(No Model.)

F. J. SCHUPP.

BOLTING REEL.

No. 501,899. Patented July 18, 1893.

Fig. 1

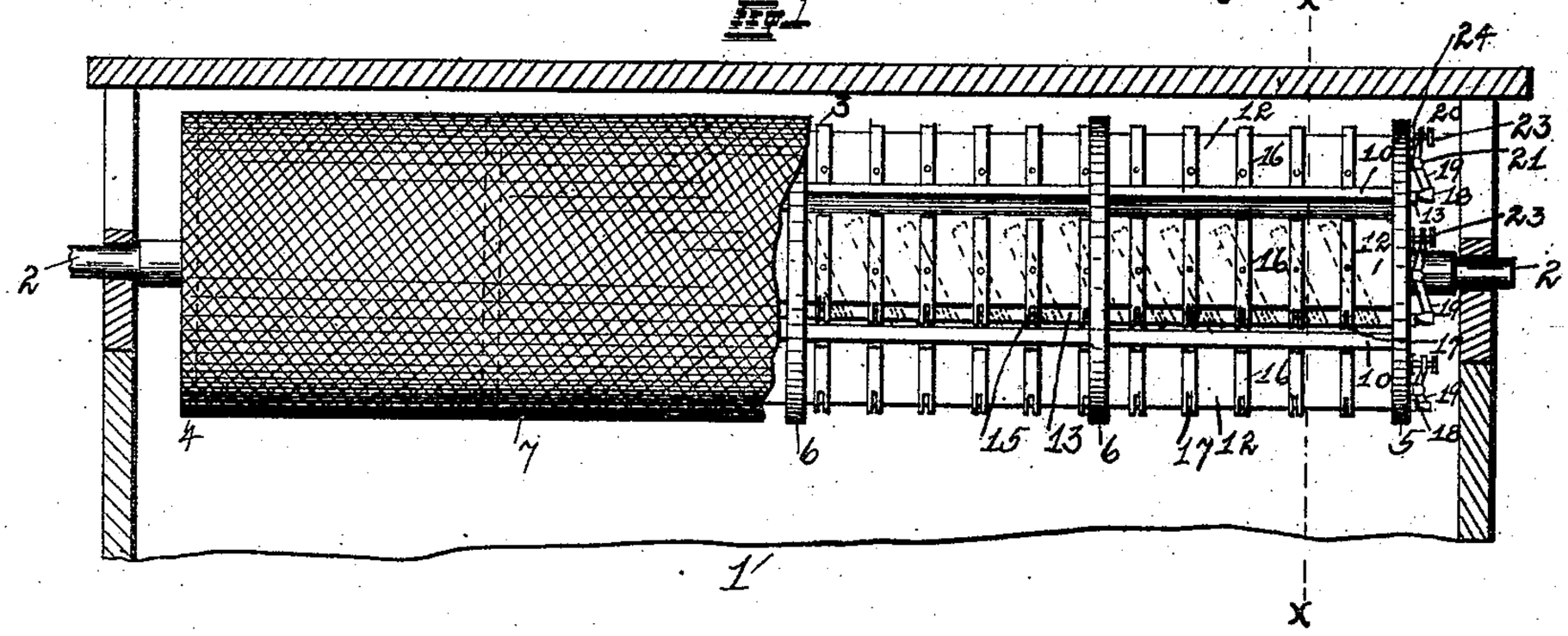


Fig. 2

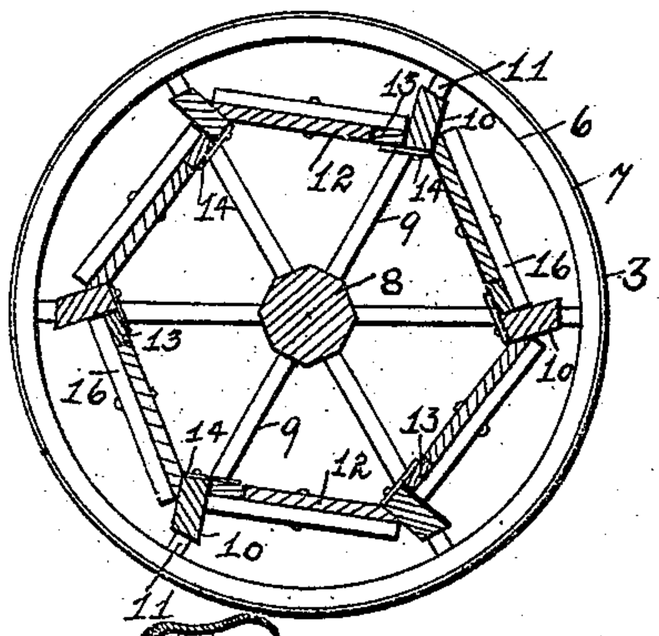


Fig. 3

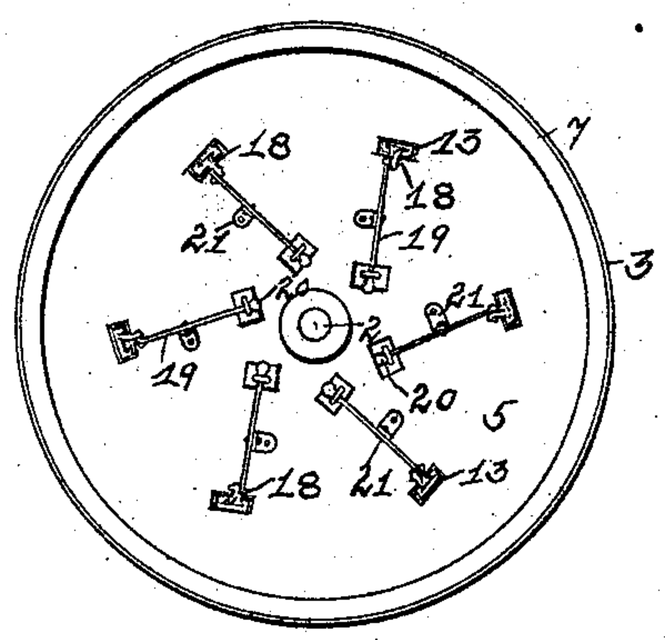


Fig. 6

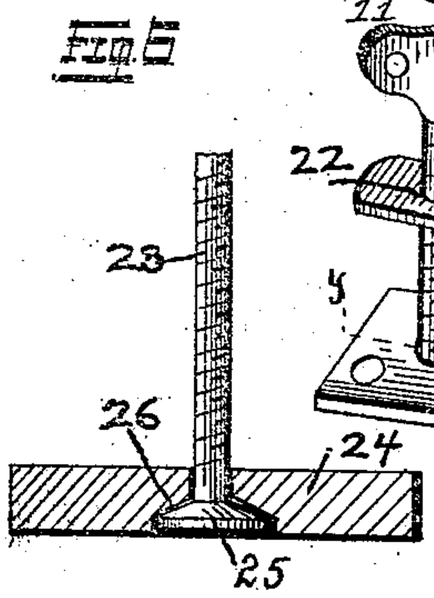


Fig. 4

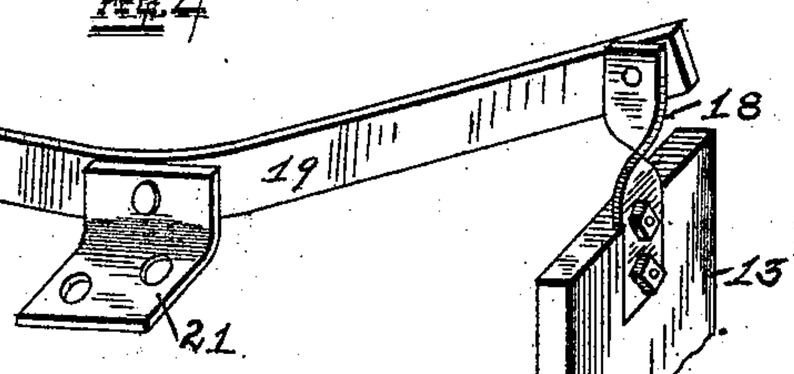
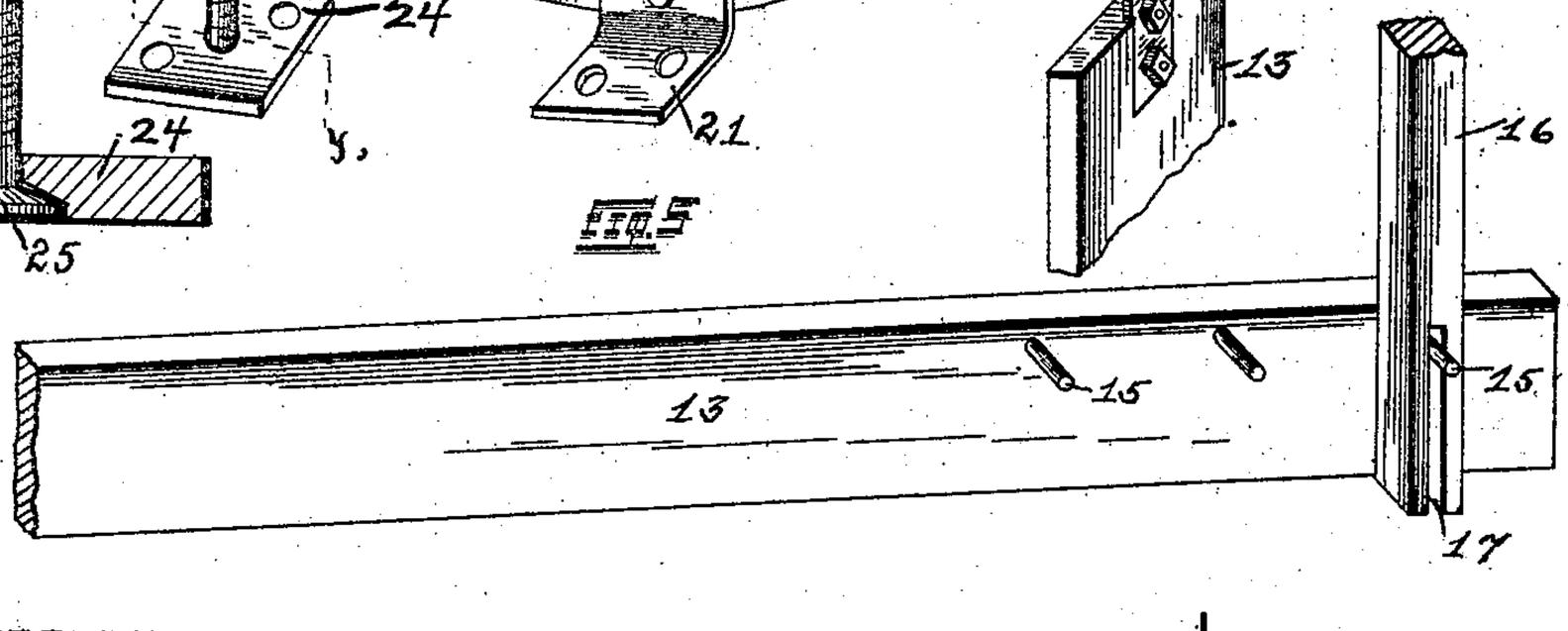


Fig. 5



WITNESSES
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UNITED STATES PATENT OFFICE.

FREDERICK J. SCHUPP, OF MARSHALL, MISSOURI.

BOLTING-REEL.

SPECIFICATION forming part of Letters Patent No. 501,899, dated July 18, 1893.

Application filed September 3, 1892. Serial No. 444,996. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. SCHUPP, of the city of Marshall, in Saline county, Missouri, have invented certain new and useful Improvements in Bolting-Reels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in "bolting reels," and consists in the novel arrangement and combination of parts as will be more fully hereinafter described and set forth in the claims.

The improvement lies in the construction of a reel having conveying strips arranged in horizontal series upon longitudinal boards and said strips being horizontally adjustable to conform to the speed with which it is desired to forward the material from the feed to the discharge end.

In the drawings: Figure 1 is a vertical sectional view of a bolting-chest frame with a reel mounted therein, having a portion of the bolting-cloth removed to show the parts in detail. Fig. 2 is a transverse vertical sectional view of the reel taken on a line *x x* in Fig. 1. Fig. 3 is an end detail view of the outside face of the tail-head. Fig. 4 is a detail view in perspective of the construction provided by means of which the parts are horizontally adjustable. Fig. 5 is a perspective view of the horizontally adjustable bars with one of the strips mounted thereon and parts of each broken away. Fig. 6 is a vertical sectional view of the thumb bolt made use of in carrying out my invention, showing a part of same broken away and the block shown in section on a line *y y* in Fig. 4.

Referring to the drawings: 1 indicates the bolting-chest frame with the lower portion of same broken away. Mounted therein upon a shaft 2, is a bolting-reel 3 having a front head 4, a tail-head 5, and intermediate circumferential bands or hoops 6 over which the bolting-cloth 7 is stretched. A central shaft 8, octagon shaped in cross-section is located in the center, longitudinally of said reel 3 and has arms or spokes 9 secured thereto and extending radially therefrom and to which are secured longitudinal bars 10, said arms 9 being preferably placed upon the two heads 4 and 5, the bars 10 being supported by small blocks 11 which are secured to the outer face of said bars 10 and to the inner periphery of the circumferential bands 6 as shown in Fig. 2 of the illustrations. Secured to the rear face of the longitudinal bars 10 and extending toward the front face of the next adjacent bar 10 and at the lower edge of same, are flat longitudinal boards 12 which are of a less width than the space between two of said longitudinal bars 10 and said lacking portion being filled by longitudinal horizontally adjustable bars 13. Longitudinal plates 14 secured to the under face of said bars 10 extend outwardly and keep said bars 13 in position and alignment with the boards 12 and prevent the same from falling out of place. At regular intervals upon the upper face of said horizontally adjustable bars 13 are pins 15 which project upwardly from said strips.

Located transversely upon the outer face of the boards 12 and at determinate distances apart are conveyer strips 16, which have their centers pivoted to said boards 12. One of their ends is provided with a vertical slot 17 which projects inwardly into the strip and is adapted to fit over the pins 15 in the bar 13 for purposes hereinafter set forth. The ends of said horizontally adjustable bars 13 in the front end of the reel are free, and shorter than the length of the boards 12 in order to allow for the horizontal adjusting of said bars. The ends of said horizontally adjustable bars 13 project outwardly through suitable slots in the tail-head 5 and have secured in said ends small twisted brackets 18 the outer face of which is at right angles with the face which is secured in said ends to present a flush surface with the surface of the bar.

A bell-crank lever 19 having one end 20 bent at right angles with its length is pivoted at its center to an angle bracket 21 which is secured upon the outer surface of the tail-head 5. One end of said bell-crank lever 19 is pivoted to the bracket 18 secured to the bar 13 and the opposite end 20 provided with an interiorly screw-threaded perforation 22, has a thumb bolt 23 operating in said perforation 22 and having its lower end freely and

revolubly mounted in a block 24 which is secured to the outer surface of the head 5. A revoluble mounting of the thumb-bolt 23 in the block 24 is attained by an enlargement 25 upon the lower end of said thumb-bolt 23 being operated in the counter-bore 26 in the under side of said block 24.

By the above descriptions and reference to Fig. 4 of the illustrations, it will be seen that when the thumb-bolt 23 is turned in either direction, it forces the bell crank lever 19 correspondingly and either draws out or forces in the adjustable bar 13 and by the horizontal adjustment of said bars 13 by the above described mechanism, the conveyer strips 16 are correspondingly inclined by reason of the central pivoting of said strips to the boards 12 and the slots 17 operating over the pins 15 in said bars 13 when the same are moved. A similar mechanism is provided for each of six sets of the above described conveyer strips 16 that being the number which I preferably make use of in the construction of my improved reel and which are placed so as to be hexagon shaped in cross-section. If the strips 16 were at right angles with the boards 12 the conveying process would not be carried on, but when the strips 16 are canted toward the tail-head 5 the material is picked up by the same and forced on, and the greater the lateral slant of said strips, the farther and faster the material is thrown to the discharge end. The longitudinal bars 10 extending as they do above the edge or top surface of the strips 16 present a scooping surface which is adapted in conjunction with the other parts to agitate the material in the interior of the reel and continually force the same against the bolting-cloth 7.

It will appear from the above described construction that the increased economy in operation and product which have been proved by my practical experiments, will produce an improved grade of flour.

Having described my invention, what I claim is—

1. In a bolting reel, the combination, with a revoluble reel, of a series of longitudinally and radially-arranged bars, and a series of conveyer strips corresponding in length to the space between two adjacent bars, the outer plane of said strips being within the outer plane of said bars; substantially as and for the purpose set forth.

2. In a bolting reel, the combination, with a revoluble reel provided with longitudinally-arranged boards the surface of the latter being approximately parallel with the periphery of the reel, of equi-distant bars 10 arranged between said boards and projecting beyond the latter, conveyer strips pivoted upon the boards and located within the outer plane of said bars, and means for effecting the lateral adjustment of the conveyer strips; substantially as and for the purpose set forth.

3. An improved bolting-reel having conveyer strips 16, bars 13 connected with the same, a bell-crank lever 19 pivoted to an angle brace 21 at its center, one end pivoted to a bracket 18 secured to the ends of said bars 13 the opposite end having a flat portion 20 provided with a screw-threaded perforation 22 and a thumb-bolt 23 operating in said perforation 22 and its lower end freely and revolubly mounted in a block 24 secured to one of the heads of the reel, substantially as set forth.

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

FREDERICK J. SCHUPP.

Witnesses:
HERBERT S. ROBINSON,
ALFRED A. EICKS.