

The invention relates to a device for cutting stacked sheet-like material made of paper or film material, with a table surface which comprises a working area above which are located a cutting knife and a pressure bar, behind it an input area for receiving the material to be cut and in front of it an output area for receiving the cut material, with a side stop for alignment of the material to be cut and with an advance mechanism for the material to be cut.

Such a cutting device is known from EP-A-56 874. It is mainly stacks of paper, cardboard, plastic film and the like that are cut. The expert knows that the better the stacked material to be cut is aligned in the transverse direction, that is, on the side stop, and in the longitudinal direction, that is, on the advance mechanism, the more accurately the cuts are made. This alignment is normally carried out by an operator manually with the aid of an angled contact pressure element. However, this is laborious and time-consuming, particularly if alignment is to be carried out again before each cut.

In the cutting device according to EP-A-56 874, automatic alignment in the longitudinal direction is already provided too. For rapid removal of the waste material from edge cuts and intermediate cuts, a gap is formed by advancing the output area relative to the working area. Due to this gap, a straightedge which is beneath the output area in its inoperative position is pivoted into a vertical position, as a result of which the stacked material reaching as far as the front edge of the working area is pressed against the advance mechanism extending across the width of the machine. But as the next cut is not made until after a further advance step, this alignment may be partially lost again.

DE-A-31 11 256 describes a device for variably cutting up plate-like materials, in which a sawing system comprises a table surface with a working area at the front edge of which is provided a pressure bar which presses the plate-like workpieces onto the table, while a circular saw blade

is moved along a cutting line to cut the plate into strips or pieces. Behind the working area is located an input area for receiving the material to be cut, and in front an output area for receiving the cut material. A side stop for alignment of the material to be cut, an advance mechanism for the material to be cut and a contact pressure slide movable in the direction of the cutting line for pressing the material to be cut against the side stop, are provided. The advance mechanism is adjustable in such a way that, out of a row of plate strips arranged parallel on the input area, it can grip only one and advance it perpendicularly to the cutting line.

FR-A-23 36 217 describes a conveying device for a mechanical saw, in which strip-like plates are advanced in a direction towards a movable saw blade. The plate stacks must in this case be already aligned. No side stop is provided. The device comprises a slide split in two in the transverse direction with two partial slides, wherein the working width of each partial slide can be adjusted individually by lifting or lowering slide fingers which are each associated with a plate strip. The total width of the slide is however to be kept constant.

US-A-2 589 033 describes a paper cutting machine in which a frame-like punch blade is used. The paper stack to be cut can be aligned by means of stops or holders at its intended location. Each holder has a resilient stop face which, when the punch blade is lowered into the paper stack, can be displaced slightly outwards and inclined outwards when the punch blade is lowered.

FR-A-11 50 136 shows a shearing machine in which a closable opening is provided in the output area. The opening can be cleared in order to receive waste pieces in an intermediate cut. At the same time as clearance of the opening by lowering a flap, devices are moved out of the plane of the output area, preventing paper waste from passing onto the output area.

It is the object of the invention to provide a cutting

device of the kind described hereinbefore with improved possibilities of alignment.

This object is achieved according to the invention by the fact that a contact pressure slide movable automatically in the direction of the cutting line is provided for pressing the material to be cut against the side stop and that the working width of the advance mechanism is smaller than the distance between side stop and contact pressure slide.

As the working width of the advance mechanism is shorter than the normal machine width, the contact pressure slide can remain more or less where it is without colliding with the advance mechanism. The working distances of the contact pressure slide and its operating time are correspondingly short. As it is operated automatically, the interval of time until the next cut can be kept short too. In general, there is transverse alignment with minimum expenditure of time. Nor therefore does it pose any problems to carry out this alignment before each cut.

For the purpose of adaptation to different widths of the material to be cut, interchangeable advance mechanisms of different width can be provided. However, it is considerably better if the advance mechanism is divided in the direction of the cutting line into separate segments, the advance function of which can be made inoperative at least over part of the width of the cutting knife. Due to the fact that the advance function is made operative for a greater or lesser number of segments, the working width of the advance mechanism can be adapted to the respective circumstances.

It is particularly favourable that the segments are displaceable from a working position, in which they entrain the material to be cut, into an inoperative position. In the inoperative position, the segments are lifted off the table surface of the cutting device and therefore do not collide with the contact pressure slide. In this case, the segments may be pivotable upwards and rearwards about a

horizontal shaft located behind them in the working position. But there are also other possible ways of making the advance function inoperative, for example, by uncoupling the inoperative segments from the advance drive.

In a cutting device in which the advance mechanism comprises teeth which engage in grooves of the pressure bar in the foremost position, it is recommended that the segments have a spacing corresponding to the tooth pitch. The segments can then be made the same as each other. The width zone of the advance mechanism which is operative at any given time cooperates with the pressure bar in the same way as was the case before for the whole advance mechanism.

Appropriately, the contact pressure slide is located above the working area behind the pressure bar working plane. In this position it is arranged close to the cutting line, so that alignment takes place in the cutting zone.

For particularly high demands, it is recommended that the contact pressure slide while the pressure bar is raised is movable first under it and then in the direction of pressing. In this way, the contact pressure slide can be moved even closer to the cutting line.

In a preferred embodiment, behind the contact pressure slide is located a supply track extending transversely to the direction of advance, for the material to be cut. The material can therefore be supplied without colliding with the contact pressure slide.

In particular, the input area may be formed by a transport plate movable transversely to the direction of advance. On this transport plate, the stacked material to be cut can already be transported forward with a certain prealignment. It can also be moved up until it abuts against the side stop, by means of the transport plate, wherein a certain basic alignment results.

Supply of the material in the transverse direction and the reduced working width of the advance mechanism have the added advantage that it is not all the material to be cut

located on the input area that has to be cut every time, but that - if this material is for example in block strips adjacent to each other - in each case one or not many block strips can be advanced and cut. In this case, a hold-down device extending in the direction of advance is appropriately provided behind the contact pressure slide. During advance of the block strips, this device then holds the adjacent block strip fast. With this hold-down device too, no collision with the advance mechanism is to be feared.

Advantageously, the advance mechanism can be lifted in its entirety and returned rearwards in the lifted state. In this way, new material can already be moved up to the side stop via the supply track, while the advance mechanism is returned to the starting position, because the advance mechanism in this case can be moved beyond the new material.

The side stop can appropriately be lifted for the purpose of letting the transport plate through. This makes it possible to move the transport plate through, as far under the side stop as is necessary for discharge of all the stacked material.

In a preferred embodiment, it is ensured that in the region of the cutter bar, a filler piece of the side stop can be moved downwards with the cutter bar and during advance movement can be lowered to below the table surface. The filler piece of the side stop is available if the material is aligned transversely by means of the contact pressure slide. As the filler piece is lowered to below the table surface, the stacks of cut material are not obstructed if they are removed forwards from the working area. Particularly with smaller labels and the like, the shape of the stack is preserved better than before.

Further, there may also be provided a straightedge which extends in the direction of the cutting line and is arranged on the output area and which has a limited stroke in a direction opposite the direction of advance, in order to press the material to be cut against the advance

mechanism.

As the straightedge is located on the output area, it can be arranged at a distance in front of the working area. It is therefore possible to perform longitudinal alignment after the advance mechanism has advanced the material to be cut into the position provided for cutting. Longitudinal alignment can therefore take place, like transverse alignment, immediately before each cut. The arrangement of the straightedge on the output area may also be used for other advantageous purposes.

Thus it is recommended that the straightedge is tiltable about a lower horizontal shaft in order to support the stack of cut material during cutting and then set it upright again. Relatively high stacks of small labels or the like can therefore be handled reliably.

Hold-down elements which are applied resiliently to the material to be cut can also be mounted on the straightedge. This is an advantage for example if the sheet-like material is slightly brittle and therefore tends to spring away during cutting.

If the output area is movable relative to the working area to form a gap, a transverse channel on the output area which leads to a further processing station and is formed by a first straightedge mounted on the output area and a second straightedge located therebehind which can be moved into its working position after opening of the gap, and an ejector which is movable along the transverse channel, are recommended. In this way the stack or stacks, particularly those with a relatively small sheet size, can be forwarded for example to a punching device or an automatic bundling device.

In particular, the second straightedge may be arranged under the output area in its inoperative position and be capable of being moved through the gap into its working position.

In this case the second straightedge can be provided with a stripping bar and controlled in such a way that

during upward movement of the cutter bar the stripping bar wipes along the latter. Thus paper remains are stripped.

It is to be recommended that the stripping bar in the working position is slidable in a direction towards the sloping surface of the cutter bar. By this sliding movement, stripping can take place over the whole of the sloping surface.

Advantageously, the segments of the advance mechanism and/or the side stop and/or the contact pressure slide comprise vertically movable sliding fingers resting on the table surface. This ensures that, in spite of the different movements of the above components, there is always contact with the table surface, so that the material is detected down to the lowermost sheet in the stack.

Particularly advantageous is use of the cutting device as a second cutting device of a system in which a first cutting device is designed to produce block strips by parallel cuts, wherein in the second cutting device, by a number of block strips arranged adjacent to each other in the direction of the cutting line, only a fractional number of the operative segments of the advance mechanism can be entrained. Due to the use of two cutting devices which are each designed for a function, namely longitudinal cutting to produce the block strips, and transverse cutting of these block strips, the result is very rational production. The second cutting device works practically fully automatically and therefore very fast. Thus transverse cutting of the block strips can take place more or less in the same time as manually operated longitudinal cutting of these block strips in the first cutting device. This does not exclude the possibility that the block strips from several first cutting devices are delivered to the second cutting device, or conversely the block strips of a first cutting device are delivered to more than one second cutting device.

The invention is described in more detail below with the aid of a preferred embodiment shown in the drawings.

They show:

- Fig. 1 a plan view of a cutting system with the cutting device according to the invention,
- Fig. 2 a side view of the advance mechanism,
- Fig. 3 a partial view of the advance mechanism from behind,
- Fig. 4 a horizontal section through the advance mechanism engaging in the pressure bar,
- Fig. 5 a schematic view of the cutting device from behind, with the advance mechanism removed,
- Fig. 6 a schematic vertical section through the working zone of the cutting device,
- Fig. 7 an enlarged section through the region of the path of travel of the cutting knife,
- Figs. 8 to 18 the working region of the cutting device in individual working stages.

In Fig. 1 a first cutting device 1 is shown in the form of a guillotine-type cutter with a cutting line indicated 2. Here, block strips 4 are cut off from stacks 3 of sheet material of large surface area, wherein the stacks 3 are aligned on a side stop 5 in the usual manner and advanced stepwise by an advance mechanism 6.

The block strips 4 are collected at a loading and prealignment station 7 on a transport plate 8. At the edges thereof there are two stops 9 and 10 extending perpendicularly to each other, by means of which the block strips 4 can be placed adjacent to each other on the transport plate 8 with satisfactory alignment. The loaded transport plate 8 can then be displaced to the right in Fig. 1 after the stop 9 has been moved away by a small amount and the stop 10 has been moved up or down.

The loaded transport plate 8 passes to a transfer station 11. The latter comprises a temporary stand 12 with several tiers 13 one above the other (Fig. 5) which can each be brought to the working level by means of a lifting device 14. Each tier has at least two guide rails 15 and 16 and, if occasion arises, other support means too such as

rollers. The transfer station 11 is formed by the tier 13 located at the working level at any given time.

The transfer station 11 directly adjoins a second cutting device 17, of which the cutting line 18 is shown in Fig. 1 again in dot-and-dash lines. This cutting device has a table surface 19 which consists of an input area 20, a working area 21 and an output area 22. The input area 20, which roughly comprises the region B1, is formed by a transport plate 8 at any given time. The working area 21, which roughly comprises the region B2, is located beneath a cutting knife (cutter bar) 23, a pressure bar 24 (Fig. 7) as well as a contact pressure slide 25. The output area 22, which may extend over the region B3, serves to receive the finished stacks. On it is located a straightedge 26 also used for alignment. On one side of the output area 22 is provided an automatic bundling device 27 for packaging the finished stacks, and on the other side an automatic punching device 28 for further processing the stacks. These automatic devices can be used selectively.

The cutting device 17 has an advance mechanism 29 which is composed of separate segments 30. These segments 30 are each mounted on a lever arm 31 which is pivotable about a rear shaft 32. They can therefore be displaced from an operative position (unbroken lines in Fig. 2) in which they rest on the table surface 19, into an inoperative position (dot-and-dash lines in Fig. 2) in which they are disengaged from the table surface and the stacked material located thereon. Pivoting is carried out manually, but may also be performed automatically by suitable drive means, for example servo motors.

Each segment 30 may comprise a sliding finger 33 which is guided vertically in the segment and is in contact with the table surface 19 due to its weight. The pressure bar 24 has grooves 34 in which the advance mechanism 29 engages by teeth 35 in its foremost position. The spacing of the segments 30 corresponds to the tooth pitch (Fig. 4).

The advance mechanism 29 is mounted on a first

carriage 36 which is slidable in a vertical direction on a carriage 37. The second carriage 37 is slidable in a longitudinal direction on a guide 38 fixed to the machine. The sliding movement takes place in a known manner by means of motors, not shown, and can be carried out fully automatically according to a previously entered programme.

In the region of the input area 20, the cutting device 17 has a guide track 39 which comprises two guides 40 and 41 for the transport plate 8 and further support rails 42. A coupling piece 43 is capable of engaging in a recess in the lower side of the transport plate 8 and pulling the latter out of the transfer station 11 onto the cutting device 17. For this purpose the coupling piece 43 is held pivotably by means of a servo motor in a housing 44 which is attached to a chain 45. The latter runs over a drive sprocket 46 which is driven by a motor 47, and a guide sprocket 48. So that the transport plate 8 can be moved beyond the guide rail 15, a lowering device 49 is provided which consists of a pneumatic or hydraulic piston and cylinder unit with a plunger 50 which pushes down the guide rail 15.

The cutting device 17 is provided with a side stop 51 with which a proximity switch 52 is associated. As soon as the edge of the first block strip approaches this side stop 51, the proximity switch 52 responds and switches off the motor 47. The block strips 4 therefore come to rest in the immediate vicinity of or in abutment with the side stop 51. The side stop 51 can be lifted by means of a sloping surface 8a at the front edge of the transport plate 8, so that the transport plate 8 can be moved through under the side stop. If the advance mechanism 29 is now set in operation, only the operative segments 30 entrain the stacked material located in front of them, in the present embodiment only three block strips 4. As soon as the first cutting position is reached, the straightedge 26 is moved on the output area 22 by means of its servo motors 53 repeatedly in a direction opposite the direction of advance,

in order to align the block strips 4 in the longitudinal direction, that is, at the operative segments 30 of the advance mechanism 29. Moreover the contact pressure slide 25, which is also provided with sliding fingers 54, is moved parallel to the cutting line 18 in order to press the advanced block strips 4 against the side stop 51 and thereby bring about transverse alignment. Before this pressing movement, the contact pressure slide 25 can be moved further under the pressure bar 24 closer to the cutting line 18, as shown in dashed lines in Fig. 1. The distance between side stop 51 and contact pressure slide 25 is greater than the working width of the advance mechanism 29.

The contact pressure slide 25 is operated in the transverse direction by a servo motor 55 which in turn is displaceable in the direction of advance by means of a servo motor 56. The latter is connected to a carriage 58 which is slidable along a transverse guide 59 fixed to the machine.

The pressing movement of the straightedge 26 or contact pressure slide 25 can take place several times one after the other, if required by the nature of the material to be cut. The working face of these pressure elements can be provided with a resilient coating.

Attached to the same carriage 58 is a hold-down device 60 which can be displaced vertically and loaded by means of a servo motor 61. Even before the first advance movement of the advance mechanism 29 it is pressed down onto the first one of the block strips 4a which are not to be displaced, so that the alignment of these block strips obtained at the loading and alignment station 7 is preserved.

The segments 30 of the advance mechanism 29 which are made inoperative are at such a level or are shifted so far back that they collide neither with the contact pressure slide 25 nor with the hold-down device 60 and the associated drives.

So that the cutter bar 23 can perform its working stroke, the side stop 51 is interrupted, wherein the gap is

filled with a filler piece 62 so that satisfactory alignment in the transverse direction is possible. This filler piece 62 can be lowered with the cutter bar 23 out of the position 62a shown in unbroken lines in Fig. 7 into the position 62b shown in dot-and-dash lines. It prevents the cutting knife, which has a component of movement in the direction of the cutting line, from laterally entraining the stack which has just been cut. After cutting, the filler piece is lowered still further into the position 62c shown in dotted lines, in which it is completely beneath the table surface 19. In this way the filler piece does not hinder removal of the stack which has just been cut, even if it consists only of sheets of a very small size. Movement of the filler piece 62 is brought about by a servo motor 63.

As Fig. 6 shows, an ejector 64 can be lowered into a transverse channel 66 by means of a servo motor 65. The whole assembly is attached to a carriage 67 which is movable by a motor along a transverse guide 68 fixed to the machine. The transverse channel is bounded by the straightedge 26 and by a second straightedge 69. This second straightedge moves into the position shown in Fig. 6 when the table top 70 forming the output area 22 has been moved forwards into the position shown in dashed lines in Fig. 1 to form a gap 73 between itself and the working area 21, as explained in more detail in connection with Figs. 1 to 18. The finished stacks can then be supplied through the transverse channel 66 fully automatically to the automatic bundling device 27 or the automatic punching device 28.

Below, the sequence of the individual movements is explained in more detail in connection with the cutting process with the aid of Figs. 8 to 18.

According to Fig. 8, a block strip 4 is pressed by the straightedge 26 against the segments 30 of the advance mechanism 29, wherein this straightedge out of the position in dot-and-dash lines performs a movement in the direction

of the arrow a, if occasion arises several times one after the other. Shortly afterwards, transverse alignment takes place by means of the contact pressure slide 25. Then the pressure bar 24, not shown here, is pushed down.

As Fig. 9 shows, cutting follows with the aid of the cutter bar 23 moving in the direction of the arrow b. At the same time the straightedge 26 is moved back in the direction of the arrow c into the position in dot-and-dash lines in Fig. 8, and tilted in the direction of the arrow d about a lower horizontal shaft.

If cutting has now been performed according to Fig. 10, the result is a stack 71 which, following the shape of the cutter bar, adopts a parallelogram-shaped cross-section. It is supported by the straightedge 26.

According to Fig. 11, the table top 70 is lifted by the amount x, for example 1 mm, from the level of the cutting strip 72 beneath the cutter bar 23. Hence the lowermost sheet is reliably separated from this cutting strip.

Now the table top 70 is advanced in the direction of the arrow e according to Fig. 12 to form a gap 73. At the same time the straightedge 69, which had adopted an inoperative position beneath the table top 70, tilts upwards in the direction of the arrow f. Moreover the straightedge 26 tilts back in the direction of the arrow g into the vertical position. Consequently the stack 71 is set upright.

According to Fig. 13, the ejector 64 is now lowered in the direction of the arrow h into the transverse channel 27 formed between the straightedges 69 and 26. Here, the straightedge 26 can be lifted slightly off the stack 71 in the direction of the arrow i. The stack 71 can then be supplied automatically to the automatic bundling device 27 or the automatic punching device 28.

Let us now suppose that it is not a useful cut, but an intermediate cut that is to be made. The segments 30 are moved in the direction of the arrow k and displace the

block strips 4 forwards by the thickness of the intermediate cut (Fig. 14).

If, as Fig. 15 shows, the cutter bar 23 is now moved down again in the direction of the arrow b, the cut-off material 74 drops down through the gap 73, preferably into a collecting receptacle located there. At the same time the straightedge 69 has been tilted into a position approximately perpendicular to the sloping surface 75 of the cutter bar 23, and a stripping bar 76 has been moved towards this sloping surface 75 in the direction of the arrow l by means of a servo motor 77.

Consequently all the cut-off material 74 is reliably stripped from the sloping surface 75 of the cutter bar and blade when the cutter bar 23 moves back up (Fig. 16).

There is a further advance movement of the block strip 4 by means of the segments 30 in the direction of the arrow k, so that the remainder of the cut-off material 74 drops through the gap 73. The straightedge 69 returns to its inoperative position (Fig. 17) and the table top 70 closes the gap 73 (Fig. 18).

A new working cycle can now begin, in which the segments 30 advance the block strips again into the vicinity of the straightedge 26. There follows a new alignment process, new cutting and so on.

If the first block strip 4 - or in the present embodiment the first three block strips - have been divided up into small stacks 72 in this way, the motor 47 is energised again so that the transport plate 8 advances further to the left in Fig. 5. As soon as the edge of the block strip 4a is detected by the proximity switch 52, the transport plate 8 stops and repeated advance with the advance mechanism 29 can take place. For this purpose the advance mechanism must be returned to the inoperative position shown in Fig. 1. This can take place before the transport plate 8 is moved on or simultaneously therewith, namely when the advance mechanism 29 is lifted in its forward position by means of the carriage 27 and moved back

beyond the block strips into the starting position. Then there is a new advance by means of the advance mechanism 29. This working cycle is repeated until all the block strips have been processed. The transport plate 8 can then be transported back to an empty tier of the temporary stand 12 by means of the coupling piece 44.

The second cutting device 17 and the supply assembly with the transport plate 8 can be operated largely automatically. Consequently a single operative is sufficient for the production of labels, who produces the block strips 4 at the cutting device 1, places them correctly on the loading and alignment station 7 and moreover simply monitors the automatic progress of the system.

There can be deviations from the embodiment described in many respects without departing from the basic concept of the invention. For instance, the empty transport plates 8 can be removed on the side of the input area 20 facing away from the transfer station 11.

If brittle stacked material is to be cut, the straightedge 26 may additionally carry spring hold-down elements 78, as shown in Fig. 9. In this way even with brittle sheet material it can be ensured that the individual sheets do not spring away. If the hold-down elements 78 are not needed, they can be folded away (Fig. 10). Furthermore, the straightedge 26 can be provided with a proximity switch 79 (Fig. 18) which responds when the front side 80 of the block strip 4 comes closer to the straightedge 26 than corresponds to a predetermined limit distance. In this case the advance mechanism 29 is switched off to avoid operator error. Furthermore the advance mechanism can be provided with a sliding clutch which responds when the block strips 4 meet with resistance during advance.

The servo motors necessary for automatic progress are here shown as pneumatic or hydraulic piston and cylinder units. But the servo motors can also be operated mechanically, electrically or in some other known manner.



Patent claims

1. Device for cutting stacked sheet-like material made of paper or film material, with a table surface (19) which comprises a working area (21) above which are located a cutting knife (23) and a pressure bar (24), behind it an input area (20) for receiving the material to be cut and in front of it an output area (22) for receiving the cut material, with a side stop (51) for alignment of the material to be cut and with an advance mechanism (29) for the material to be cut, characterised in that a contact pressure slide (25) movable automatically in the direction of the cutting line (18) is provided for pressing the material (4) to be cut against the side stop (51) and in that the working width of the advance mechanism (29) is smaller than the distance between side stop (51) and contact pressure slide (25).

2. Device according to claim 1, characterised in that the advance mechanism (29) is divided in the direction of the cutting line (18) into separate segments (30), the advance function of which can be made inoperative at least over part of the width of the cutting knife.

3. Device according to claim 1 or 2, characterised in that the segments (30) are displaceable from a working position in which they entrain the material (4) to be cut, into an inoperative position.'

4. Device according to claim 3, characterised in that the segments (30) are pivotable upwards and rearwards about a horizontal shaft (32) located behind them in the working position.

5. Device according to any of claims 1 to 4, in which the advance mechanism (29) comprises teeth (35) which engage in grooves (34) of the pressure bar (24) in the foremost



position, characterised in that the segments (30) have a spacing corresponding to the tooth pitch.

6. Device according to any of claims 1 to 5, characterised in that the contact pressure slide (25) is located above the working area (21) behind the pressure bar working plane.

7. Device according to claim 6, characterised in that the contact pressure slide (25) while the pressure bar (24) is raised is movable first under it and then in the direction of pressing.

8. Device according to any of claims 1 to 7, characterised in that behind the contact pressure slide (25) is located a supply track (39) extending transversely to the direction of advance, for the material to be cut.

9. Device according to claim 8, characterised in that the input area (20) is formed by a transport plate (8) movable transversely to the direction of advance.

10. Device according to any of claims 1 to 9, characterised in that a hold-down device (60) extending in the direction of advance is provided behind the contact pressure slide (25).

11. Device according to any of claims 1 to 10, characterised in that the advance mechanism (29) can be lifted in its entirety and returned rearwards in the lifted state.

12. Device according to any of claims 9 to 11, characterised in that the side stop (51) can be lifted for the purpose of letting the transport plate (8) through.

13. Device according to any of claims 1 to 12, characterised in that in the region of the cutter bar (23), a filler



piece (62) of the side stop (51) can be moved downwards with the cutter bar (23) and during advance movement can be lowered to below the table surface (19).

14. Device for cutting stacked sheet-like material made of paper or film material according to any of claims 1 to 13, characterised by a straightedge (26) which extends in the direction of the cutting line (18) and is arranged on the output area (22) and which has a limited stroke in a direction opposite the direction of advance, in order to press the material (4) to be cut against the advance mechanism.

15. Device according to claim 14, characterised in that the straightedge (26) is tiltable about a lower horizontal shaft in order to support the stack (71) of cut material during cutting and then set it upright again.

16. Device according to claim 14 or 15, characterised in that hold-down elements (78) which are applied resiliently to the material to be cut are mounted on the straightedge (26).

17. Device according to any of claims 1 to 16, in which the output area (22) is movable relative to the working area (21) to form a gap (73), characterised by a transverse channel (66) on the output area (22) which leads to a further processing station (27, 28) and is formed by a first straightedge (26) mounted on the output area (22) and a second straightedge (69) located therebehind which can be moved into its working position after opening of the gap (73), and by an ejector (64) which is movable along the transverse channel.

18. Device according to claim 17, characterised in that the second straightedge (69) is arranged under the output area (22) in its inoperative position and is capable of being



moved through the gap (73) into its working position.

19. Device according to claim 18, characterised in that the second straightedge (69) is provided with a stripping bar (76) and controlled in such a way that during upward movement of the cutter bar (23) the stripping bar wipes along the latter.

20. Device according to claim 19, characterised in that the stripping bar (76) in the working position is displaceable in a direction towards the sloping surface (75) of the cutter bar (23).

21. Device according to any of claims 2 to 20, characterised in that the segments (30) of the advance mechanism (29) and/or the side stop (51) and/or the contact pressure slide (25) comprise vertically movable sliding fingers (33, 54) resting on the table surface.

22. Device according to any of claims 1 to 21, characterised by use as a second cutting device (17) of a system in which a first cutting device (1) is designed to produce block strips (4) by parallel cuts, wherein in the second cutting device (17), by a number of block strips arranged adjacent to each other in the direction of the cutting line (18), only a fractional number of the operative segments (30) of the advance mechanism (29) can be entrained.