

E. G. STAUDE.
EJECTING DEVICE FOR CUTTING ROLLS.
APPLICATION FILED FEB. 27, 1908.

909,957.

Patented Jan. 19, 1909.

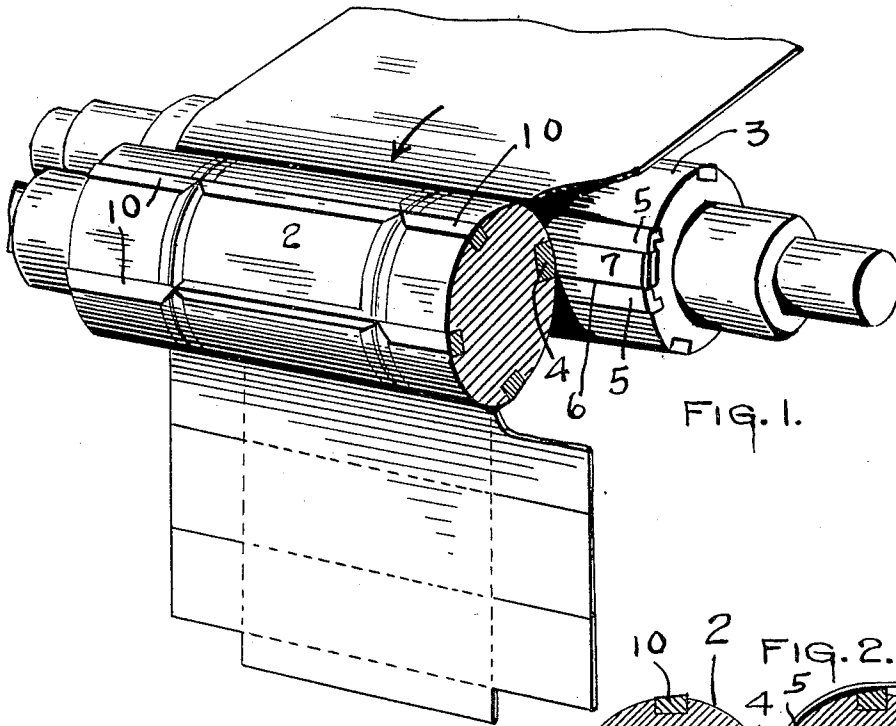


FIG. 1.

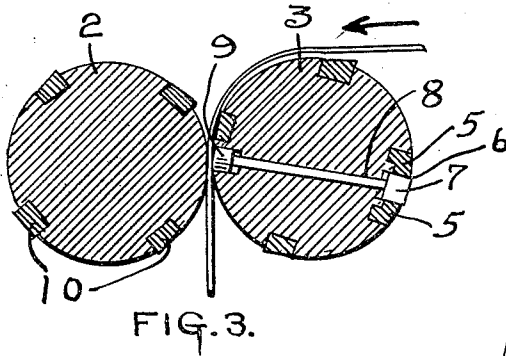


FIG. 3.

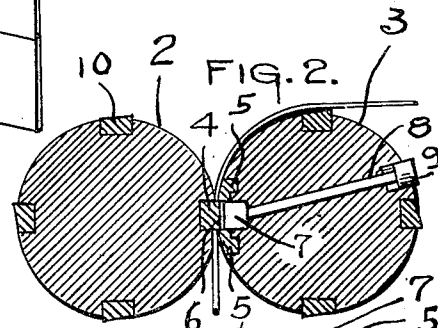


FIG. 2.

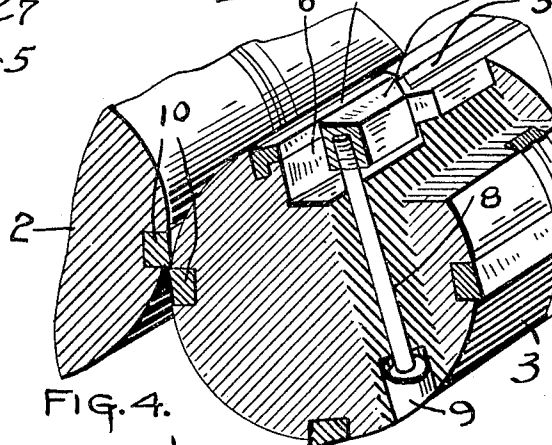


FIG. 4.

WITNESSES
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UNITED STATES PATENT OFFICE.

EDWIN GUSTAVE STAUDE, OF MINNEAPOLIS, MINNESOTA.

EJECTING DEVICE FOR CUTTING-ROLLS.

No. 909,957.

Specification of Letters Patent.

Patented Jan. 19, 1909.

Application filed February 27, 1908. Serial No. 418,038.

To all whom it may concern:

Be it known that I, EDWIN GUSTAVE STAUDE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and
5 useful Improvements in Ejecting Devices for Cutting-Rolls, of which the following is a specification.

My invention relates to machines for making flexible boxes and the like, wherein strips
10 of paper, straw-board or other suitable material are cut to the desired size for making the box blanks.

The object of my present invention is to provide improved means for ejecting from
15 the rolls the waste pieces cut out by the operation of the knives.

My invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed
20 out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view illustrating the operation of the rolls. Fig. 2 is a transverse sectional
25 view of the same showing the rolls in position to cut the waste piece out of the paper. Fig. 3 is a similar view illustrating the reverse position of the plunger from that shown in Fig. 2. Fig. 4 is an enlarged per-
30 spective in detail of the device.

In the drawing, 2 and 3 represent cutting rolls.

4 is a knife mounted in the periphery of the roll 2 and extending lengthwise thereof.

35 5 is a knife mounted in the roll 3 and having a recess 6 to receive the knife 4, said knives coöperating with one another to cut a waste piece out of the stock with each revolution of the rolls. The waste piece cut out
40 by the knife 4 and the edges of the knife 5 is forced into the recess 6 and for the purpose of discharging this waste piece from the roll I provide a plunger 7 arranged to slide within a transverse socket 8 in the roll 3 and
45 having a head 9 on the opposite side of the roll which is projected beyond the periphery of the roll when the plunger is forced inwardly by the operation of the knives in cutting out the waste piece. The head 9 projecting beyond the surface of its roll will
50 contact with the roll 2 and will be forced back into the socket in the roll and the plunger will be moved outwardly in the recess 6 to eject the waste piece. Thus with every
55 revolution of the rolls the plunger will be moved inwardly to set the head in position

to force the plunger outwardly after the cutting operation is completed and eject the waste piece of the blank. The ejector is entirely automatic and is positive and reliable
63 in its action.

I do not depend upon springs or cushions of any kind, the ejection of the waste piece being surely and completely accomplished
65 after each cutting operation.

The plunger may be made of any suitable size and shape according to the dimensions of the knives and the character of the stock and the size of the waste material to be cut
70 out.

In addition to the cutting knives I provide a series of scoring or slitting knives 10 arranged at intervals in the periphery of the
75 rolls.

This ejecting device can be located at any
75 suitable point in the periphery of the roll. I have found it of great importance when located near the middle of the roll, as it would be extremely difficult at this point to provide any exterior mechanism for operat-
80 ing the ejector. The plunger being set in its roll by the pressure of the opposite roll I am able to dispense entirely with mechanism heretofore generally employed for resetting the ejector device.
85

I claim as my invention:

1. The combination, with the cutting rolls and the knives adapted to cut waste pieces out of the blanks, one of said rolls having a recess to receive the waste piece, means
90 operating in said recess to eject the waste piece therefrom, said means having a part projecting from its roll in position to be actuated by contact with the other roll to operate said means and eject the waste piece.
95

2. The combination, with the cutting rolls having peripherally arranged knives therein, said knives being adapted to coöperate with one another to cut a waste piece out of the stock, one of said rolls having a recess in its
100 periphery and a plunger operating in said recess to eject the waste piece, said plunger having means projecting from its roll and actuated by contact with the other roll whereby the plunger is positively actuated
105 to perform the ejecting operation once with each revolution of said roll.

3. The combination, with the cutting rolls having peripherally arranged knives there-
110 in adapted to coöperate with one another to cut a waste piece out of the stock, one of said rolls having a recess in its periphery

into which the waste piece is forced, a
plunger operating in said recess and having
a part extending through the roll and be-
yond its periphery where it will be struck
5 and positively actuated by the other roll to
eject the waste piece with each revolution of
the rolls.

4. The combination, with the cutting rolls
having peripherally arranged knives therein
10 adapted to coöperate with one another to cut
a waste piece out of the stock, one of said
rolls having a recess in its periphery near
the middle portion of the roll and into which
recess the waste piece is forced, a plunger
15 operating in said recess and having a part
extending transversely through the roll and
projecting beyond its periphery on the op-
posite side of the roll from said recess, and

said part being adapted to be struck and
positively actuated by the other roll to eject 20
the waste piece with each complete revolu-
tion of the roll.

5. The combination, with a pair of cut-
ting rolls having knives adapted to cut waste
pieces out of the blanks, one of said rolls 25
having a recess to receive the waste piece
and means in said recess for ejecting the
waste piece, said means having a part that
is engaged and actuated by the other roll
to operate said ejecting means. 30

In witness whereof I have hereunto set
my hand this 24th day of February 1908.

EDWIN GUSTAVE STAUDE.

Witnesses:

J. A. BYINGTON,
C. G. HANSON.