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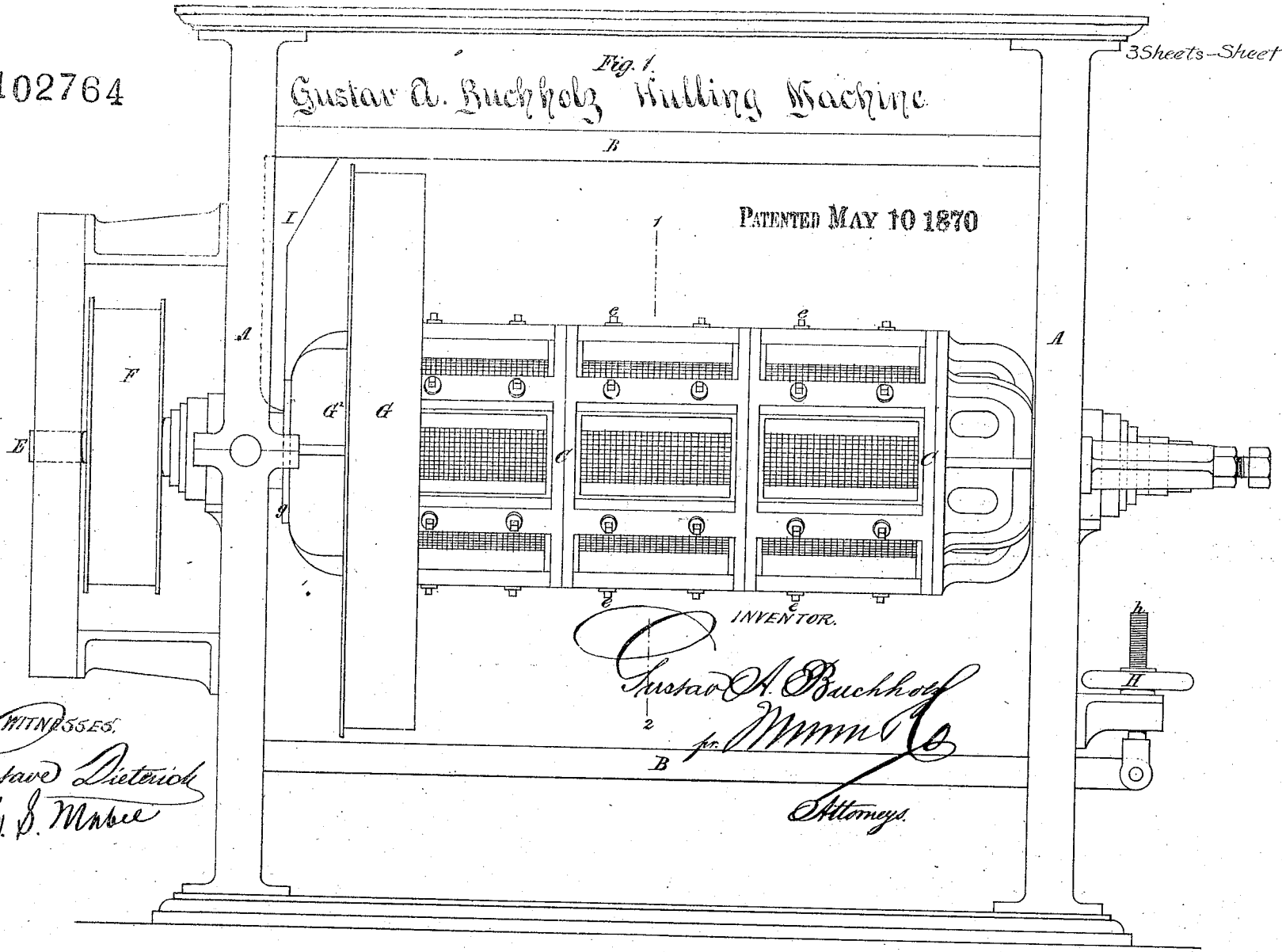
3 Sheets—Sheet 1.

Fig. 1.

Gustav A. Buchholz Hulling Machine

PATENTED MAY 10 1870



WITNESSES.

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3 Sheets- Sheet 2.

Gustav A. Buchholz. Hilling Machine.

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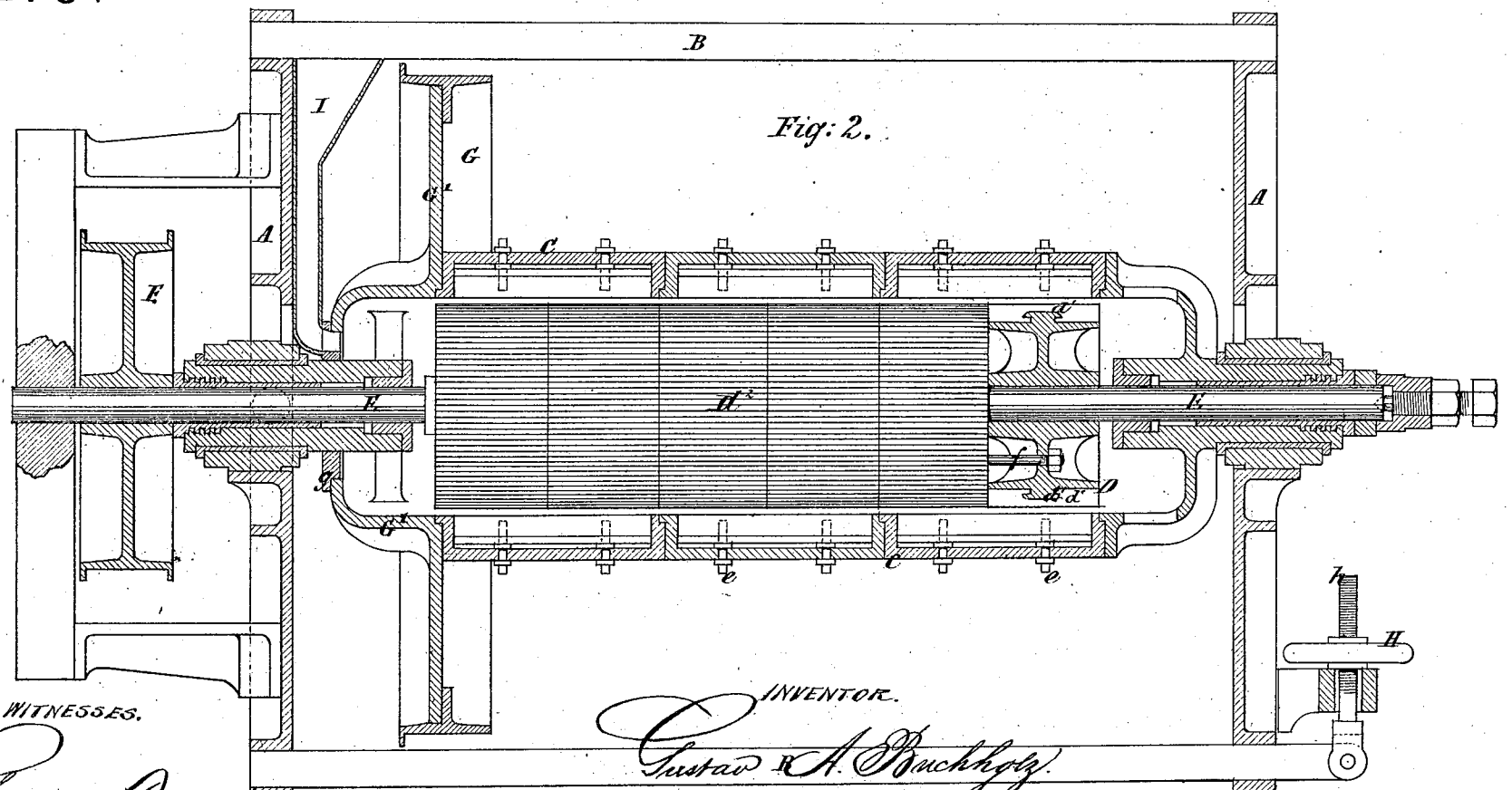

Fig: 2.

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Fig:4.

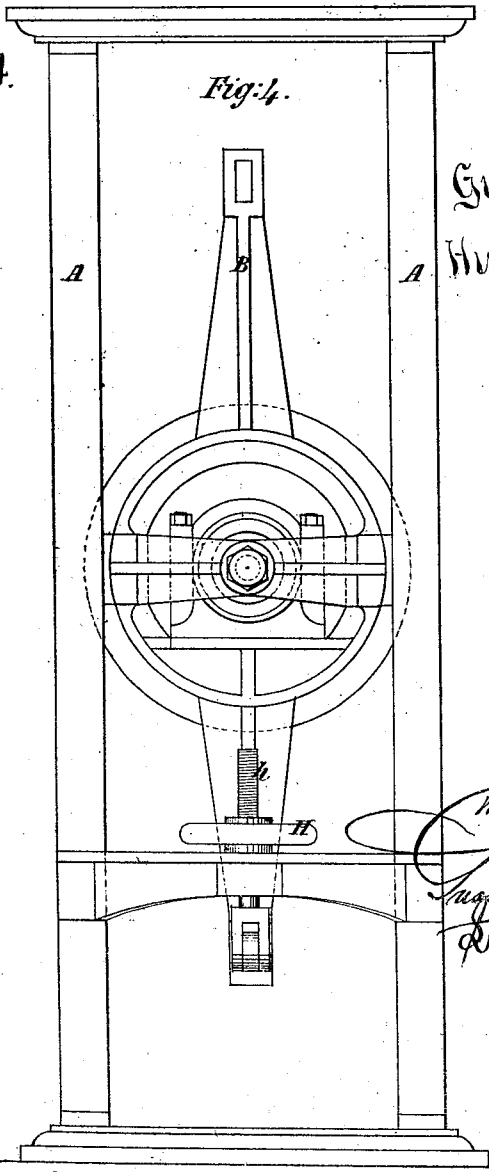
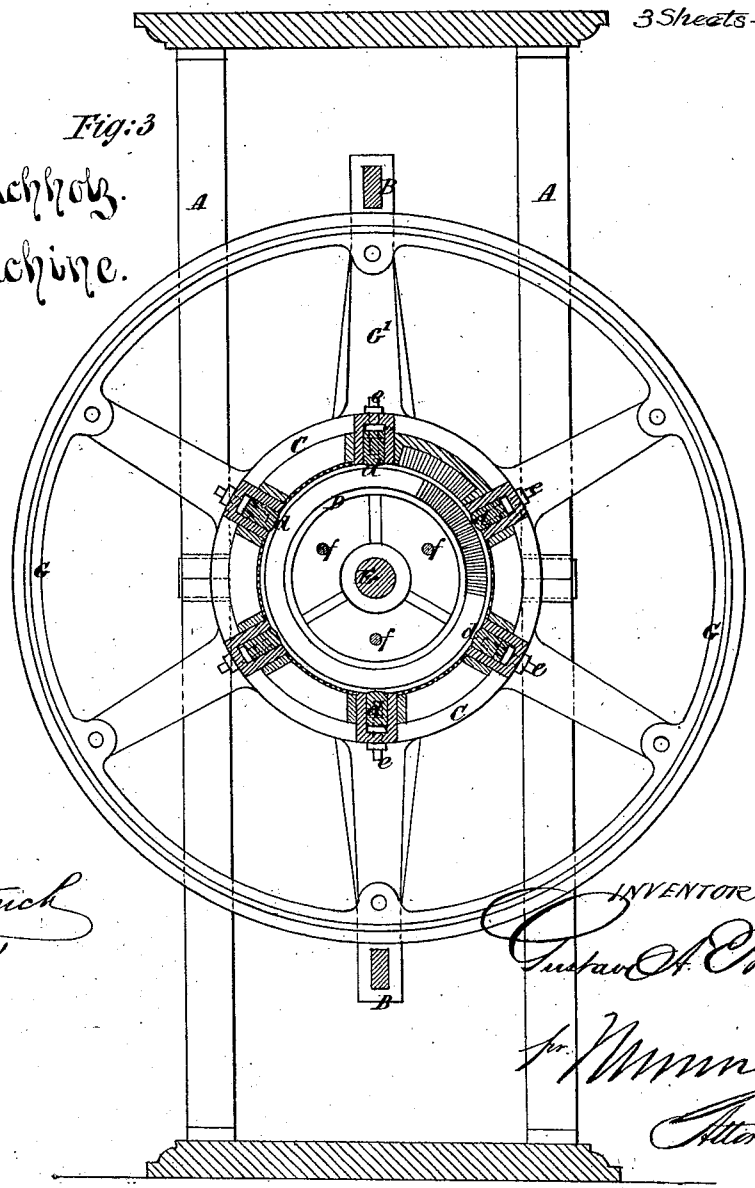


Fig:3



Gustav A. Buchholz.

Hulling Machine.

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United States Patent Office.

GUSTAV ADOLPH BUCHHOLZ, OF REGENT'S PARK, ENGLAND.

Letters Patent No. 102,764, *dated May* 10, 1870.

IMPROVEMENT IN HULLING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GUSTAV ADOLPH BUCHHOLZ, of Regent's Park, in the county of Middlesex, England, have invented a new and improved Hulling-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification.

This invention relates to improvements in the horizontal or longitudinal hulling-machine for which I obtained Letters Patent in Great Britain, dated 5th January, 1865, the object being to reduce the cost of its construction, and increase its efficiency, and consists, instead of making the outer case and the drum which it contains conical, as heretofore, in making both cylindrical, and mounting the central shaft, which carries the drum and supports the case in position, so that it may receive any desired inclination toward the delivery-end of the machine.

It also consists in an application of friction surfaces to the inner surfaces of the sections of the outer case.

In the accompanying drawings—

Figure 1 shows my improved machine in side elevation;

Figure 2 is a longitudinal section of the working parts of the same;

Figure 3 is a transverse section of the machine, taken in the line 1 2 of fig. 1; and

Figure 4 is an elevation of the delivery-end of the machine.

A A are standards, braced together at top and bottom, and forming a fixed frame, within which is mounted a movable frame, B B, carrying a cylinder, C, and the mechanism connected therewith.

The frame B is fitted with trunnions at one end, to allow it to rock in the fixed frame A.

The other end of the frame B is capable of receiving a vertical adjustment through a regulating-screw attached thereto, and pendent from the fixed framing.

The cylindrical case I cast, by preference, in flanged sections, as shown in fig. 2, and I bolt the same together.

Each of these sections will be cast with two, three, or more rectangular openings, to receive at their inner peripheries either panels of wire-gauze or perforated metal, for admitting air into and allowing of the discharge of bran from the case; or the openings may be filled with steel blades fitted according to my patent, dated November 23, 1869, No. 97,039; or they may receive alternately ventilating surfaces and blades.

Between these panels, and on the inner periphery of the case, I fit ribs or blocks of vulcanized India rubber, *d d*, or its equivalent, as friction-surfaces, the protrusion of which I regulate by means of radial screws *e e*, access to the heads of the screws being obtained outside the case.

Within this cylinder C, I mount a cylindrical drum, D, which is made fast to a longitudinal shaft, E, having its bearings in the adjustable frame B.

This drum D is cast in sections, and with annular rebated ribs, d^1, on its periphery, to receive steel blades, d^2, with which it is covered from end to end.

These sections are strung on the central shaft, and keyed thereto, and they are connected together by screw tie-rods *f f*, running through all the sections.

One end of the shaft is fitted with a driving-pulley, F, through which a rapid rotary motion is imparted to the drum by means of a band from any prime mover.

A slow rotary motion in the opposite direction is also given to the case, to increase the efficiency of the machine.

The pulley for driving the case is shown at G, and it is carried by an end plate, G′, made fast to the case.

This end plate is cast with a hollow boss, through which the feed is delivered to the case.

A fixed central feed-plate, *g*, is fitted to this boss, and through an opening in this plate the feed is delivered to the machine from a delivery-pipe or hopper, I.

When the machine is in action, the delivery-end (that opposite to the feed-end) is depressed by turning the hand-wheel H, which is fitted to the vertical screw *h*, by which the frame B is suspended at its adjustable end.

On the depression of the central shaft, the grain will then take a helical course through the machine.

The greater the depression of the central shaft, the quicker will be the delivery.

When, therefore, the action of the machine upon the grain is required to be increased, the shaft will have to be brought nearer to the horizontal, and *vice versa*.

The machine may be run until the efficiency of the blades has appreciably deteriorated by wear, when they will require to be changed.

Slight wear will show no depreciation, and considerable wear may be met by increasing the supply of grain.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The rubber blocks *d*, combined with the wire panels and case, as and for the purpose described.

2. The vertically-adjustable rocking frame B B, combined with a cylinder, C, having two or more rectangular openings, as and for the purpose described.

3. The vertically-adjustable rocking frame B B and cylinder C, combined with the drum D and longitudinal depressible shaft E.

This specification of my invention signed by me this 24th day of January, 1870.

G. A. BUCHHOLZ.

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