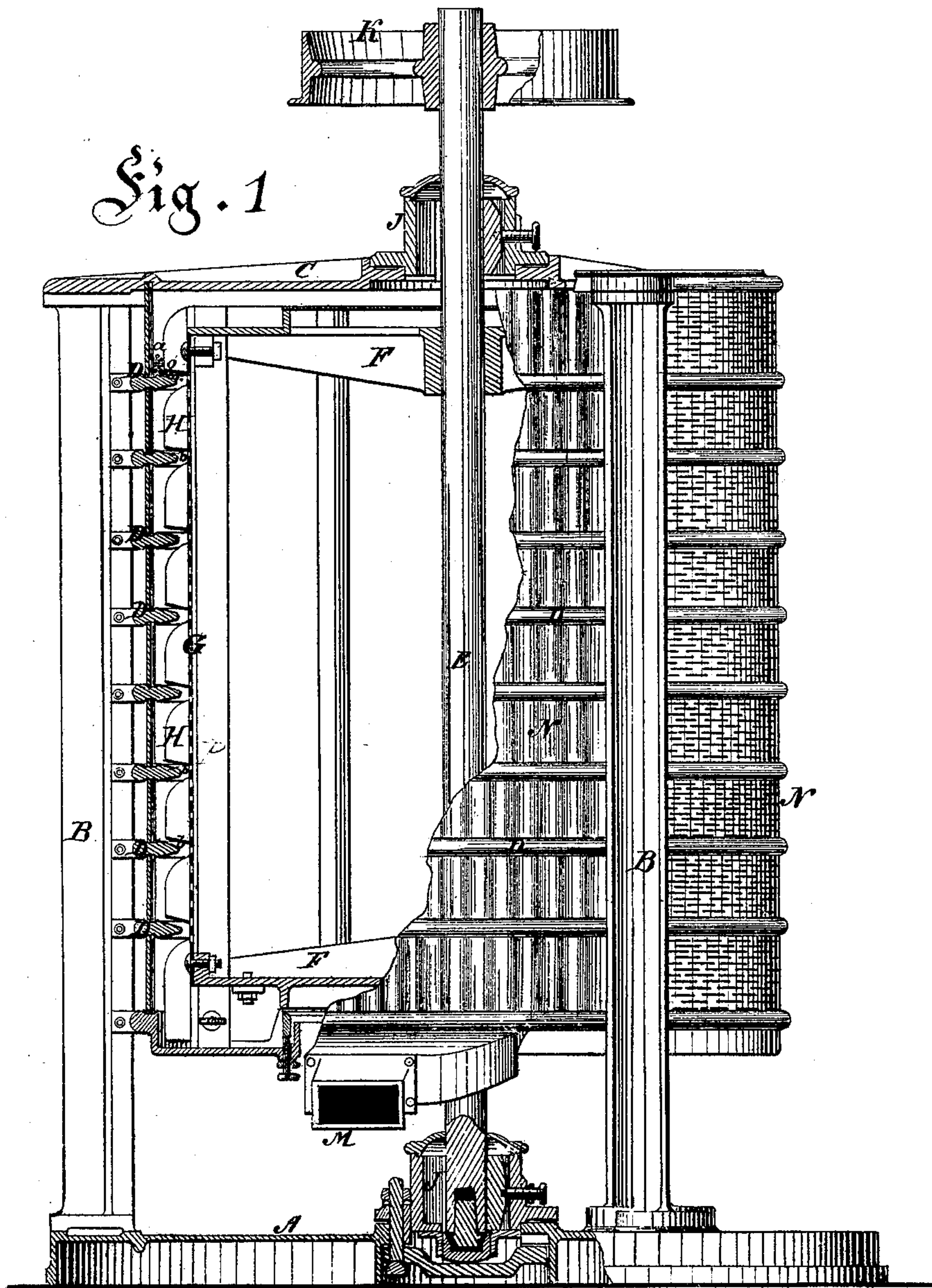


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Improvement in Machines for Hulling, Cleaning, and Polishing Grain.

No. 126,416.

Patented May 7, 1872.



Witnesses:

Charles Gerhardt.  
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per Rastert & Hagemann  
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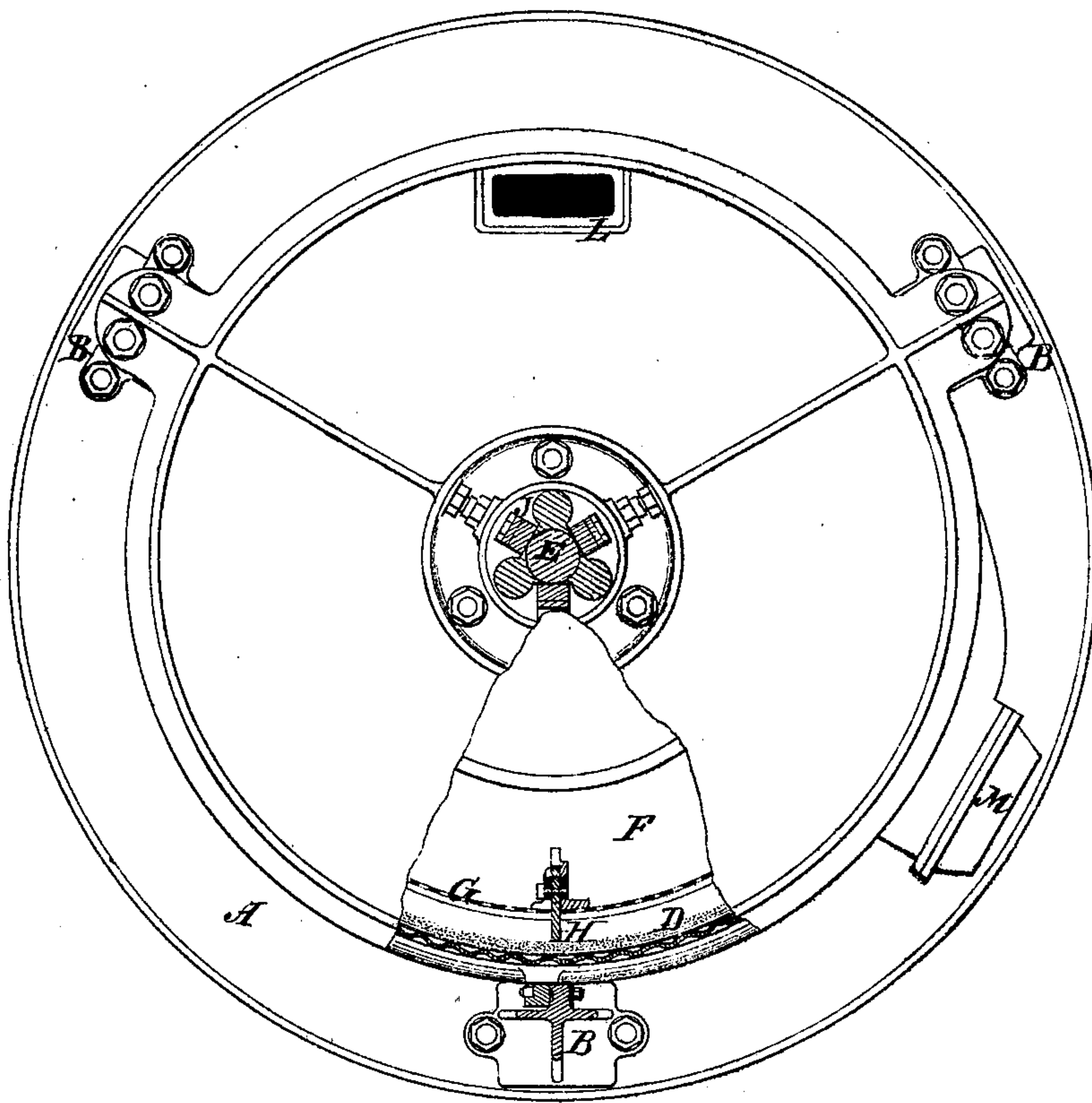
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Fig. 2



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# UNITED STATES PATENT OFFICE.

WILHELM SECK, OF FRANKFORT, PRUSSIA.

## IMPROVEMENT IN HULLING-MACHINES.

Specification forming part of Letters Patent No. 126,416, dated May 7, 1872.

### SPECIFICATION.

*To all whom it may concern:*

Be it known that I, WILHELM SECK, of Frankfort, Prussia, Germany, have invented a new and useful Machine for Hulling, Cleaning, and Polishing Grain; and I do hereby declare that the following is a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 represents a side elevation, parts of it broken out; Fig. 2, a horizontal section and top view.

The principal objects of my invention are to obtain a durable, simple, and convenient machine for hulling and cleaning grain, &c., as will be more fully described in the annexed specification.

The casing or covering consists of a bed-plate, A, upon which are secured the columns B and cover C. To these columns B are secured a desired number of concentric rings, D, (in this case consisting of eight,) by which the whole casing is divided into an equal number of parts. About two thirds of the circumference of the casing is composed of corrugated sheet-iron or steel, fitting into recesses or rabbets in the rings D, for securing it; and the other third consists of perforated strips of steel. The inner cylinder or drum is secured to the shaft E by the four-armed spiders or heads F, and to these heads the perforated sieve G is fastened, and its upper end is closed by a suitable cover. H are radial wings or beaters on the bar P, let into the drum, and, with the bar, made radially adjustable, to regulate their position with respect to the outer casing. The outer diameter of this drum is about three-fourths of an inch less than the inner diameter of the outer casing, so as to give a space of three-eighths of an inch, circumferentially, when the drum is placed in its central position. As will be seen by reference to the drawing, Fig. 1, the beaters project considerably into the compartments formed by the eccentric rings composing the casing A. The distance between the lower edges *b*, Fig. 1, of the beaters H and the rings D of the

casing may be regulated by raising or lowering the entire drum G in any of the usual well-known ways. J J, Figs. 1 and 2, represent the bushes of the upright shaft, which do not require any definite description, as well as the pulley K. The rectangular opening L, Sheet 2, represents the hopper, by which the grain is introduced, and the outlet is shown at M, Sheet 1, for delivering it. Through the outer perforated case N, Fig. 1, the dust and chaff are blown.

When the drum of the machine is set in motion, by means of the pulley K, at the rate of about three hundred and fifty revolutions per minute, and the grain is introduced through the hopper, the following results will be obtained: The grain, falling upon the head of the drum, is thrown by centrifugal force to the circumference thereof, and is caused to rotate with said drum by the beaters H. Arrived at the outer edge of the head, they fall into the space *a* upon the first ring D of the casing, and, as the centrifugal force ceases here, the grains are collected partly, and move more slowly. As more kernels fall upon these, they fall over the edge of the rings D through the space, and are again carried around by the next set of beaters, when the above-described operation is repeated until the cleaned grain is carried out at the outlet M. During this operation a continuous rubbing of the kernels is occasioned, by which they are polished and rubbed, being also cleaned, at the same operation, from all dust and chaff, these being blown through the sieve or perforations of the outer casing N, the openings being, of course, small enough not to allow the kernels to pass through.

In this manner the hulls, dust, as well as the chaff and smut of the grain are removed, thereby preventing the specking of the flour. The kernels are retarded by the corrugations in the outer casing, the following ones are carried forward more rapidly, and the rubbing action is occasioned.

It will be, of course, understood, that these machines can be made of any desirable size, and, of course, the casings or cylinders can be made of sheet-iron, cast-iron, or any other material, as well as steel.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The combination, in a hulling-machine, of the perforated drum G, radially-adjustable bar and beater P H, and concentric rings D, substantially in the manner and for the purpose specified.

2. The combination of the adjustable beaters H with the concentric rings D of the outer casing, constructed and arranged as shown and described, for the purpose set forth.

3. The combination and arrangement of the drum G, provided with the series of adjustable beaters H with the partly-corrugated or partly-perforated outer casing N, all construct-

ed as herein shown and described, for the purpose set forth.

4. The arrangement, in the hulling-machine herein described, of the drum or inner cylinder G, adjustable beaters H, heads F, shaft E, step J, outer casing N, and pulley K, when all these parts are constructed and operated as shown and described, for the purpose set forth.

The above specification signed by me this 4th day of October, 1870.

WILHELM SECK.

Witnesses:

AUGUSTUS GLUSS,  
F. RAUCH.