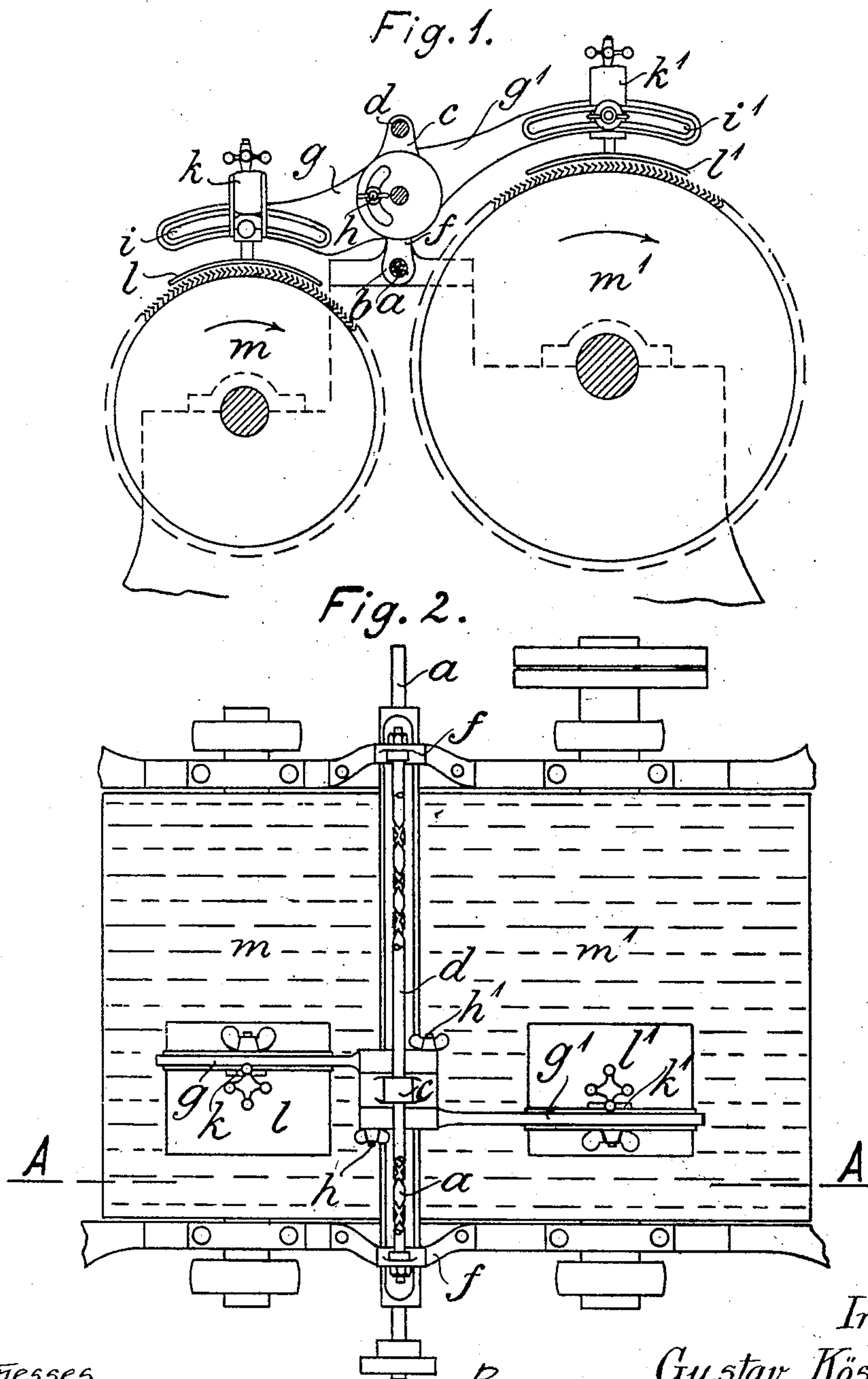


No. 865,401.

PATENTED SEPT. 10, 1907.

G. KÖSTER.
MEANS FOR GRINDING CARDING CYLINDERS.
APPLICATION FILED NOV. 26, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

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MEANS FOR GRINDING CARDING-CYLINDERS.

No. 865,461.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed November 26, 1906. Serial No. 345,253.

To all whom it may concern:

Be it known that I, GUSTAV KÖSTER, manufacturer, of 33 Freidrichstrasse, a subject of the German Emperor, residing at Neumünster, in the Province of Holstein and German Empire, have invented certain new and useful Improvements in Means for Grinding Carding-Engine Cylinders, of which the following is a full, clear, and exact description.

This invention relates to an improved device for grinding the cylinders of carding engines in pairs, and it has for its object to provide means whereby an exceedingly uniform grinding of the card may be insured, so that the carding cylinders are given an accurate cylindrical form.

In the known grinding arrangements for card cylinders by which only one card cylinder at a time could be ground, accurately grinding could not be attained, as the surface was invariably ground deeper in the middle than towards the ends. Even the use of a screw-spindle or leading screw, with right-hand and left-hand threads, of varying pitch such as the so-called "Horsfall" screw, for moving the grinding tool along the cylinder, did not insure perfectly true grinding of the card cylinders, in view of the fact that the screw will always bend a little towards the center, on account of its natural spring.

In the present invention, this evil is avoided, as this bending of the screw-spindle, which is the cause of untrue grinding of the cards, is prevented by grinding the card cylinders in pairs, so that two cylinders are ground simultaneously, one on either side of the screw-spindle. For this purpose the nut traveling on the Horsfall screw is fitted with adjustable arms carrying the grinding tools, and which, when adjusted, mutually support and balance each other, and further, for the purpose of securing the nut against turning on the screw, a guide-rod is provided, which is fixed on the machine frame, on which the frame carrying the grinding tools slides by means of a collar.

In order that the invention may be the better understood drawings are appended in which,

Figure 1 is a side elevation with partial section and Fig. 2 is a plan.

In carrying the invention into effect, I employ the so-called "Horsfall" screw *a* supported on the card-

ing engine frame, the nut *b* traveling as the screw revolves.

In order to secure the nut *b* against turning on the center line of the screw-spindle *a* it is provided with an extension having an eye *c* which engages a guide-rod *d* which rod is supported at its ends by arms *f* fixed to the caps *e* protecting the ends of the spindle on the machine frame. The nut *b* carries two laterally projecting arms *g g'*, which can be adjusted by means of winged nuts *h h'*. The adjustable arms *g, g'* have fitted at their ends, by means of the curved slots *i i'* adjustable supports *k k'*, which serve for the reception and adjustment of the actual grinding tools or surfaces *l l'*. These grinding tools bear on the card cylinders *m m'* which are to be ground. By means of the guide-rod *d* accurate movement of the grinding tools, in a line parallel to the surface of the cylinder, is insured, so that a uniform pressure is exerted by the said grinding tools *l l'*, on the card cylinders, and a true cylindrical grinding of the cards is obtained.

What I claim and desire to secure by Letters Patent is:—

1. In a device for grinding carding engine cylinders, a frame, a rotary feed screw journaled therein, a nut arranged for travel on said screw and for movement by the latter, a guide rod sustained on the frame and operatively engaged with the nut for guiding the same in its movements, a pair of oppositely-projecting arms adjustably connected with the nut for relative movement in a vertical plane, and grinding devices adjustably mounted on the arms for movement longitudinally thereof.

2. In a device for grinding carding engine cylinders, a frame, a rotary feed screw journaled therein, a nut arranged for travel on the screw and for movement by the latter, a guide rod sustained above the screw and having operative connection with the nut for guiding the same in its movements, a pair of oppositely-extended arms pivoted to the nut for vertical swinging movement, means for fixing the arms in adjusted position, said arms being provided at their outer ends with longitudinal slots, supports slidably mounted on the arms, clamping screws entered through the slots for fixing the supports in adjusted positions, and grinding members carried by and movable with the supports.

In witness whereof, I subscribe my signature in presence of two witnesses.

GUSTAV KÖSTER.

Witnesses:

JULIUS RÖPKE,

JOHANNES V. PALASZEWSKI.