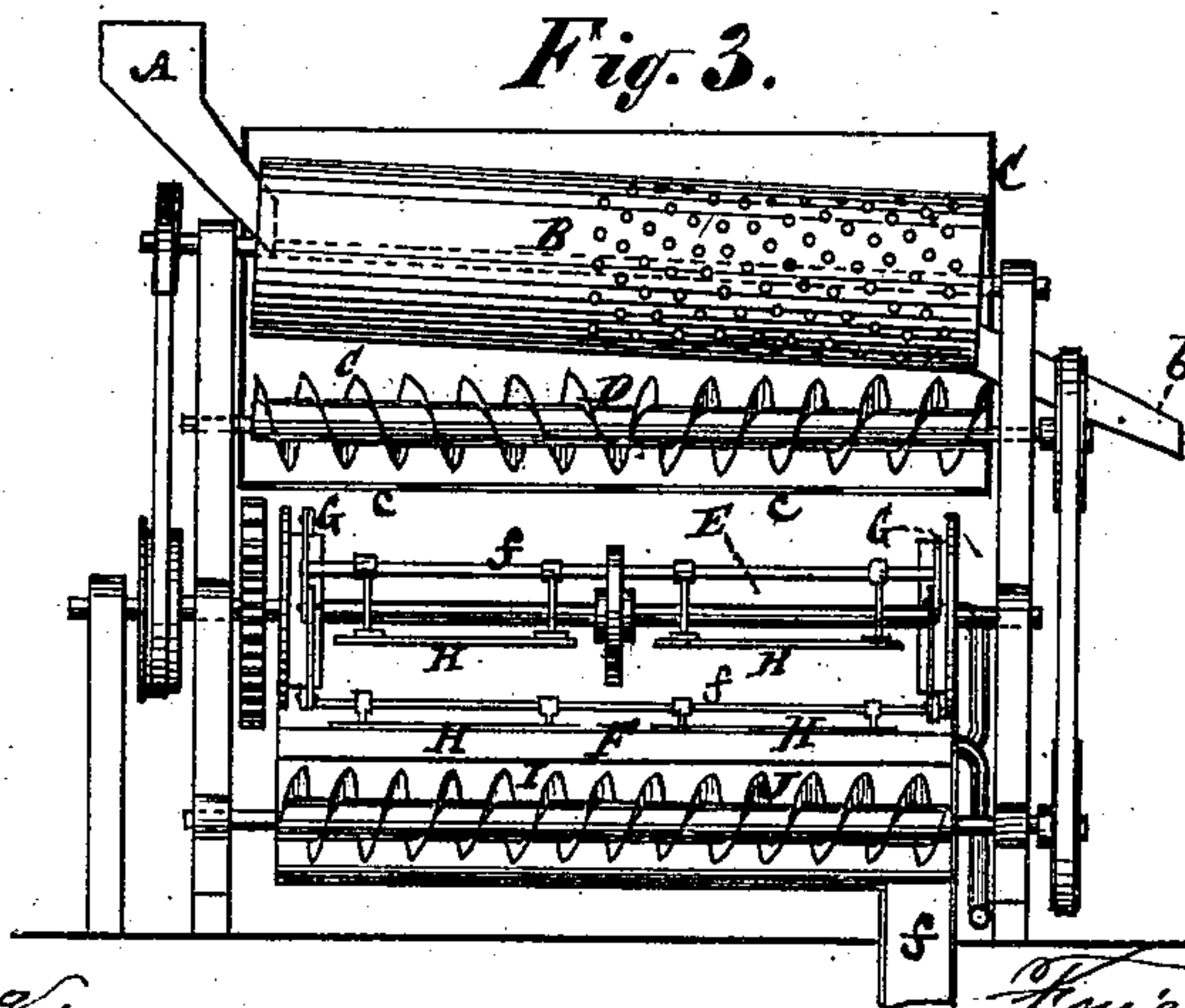
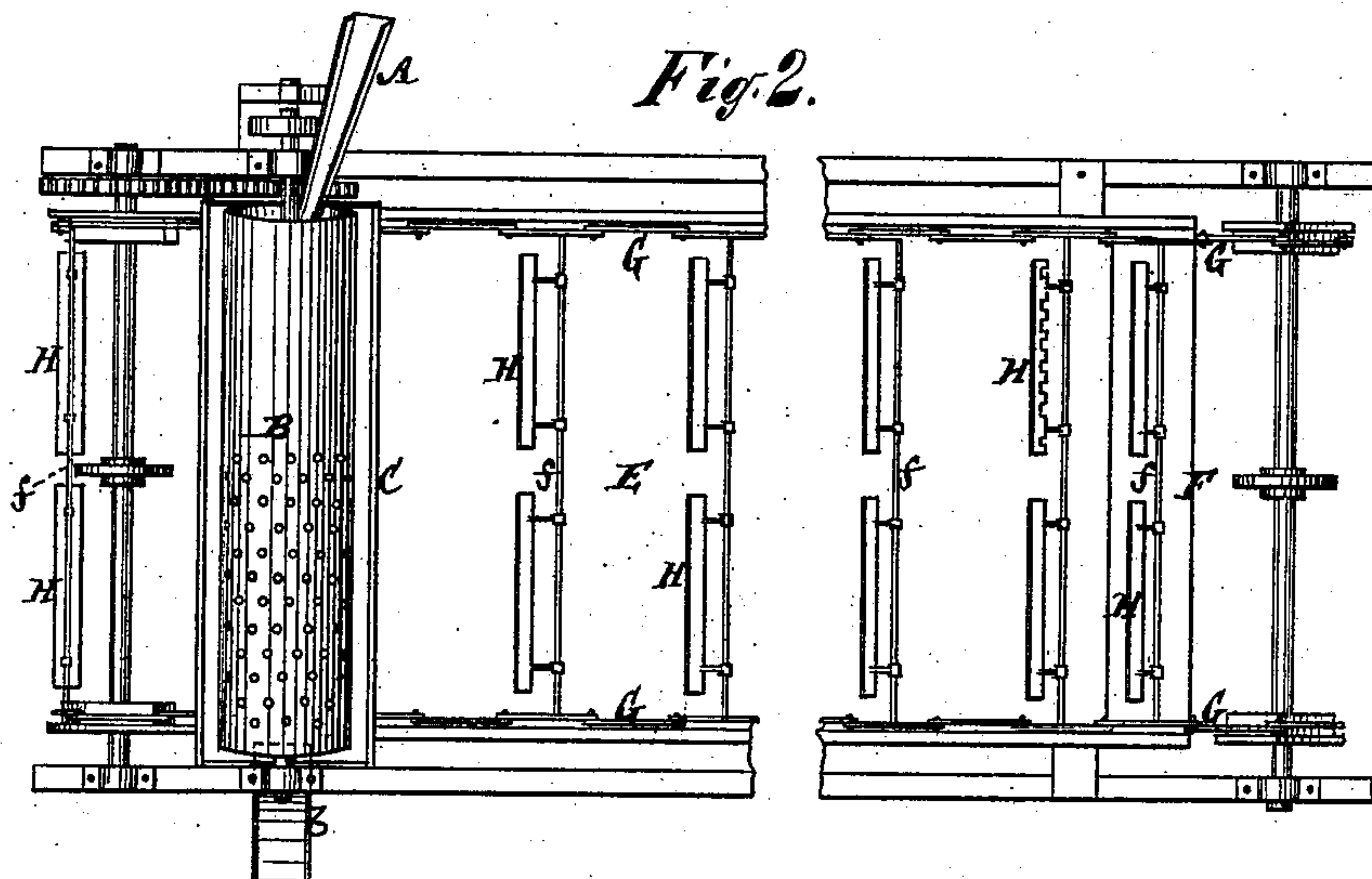
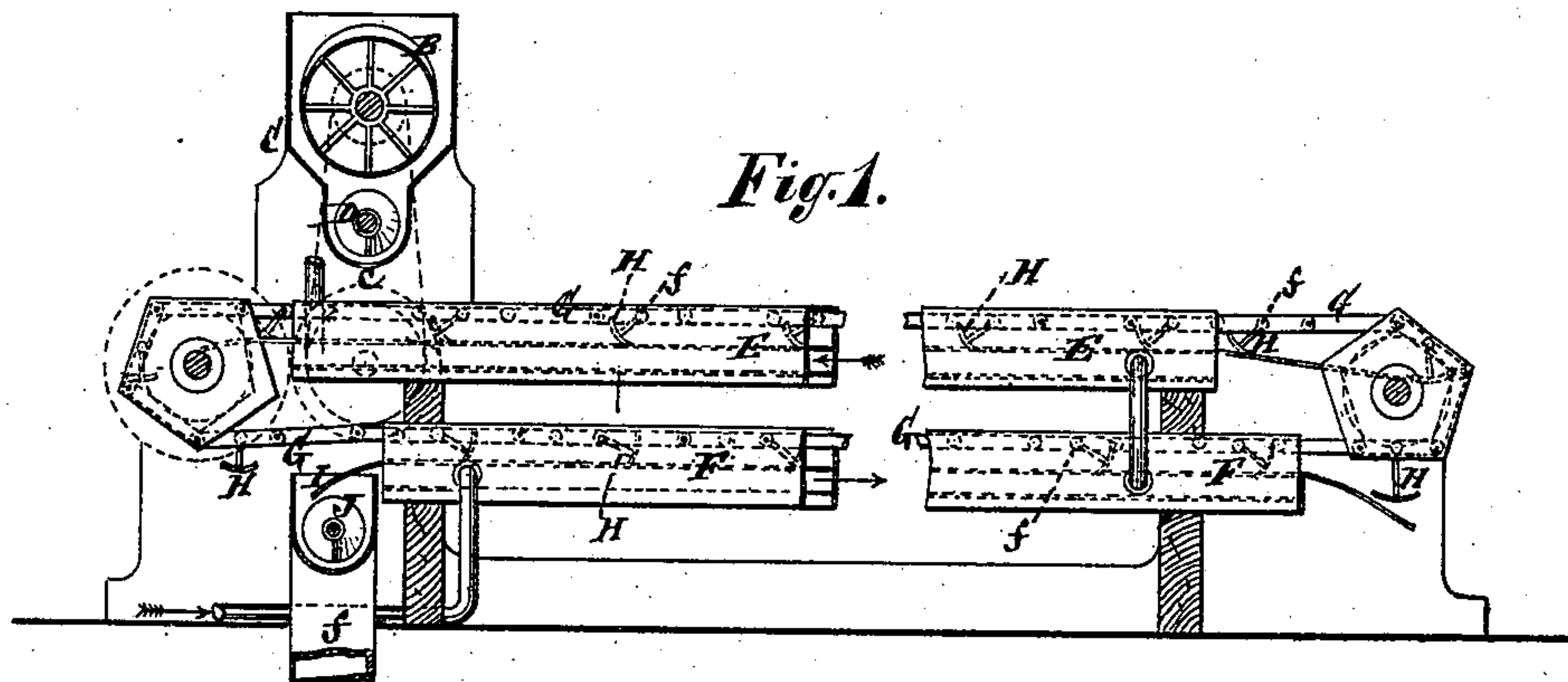


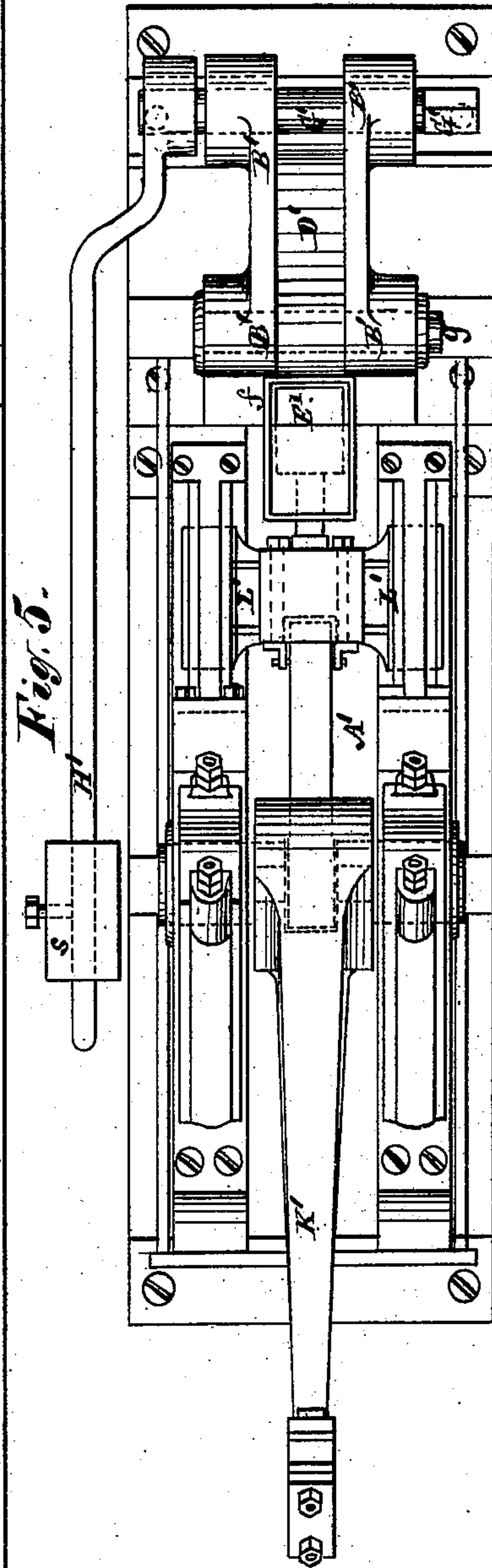
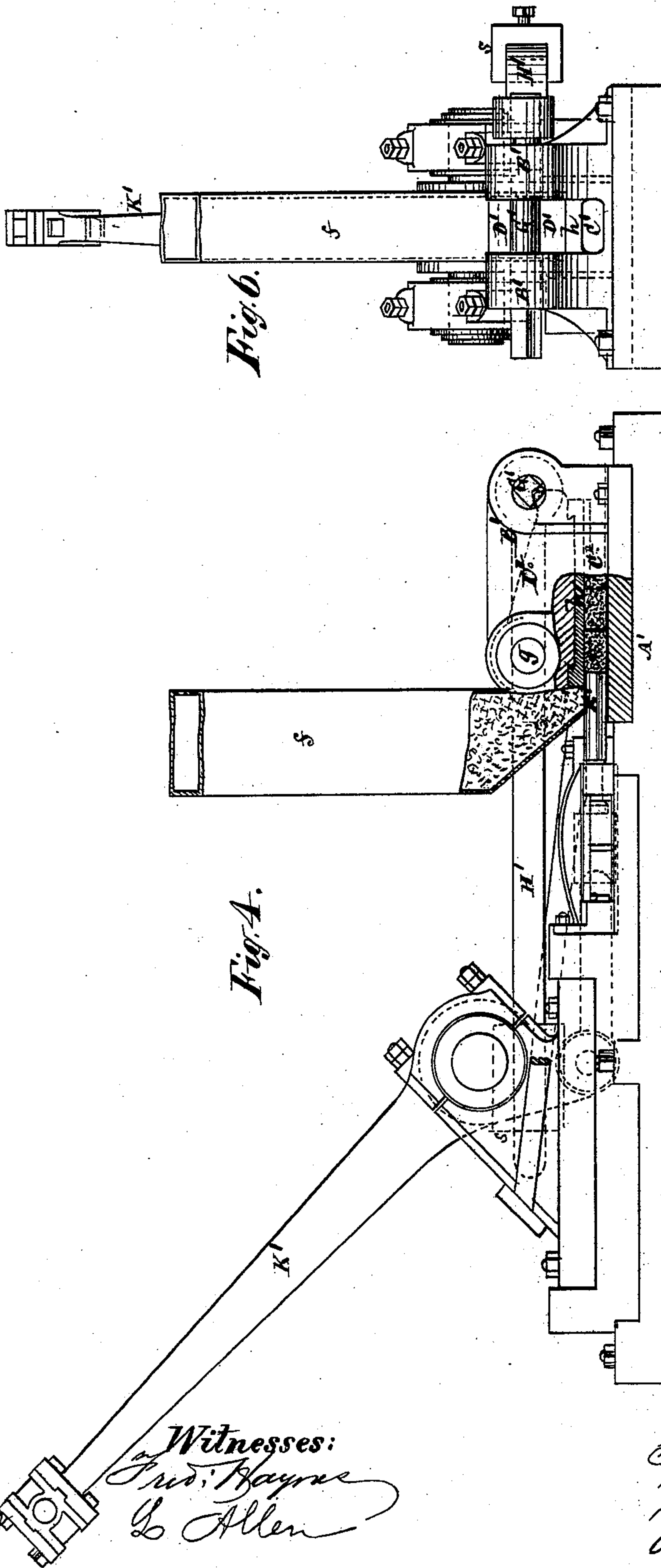
F. HACK.  
Apparatus for the Manufacture of Peat-Bricks.  
No. 204,816.  
Patented June 11, 1878.



*Witnesses:*  
*Henry Eichling.*  
*Wm. Haynes*

*Inventor*  
*Friedrich Hack*  
*By Wm. H. Brown & Allen*

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Witnesses:  
Fred. Haynes  
G. Allen

Inventor:  
Friedrich Hack  
by his Attorneys  
Brown & Allen



# UNITED STATES PATENT OFFICE.

FRIEDRICH HACK, OF HAMBURG, GERMANY.

## IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF PEAT BRICKS.

Specification forming part of Letters Patent No. **204,816**, dated June 11, 1878; application filed May 14, 1878.

*To all whom it may concern:*

Be it known that I, FRIEDRICH HACK, of Hamburg, Germany, have invented certain new and useful Improvements in the Manufacture of Peat into Bricks or Blocks, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

This invention has for its object the manufacture of peat into condensed masses or bricks by a dry and continuous process, without any preliminary preparation of said material before introducing it to the apparatus for converting it into brick; and relates to apparatus for treating the peat, in which said material is bolted by a revolving drum, then passed over one or more drying-tables, and subsequently conducted to the devices by which it is pressed into form.

The invention consists in a certain combination of a bolting or sifting drum, a right and left hand threaded screw distributor arranged in a receiver below said drum, one or more drying-tables below said distributor, an endless chain or chains of pendent scrapers or rakes for passing the bolted peat over said table or tables, and a conveyer for conducting said material to the press which gives it form or solidity. By this combination the bolted peat is evenly distributed over the drying-tables, and is kept loose or free thereon by the pendent rakes or scrapers without any liability to jam or pack, thus facilitating the drying of the peat.

The invention also consists in a novel construction of the press for solidifying the peat into detached masses or bricks, whereby a self-adjusting pressure on the peat is obtained, and the degree of pressure may be regulated at will.

Figure 1 represents a partly-sectional side elevation of a peat separating, drying, and distributing apparatus with attached conveyer for conducting the sifted and dried peat to the press. Fig. 2 is a plan of the same, and Fig. 3 is a front or end view thereof. Fig. 4 is a side elevation of a press used to form the peat into brick. Fig. 5 is a plan of the same, and Fig. 6 is an end view thereof.

Referring, in the first instance, to Figs. 1, 2, and 3 of the drawing, A is a hopper, into

which the peat, in its green state, is fed by an elevator or otherwise, and by which it is conducted into the upper end of a rotating reticulated cylinder or drum sieve, B, arranged in a transverse direction to and above the drying table or tables, and with its longitudinal axis at an inclination to the horizon. The lower end of said sieve is left open to provide for the escape by a spout, *b*, of lumps or pieces of peat too large to pass through the meshes of the sieve, while the finer portions or particles of the peat which are thrown out by the sieve are collected within a receiver, C. Arranged within said receiver below the drum-sieve B is a rotating screw-distributor, D, having right and left hand threads on it for the purpose of uniformly distributing the workable peat over the bottom of the receiver C, and so that it will be evenly delivered through one or more apertures, *c*, therein onto the upper surface of a hollow drying-table, E. This drying-table may be of sheet-iron, and may be heated by the circulation of steam within it, or in any other suitable manner.

G G are endless chains on opposite sides of the table E, and arranged to pass above and below it, and over an under hollow drying-table, F, which is also heated by steam or otherwise. These chains, which pass around drums or wheels at opposite ends of the tables, and have a continuous motion imparted to them by the wheels at one end, are provided with a series of peat rakes or scrapers, H, extending in detached sections crosswise over the tables, and which may be formed of plain or serrated plates and arms pendent on cross-bars *f*, connecting the two chains.

These devices H, by the motion of the chains carrying them, take hold of the peat as it is distributed from the receiver C onto one end of the table E and drag it over said table, turning it over and over, to more effectually expose it to the drying action of the table, and ultimately deliver it over the rear end of said table onto the under drying-table F, over which it is carried or dragged in a reverse direction by the devices H, and turned over and over as before to effect a still further drying of it. The peat thus dried is delivered, by the action of the devices H over the back end of the table F, into a lower receiver or



hopper, I, from whence it is discharged by a screw-conveyer, J, to a passage, spout, or duct, *f*, that conveys it to the press.

The press, which solidifies the dried peat and forms it into bricks, is or may be constructed as shown in Figs. 4, 5, and 6 of the drawings, and in which A' is a cast-iron foundation plate, on or near one end of which is secured a double-cheeked frame, B' B', constructed to form in between the cheeks the lower portion of a mold, C'. Arranged between the cheeks of this lower mold-frame, and pivoted thereto at or near their inner end by a joint-pin, *g*, is a jaw-piece, D', which is constructed to form, by means of a steel facing-piece, *h*, the upper portion of the mold C'. The shape of the mold in its cross-section is shown in Fig. 6 of the drawings.

The duct *f*, which conveys the dried peat to the press, is arranged to deliver said material into the mold at or through the inner end of the latter, beneath its jointed attachment to the lower mold-frame, by the pin *g*, and immediately in front of a plunger, E', each time the latter completes its back stroke.

G' is a recessed or cam-shaped shaft, having its bearings in the front or outer end of the double-cheeked or lower mold-frame B' B', and arranged to bear down upon a projection on the upper surface of the front or outer end portion of the jaw-piece D', subject to any desired given weight or pressure by a weighted lever, H', applied to either or both ends of the cam or cam-shaped shaft G', and preferably having its weight adjustable along it to vary the amount of pressure of the jaw-piece D' on the peat in the mold C'.

The plunger E' is reciprocated horizontally into and out of the mold through the inner or back end of the latter, and beneath or through the lower end of the duct *f* by means of a lever, K', which may be actuated by any suitable motor, and which is connected with the plunger through a bar and sliding cross-head, L', working in suitable guides. The forward action of the plunger presses a sufficient quantity of peat into the mold to form a brick, the thickness of which will depend upon the length of the plunger-stroke, the closing of the jaw-piece D', as controlled by the lever H', giving the necessary resistance to the plunger and providing for a self-adjusting action of the pressure while the press is at work.

I claim—

1. The combination of the bolting or sifting drum B, the receiver C below said drum, the right and left hand threaded screw distributor D within said receiver, one or more drying-tables, E F, the endless traveling chain or chains G, the rakes or scrapers H, carried by said chain or chains, the receiver or hopper I, and the screw-conveyer J, for conducting the dried peat to the pressing devices, substantially as specified.

2. The combination, with the duct or passage *f*, of the reciprocating plunger E', the mold C', the pivoted jaw-piece D', forming the movable portion of said mold, and the weighted lever H', essentially as and for the purposes described.

FRIEDRICH HACK.

Witnesses:

F. ENGEL,  
E. OFPERT.