

(No Model.)

F. LUFT.

ROLLER CRUSHER FOR FIBROUS PLANTS.

No. 330,989.

Patented Nov. 24, 1885.

Fig. 1.

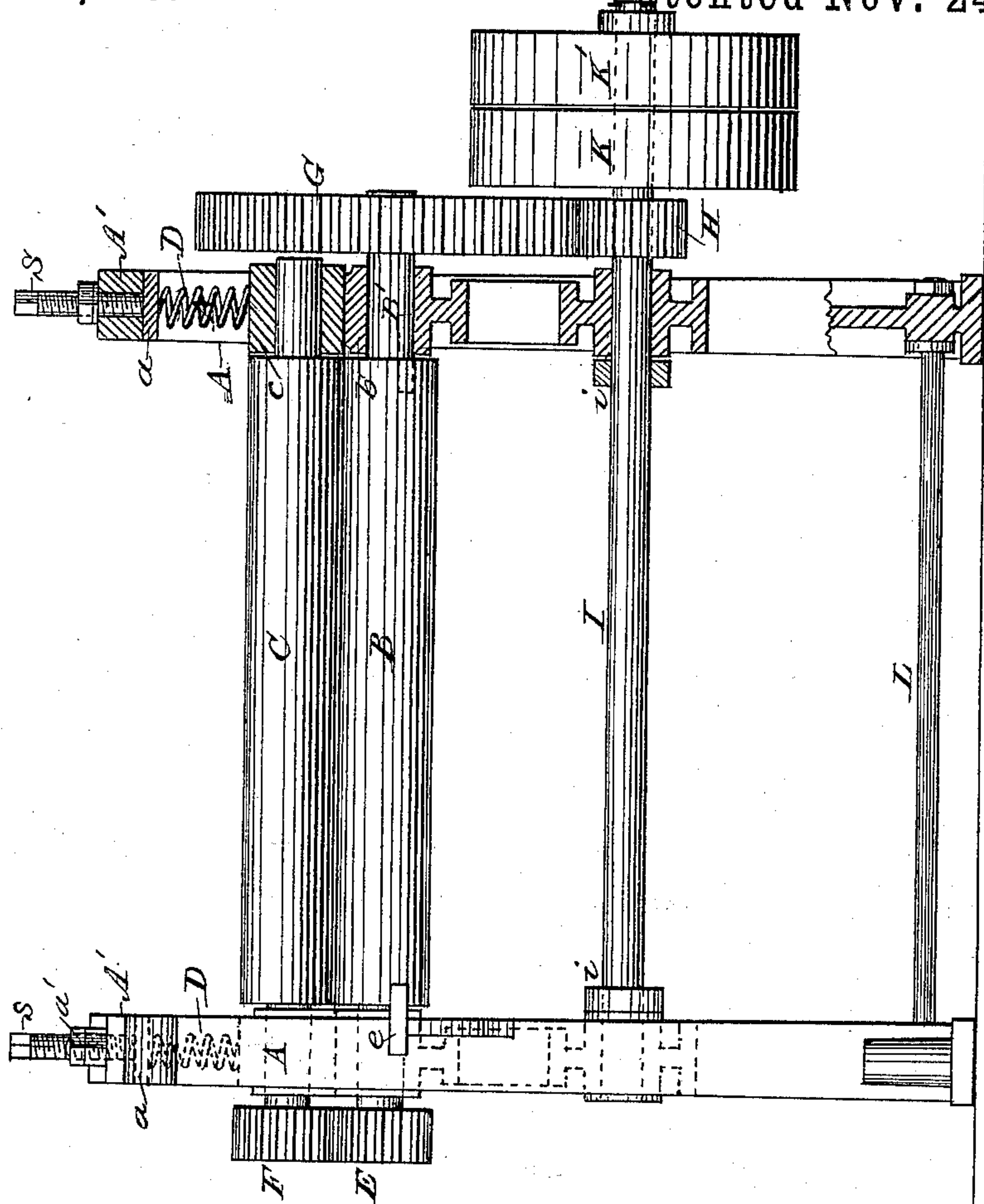
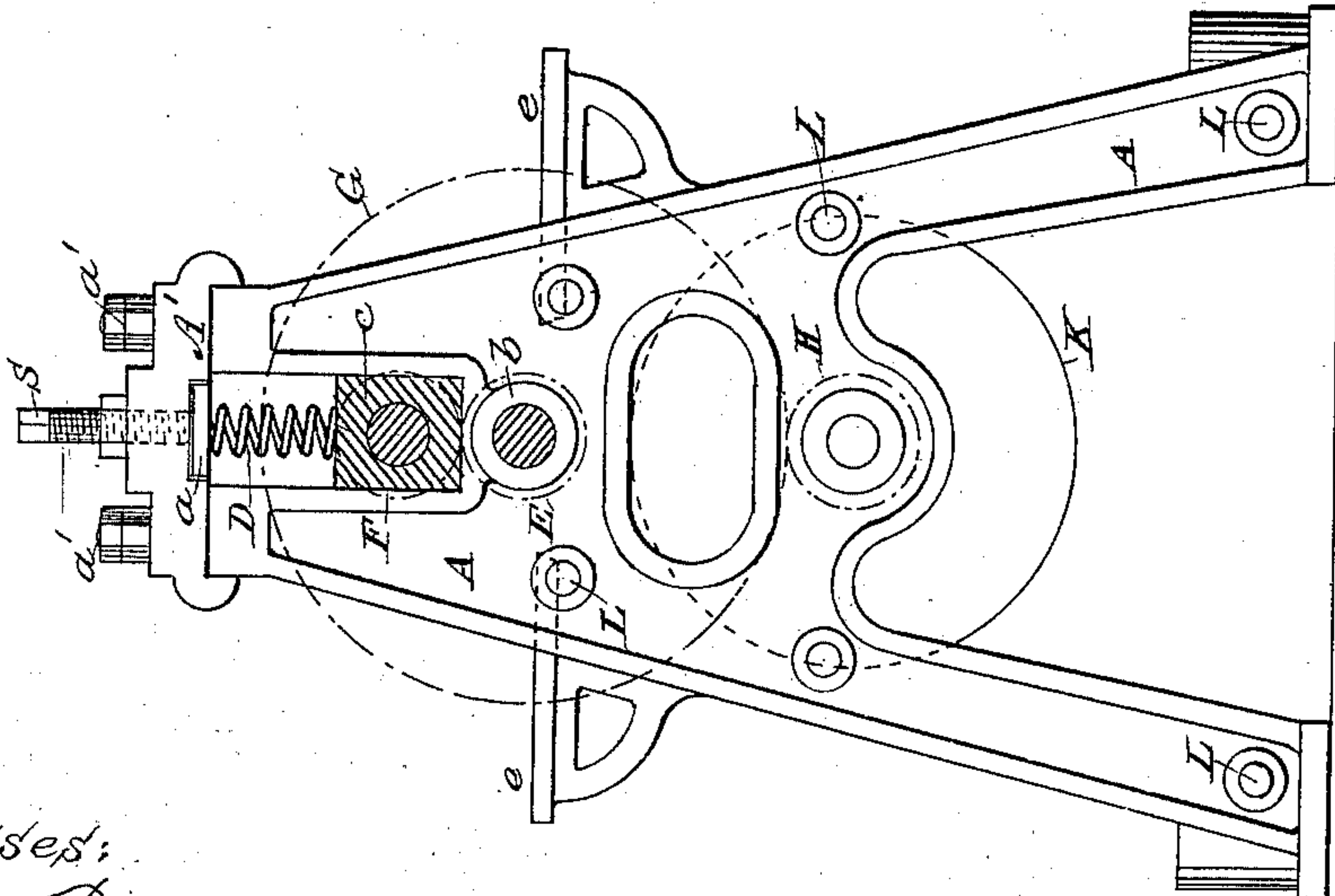


Fig. 2.



Witnesses:

Louis Beyer,  
Am. J. R. M. Co.

Inventor:

Franz Luft,  
By T. C. Brecht,  
Attorney



# UNITED STATES PATENT OFFICE.

FRANZ LUFT, OF NEW ORLEANS, LOUISIANA.

## ROLLER CRUSHER FOR FIBROUS PLANTS.

SPECIFICATION forming part of Letters Patent No. 330,989, dated November 24, 1885.

Application filed July 27, 1885. Serial No. 172,828. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ LUFT, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Roller Crushers for Fibrous Plants; 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 invention relates to improvements in roller crushers for jute and similar material, and the object is to produce a machine by which jute or cane or other fiber-containing material can be thoroughly and evenly crushed for the purpose of obtaining the fibers contained therein in an easy and expeditious manner; also, to produce a machine that is reliable, not liable to get out of order, and simple in its construction and operation, so that it can be operated by any person.

The invention to this end consists in the peculiar construction of parts, as will be more definitely described hereinafter, and specifically pointed out in the claim, reference being had to the accompanying drawings and the letters of reference marked thereon.

The same letters indicate the same parts in the different figures of the drawings, in which—

Figure 1 represents a side elevation of my improved jute roller crusher. Fig. 2 is an end view of the same.

In the accompanying drawings, A represents the stands or supports, made of any suitable material and of the proper size and strength to support a pair of rollers, B and C. The lower roller, B, is mounted in journals *b* in the stand, and the upper roller, C, is mounted in boxes or journals *c*, which are made to yield. Springs D are arranged over the journal-boxes *c*, and bear with their upper ends against the lower sides of the caps *A'*, secured to the stands A by bolts *a'*, although preferably a plate, *a*, is placed in each cap. A set-screw, S, passing through each cap, serves to adjust the tension of said spring D as required. The rollers B and C are geared together by a pair of wheels, E and F, at one end, and by a gear-wheel, G, secured on the opposite end of the

roller-shaft B', and meshing with a pinion, H, on a counter-shaft, I, also journaled in the stand A. Said shaft I imparts motion to the rollers by means of the gearing named, a belt, and tight and loose pulleys K K'. Suitable braces or stay-rods, L, secured by collars and nuts in the stands A, hold and secure the stands and form a strong and reliable frame for the rollers. On each side of the roller-stands are placed suitable brackets, *e*, to which a table or platform can be bolted, and upon which the jute or other fiber-containing material can be placed before being entered between the rollers for crushing. If desired, all of the journals may be arranged to revolve in detachable or removable sleeves or journal-boxes, although ordinarily this is not necessary.

To prevent the shaft I from having any end-wise motion, I place collars *i* on each end of said shaft between the stands, which collars are secured in position by set-screws or their equivalent.

The stands may be made ornamental, if desired; but they should be made strong enough to withstand the great pressure ordinarily required to crush the jute, &c., and they may be provided with lug through which foundation-bolts pass to secure the entire machine to the floor or other foundation upon which it is to be placed. If desired, the rollers may be provided with chilled faces to prevent wear. Instead of placing springs over the journal-boxes of the upper roller-shafts, said springs may be arranged and applied to the lower roller-shafts in a similar manner, so that they can yield also if extraordinarily hard matter should enter between them—such as stone or similar articles—and thereby prevent breakage of any of the parts of the machine. One of the rollers may be made larger than the other, if desired.

The operation is as follows: The belt having been connected to the pulley on the shaft which imparts motion to the machine, the jute or any other material containing fibers is inserted by the attendant between the rollers, and having been crushed by them is received on the table on the opposite side of the rollers, from which it can be taken to the machinery usually employed to finish the fibrous material for the market. It can also be employed for crushing other material, if desired, of a

similar nature—such as banana, pita, hemp, flax, or any plant out of which fibrous matter can be extracted.

It will be readily perceived by those skilled  
5 in the art that this forms a very powerful and compact machine for crushing jute and other fiber-containing material; that it is very simple and efficient in its construction and operation; it is not liable to get out of order;  
10 it can be operated by any ordinary workman, and requires no skilled mechanic; it can be produced at a very reasonable cost and requires no very particular fitting and finishing, and it is always ready for use and operation  
15 without any previous preparation. If desired, several sets of these rollers may be employed instead of two.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A roller crusher for fibrous plants, comprising a pair of rollers, B C, bearings *b* and *c*, springs D D, caps A' A', gear-wheels E F, the supports A A, braces L, shaft I, having collars *i*, and the driving-pulleys and gearing, 25 arranged as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANZ LUFT.

Witnesses:

LOUIS BEYER,  
F. H. G. TODD.