W. J. KENT.
MACHINE FOR CUTTING SLAB PACKING.
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1,419,144. Patented June 13, 1922.
To all whom it may concern:

Be it known that I, WILLIAM J. KENT, a 
5 citizen of the United States, residing at 
Brooklyn, county of Kings, and State of 
New York, have invented new and useful 
Improvements in Machines for Cutting Slab 
Packing, of which the following is a full, 
clear, and exact description. 

This invention relates to a machine for 
cutting slab packing and similar material. 

Previously to my invention it has been 
 customary to cut slab packing one piece at 
a time with a single knife, as owing to the 
thickness and rigidity of the slab it was im-
possible to force a plurality of knives in 
transverse alignment through the slab with-
out causing buckling and inaccurate cutting. 

The object of my invention is to provide 
a machine having means so arranged that a 
number of pieces may be accurately cut from 
a slab of packing or similar material in a 
single operation, thereby increasing produc-
tion, conserving labor and reducing the cost 
of the material to the public. 

For a full disclosure of the invention, refer-
ence is made to the accompanying draw-
ings and specification. 

In the drawings:

Figure 1 is a top plan view of the machine, 
partly broken away and partly in section. 

Fig. 2 is a side elevation of the machine 
partly broken away. 

Fig. 3 is a plan view showing the opera-
tion of the cutters on a slab of packing. 

Referring to the drawings, the numeral 1 
represents the reciprocable bed of an ordi-
nary type of planer, the details of which 
form no part of my invention and have not 
been illustrated. On each side of the bed, 
uprights 2 are disposed, between which ex-
tends the cross rail 3 upon which the cutting 
mechanism is mounted to slide. This cut-
ting mechanism comprises a saddle 4 slid-
able on the cross rail 3, which saddle has a 
block 5 extending into a transverse recess 6 
in the cross rail. The saddle is moved trans-
versely by means of a feed rod 7 mounted 
in the cross rail and having a screw thread 
connection with the block 5 of the saddle. 

At the outer end of the feed rod 7 a handle 
8 is provided for actuating the same. To 
the front face of the saddle 4 an ordinary 
form of swivel 9 is adjustably secured by 
bolts 9', and a cutter carrying frame 10 is 
Pivoltly mounted on the swivel 9 at 11.

This frame is formed in sections connected 
by the bolt 10" and screws 10". Adjustably 
mounted in the frame 10 is a series of knives 
or cutters 12, which are secured in adjusted 
position by means of screws 18, the knives 60 
being parallel to each other but arranged in 
stepped relation, as shown in Fig. 1. Also 
disposed on each side of the bed in advance 
of the cutter mechanism are uprights 14 
having vertical slots 15 therein, in which 
the bearing blocks 16 of a roll 17 may slide. 
Vertical slots 17' are provided in the bearing 
blocks 16, in which slots the axle 17" of the 
roll 17 is freely movable. Each upright 
14 has near its upper portion a horizontal 
shelf or extension 18 in which a bevel gear 
19 is mounted on a vertical axis, the lower 
vertical portion of the shaft of the gear 19 
being screw threaded at 20 and engaging a 
screw threaded lug 20' in the bearing 16. A 
horizontal shaft 21 is mounted in the upper 
ends of the uprights 14 and carries bevel 
gears 22, each meshing with a respective 
bevel gear 19. The shaft 21 is actuated by 
means of a handle 23 at one end. 

In operation a slab of packing 24 is dis-
posed on the reciprocable bed 1, and the roll 
17 adjusted downwardly by means of the 
handle 23 to bear against the upper side of 
the slab and retain it in position upon the 85 
bed. Upon starting the machine the move-
ment of the bed 1 carries the slab 24 into 
engagement with the stepped series of knife 
12, which results in the simultaneous cutting 
of successive strips of packing 25 from the 90 
edge of the slab as shown in Fig. 3. Side 
movement of the slab during the cutting 
operation is prevented by the guide 26. 

Upon the completion of the cutting of one 
such series of strips, the cutting mechanism 
is elevated on its pivot 11, the bed is drawn 
back and the cutting mechanism positioned 
for a new series of cuts by operation of the 
handle 8. It will be noted in Fig. 3 that 
by the stepped arrangement of the knives 12 
each cut strip is free to move outwards to 
allow room for the cutter as it advances 
through the packing, thereby reducing fric-
tion and preventing any buckling of the slab. 
The roll 17, which is a heavy one, is ad-
justed until it rests by its own weight on 
the slab to retain it in position on the bed 1 
as the latter moves forwardly. By loosening 
the bolts 9", the swivel 9 may be adjusted to 

vary the cutting angle of the knives 12.
It is evident that the number of knives and their spacing may be varied according to circumstances, but it is essential that they be arranged in stepped relation in order that the cut strips may be free to move outwardly as they are severed from the edge of the slab by their respective knives.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a machine for cutting slab packing, a cutting bed adapted to receive a slab of packing, means coacting with one edge of the slab for preventing transverse movement thereof, and a series of angularly aligned simultaneously operating rigid knives for cutting strips in succession from the free edge of the slab, whereby the cut strips may spread laterally to relieve the knives from binding.

2. In a machine for cutting slab packing, a plurality of cutting elements in stepped arrangement and adapted to engage the material adjacent one edge of a slab, means for causing alternate longitudinal cutting and transverse shifting relative movements of said cutting elements as a unit and a slab of packing, and means coacting with the other edge of the slab to prevent transverse movement thereof during a cutting movement.

3. In a machine for cutting slab packing, a cutting bed for a slab, an abutment for one edge of the slab, a plurality of laterally spaced rigidly connected edged-cutting elements each arranged to engage the opposite free edge portion of the slab at a point out of transverse alignment with the others, means for retaining the bed and slab in contact, and means for causing a relative movement of said cutting elements and the slab.

4. In a machine for cutting slab packing, a single line of parallel cutting elements in stepped arrangement, means for simultaneously varying the cutting angle of said elements, and means for moving the slab into contact with the cutting elements.

5. In a machine for cutting slab packing, an abutment for one edge of the slab, simultaneously operating means for cutting strips in succession from the opposite free edge of the slab, and means for simultaneously moving said first means transversely of the slab.

6. In a machine for cutting slab packing, an abutment for one edge of the slab simultaneously operating rigidly connected edged-cutting means for cutting strips in succession from the free edge of the slab, and means for causing a relative movement of said first means and the slab longitudinally and transversely of the slab.

7. In a machine for cutting slab packing, a frame, a plurality of parallel knives disposed in said frame in stepped arrangement, a support, a pivotal connection between said frame and support, means for transversely moving said support and the parts carried thereby, and means for moving the slab into engagement with the knives.

8. In a machine for cutting slab packing, a pivotally mounted carrier, a plurality of parallel knives disposed in stepped arrangement in said carrier, a traveling bed for the slab, and means for retaining the slab in contact therewith.

9. In a machine for cutting slab packing, a cutting bed for the slab, a plurality of knives in stepped arrangement, means whereby the cutting angle of the knives may be varied, means whereby the knives may be adjusted toward or from the bed, means whereby the knives may be moved to inoperative position, means for causing a cutting engagement of the knives and slab, and means for varying the points of cutting engagement transversely of the slab.

10. In a machine for cutting slab packing, a reciprocable cutting bed for the slab, adjustable means for retaining the slab in contact with the bed, a series of knives disposed in stepped arrangement in the path of the slab, and means whereby the knives may be moved to inoperative position.

11. In a machine for cutting slab packing, a reciprocable cutting bed for the slab, means for retaining the slab in contact with the bed, a series of knives disposed in stepped arrangement in the path of the slab, and means for simultaneously moving the knives transversely with respect to the slab.

12. In a machine for cutting slab packing, a reciprocable cutting bed for the slab, an abutment for one edge of the slab, superposed rotary means for retaining a slab on the bed, and means for simultaneously cutting a plurality of strips from the free edge of the slab, whereby the cut strips may spread laterally.

13. In a machine for cutting slab packing, a frame, a reciprocable cutting bed for a slab carried thereby, a slab engaging roller carried by the frame, means for adjusting the roller relatively to the bed, and a series of stepped knives stationarily disposed in the path of a slab carried by the bed.

14. In a machine for cutting slab packing, a frame, a reciprocable cutting bed for a slab carried thereby, slotted uprights carried by the frame at the sides of the bed, a roller journaled in said slots, means for raising or lowering the roller, and a series of stepped cutters disposed in the path of a slab carried by the bed.

Signed at New York, in the county of New York and State of New York, this 13th day of January, 1929.

WILLIAM J. KENT.