

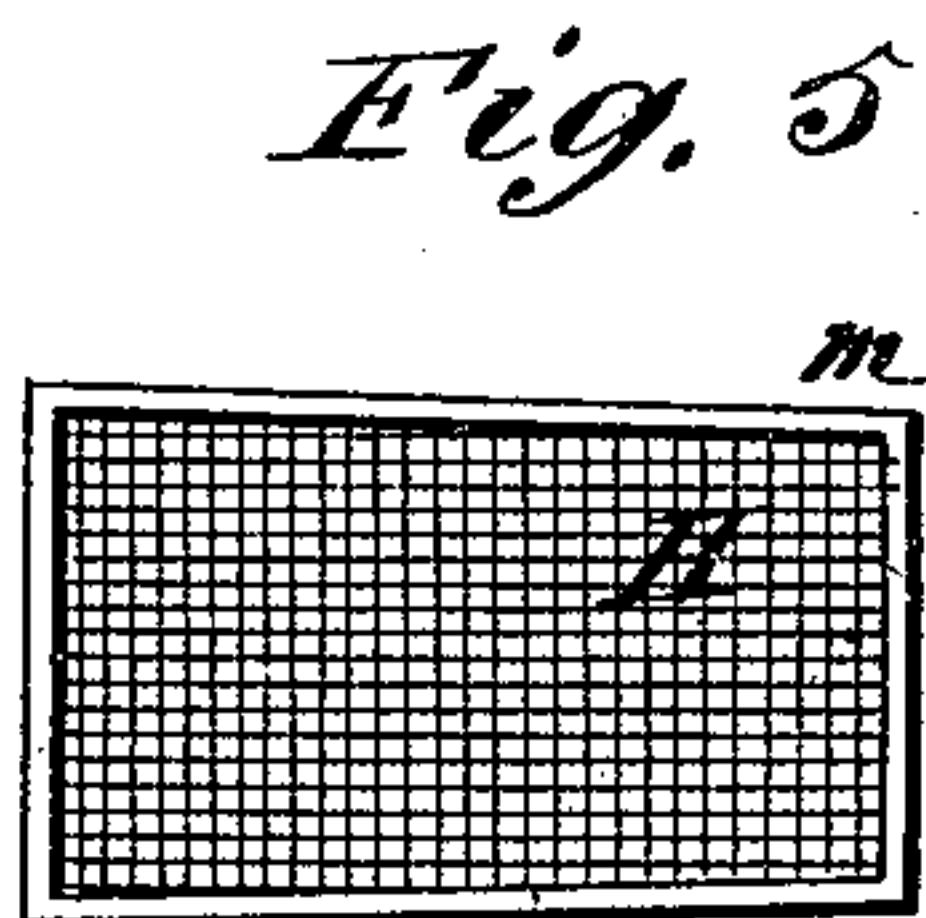
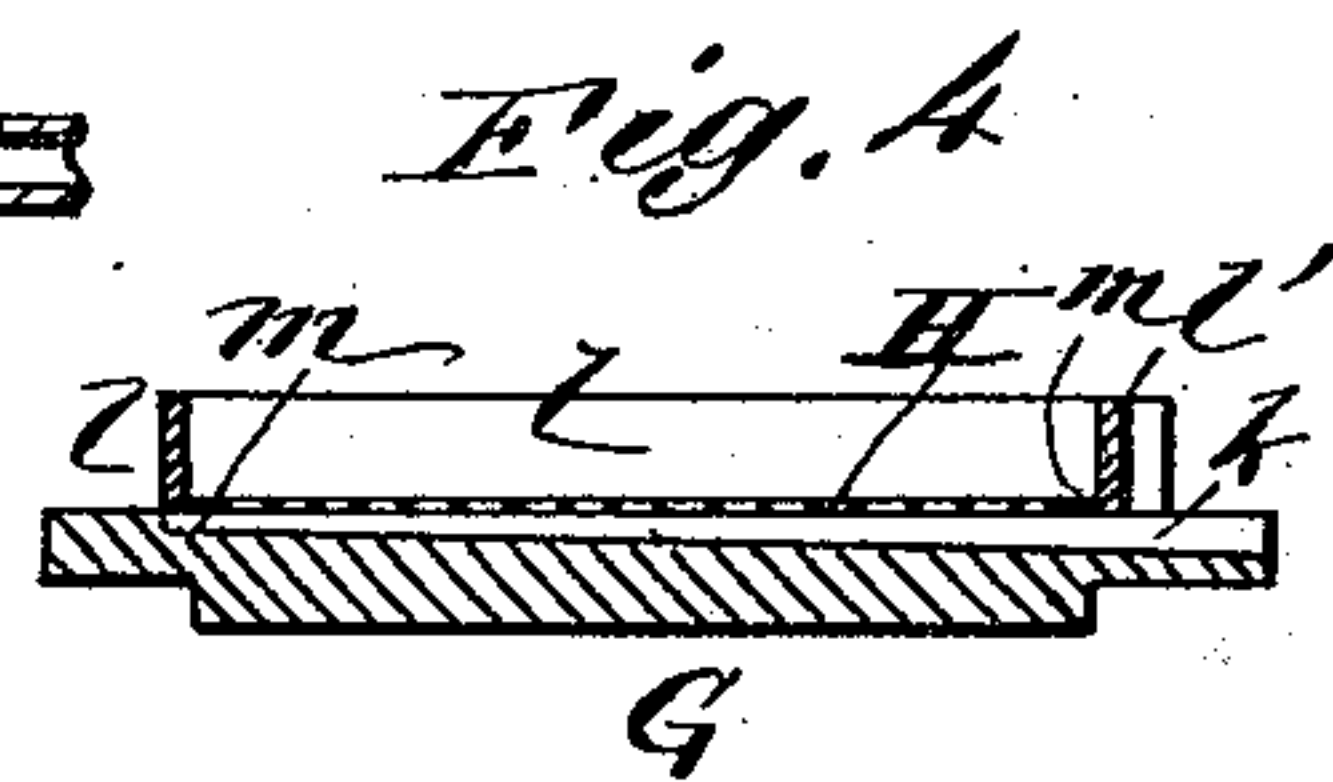
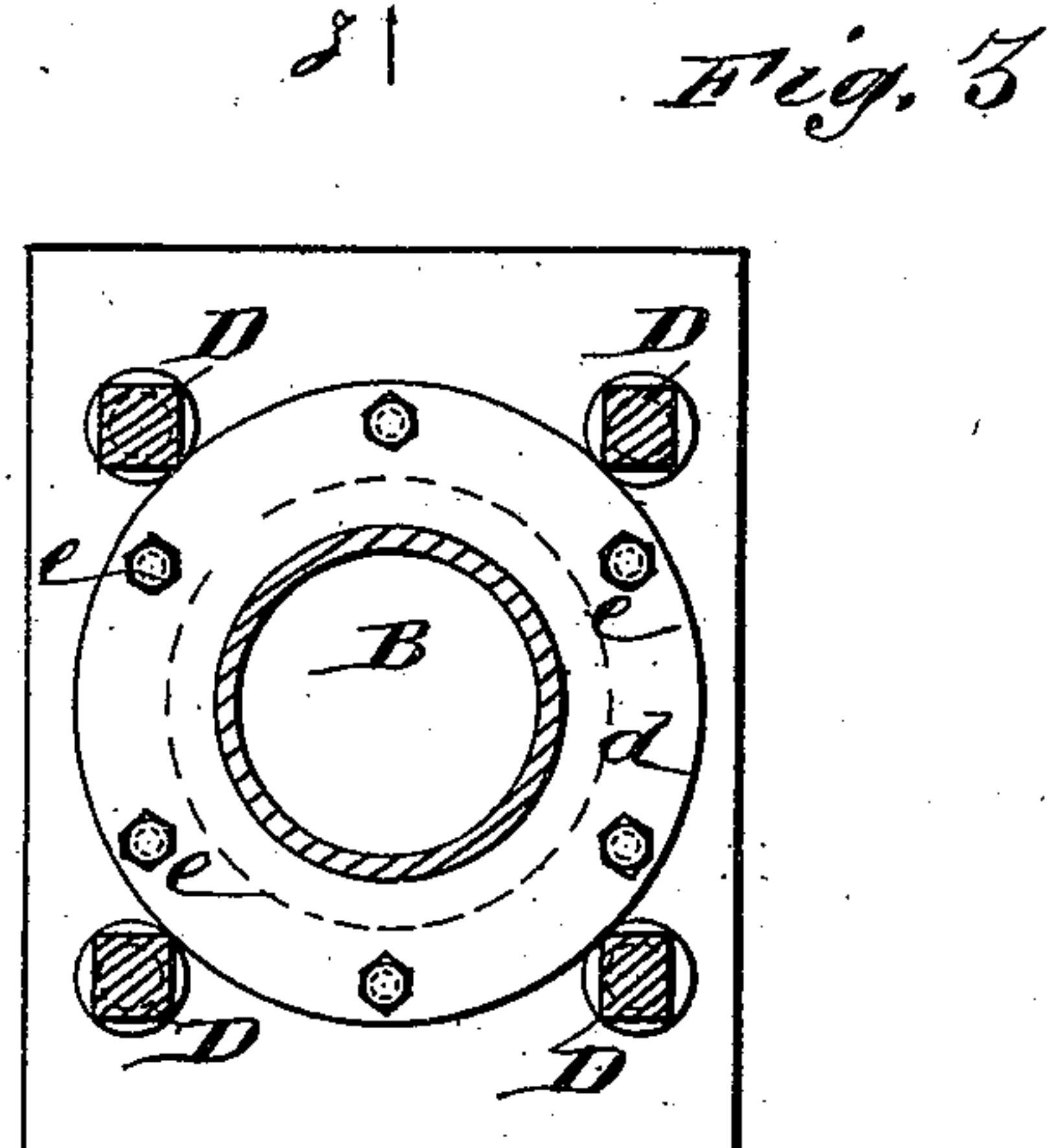
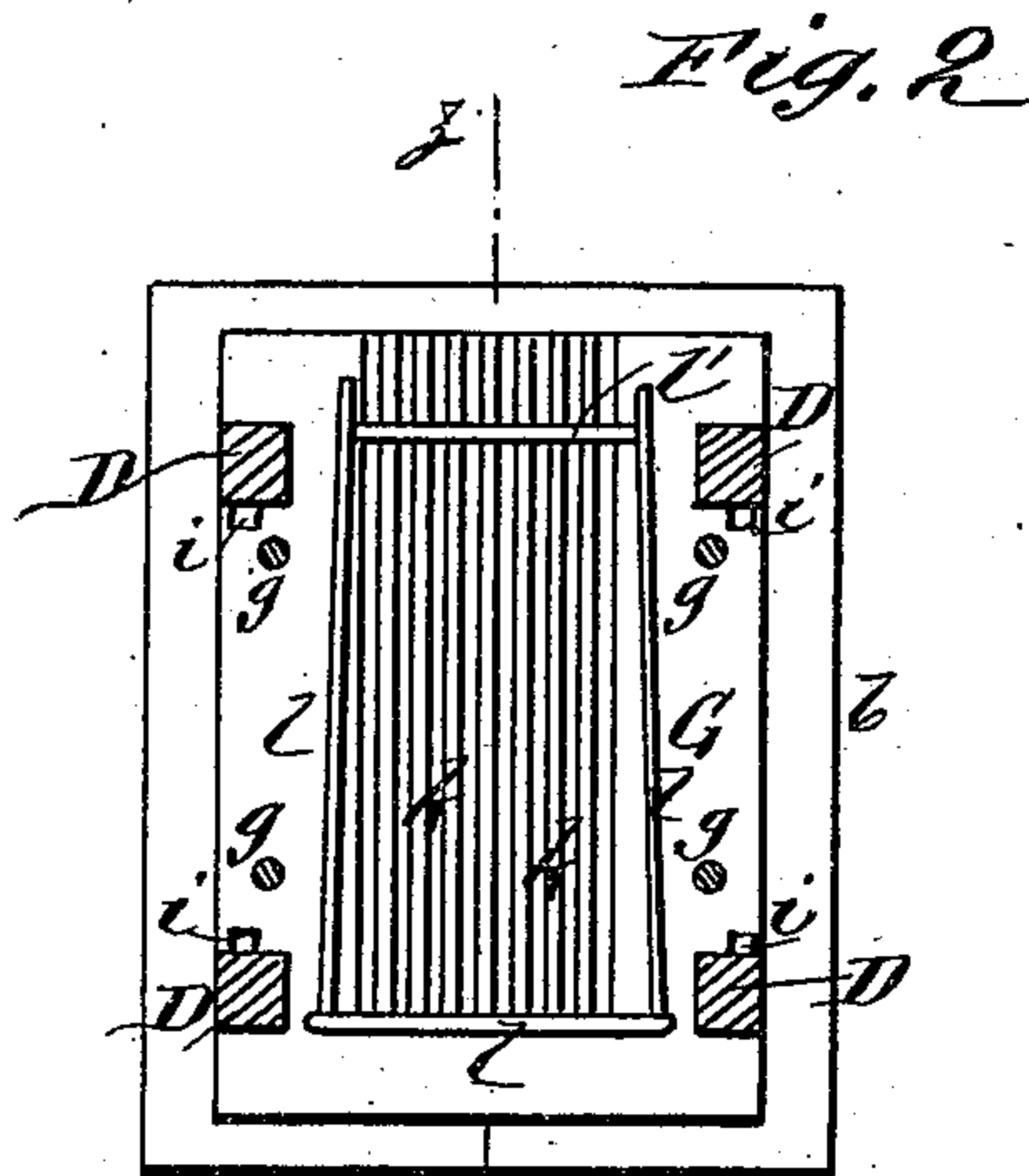
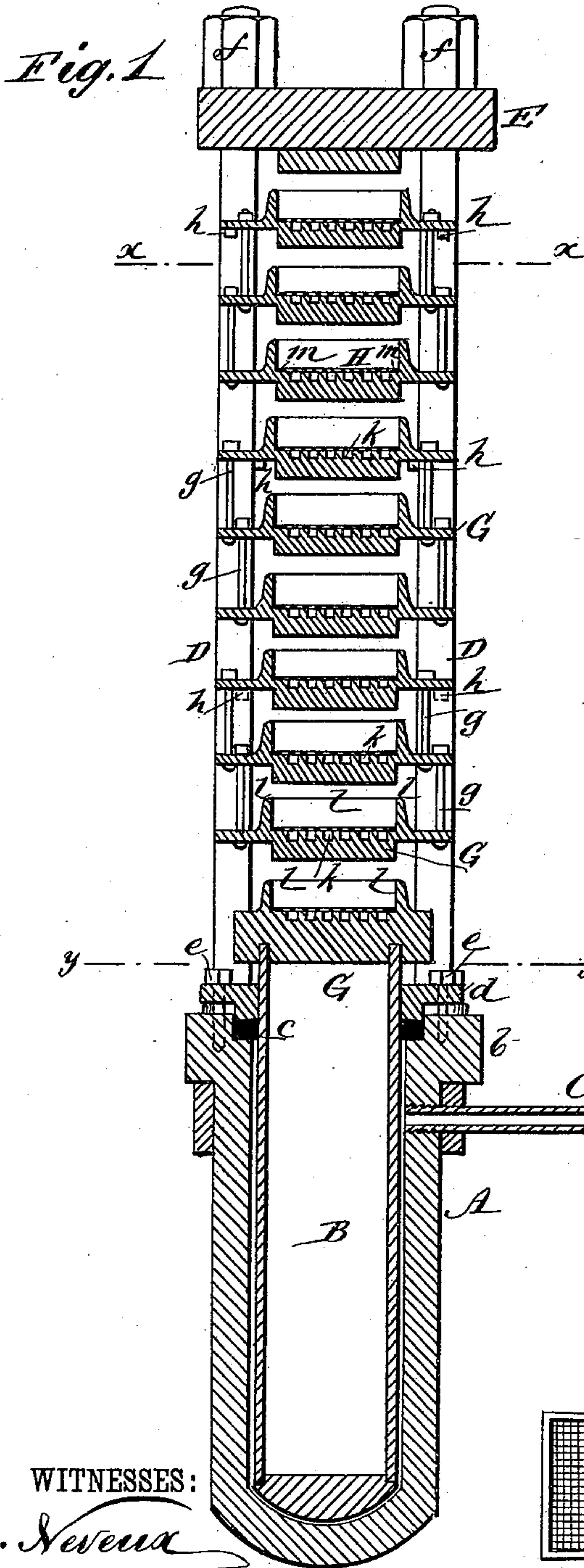
(No Model.)

C. BAUMGARTEN.

PRESS FOR EXPRESSING OIL FROM COTTON AND OTHER SEEDS.

No. 354,673.

Patented Dec. 21, 1886.



WITNESSES:
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UNITED STATES PATENT OFFICE.

CHRISTIAN BAUMGARTEN, OF SCHULENBURG, TEXAS.

PRESS FOR EXPRESSING OIL FROM COTTON AND OTHER SEEDS.

SPECIFICATION forming part of Letters Patent No. 354,673, dated December 21, 1886.

Application filed May 25, 1886. Serial No. 203,218. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN BAUMGARTEN, of Schulenburg, in the county of Fayette and State of Texas, have invented new and useful Improvements in Presses for Expressing Oil from Cotton and other Seeds, of which the following is a full, clear, and exact description.

This invention relates to hydraulic presses for extracting the oil from cotton and other seeds, and is more particularly designed to be applied to hydraulic presses constructed, so far as the ram, cylinder, and packing and guiding devices for the ram are concerned, substantially as described in my Letters Patent for a cotton-baling press, No. 302,880, dated July 29, 1884.

The invention consists in certain novel constructions and combination of the pressing-plates with each other and the ram of the press, and in means for operating said plates in independent series, whereby great efficiency is obtained, and the plates, which are guttered or grooved, may be readily cleaned, substantially as hereinafter shown and described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of a press embodying my invention. Fig. 2 is a horizontal section upon the line *xx* in Fig. 1. Fig. 3 is a horizontal section upon the line *yy* in Fig. 1; Fig. 4, a vertical section through one of the pressing-plates upon the line *zz* in Fig. 2, and Fig. 5 a plan view of a screen used on the pressing-plates.

A is the vertical cylinder of the press; B, its hollow ram; C, the pipe by which the water or other fluid is supplied to the cylinder from the pump or pumps used to work the press; *b*, the recessed collar on the upper end of the cylinder containing a packing, *c*, and *d* the packing ring or gland.

D D are the uprights, rods, or guides, up and down which the pressing-plates, that are suitably recessed in their sides for the purpose, move, said rods or guides, which are turned at their lower ends, passing through holes in the top planed plate or collar of the cylinder, that is also provided with holes for

the bolts *e*, which hold down the stuffing-box gland *d*.

E is the cap or upper plate of the press, against which the thrust is made, and which is secured on top of the rods D D by nuts *f*.

G G are the pressing-plates, which are generally of similar construction, and with the lower one of which the top of the ram B is connected. The other pressing-plates are built up in sets of two, three, or more, the several plates in each set being loosely connected by bolts *g* with each other, so that the lower plate or plates of each set are suspended from the upper plate, and are free to move upward when pressure is applied independently of each other, but are kept at their proper distances apart for charging with the material to be compressed when the ram is down.

To carry out this action or arrangement, the uprights or bars D are each provided with studs *h*, corresponding; each horizontal series, with the number of sets of pressing-plates G, so that the upper plate of each set of plates rests when lowered upon its respective studs *h* with the lower plates in the set pendent from it. These studs in no way restrict the upward movement of the pressing-plates, each horizontal series of studs *h* being out of line with the other, and the pressing-plates having openings *i*, Fig. 2, in them, to allow them to rise without interference by the studs or stops. A greater or lesser number of pressing-plates may be used in the press at any one time, according to the requirement of the work.

Each pressing-plate G is cast in a single piece, then planed smooth and grooved, as at *k*, to allow the oil to escape when pressure is applied from the material or seeds (usually wrapped in cloth) carried by the plates. The grooves *k* are cut clean out to one edge of the plates, and are made of increasing depth toward their outer ends, to allow the oil to run down and from the plates into a trough or vessel set to receive it. The upper faces of the pressing-plates are constructed with raised ribs *l* at the inner ends and for a portion of the sides of the series of grooves, to form, in connection with a lower rib or strip, *l'*, a receptacle or space for the material to be compressed. This extra rib or strip *l'* is riveted or otherwise secured to its place after the plates have

been otherwise finished, so as not to interfere with the cutting of the grooves to the delivery-edge of the plates. Within the receptacle or space formed by the ribs *l l'*, and over the 5 grooves *k*, a piece of closely-woven wire-cloth, *H*, bound on its edges with sheet metal *m*, is placed, to allow of a free passage of the oil to the grooves without exposing them to being choked by the material being compressed.

10 To clean the plates *G* it is only necessary to remove the wire-cloth coverings *H*, which may be speedily done, when the grooves *k* may be quickly wiped out.

15 The wire-cloth plates or coverings *H* are important adjuncts, inasmuch as their meshes serve as an outlet for the oil directly downward, and from thence through the grooves *k*, thus greatly reducing the power necessary to

press out the oil as compared with forcing it out sidewise over the close or solid bottoms of 20 the pressing-plates, as is usually done.

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

The combination, with the ram *B*, cylinder 25 *A*, and cap or top plate, *E*, of the press, of the uprights *D*, provided with a series of stops or studs, *h*, at different heights or levels, and the independent pressing-plates *G* in sets pendent 30 the one from the other, for operation in relation with each other substantially as specified. 3c

CHRISTIAN BAUMGARTEN.

Witnesses:

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