

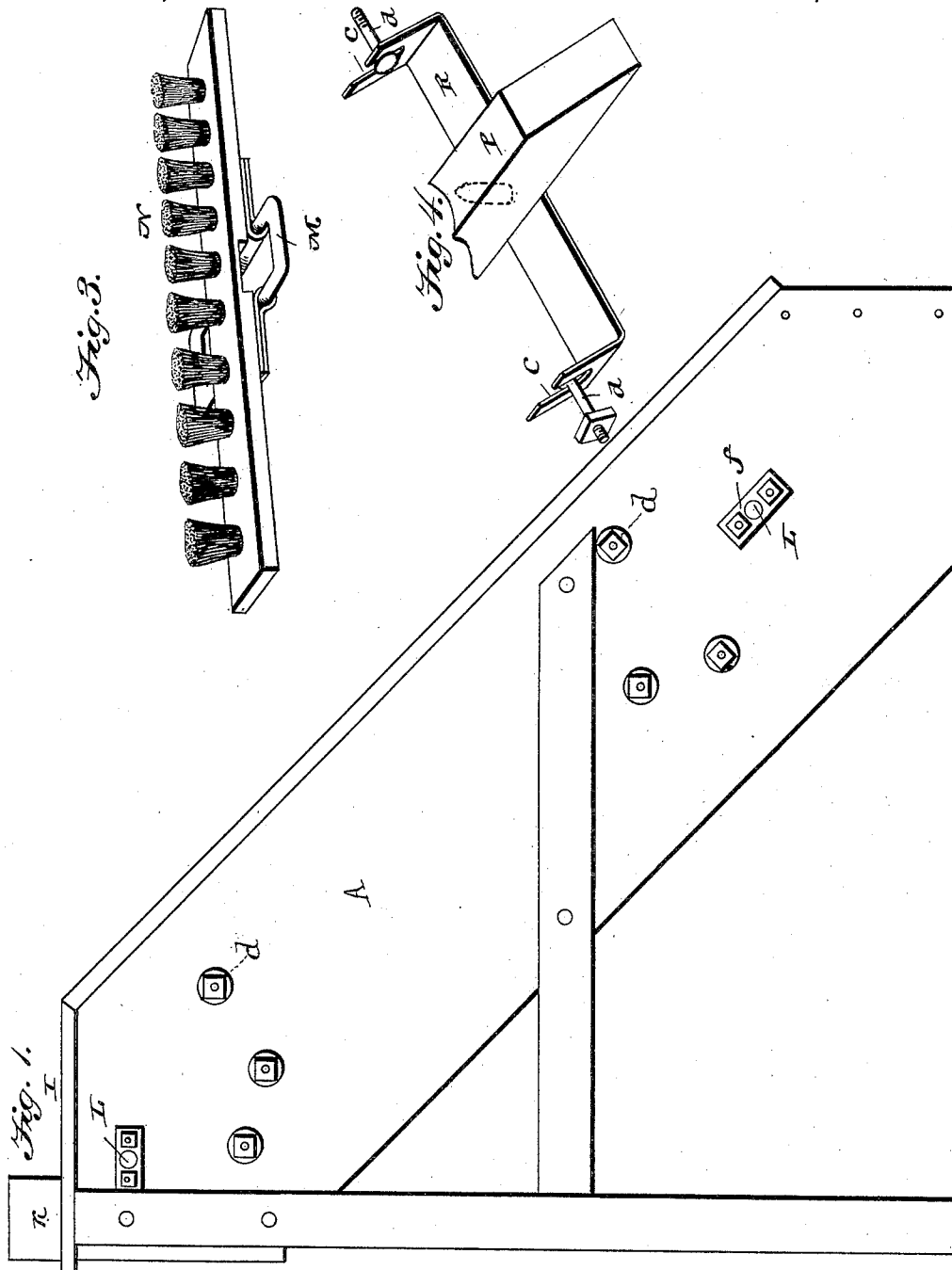
(No Model.)

2 Sheets—Sheet 1.

T. PONSAR.
GRAIN SCALPER AND GRADER.

No. 417,836.

Patented Dec. 24, 1889.



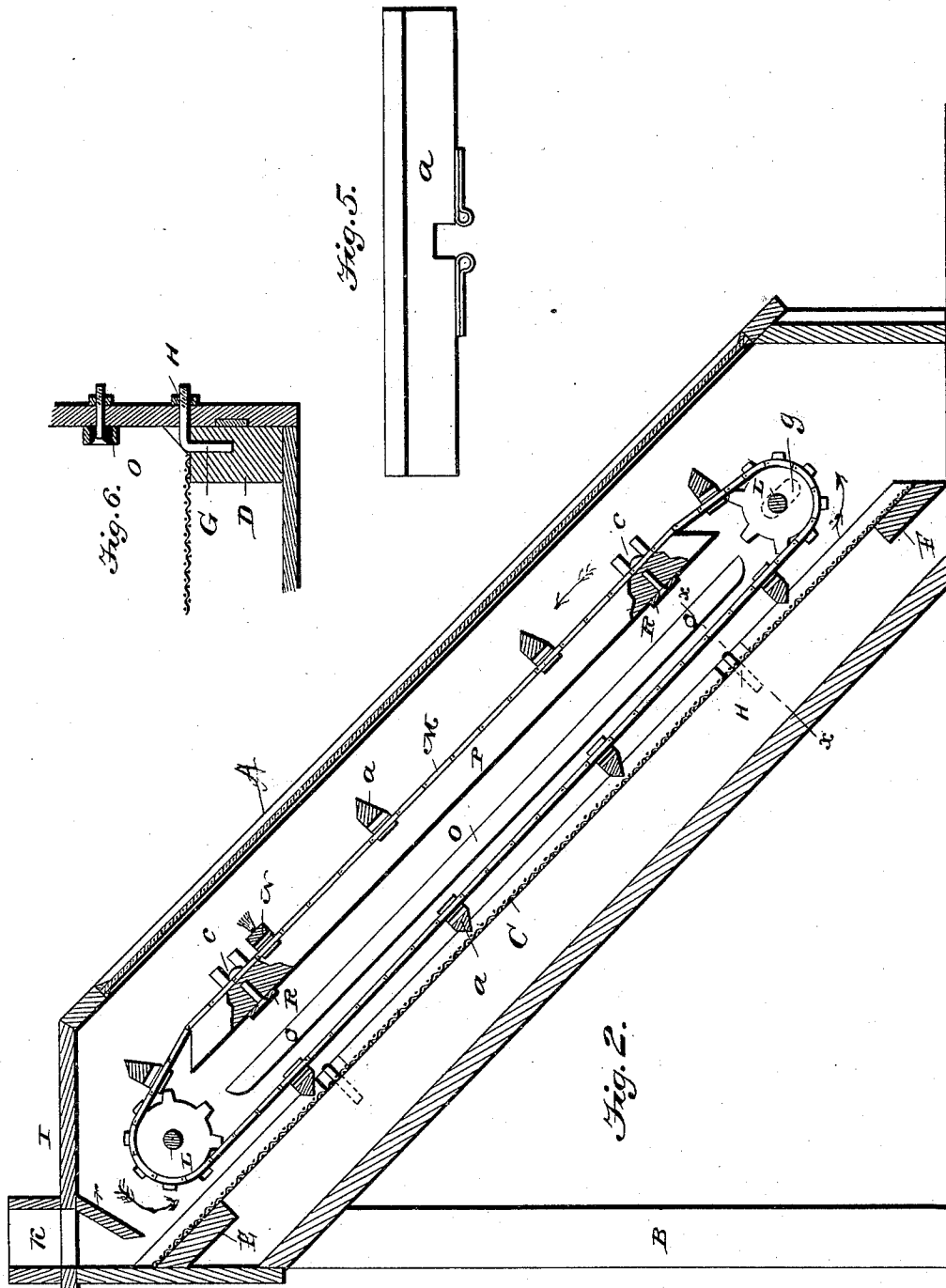
Witnesses
J. H. Schiller
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Inventor
Theodore Ponsar.
 By his Attorney
James Shulby

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UNITED STATES PATENT OFFICE.

THEODORE PONSAR, OF TALMAGE, NEBRASKA.

GRAIN SCALPER AND GRADER.

SPECIFICATION forming part of Letters Patent No. 417,836, dated December 24, 1889.

Application filed April 24, 1889. Serial No. 308,429. (No model.)

To all whom it may concern:

Be it known that I, THEODORE PONSAR, a citizen of the United States, residing at Talmage, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Grain Scalpers and Graders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to means for grading and separating grain that has been partly comminuted or broken by rollers, stones, or otherwise; and it consists in the novel construction and arrangement of devices, which will be fully understood from the following description and claim, taken in connection with the annexed drawings, in which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a perspective view of one of the brushes removed from the endless chain, and Fig. 4 is a view of one of the angular cross-bars with the longitudinal strip and bolts for securing the bar to the main frame in position. Fig. 5 is a view of one of the strips carried by the endless chain; and Fig. 6 is a sectional detail view of a portion of the main frame with the sieve in position, showing the means for tightening the latter.

Referring to the said drawings, A designates a frame, which is preferably arranged at an angle of from forty to seventy-five degrees with the floor of the building in which it is used, and upon which it is supported by upright posts B, attached to the frame. The upper inclined side of the frame A is preferably provided with a hinged door arranged for opening at will, while its lower inclined side is permanently closed. At a distance of a few inches, more or less, from the inclined bottom I arrange a sieve, preferably of wire-cloth, designated by C on the drawings. It is firmly attached to side bars D and head and foot blocks E and F, respectively.

For the purpose of tightening the sieve laterally, I provide hooks G, which are secured in the side bars D, and are provided with threaded heads and nuts, as shown at H. The threaded head of these hooks or bolts are passed through the sides of the main frame

and the nuts secured on the projecting ends thereof.

I indicates the top of the main frame, in which a hopper is arranged, indicated by the letter K.

L represents shafts arranged, respectively, near the top and bottom of the frame A and having their bearings in the sides thereof, and each provided with a sprocket-wheel, with which the sprocket-chain M engages and works. The movement of its upper face is always directed from the bottom upward upon the surface of a supporting-block P. On this chain I arrange strips of wood or metal *a* at a distance of about four or five inches apart and of a length corresponding with the width of the sieve. The sides of these strips *a* that do not rest on the sprocket-chain are beveled, so as to present partially-sharpened edges, to the end that they may more effectually serve as scrapers and spreaders of the stock over the entire surface of the sieve, as hereinafter mentioned. Upon the sprocket-chain I also arrange a brush. (Marked N.) This brush, which comes in contact with the surface of the sieve as the chain is moved, keeps the meshes thereof open and free. There are guide bars or slats for this brush arranged on the inner sides of the main frame and marked O. They are respectively provided with slots and thumb-nuts, as shown, to the end that they may be adjusted up or down at will, and thereby regulate the pressure of the brush upon the sieve. This is effected by making the block of the brush sufficiently long to permit its ends to travel under the guide-bars.

R indicate bars upon which the supporting-block P rests. They are preferably made of metal and are adjustable by means of their slots *c* and thumb-nuts *d*. It is obvious that the sprocket-chain may be tightened or loosened at will by means of these adjustable bars. I also make the lower shaft adjustable by making slots in the walls of the main frame and journaling said shaft in adjustable blocks *f*, which are secured to said walls by nuts and screws, as shown. One of the slots in the wall of the frame through which the lower shaft passes is shown by dotted lines on Fig. 2 by the letter *g*.

In operating my machine power is applied to the upper shaft, and the partially-ground grain or stock is poured into the hopper, from whence it falls by gravity down the inclined surface of the sieve to a proper receptacle at the bottom thereof. On its passage downward it is beaten, rolled, and scraped by the action of the strips *a*. These strips also serve to control the movement of the stock downward and prevent it from moving too rapidly. The result of said movement is that the flour and middlings pass through the meshes of the sieve and are conducted to the bottom of the main frame down the lower wall thereof, while the coarser and broken wheat passes downward to the bottom on the surface of the sieve.

I find that from fifteen to thirty revolutions per minute constitute sufficient speed for the shafts.

From the construction illustrated it will be seen that I have a permanently-arranged casing inclosing the entire mechanism, including the endless chain carrying the clearing and retarding devices.

This machine is designed for separating flour and middlings from broken grain after the grain has been ground by rollers or burrs.

I am aware that it is not new to provide a cockle-machine with an adjustable inclined frame carrying a sieve, and arrange an endless sieve above the same in an exposed man-

ner. It will also be seen by my construction that the hopper is provided with a deflecting-board *r*, arranged within the casing, so that the broken grain may be directed to the sieve and prevented from striking the endless chain at the entrance.

Having described my invention, what I claim is—

In a machine for separating flour and middlings from broken grain, the combination, with the inclosing-case having a screen fixed therein at an angle of between forty and seventy degrees and having the hopper *K* at its upper end and the discharges at its lower end above and beneath the screen, respectively, of the guide-bars *O* on the inner face of the side walls of the casing, the vertically-adjustable supporting block or strip, the slotted bars *R*, secured to the block, the bolts and nuts for securing the bars to the case, the endless chain mounted on the sprocket-wheels, the beveled scrapers *a*, secured to the chain, and the clearing-brush *N*, also secured to the chain by the link *M*, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE PONSAR.

Witnesses:
HERMAN H. TANGEMAN,
AUGUST BRUNE.