

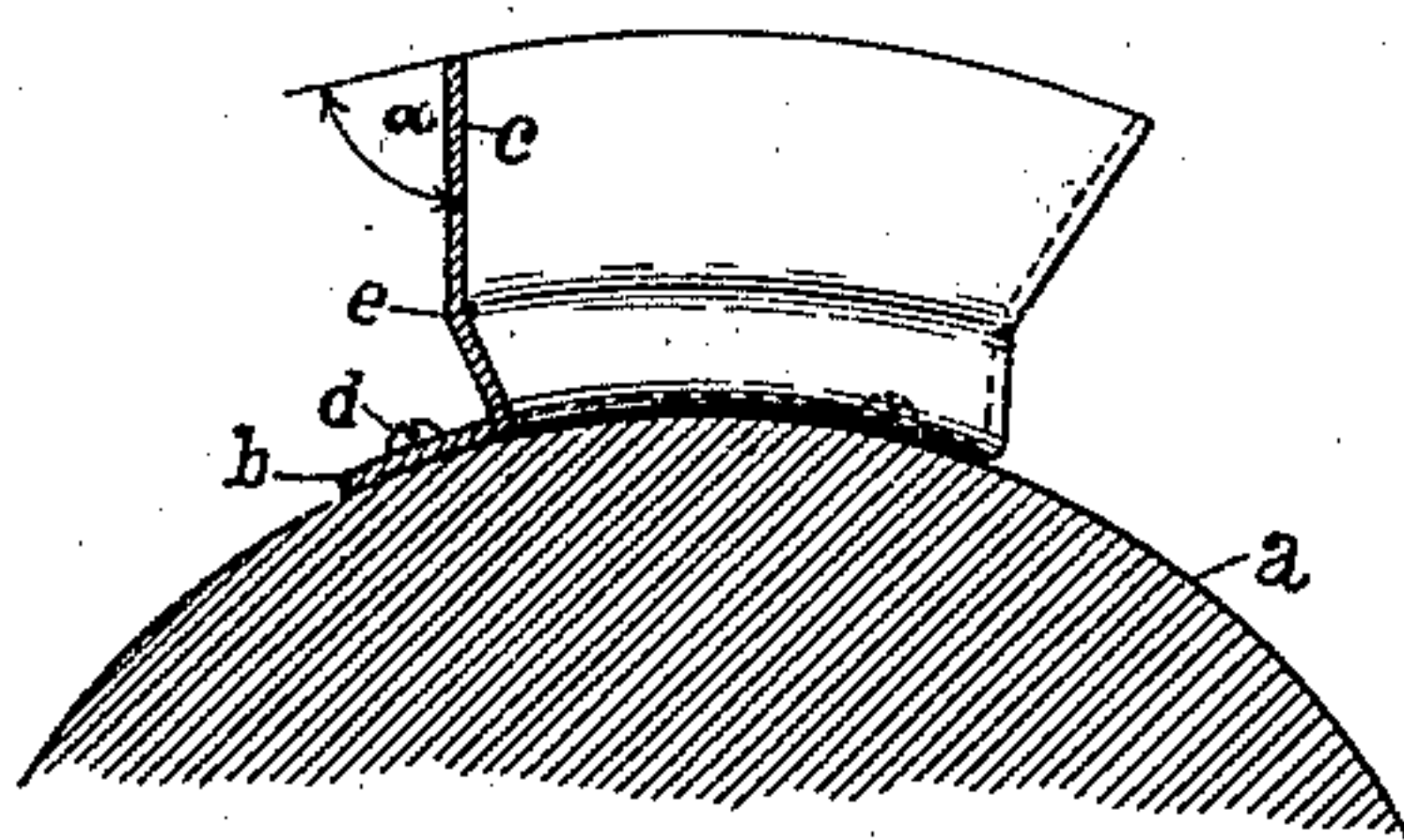
No. 686,346.

Patented Nov. 12, 1901.

F. SCHLENTER.
SPIRAL SHEARING KNIFE.

(Application filed June 7, 1901.)

(No Model.)



Witnesses.

J. G. Harder.

Jos. Schnitzler

Inventor.

Fritz Schlenter

per Martin Schmetz

Attorney.

UNITED STATES PATENT OFFICE.

FRITZ SCHLENTER, OF AIX-LA-CHAPELLE, GERMANY.

SPIRAL SHEARING-KNIFE.

SPECIFICATION forming part of Letters Patent No. 686,346, dated November 12, 1901.

Application filed June 7, 1901. Serial No. 63,532. (No model.)

To all whom it may concern:

Be it known that I, FRITZ SCHLENTER, manufacturer, a subject of the King of Prussia, Emperor of Germany, residing at 89 Kaiserallee, Aix-la-Chapelle, in the Kingdom of Prussia, Empire of Germany, have invented certain new and useful Improvements in Spiral Shearing-Knives of Sheet-Steel for Cloth-Shearing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to shearing-knives of sheet-steel, and particularly to knives in shearing-machines for uniformly cutting the nap on cloth and other textile fabrics, having rapidly-rotating spiral knives, the object in view being to obtain a shearing-knife simple in its construction, and yet retaining the most favorable cutting angle until entirely worn out.

The accompanying drawing shows a cross-section of my improved shearing-knife of sheet-steel and a portion of the cylinder to which it is secured.

Hitherto the knives in shearing-machines were either straight in their cross-section or curved. Being secured to the periphery of a rotating cylinder, the first kind of knives would at all times show the same unfavorable cutting angle, while in the second kind the cutting angle would grow constantly worse, as wear shortens the knife. All these disadvantages I avoid by giving a strip of sheet-

steel the form of cross-section as shown in the drawing.

Upon the rapidly-rotating cylinder a is secured the foot b of the shearing-knife c by means of screws d or otherwise. The part of the knife c between the foot b and the knee e is not quite radial, but leaning toward the foot b , which form, in connection with the knee e , gives great strength to the knife, though only consisting of thin sheet-steel. From the knee outward the blade of the knife is kept straight, and a line drawn through its front and prolonged rearward would not touch the axial line of the knife-cylinder, but go through a point intermediate said axial line and the periphery of the cylinder. By means of this cross-section the most advantageous cutting angle α of the shearing-knife will remain constantly acute until the blade of the knife is worn down to the knee e and the stability of the knife improved considerably, so as to facilitate the shearing process to a marked degree.

I claim—

A spiral shearing-knife of sheet-steel for cloth-shearing machines having its blade bent into the shape of a knee so as to make the cutting angle α constantly acute.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRITZ SCHLENTER.

Witnesses:

H. QUADPLIEZ,
E. CRÜTYEN.