

(No Model.)

2 Sheets—Sheet 1.

H. GSCHWENDER.
RYE EXTRACTOR.

No. 453,185.

Patented June 2, 1891.

Fig. 1.

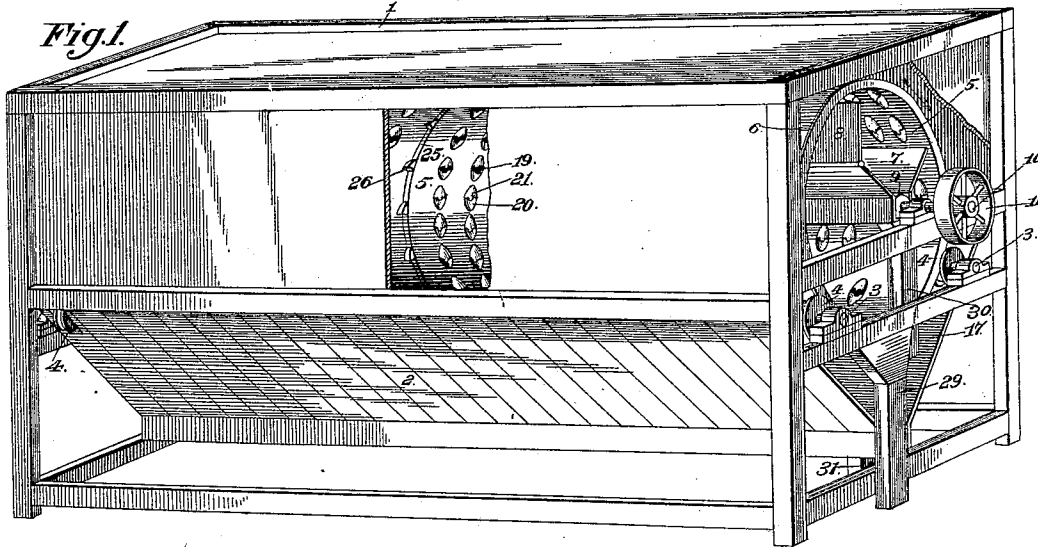


Fig. 2.

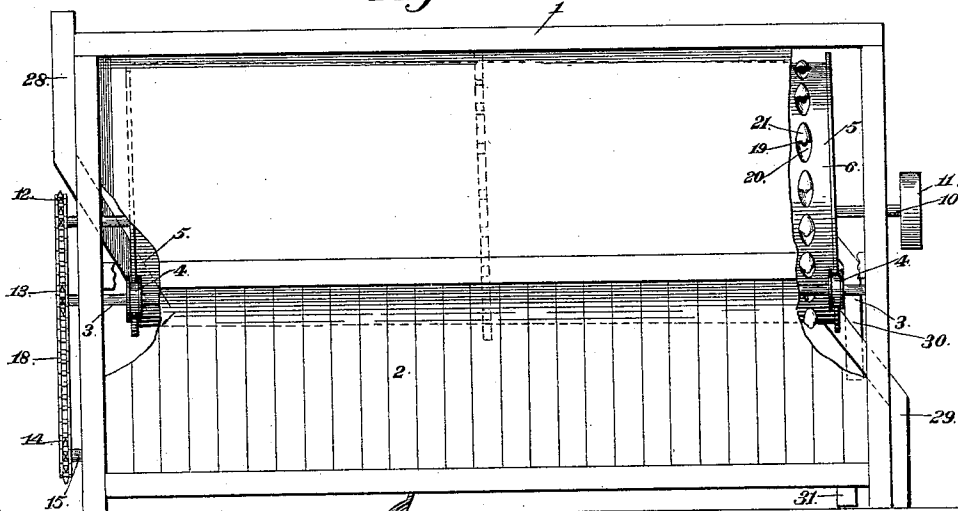
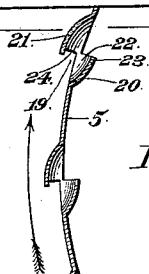


Fig. 5.

Witnesses

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By his Attorneys,

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(No Model.)

2 Sheets—Sheet 2.

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EYE EXTRACTOR.

No. 453,185.

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Fig. 3.

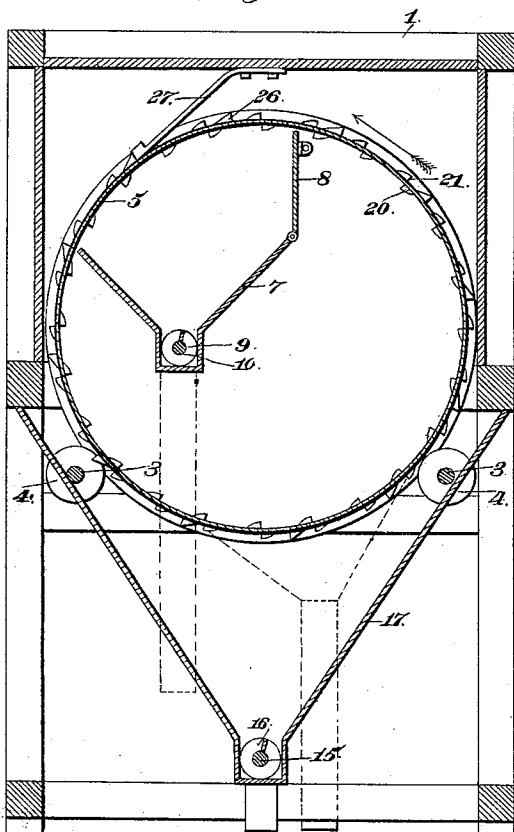


Fig. 4.

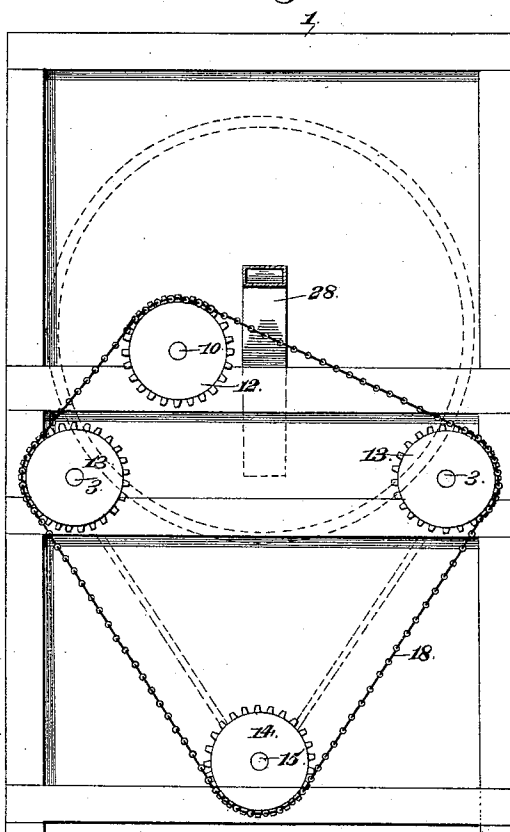


Fig. 6.

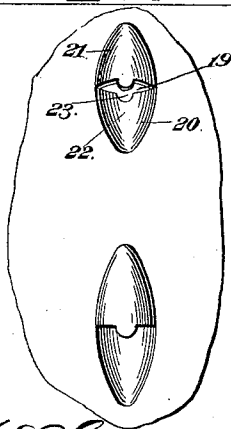
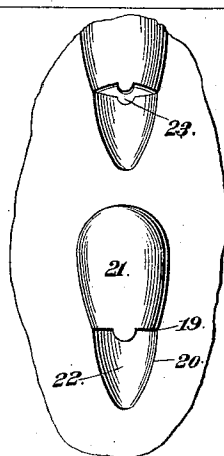


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY GSCHWENDER, OF OIL CITY, WISCONSIN.

RYE-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 453,185, dated June 2, 1891.

Application filed December 31, 1890. Serial No. 376,399. (No model.)

To all whom it may concern:

Be it known that I, HENRY GSCHWENDER, a citizen of the United States, residing at Oil City, in the county of Monroe and State of Wisconsin, have invented a new and useful Rye-Extractor, of which the following is a specification.

This invention relates to machines for extracting impurities—such as rye, oats, chess, and the like—from wheat; and it has for its object to provide a machine of this class which shall be simple in construction, durable, and efficient in operation.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of a machine constructed in accordance with my invention, a portion of the casing having been broken away for the purpose of showing the interior construction. Fig. 2 is a front elevation with a part of the casing broken away. Fig. 3 is a vertical transverse sectional view. Fig. 4 is an end elevation. Fig. 5 is a sectional detail view of a portion of the revolving cylinder. Fig. 6 is a plan view, on an enlarged scale, of a portion of the inner side of said cylinder, showing the construction of the indentations in said cylinder. Fig. 7 is a plan view, on an enlarged scale, showing a modification in the construction of said indentations.

Like numerals of reference indicate like parts in all the figures.

1 designates a frame or casing, which is constructed with inclined bottom pieces 2, forming a hopper. Suitably journaled in the ends of the casing are a pair of longitudinal shafts 3 3, having grooved wheels or disks 4 4, upon which is supported the cylinder 5, which is provided near each end with a ring or band 6, which said bands have bearings in the grooved wheels or disks 4, upon which the said cylinder is thus supported. The cylinder 5 is arranged in a slightly-inclined position from the feed end toward the tail end or discharge.

7 designates a hopper, which is arranged longitudinally in the casing 1 within the cylinder 5. Said hopper is provided at its up-

per front side with a hinged plate or deflector 8, which may be adjusted to any desired position with relation to the side of said hopper. In the bottom of the latter is arranged an endless spiral conveyer 9, the shaft of which 10 is extended through the ends of the casing and is provided at one end with a driving-pulley 11 and at the opposite end with a band-wheel or sprocket-wheel 12. The ends of the shafts 3 are provided with sprocket-wheels 13, arranged in alignment with the sprocket-wheel 12, and a fourth sprocket-wheel 14 is mounted upon the projecting end of the shaft 15 of a spiral conveyer 16, which is mounted in the bottom of the hopper 17, formed by the converging bottom pieces 2 of the frame or casing. An endless chain 18 connects the sprocket-wheels 12, 13 13, and 14, thus transmitting motion from the shaft 10 to the shafts 3 3 and 4 and causing the cylinder which is supported upon the wheels or disks 4 upon the shafts 3 to revolve slowly.

The cylinder 5 is constructed of sheet metal and is provided with numerous openings 19, each of which is formed by two opposite indentations 20 and 21. The lower indentation 20, whereby is meant the one which is the lowest on the ascending side of the cylinder in operation, is formed in the outer side of the cylinder, thus forming upon the inner side of said cylinder a small pocket 22, the upper edge of which is provided with a recess 23, (clearly shown in Figs. 6 and 7 of the drawings.) The pocket 22 may be described as being semi-conoidal or triangular in shape. The upper indentation 21, which is formed in the inner side of the cylinder, forms a pocket 24 upon the outer side of the latter. Said indentation may be of a shape exactly corresponding with that of the lower indentation, or it may, as shown in Fig. 7 of the drawings, be elliptical in shape, its upper end being wider than its lower end where it joins the perforation or opening formed between itself and the lower indentation 21. The shape of the said upper indentation may be otherwise modified without departing from the spirit of my invention.

The cylinder is provided with an exterior ring or band 25, having a series of teeth or ratchets 26, adapted to engage a spring-beater 27, which is mounted in the casing and

which will serve to strike the cylinder a series of light blows that will have the effect to dislodge any seeds that might become wedged in the pockets of the cylinder.

5 28 designates a feed-chute at one end of the machine. At the opposite end are arranged the chutes or spouts 29, 30, and 31, communicating, respectively, with the cylinder 5 and with the hoppers 7 and 17.

10 The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. The wheat which is to be
15 cleaned is fed into the cylinder 5, which revolves slowly through the spout or chute 28. Small seeds and impurities will pass through the perforations 19 into the hopper 17, whence they are carried off by the spiral conveyer 16. Larger grains—such as rye and oats—
20 will be engaged by the pockets 22 and become loosely wedged in the latter, thus being carried in an upward direction by the cylinder over the plate or deflector 8, which is hinged to the front side of the hopper 7, into
25 which said grains of oats and rye will be dumped. The action of the beater 27 will serve to dislodge the said grain, if necessary. The wheat-grains, on the other hand, being rounder and more plump, will not engage or
30 be lifted by the pockets 22, owing partly to the peculiar shape and the small capacity of said pockets and also to the recesses 23 at the upper edges of the latter. The upper indentations or pockets 24 serve partly to guide
35 the small seeds and impurities through the perforations 19 and partly to accommodate the oats and rye that may become seated in and elevated by the pockets 22. The oats and rye that are discharged into the hopper 7
40 will be carried off from the latter through the

spout 30 by the action of the spiral conveyer 10, and the cleaned and purified wheat eventually escapes at the tail end of the cylinder through the spout or tube 29.

Having thus described my invention, what I claim is—

1. In a machine of the class described, the combination of the outer casing having the hopper 17 and spiral conveyer 16, the interior hopper 7, having spiral conveyer 9 and
50 hinged deflector 8, and the revoluble sheet-metal cylinder having opposite indentations, the lower indentations forming interior and the upper indentations forming exteriorly-arranged pockets, being provided with re-
55 cesses at their upper edges, all arranged and operating substantially as set forth.

2. In a machine of the class described, the herein-described sheet-metal cylinder having
60 opposite indentations, the lower indentations forming interior and the upper indentations forming exteriorly-arranged pockets, said interior pockets being provided at their upper
65 edges with recesses, substantially as and for the purpose set forth.

3. In a machine of the class described, the herein-described sheet-metal cylinder having
70 opposite indentations forming recesses or pockets and intermediate perforations, said upper pockets being arranged exteriorly and of increasing width toward their upper ends,
substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY GSCHWENDER.

Witnesses:

C. H. FRANCISCO,
FRED DENTER.