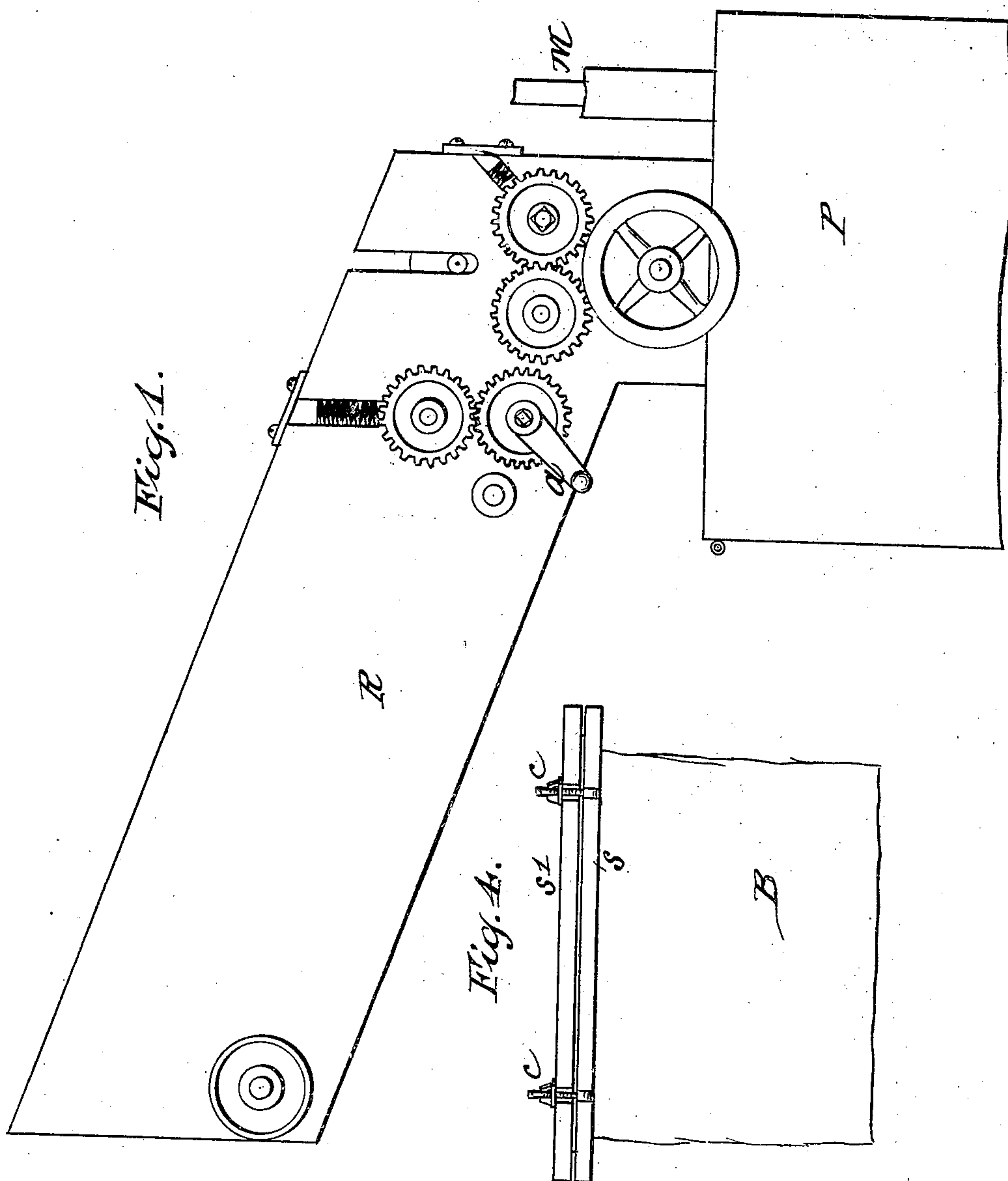


A. A. LOW.  
 APPARATUS FOR REDUCING AND PACKING WASTE PAPER.  
 APPLICATION FILED OCT. 1, 1909.

960,027.

Patented May 31, 1910.  
 2 SHEETS—SHEET 1.



Witnesses:  
 O. W. Gardner  
 Thos. B. King

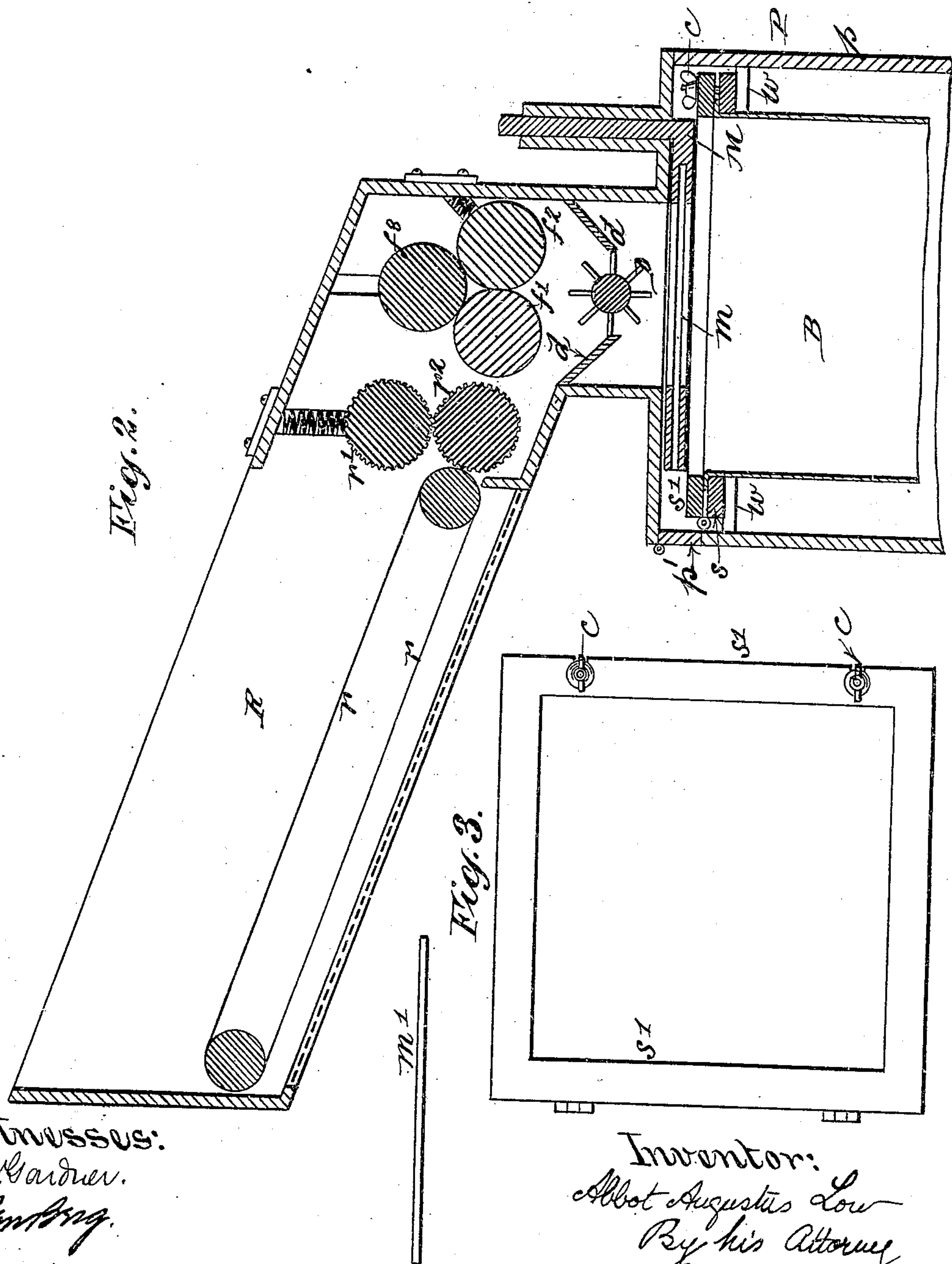
Inventor:  
 Abbot Augustus Low  
 By His Attorney  
 Geo. W. Smith

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Witnesses:  
 D. Gardner.  
 J. M. Long.

Inventor:  
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# UNITED STATES PATENT OFFICE.

ABBOT AUGUSTUS LOW, OF HORSESHOE, NEW YORK.

APPARATUS FOR REDUCING AND PACKING WASTE PAPER.

960,027.

Specification of Letters Patent.

Patented May 31, 1910.

Application filed October 1, 1909. Serial No. 520,577.

*To all whom it may concern:*

Be it known that I, ABBOT AUGUSTUS LOW, a citizen of the United States, residing at Horseshoe, St. Lawrence county, and State of New York, have invented certain new and useful Improvements in Apparatus for Reducing and Packing Waste Paper, of which the following is a specification.

My improvements relate to apparatus for the reduction and packing of waste paper after the manner set forth in Letters Patent No. 929,960 issued to me on August 3, 1909, and as set forth in my concurrent application Serial No. 516,847, one object of the present invention being to adapt the apparatus to various thicknesses of the material to be treated and to obviate clogging, and another being to facilitate the final packing of the desiccated material.

The invention consists in the special construction and arrangement of parts herein shown and described, whereby the feed mechanism adapts itself automatically to the material passed through it; whereby the feed mechanism may be reversed if there is any clogging and whereby the receiving bag is held true and square to receive the packing device.

In the accompanying drawings, Figure 1, is a side elevation of my improved apparatus; Fig. 2, is a vertical sectional elevation thereof; Fig. 3, is a top view of the bag holder; Fig. 4, a front view thereof.

R, is an elongated inclined receiving box into which the waste paper is dumped. This receiving box R, may be arranged horizontally or inclined as shown in the drawings, and contains an endless traveling screen  $r$ , onto which the paper falls and by which it is delivered to the receiving rollers  $r'$ ,  $r^2$ , the upper one  $r'$ , of which is free to adapt itself vertically with relation to the lower roller  $r^2$ , so as to compensate for variations in thickness of the material passing between the rollers. The receiving rollers  $r'$ ,  $r^2$ , are corrugated or roughened coarsely to give them a firm purchase on the material delivered to them. They in turn deliver the material to be reduced to the feed rollers  $f'$ ,  $f^2$ ,  $f^3$ , the latter of which is an idler which tends to rest constantly against the other two, thereby insuring the descent of the material between the opposed peripheries of the feed rolls  $f'$ ,  $f^2$ , which forward the material to the disintegrator D.

The disintegrating device D, may be of

any desired form of construction. As shown in the drawings it consists of a single cutting cylinder interposed between the plates  $d$ ,  $d$ . The desiccated material falls from the disintegrating device D, into the packing device M, which is of the character described in my Letters Patent hereinbefore referred to. The novelty of the packing device in the present instance consists in the means employed for supporting and holding open the receiving bag B, consisting of two superposed square frames  $s$ ,  $s'$ , hinged together and supplied with suitable clamping devices  $c$ . In use the edges of the bag B are inserted between the inner edges of the clamping frames  $s$ ,  $s'$ , and the frames are then bound together by any simple mechanical expedient as by the bolts and nuts shown in the drawings. The frames  $s$ ,  $s'$ , with the bag attached are then slid into the casing P, through a suitable opening (closed normally by a door  $p$ ) the frames being supported in the casing P, upon shoulders or ways  $w$ , arranged upon the inner side of the casing upon opposite sides thereof.

The desiccated paper drops from the disintegrating device D, through a central opening  $m$ , in the rectangular packing follower M, into the receptacle or bag B. This opening  $m$ , may be closed however by a slide  $m'$ , when it is desired to compress the waste paper within the bag B, in which case the packing follower M, is depressed and lowered into the bag B, as far as may be desired by means of a rack and pinion or other equivalent mechanical expedient. The slide  $m'$ , is fitted to close the aperture  $m$ , through the medium of a door  $p'$ . The rectangular frames  $s$ ,  $s'$ , hold the edges and sides of the bag B, taut and true so that the rectangular packing follower M is free and unobstructed in its movements within the bag B.

Both the receiving rollers and the feed rollers are mounted in bearings resting in slots which admit of their convenient removal when necessary; and the projection of the axis of each roller is made rectangular or otherwise formed for engagement with a crank (as at  $a$ , Fig. 1), by means of which the motion of the rollers may be reversed in case clogging occurs, the power being first shifted from the rollers.

What I claim as my invention and desire to secure by Letters Patent is,

1. In apparatus of the character described,



the combination with the feed and disintegrating mechanism, of a bag holder consisting of two rectangular frames, means for clamping the edges of a bag between said rectangular frames, means for supporting said frames in the casing and a packing follower arranged to compress the desiccated material in the bag, for the purpose described.

10 2. In apparatus of the character described, the combination of a receiving box, an endless screen in the lower portion thereof arranged to convey the material to receiving rollers, said receiving rollers, feed rollers  
15 arranged to take the material from said receiving rollers and feed it to a disintegrator, said disintegrator and a packing device arranged to receive the desiccated material from the disintegrator and compress it  
20 within a receptacle, for the purpose described.

3. In apparatus of the character described, the combination of a receiving box, an endless screen in the lower part thereof arranged to convey the material from the receiving rollers, said receiving rollers, one  
25 of which is free to adapt itself to the thick-

ness of material passing between them, feed rollers arranged to take the material from the receiving rollers and feed it to a disintegrator, an idler roller resting upon said feed rollers, said disintegrating device and mechanism arranged underneath the same for packing the desiccated material, for the purpose described. 30 35

4. In apparatus of the character described, the combination of a receiving box an endless screen in the lower portion thereof arranged to convey the material to receiving rollers, said receiving rollers, feed rollers arranged to take the material from said receiving rollers and feed it to a disintegrator, said disintegrator and a packing device arranged to receive the desiccated material from the disintegrator and compress it within a receptacle, and means for reversing the motion of the receiving and feed rollers for the purpose of preventing clogging, substantially in the manner and for the purpose described. 40 45

ABBOT AUGUSTUS LOW.

Witnesses:

D. W. GARDNER,  
GEORGE WM. MIATT.