

J. T. BRAZELL.
BOBBIN STRIPPER.

APPLICATION FILED APR. 6, 1912.

1,048,802.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

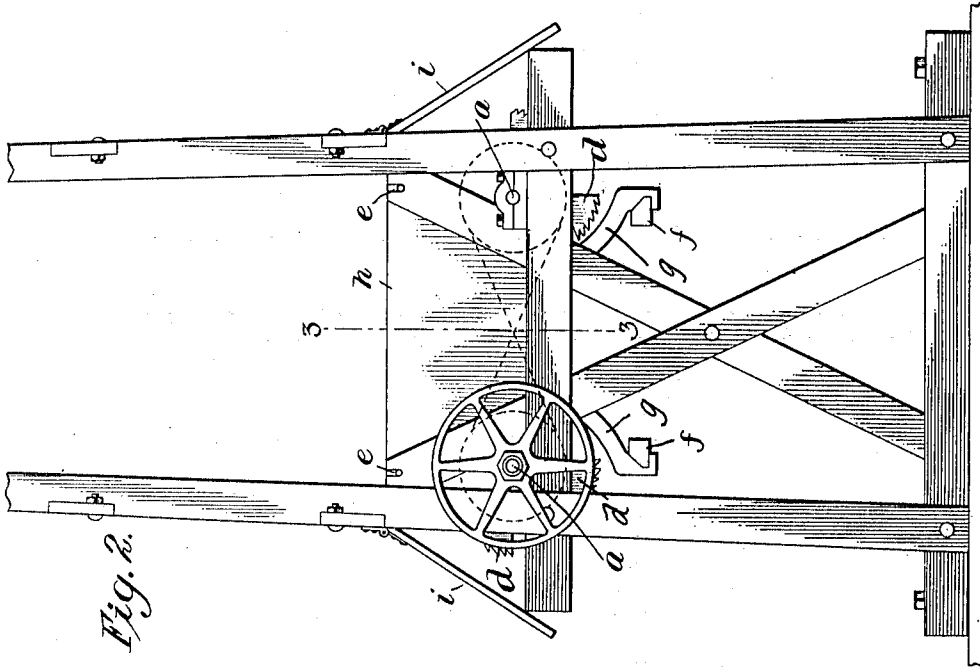


Fig. 2.

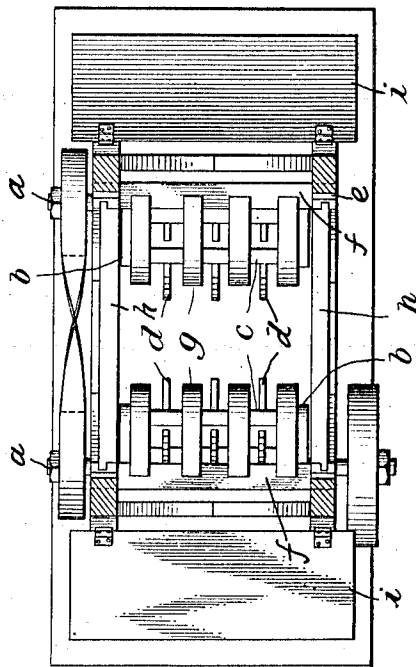
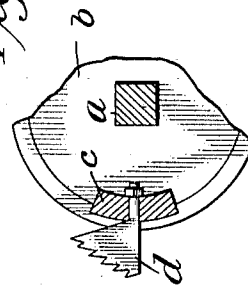


Fig. 1.

Fig. 5.



Witnesses

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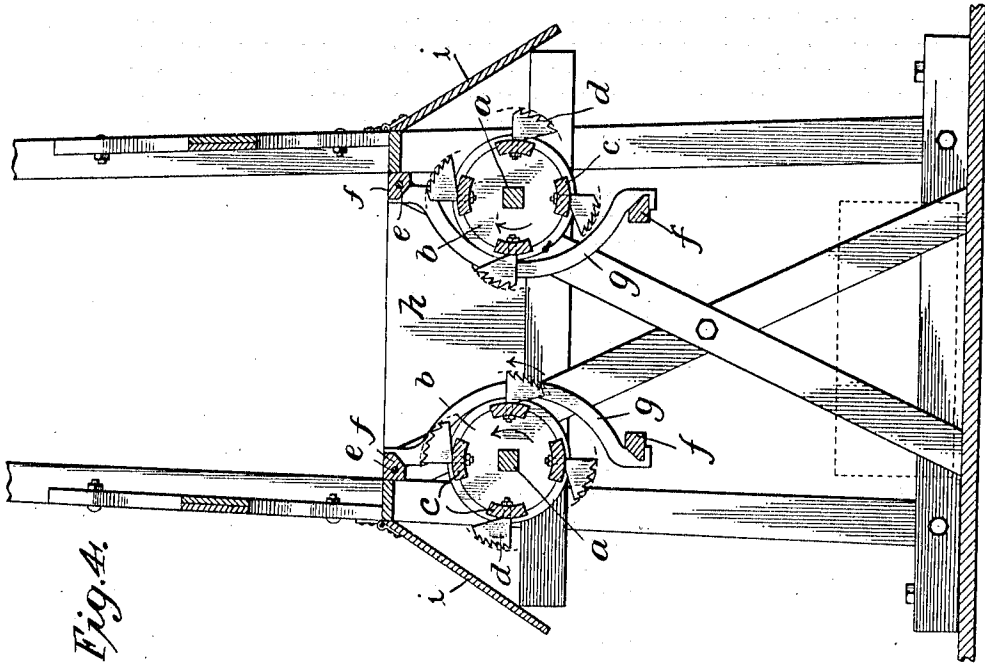


Fig. 4.

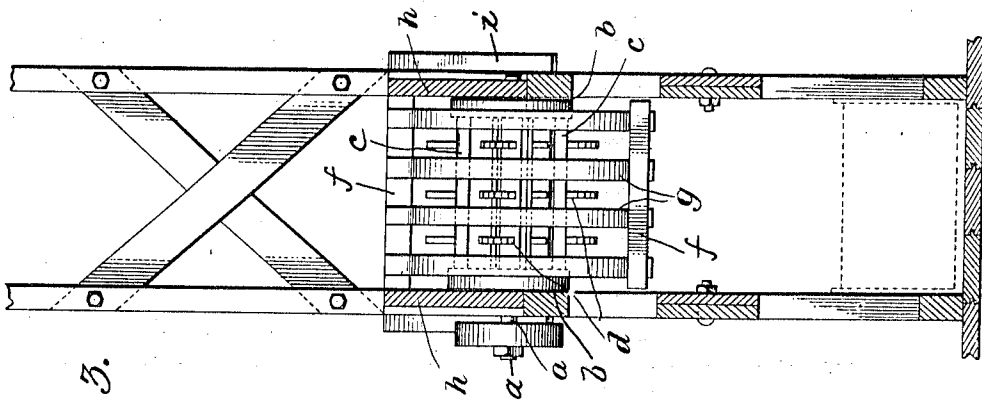


Fig. 5.

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JOHN T. BRAZELL, OF LANETT, ALABAMA.

BOBBIN-STRIPPER.

1,048,802.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed April 5, 1912. Serial No. 688,667.

To all whom it may concern:

Be it known that I, JOHN T. BRAZELL, a citizen of the United States, and a resident of Lanett, county of Chambers, State of Alabama, have invented certain new and useful Improvements in Bobbin-Strippers, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of an apparatus embodying one form of my invention; Fig. 2 a side elevation thereof; Fig. 3 a vertical sectional view taken on the line 3—3 of Fig. 2; and Fig. 4 a vertical sectional view taken on a plane at right angles to the plane on which Fig. 3 is taken.

In the operation of the well known automatic Draper loom when the filling-carrying bobbins or quills are ejected they have still remaining upon them a number of windings of yarn.

It is the purpose of the present invention to provide a simple apparatus for unwinding this yarn from the quills and winding it up on reels, from whence it may be removed, thereby enabling this yarn to be recovered and utilized and the quills to be used again without further cleaning, as more fully hereinafter set forth.

Journalled in a suitable frame is a pair of parallel shafts *a*, each carrying a reel formed of side disks *b* and horizontal connecting bars *c*, these two reels being arranged in the same horizontal plane and at a suitable distance from each other. Rigidly attached to each of the bars *c* and projecting radially therefrom is a series of plates *d* which are arranged vertically edge-wise and are provided along their outer edges each with a series of saw-tooth-shaped teeth facing in the direction of rotation of the reel, this direction of rotation being indicated by the arrows, which arrows show that the adjacent faces or sides of the reels are adapted to revolve upwardly, suitable gearing or belting being provided for this purpose.

A grating is hung on a pivot *e* above each of the reels, these gratings hanging loosely so as to be capable of freely swinging toward and from each other. Each grating consists of horizontal cross bars *f* at the respective upper and lower ends of the grating and a series of separated guard bars *g*. The axis of the pivots *e* are parallel with the axes of the reels, and the guard bars *g*

are curved in order to pass half around the reels, so that normally the lower cross bars *f* will lie approximately under the centers of the respective reels. In operation the toothed plates or arms *d* work through the spaces between the bars *g* and project beyond the outer faces of the bars, as shown.

The reels and guard bars form the opposite sides of a hopper, the two other opposite sides of the hopper being formed by the two vertical boards *h* supported in the frame of the machine. The quills containing the yarn are dumped into this hopper while the reels are rapidly rotated in the direction of the arrows, whereby the loose ends of the yarn are snagged by the picker teeth of the arms *d* and are thereby carried around the reel. The bobbins or quills fall through the hopper into a suitable receptacle below and while in the act of falling and also after they have reached the receptacle the rotation of the reels unwinds the yarn from the quills and winds it up upon the respective reels. As the reels fill with yarn, the guard bars will be pressed toward each other, thus narrowing the exit opening at the bottom of the hopper, and when the guard bars have been pressed toward each other sufficiently to prevent the quills dropping through, the apparatus must be stopped and the yarn removed from the reels by cutting the yarn at a suitable point across the reel. To guard the reels during the winding operation I provide guard boards *i* and in order that these boards may be lifted to expose the reels for cutting off the yarn, I hinge these boards at their upper edges. The quills are dropped into the hopper in masses.

It will be observed that the picker arms of each reel pass up into the hopper or throat successively with respect to the pickers on the other reel and that the result of this is that the mass of quills in the hopper is repeatedly shoved from side to side, whereby the quills are shifted about sufficiently to bring the loose, free ends of the yarn into the path of one or the other set of picker teeth. In practice I have found that if the reels are rotated rapidly but a few of the quills get down through the throat without having the loose ends of their yarn windings entangled in the teeth of the pickers. The few that get through the throat without being caught are separated from the stripped quills and put through the machine again.

I have found in practice that the width of the throat or passage between the outermost teeth on the respective arms of the reels may be four (4) times the diameter of the quills
5 the machine is adapted to clean.

It will be observed from Fig. 5 that the row of teeth formed in the outer edge of the picker arms or plates *d* is not on a line concentric with respect to the axis of the reel
10 but on the contrary is arranged on a curve which is described from a point eccentric to the axis, whereby the stirring action of the picker arms as the arms pass up into the throat of the hopper is greatly increased and
15 whereby also the possibility of the quills falling through without having their yarn-ends snagged by the teeth is reduced to a minimum.

Having thus described my invention, what
20 I claim as new and desire to secure by Letters Patent, is—

1. In a machine of the class set forth, a pair of oppositely disposed reels carrying picker teeth and means forming a hopper,
25 means being provided for rotating the reels so that their adjacent sides shall rotate upwardly and said reels being separated far enough to form a throat or passage-way for the quills.

2. In a machine of the class set forth, the combination of a pair of reels carrying picker teeth, and means forming a hopper,
30 said means consisting of side plates and guard bars curving around the adjacent sides of the reel.

3. In a machine of the class set forth, the combination of a pair of reels carrying picker teeth, and means forming a hopper,

said means consisting of side plates and guard bars curving around the adjacent sides
40 of the reel, said guard bars being pivotally hung at their upper ends so as to be capable of swinging toward each other.

4. In a machine of the class set forth, the combination of a pair of reels each carrying
45 radially projecting plates provided with picker teeth, pivotally depending guard bars normally lying between said plates, and boards forming a hopper in conjunction with said guard bars.

5. In a machine of the class set forth, the combination of a hopper embodying side boards and spaced guard bars, a pair of reels mounted behind the guard bars and having
50 projecting arms which extend therebetween and work in the hopper, said arms provided with saw shaped teeth arranged on a curve described from a point eccentric to the axis of the reel, and means for rapidly rotating
55 the reels so that the arms shall work upwardly through the hopper.

6. In a machine of the class set forth, the combination of a pair of reels carrying
60 picker teeth, and means forming a hopper, said means consisting of side plates and guard bars curving around the adjacent sides of the reel, the picker teeth on one reel being
65 arranged out of horizontal alinement with the picker teeth on the other reel so that they shall enter the hopper successively.

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

JOHN T. BRAZELL.

Witnesses:

T. P. HUMPHREY,
G. L. STEPHENS.