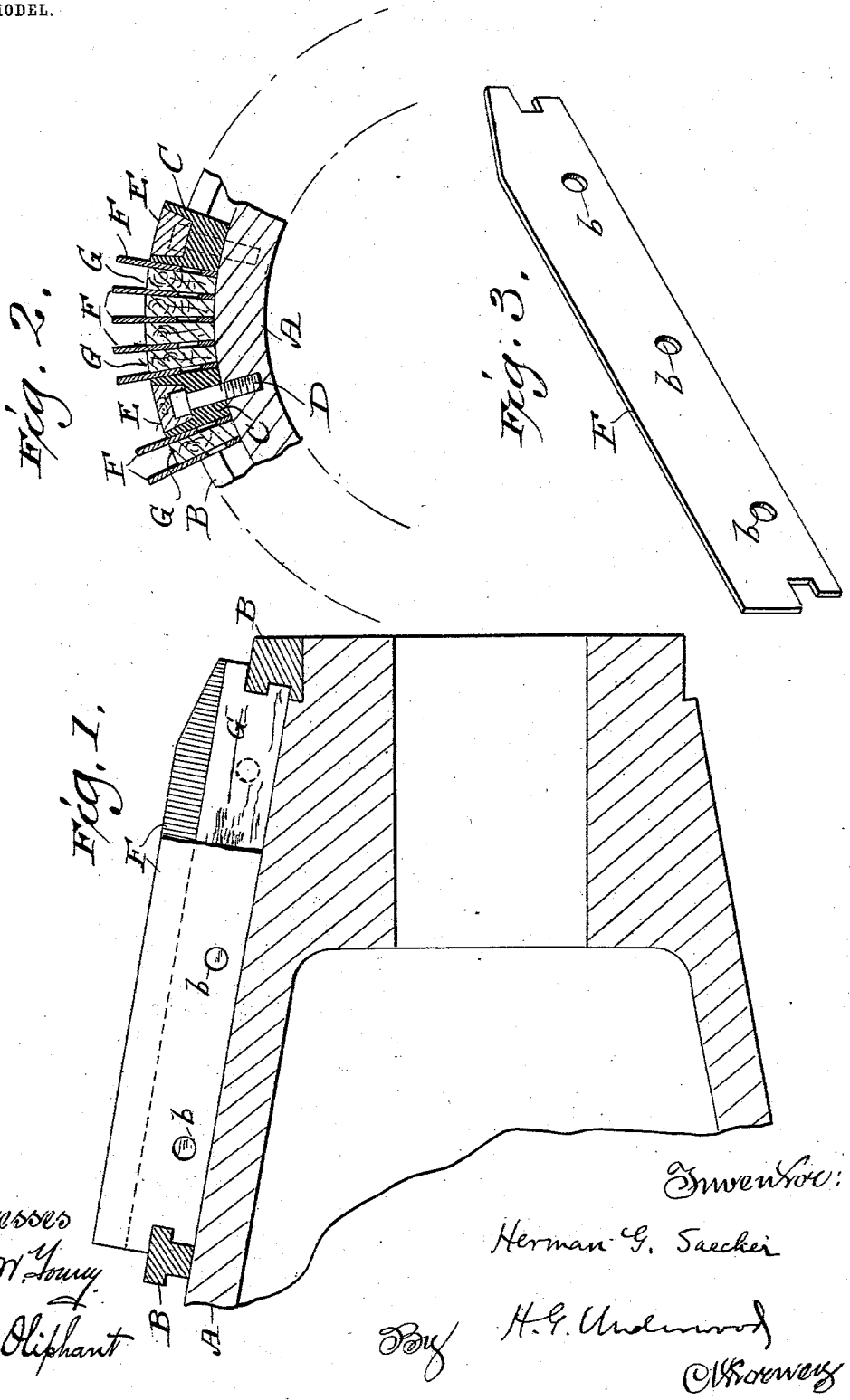
No. 717,718. PATENTED JAN. 6, 1903.

H. G. SAECKER.

PAPER STOCK REFINING ENGINE.

APPLICATION FILED OCT. 3, 1902.

NO MODEL.



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UNITED STATES PATENT OFFICE.

HERMAN G. SAECKER, OF APPLETON, WISCONSIN.

PAPER-STOCK-REFINING ENGINE.

SPECIFICATION forming part of Letters Patent No. 717,718, dated January 6, 1903.

Application filed October 3, 1902. Serial No. 125,792. (No model.)

To all whom it may concern:

Be it known that I, HERMAN G. SAECKER, a citizen of the United States, and a resident of Appleton, in the county of Outagamie and State of Wisconsin, have invented certain new and useful Improvements in Paper-Stock-Refining Engines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to the conical cores of "Jordan" type paper-stock-refining engines, and has especial reference to that species of such a core provided with annularly-recessed bands at intervals of its length, ribs arranged longitudinally of the core between bands thereon, knives having notched ends fitting the recessed bands, and wooden spacers confining the knives in series between core-ribs.

The object of the invention is to prevent displacement of the spacers by moisture and centrifugal force; and said invention consists in providing the knives with apertures into which there is swell of the spacer material, as is hereinafter more particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a longitudinal section of a portion of that species of paper-stock-refining-engine core to which my invention has especial reference; Fig. 2, a transverse section of the same, illustrating an assemblage of ribs, knives, and spacers thereon, the spacers being positioned in a dry state ready to swell into apertures with which the knives are provided; and Fig. 3, a perspective view of one of the knives.

Referring by letter to the drawings, A indicates a portion of a conical core that pertains to a paper-stock-refining engine, and which is provided with annularly-recessed bands B, fast thereon at intervals of its length. Channeled ribs C, arranged longitudinally of the core, between the bands of same, are held in place by machine-screws D, and a filling E is arranged in the rib-channels. Alternately disposed between the ribs C are knives F and wooden spacers G, the knives being notched at their ends to engage with the core-bands. The spacers are of blunt-wedge form and serve to hold the knives in place, the general construction and arrangement of parts thus far specified with particular reference to the drawings being old in Patent No. 653,856, of July 17, 1900.

The spacers are dry when put in place, and owing to moisture and centrifugal force they have a tendency to slip outward, and thus become ineffective as means for holding the knives rigidly in working position. To prevent outward movement on the part of the spacers when affected by moisture and centrifugal force, the knives F are each provided with a plurality of apertures *b*, circular or otherwise, at intervals of their length between the core-bands. Absorption of moisture by the spacers causes them to swell into the knife-apertures, and thus automatically key themselves in place to obviate the trouble heretofore experienced.

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

1. The core of a paper-stock-refining engine provided with annularly-recessed bands at intervals of its length, ribs arranged longitudinally of said core between bands thereon, knives that having end notches engaged by the bands are apertured intermediate of said bands, and wooden spacers confining the knives in series between core-ribs, there being swell of spacer material into said apertures of the knives when affected by moisture to automatically key said spaces in place.

2. A paper-stock-refining engine having the knives thereof provided with apertures between retaining-bands on said core, and wooden spacers alternating with said knives, there being swell of spacer material into the knife-apertures when affected by moisture to automatically key said spacers in place.

3. A paper-stock-refining-engine core having each knife thereof provided with a plurality of apertures provided at intervals longitudinally thereof between the knife-retaining bands of the core to be engaged by material of the adjacent wooden spacers when these spacers are affected by moisture, whereby said spacers are automatically keyed in place.

In testimony that I claim the foregoing I have hereunto set my hand, at Appleton, in the county of Outagamie and State of Wisconsin, in the presence of two witnesses.

HERMAN G. SAECKER.

Witnesses:
P. M. CONKEY,
THOMAS O'KEEFE.