Atem" als PDF-Datei \(Deutsch\)](#)

» [Book: "Inventor with long breath" as PDF-file \(English\)](#)

Also on YouTube, a few months ago, I posted a movie about this "self-adjusting sprocket" that you can watch in ten languages:

» [Filme bei YouTube in verschiedenen Sprachen](#)

NO CHAIN WITHOUT SPROCKET

This "self-adjusting sprocket" can be used in **all conceivable systems**, from relatively small chain saws to escalators to huge open-cast mining machines, but also, for example, in **wind turbines**.

A few examples of the applications
of the "self-regulating sprocket":



A look at the daily statistics on my website shows me that there is great interest worldwide in this "self-adjusting sprocket", which can also be built and used outside Germany without any problems.

This patent is now only protected in Germany.

It is a shame that this patent can be used all over the world, while the German chain industry continues to bury its head in the sand according to the motto: We continue to go our way, as was confirmed to me again some time ago at the Ketten RUD company.

The patent "self-adjusting sprocket" I developed could be built in Germany almost immediately; the production costs would not be higher than the previous costs for the production of a sprocket.

I'm curious to see whether the new traffic light coalition will really bring about a turnaround in climate protection. You are currently the CDU's first point of

contact in North Rhine-Westphalia, so I wanted to introduce the "self-adjusting sprocket" to you, too, especially since the Ketten Wulf company is located in your state.

I would also be happy to present the patent in person in Düsseldorf. On this occasion, you can also take a look at the **investigation report of the company Ketten Wulf at that time**. Unfortunately, I am not allowed to publish this report after the company Ketten Wulf sued me for injunction, because they do not want the results of this enormous wear reduction of 30 %, which was already determined after 2 years, to be accessible to the public.

For further information I am always at your disposal.

I will post this letter as an "open letter", so to speak, in another film on YouTube, since there is certainly one or the other company in Germany that also wants to make a contribution to climate protection and reduce its costs at the same time.

For today I remain

With kind regards

Karl Herkenrath