

(No Model.)

N. C. GAUNTT.
WHEAT GRADING MACHINE.

No. 310,131.

Patented Dec. 30, 1884.

Fig. 1.

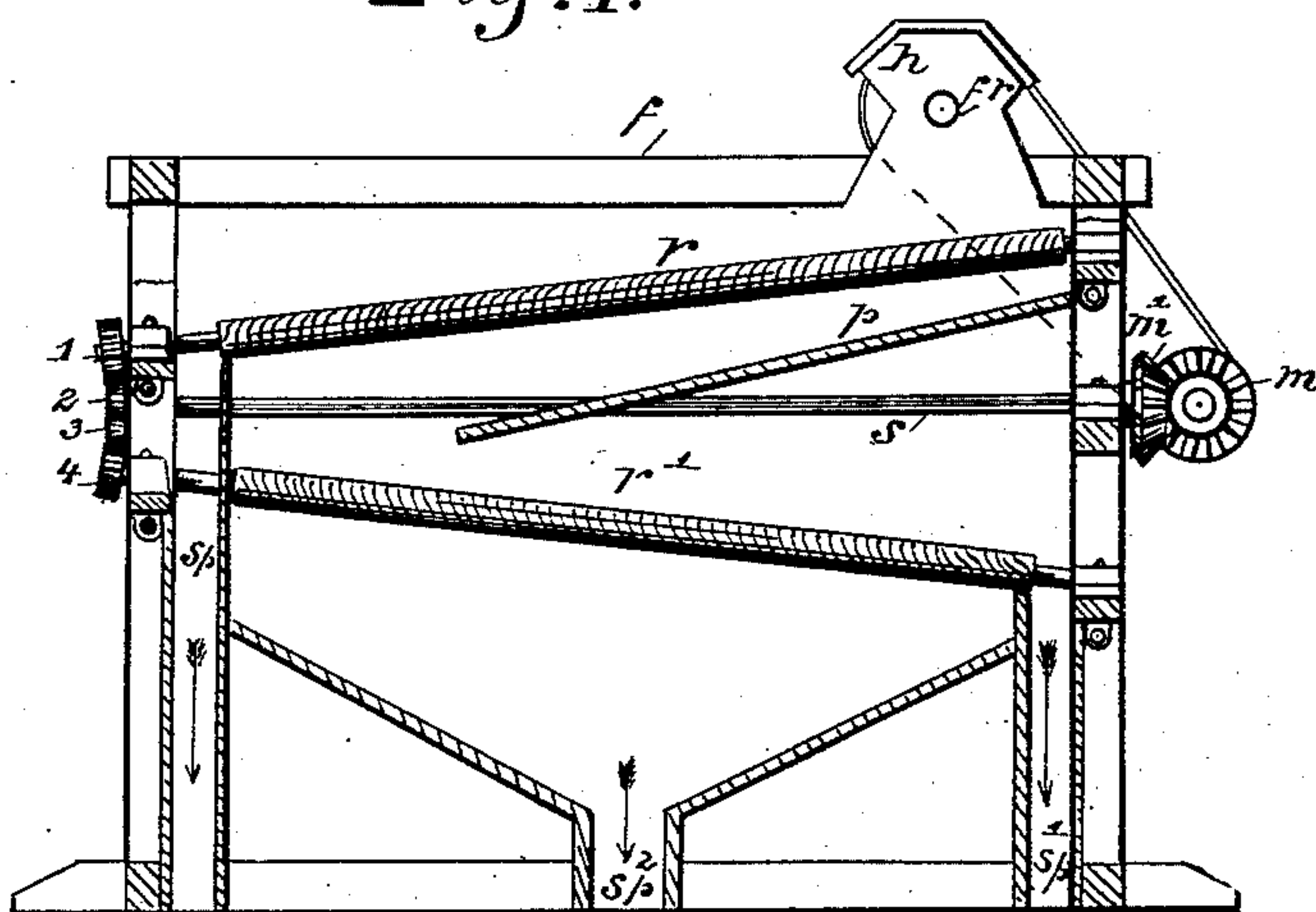


Fig. 2.

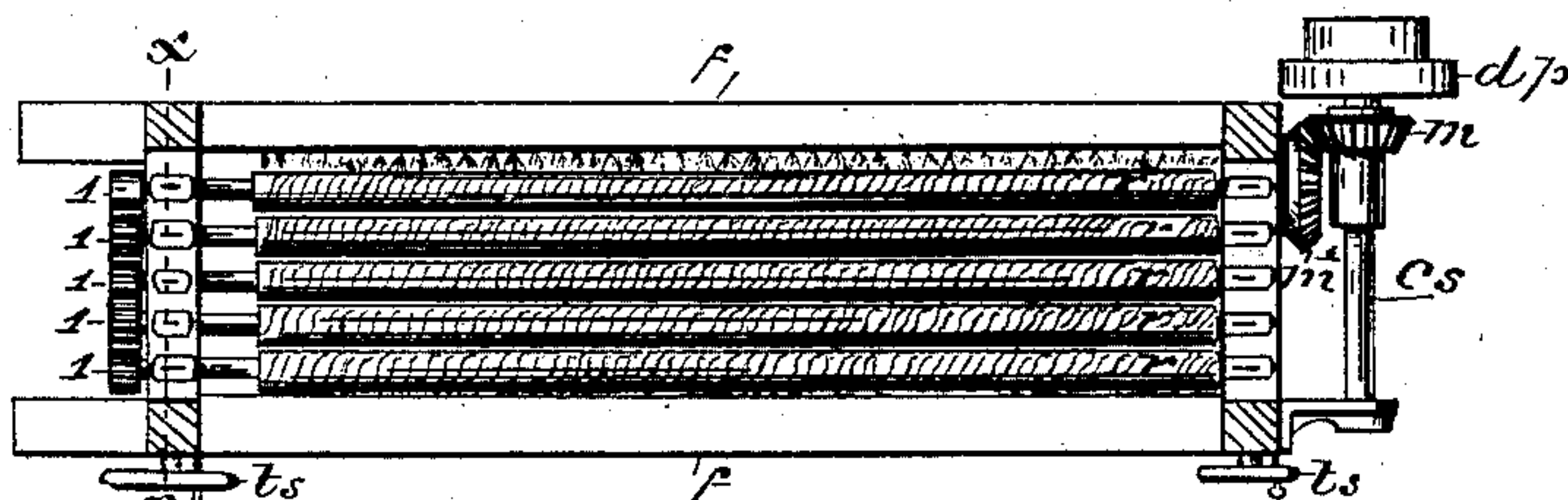


Fig. 3.

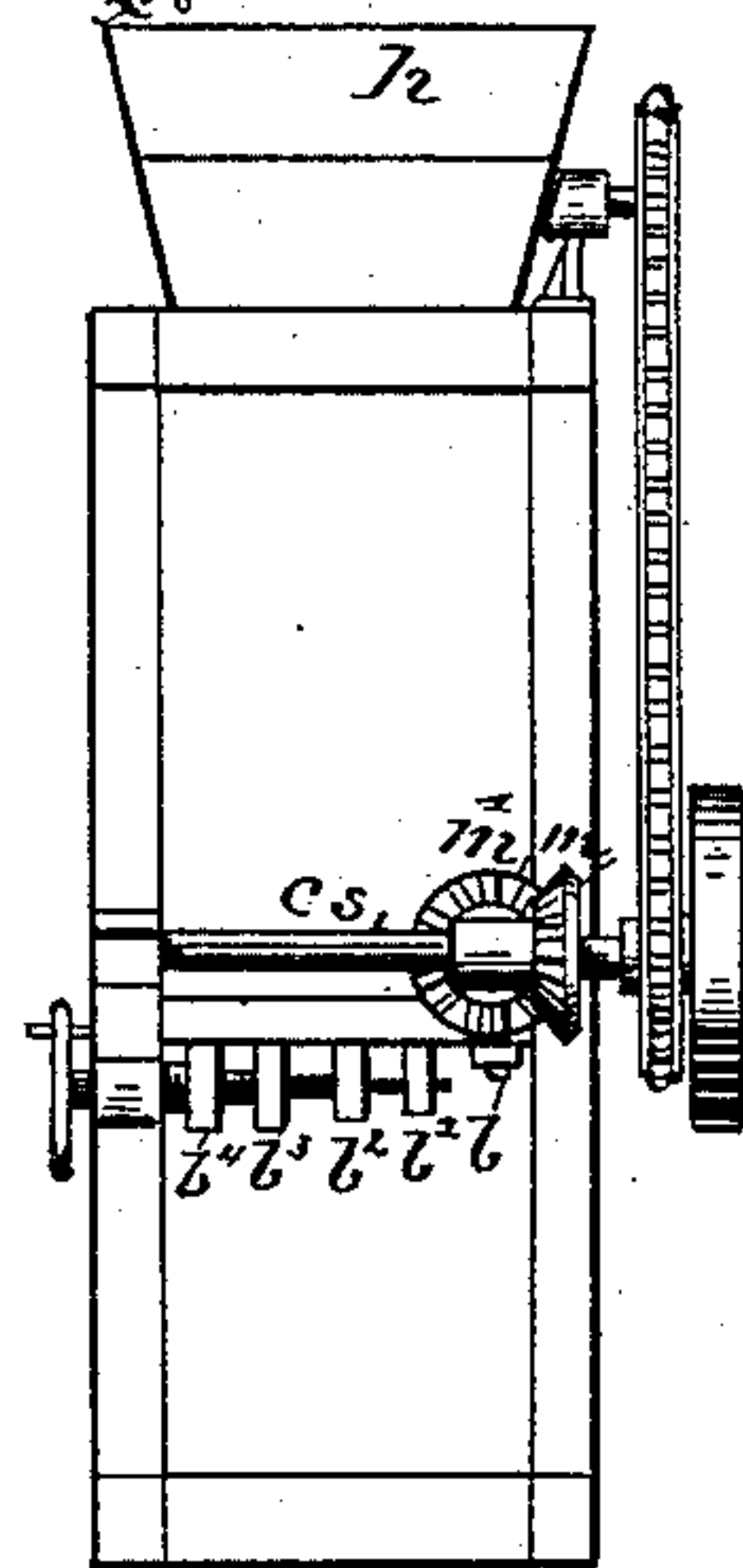


Fig. 4.

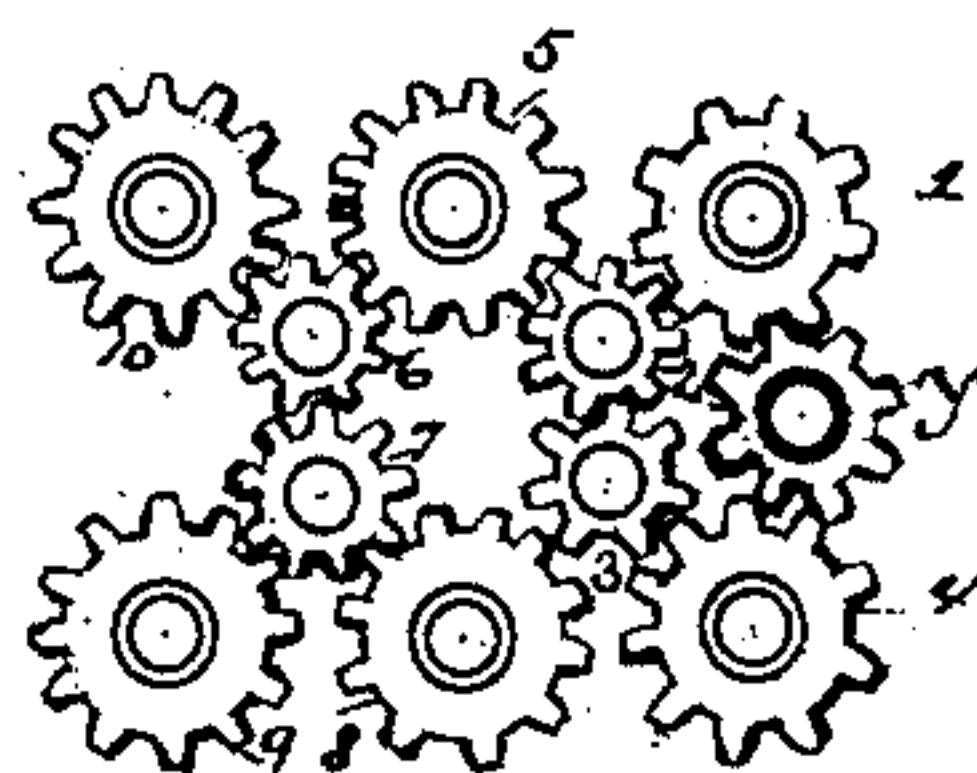
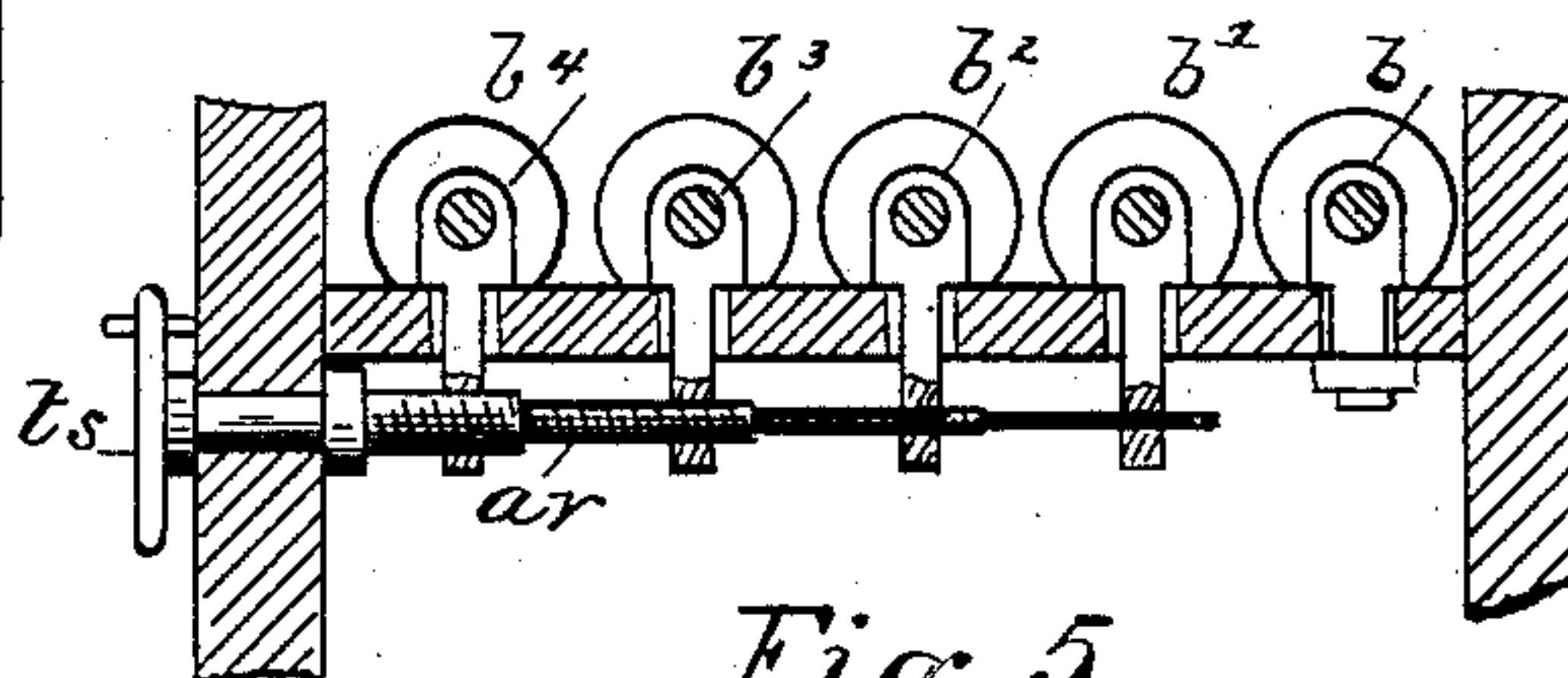


Fig. 5.



WITNESSES.

Jacob W. Loeper
W. S. Smith

INVENTOR.

Newton C. Gauntt
By C. F. Jacobs
Atty.

UNITED STATES PATENT OFFICE.

NEWTON C. GAUNTT, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIAM H. MCCAIN, OF SAME PLACE.

WHEAT-GRADING MACHINE.

SPECIFICATION forming part of Letters Patent No. 310,131, dated December 30, 1884.

Application filed February 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, NEWTON C. GAUNTT, a resident of Indianapolis, Marion county, Indiana, have made certain new and useful Improvements in Wheat-Grading Machines, a description of which is set forth in the following specification, reference being made to the accompanying drawings, in the several figures of which like letters indicate like parts.

My invention is designed to grade the wheat through two or more series of rollers before feeding it to the grinding-machines, and will be understood from the following description.

In the drawings, Figure 1 is a side view in vertical section of my device; Fig. 2, a top view on a horizontal section just below the hopper. Fig. 3 is an end view. Fig. 4 shows the arrangement of the gear-wheels and idlers; and Fig. 5 is a vertical section on $x x$, Fig. 2, and also through the lower movable boxings at the right-hand end of Fig. 2.

In detail, f is the frame-work or box inclosing the grading-rolls, provided with a hopper, h , having a feed-roll, fr , for regulating the feed of the grain, which is driven by a belt and pulleys, one of which, dp , is mounted in the counter-shaft cs , which is supported by brackets fastened to the frame f . Miter-wheels m and m' intermesh with each other, and power is thus communicated to shaft s , which runs through the machine, as shown in Fig. 1, or may run on the outside, if desired, and has a spur-wheel, y , mounted on the rear end, which meshes with the gear-wheels of the two sets of rolls 1 5 10 and 4, 8, and 9, between which are set idlers 2 3 6 7, so that all the rolls will turn in the same direction when in motion. Each set of rolls r and r' , inclined as shown in Fig. 1, have bearings in movable boxings b' , b^2 , b^3 , and b^4 , Fig. 5, attached to the frame, these boxes having lugs at their bottoms, through threaded openings in which passes the adjusting-rod ar , formed, as shown in Fig. 5, in sections, each of which after the first has a thread cut on it smaller than the one preceding it, and fitting the thread of the nut in the lug, through which it passes. This rod is manipulated by a thumb-screw, ts , and by turning this the boxes, and of course the rolls, may be brought nearer together or forced

apart. These differential threads thus secure uniformity of distance in separating or closing up the rolls r and r' in both the upper and lower series, the two adjusting-rods, whose ends are shown in Fig. 2, and their respective boxings, being constructed alike in all respects. This arrangement is provided at each end of not only the upper series of rolls, r , but of the lower series of rolls, r' , which are mounted in bearings in movable boxes constructed and fastened to the frame in the same way. The outside one of each of these sets of rolls is stationary, as shown in Fig. 5 at b , and is provided with a brush, as shown in Fig. 2, for keeping the wheat from falling down and outside the rolls. The lower set of rolls is intended to be drawn closer together than the upper ones, and all these rolls have fine spiral grooves running from the upper to the lower ends for the better carrying the berries along, after the fashion of a conveyer.

In Fig. 1 p is a pan or shelf, of sheet-iron, for catching the berries that fall through rolls r and delivering them to the upper ends of rolls r' . sp is a spout for carrying off the tailings from rolls r ; sp' , a spout for carrying off the tailings from rolls r' , and sp^2 a general discharge-spout for cockle and screenings, broken berries, and other matters that pass through both sets of rolls. By this device it will be seen the larger and plumper grains will be carried down the first series of rolls and into spout sp , the smaller berries falling through between the rolls r are delivered to rolls r' , and these are close enough together to carry along the smaller-sized berries to the discharge-spout sp' , while cockle, broken berries, and smaller matters drop between this set of rolls and into the hopper-mouth of the discharge-spout sp^2 . The rolls are herein shown as slightly inclined. This is to facilitate the travel of the berries and to allow a small spiral to be used; but the rolls might be placed on a level and larger spirals used.

What I claim, and desire to secure by Letters Patent, is the following:

1. The combination, in a wheat-grader, of a suitable inclosing-frame, two or more series of reversely-inclined rolls graduated to pass different sizes of berries, adjustable boxings there-

for, and suitable gear mechanism, whereby the revolution of one set of rolls sets the others in motion in a similar direction, with suitable discharge-spouts for each series of rolls, substantially as described.

2. The herein-described wheat-grader, comprising the frame *f*, rolls *r r'*, provided with movable boxings, geared wheels 1, 5, 10, 4, 8, and 9, and intermediate idlers, shaft *s*, gear *y*, counter-shaft *cs*, spouts *sp sp' sp²*, pan *p*, miter-

wheels *m m'*, hopper *h*, feed-roll *fr*, and means for driving the same, substantially as described.

Witness my hand this 21st day of February, 1884.

NEWTON C. GAUNTT.

Witnesses:

C. P. JACOBS,

F. L. BAILEY.