(No Model.)

F. LUFT.

MACHINE FOR DISINTEGRATING FIBROUS MATERIAL.

No. 265,117. Patented Sept. 26, 1882.

Fig. 3.

Fig. 1.

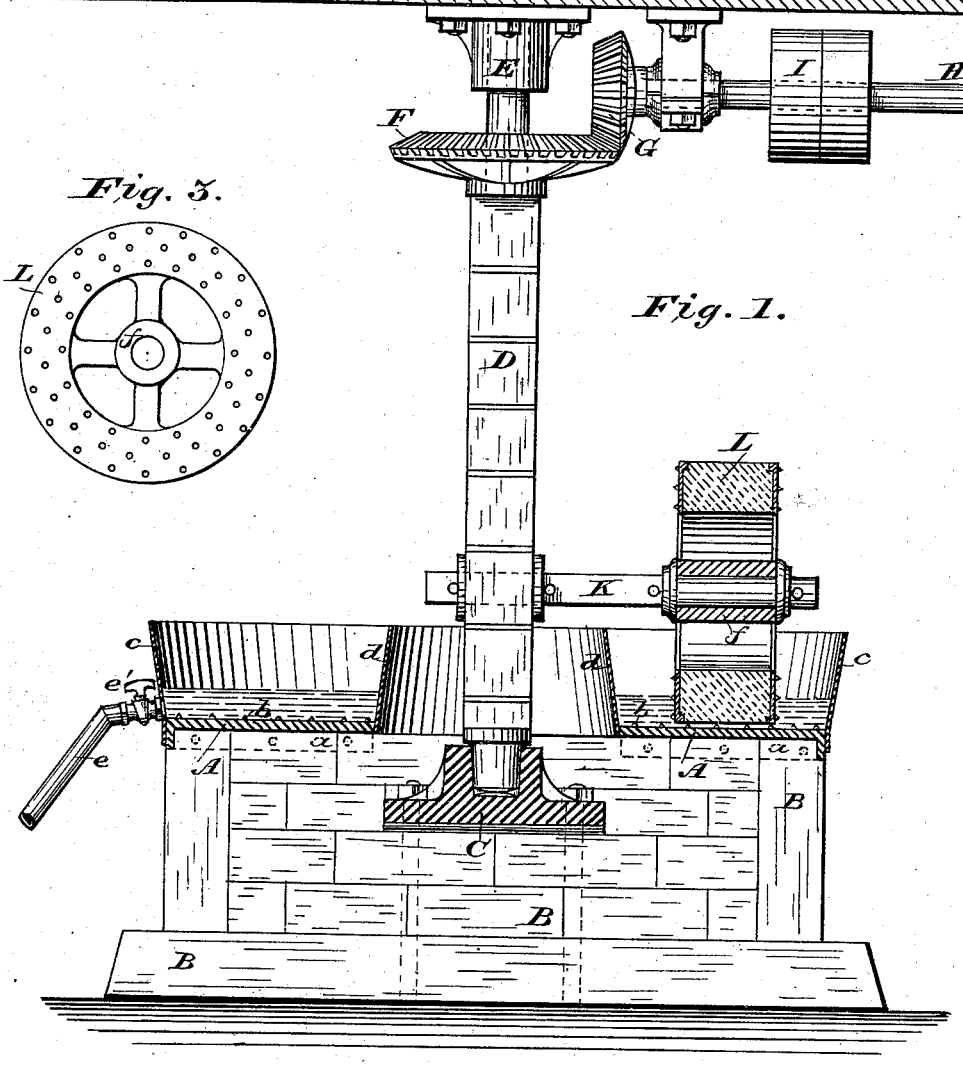
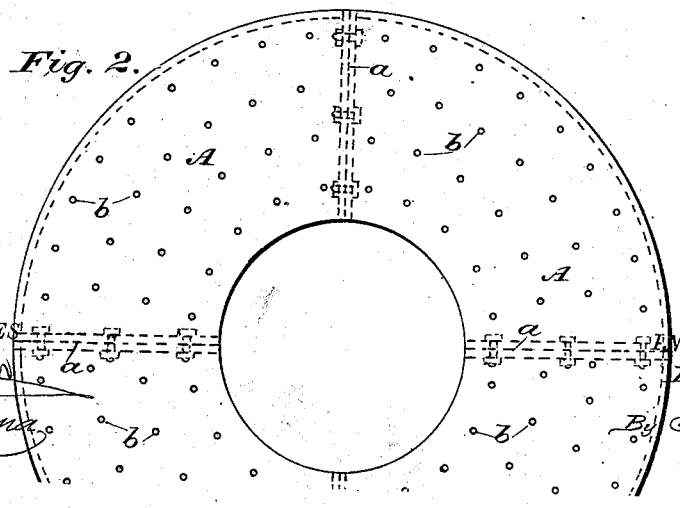


Fig. 2.



WITNESSES:
L. F. Kelleher
Paul Sumner

INVENTOR:
Franz Luft,
By J. C. Brecht
Attorney

UNITED STATES PATENT OFFICE.

FRANZ LÜFT, OF NEW ORLEANS, LOUISIANA.

MACHINE FOR DISINTEGRATING FIBROUS MATERIAL.

SPECIFICATION forming part of Letters Patent No. 265,117, dated September 26, 1882.

Application filed February 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, FRANZ LÜFT, 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 Machines for Disintegrating Fibrous Material; 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 machines or apparatus for disintegrating the fibers of jute, wood, and other fibrous material or substances; and the object is to produce a machine that will do the disintegrating in a more thorough as well as economical manner than has been done heretofore to my knowledge.

The invention consists in the construction and arrangement of certain parts, as will be more fully described hereinafter, reference being had to the accompanying drawings and the letters of reference marked thereon.

Like letters refer to like parts in the several figures of the drawings, in which—

Figure 1 represents a side view of my machine, partly in cross-section. Fig. 2 is a plan view of the bed plate or stone. Fig. 3 is a side view of the revolving stone.

In the drawings, A is the bed-plate, made preferably of iron and in four pieces, which are bolted together by means of downward-projecting flanges *a*, through which suitable bolts pass and secure the pieces together. The face of this bed-plate is provided with a large number of short points, *b*, over the entire surface and cast upon the four pieces. The object of these points is to roughen the surface and prevent the jute or other material to be operated upon from slipping or being carried around by the revolving stone. The bed-plate is firmly secured to a solid foundation, B, of stone or wood, and to this is secured a step, C, in which an upright shaft, D, is stepped and revolves. This shaft is preferably made of wood and strengthened by wrought bands at intervals, although it may be made of iron. At its upper end the shaft revolves in a suitable journal, E, bolted to the ceiling or girders of the building or other structure. The shaft receives its motion by a bevel-wheel, F, into which the pinion G meshes. This pinion is secured on a shaft, H, to which motion is imparted by a proper-sized pulley, I, which may be a tight and loose pulley, if desired. To the bed-plate, both at its outside and inside, is firmly fastened a rim or upward-projecting flange, *c* and *d*, forming an annular basin, into which the material to be operated upon is placed, with water to soften it. An outlet-pipe, *e*, is arranged at one side, through which the water can be withdrawn when desired, and a strainer may be placed over the inner end. A valve is placed in the pipe to close it. At a proper distance above the bed-plate is firmly secured to the shaft D a horizontal arm or shaft, K, preferably made of square iron. Upon the outer rounded end of the shaft K a roller or revolving stone, L, is attached, so as to revolve upon said shaft. This roller is made of any suitable material, but I prefer to use stone which is faced on its sides with cast metal, also provided with a number of points or roughened edges, as shown in Fig. 3. A suitable spider, M, to which the stone is secured, has a hub, *f*, which may be lined with a bushing, so it can be replaced when it is worn out, and revolves on the shaft K.

If desired, scrapers may be attached to the horizontal shaft, by which the material is pushed or carried in front of the revolving stone.

The operation is as follows: The material being placed in the annular basin, with a proper amount of water, motion is imparted from any motive power to the pulley I and its shaft, which rotates the pinion G, and this starts the bevel-wheel F, which in turn gives motion to the upright shaft D, and by it the stone L is revolved on the bed-plate and crushes the material and disintegrates the fibers, which are used for various purposes, such as packing, wool fiber, &c.

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

1. In a machine for disintegrating fibrous substances, the bed-plate A, provided with a roughened surface having points *b*, in combination with a revolving stone, substantially as set forth.

2. In a machine for disintegrating fibrous

substances, the bed-plate provided with points *b* on the surface, and made in sections having downward-projecting flanges *a*, by which and suitable bolts the sections are secured together, substantially as described.

3. In a machine for disintegrating fibrous substances, the bed-plate A, having points *b*, and annular rims *c d*, in combination with a roller, L, attached to a horizontal shaft, K, secured to the shaft D, substantially in the manner shown, and for the purpose specified.

4. In a machine for disintegrating fibrous substances, the roller L, consisting of a spider, to which the stone face is secured, and having its sides faced with metal provided with points, as and for the purpose set forth.

5. A machine for disintegrating fibrous substances, consisting of a bed-plate, A, with points *b*, an annular basin, an upright shaft, D, to which the horizontal shaft K is secured, having a roller, L, with roughened sides, and operated by means of a suitable gearing, all constructed and arranged substantially as specified.

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

FRANZ LÜFT.

Witnesses:
N. LANDRY,
SAMUEL G. VOGT.