

(No Model.)

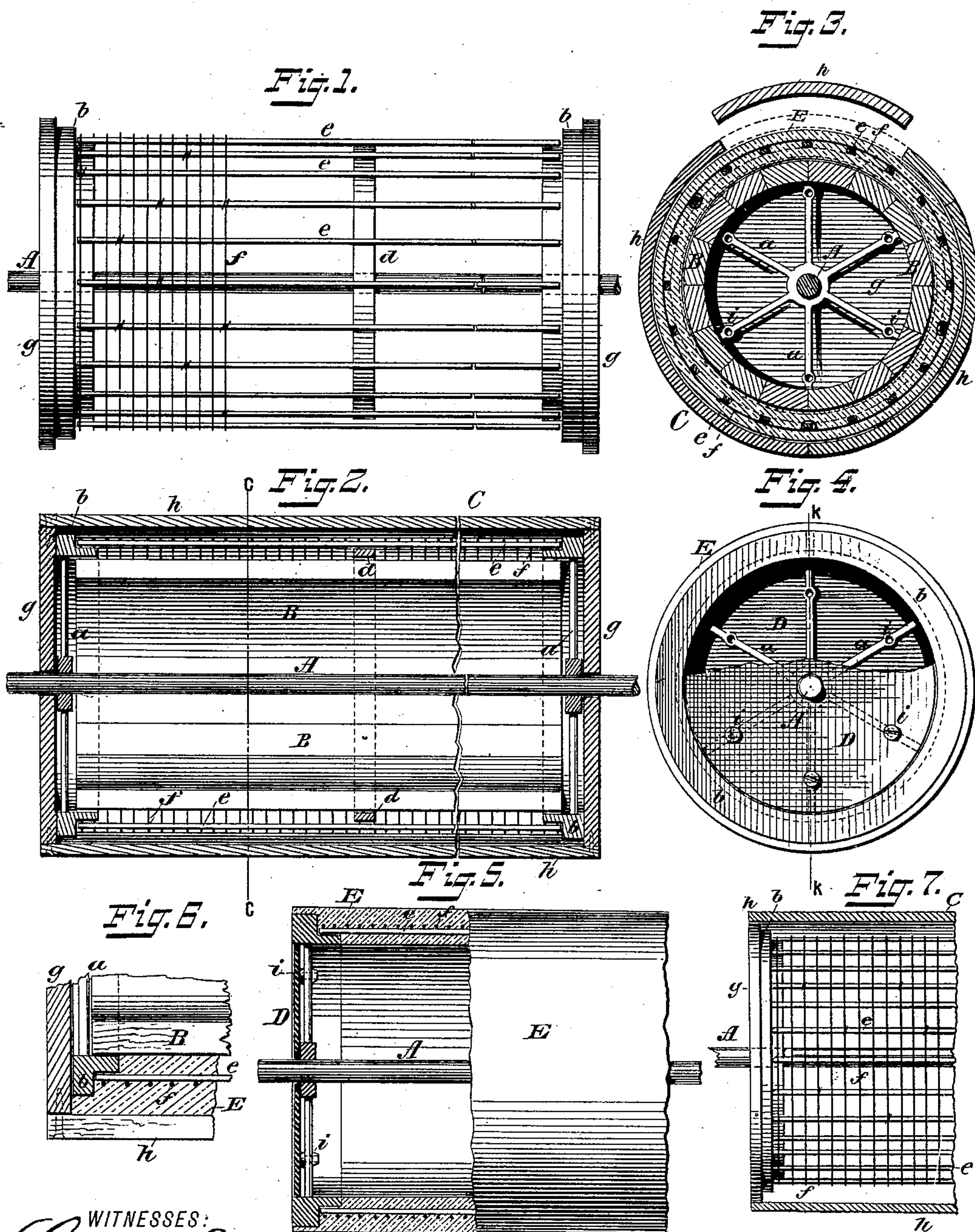
K. L. KRAUSSE, Dec'd.

C. R. KRAUSSE, Administrator.

CARD CYLINDER.

No. 411,105.

Patented Sept. 17, 1889.



WITNESSES:

Gustave Dietrich
Theo F. Bourn

Carl Robert Krausse,
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INVENTOR
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CARL ROBERT KRAUSSE, OF PHILADELPHIA, PENNSYLVANIA, ADMINISTRATOR OF KARL LUDWIG KRAUSSE, DECEASED; SAID ADMINISTRATOR ASSIGNOR TO THE DECKER MACHINE COMPANY, OF PENNSYLVANIA.

CARD-CYLINDER.

SPECIFICATION forming part of Letters Patent No. 411,105, dated September 17, 1889.

Application filed March 20, 1889. Serial No. 303,998. (No model.)

To all whom it may concern:

Be it known that KARL LUDWIG KRAUSSE, late of Werdau, Germany, did during his life-time invent a new and useful Improvement in Card-Cylinders, of which the following is a specification.

The object of this invention is to produce a card-cylinder (that is, a cylinder such as is used for holding card-clothing in carding-engines) whose body shall be mainly composed of plaster-of-paris or analogous composition surrounding a rigid central shaft.

The invention mainly consists in combining the plaster-of-paris shell of the cylinder with an interior metal bracing; also, in making such a cylinder hollow, but closing its ends; also, in further details of improvement that are hereinafter more fully specified.

In the accompanying drawings, Figure 1 represents a broken side view of the skeleton frame of the improved card-cylinder, showing also the disks *g* on the ends of the cylinder. Fig. 2 is a broken longitudinal central section of the said skeleton frame and its inner cylinder, the whole being inclosed in a mold and ready to receive the plaster-of-paris filling. Fig. 3 is a cross-section on the line *c c*, Fig. 2, but showing the plaster-of-paris filling in place. Fig. 4 is an end view, part being broken away, of the completed cylinder. Fig. 5 is a broken side view, partly in section, of the completed cylinder. Fig. 6 is an enlarged sectional view of one corner of the cylinder while the same is in the mold, and Fig. 7 represents part of the skeleton within the mold ready to receive the plaster-of-paris.

In the drawings, *A* represents the shaft. The same carries at proper distances apart, by means of spokes *a*, rabbeted hoops or rings *b*. Between these two hoops or rings may be placed one or more other hoops or rings *d*, that may be supported in manner similar to the rings *b*, if desired. The distance between the outer faces of the hoops *b* determines the length of the card-cylinder.

e e are rods of metal, which extend from hoop to hoop *b*, and which are tied together and connected by a wire filling *f*.

g g are disks slightly larger in diameter than the hoops *b* and secured by screws or otherwise removably to said hoops.

The parts so far described constitute the skeleton framing shown in Fig. 1. For the purpose of preparing this framing for the reception of the plaster, I place within the same an open-ended barrel-like structure *B*, which is composed of sundry staves that are put together to form a cylinder within the skeleton frame formed by the rods *e*. This barrel-like inner cylinder extends from hoop to hoop *b*, by preference entering said hoops, as shown in Fig. 2.

The parts thus far described produce a framing which is ready to receive the gypsum or plaster-of-paris. For the best kind of cylinder the framing so far described is now put into a mold *C*, which is of cylindrical form, being composed of three (more or less) sections *h*, (see Fig. 3,) that are put around the said framing, and that may be secured to the edges of the disks *g* by screws, as in Fig. 2. One of the sections of the mold *C* is left off to produce an opening, through which the gypsum or plaster-of-paris is introduced, and thereupon the plastic matter so introduced fills the whole space between the outer circumference of the cylinder *B* and the inner circumference of the mold *C*, and when this space has been properly filled the last section of the mold *C* is put in place, so as to produce a perfect outer cylindrical form of the plaster filling. When this plaster filling has set, the sectional mold is taken apart. The inner cylinder *B* is removed by taking out through the interstices between the spokes *a* one of the staves after the other that were used to form said cylinder *B*. The disks *g* are also removed, and then the ends of the open-ended cylinder thus formed are closed by securing, with the aid of screws or otherwise, tin disks *D* to the spokes, as shown in Fig. 5. By this time the card-cylinder is completed. It will be seen that it is a cylinder composed of an outer shell *E* or cylindrical body of plaster-of-paris, within which is contained the metal bracing *e f*, which serves to hold said plaster-of-paris shell

firmly together, preventing it from falling to pieces and permitting a comparatively light and thin shell to be used.

The end plates D are useful in that they prevent during the operation of the card-cylinder drafts of air passing through it, which drafts are liable to produce cracks within the cylinder.

In lieu of the bracing *ef*, composed of rods and wires, that have been illustrated in the drawings, other metal bracing properly supported on the shaft and adapted to be anchored within the gypsum may be used; and it is to be distinctly understood that the kind of bracing herein shown is not the only kind that can be profitably used for the purpose of this invention. Any skilled mechanic having once been given to understand that a hollow cylinder can be produced by plaster-of-paris with the aid of an internal metal bracing that is supported on the shaft will readily be able to substitute any other metal bracing for that specifically shown in the drawings. Nor is it always necessary (though decidedly preferable) that the plaster-of-paris cylinder shall be hollow outside of the shaft A. Of course it is much less expensive to produce a cylinder having as thin a shell of plaster-of-paris as may be practicable, yet the invention con-

templates also the use of a plaster-of-paris covering when duly embraced internally with metal, even should such covering make contact with the shaft A.

What it is sought here to claim as the invention of KARL LUDWIG KRAUSSE, deceased, and to secure by Letters Patent, is—

1. A card-cylinder having a central shaft, an open metal bracing, and a circumferential wall of plaster-of-paris that is on the outside, on the inside, and passes through the interstices of said metal bracing, substantially as described.

2. A hollow card-cylinder having an outer shell of plaster-of-paris and an inner shaft A, in combination with the disks DD, which close the open ends of said cylinder, as specified.

3. A card-cylinder composed of a central shaft A, a set of rings or hoops *b*, carried thereby, and metal bracing *ef*, connecting said hoops or rings, and a plaster-of-paris shell E, which is traversed by said bracing, substantially as herein shown and described.

CARL ROBERT KRAUSSE,
Administrator of Karl Ludwig Krausse, deceased.

Witnesses:

HERMAN BONIER,
LOUIS C. SCHNEIDER.