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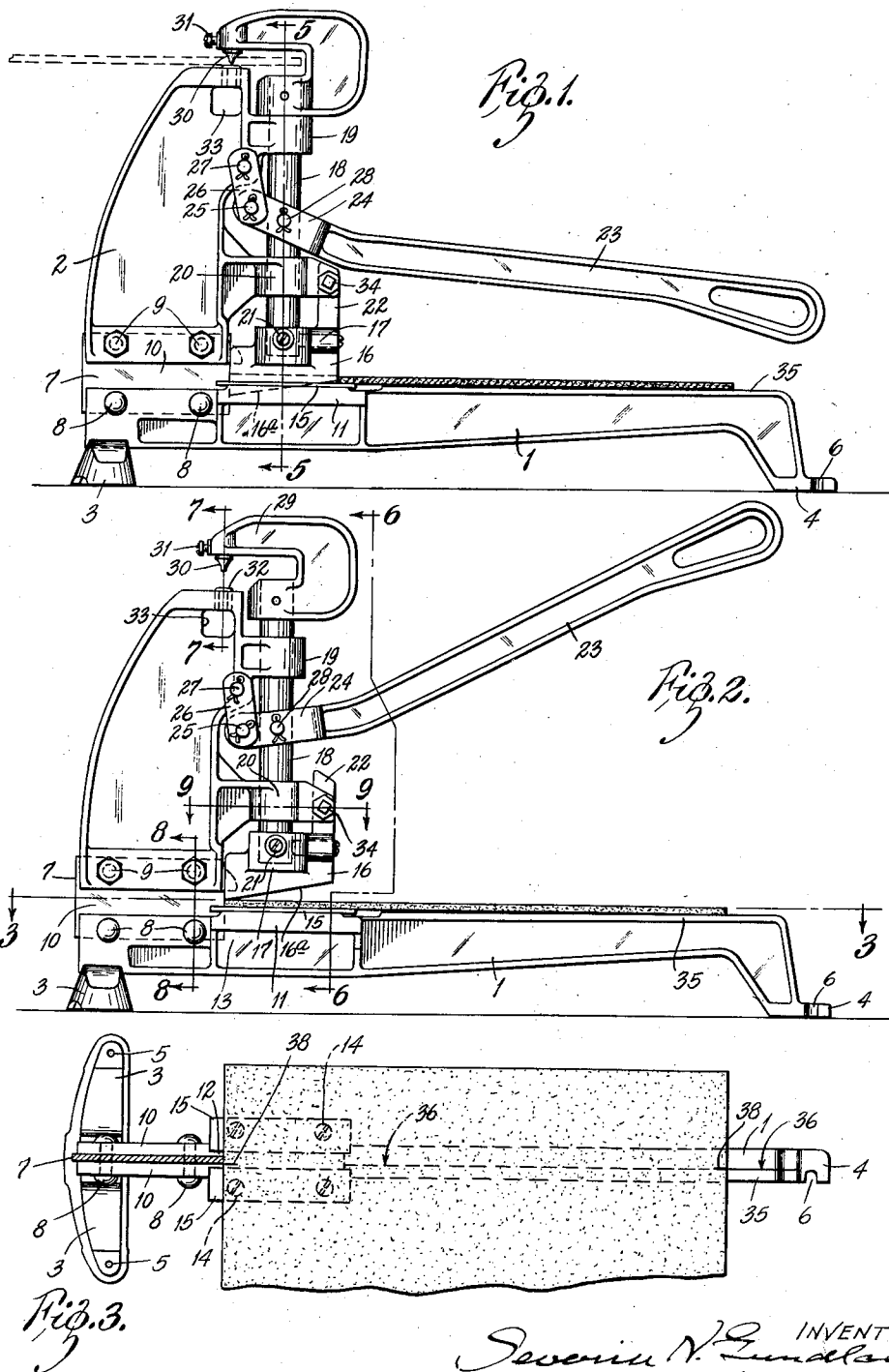
S. N. GUNDLACH

2,260,972

SHINGLE CUTTER

Filed Dec. 27, 1938

2 Sheets-Sheet 1



INVENTOR:
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HIS ATTORNEYS

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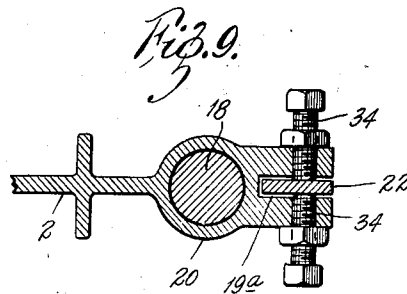
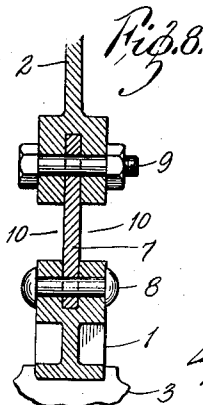
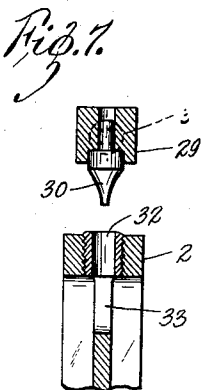
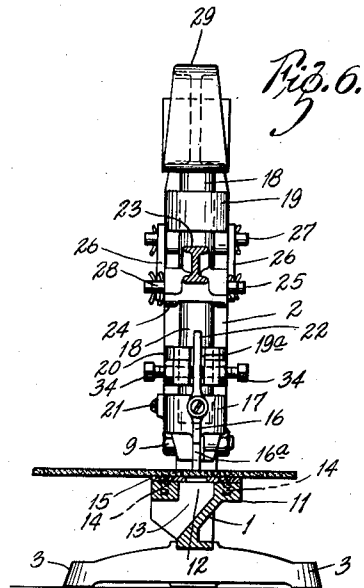
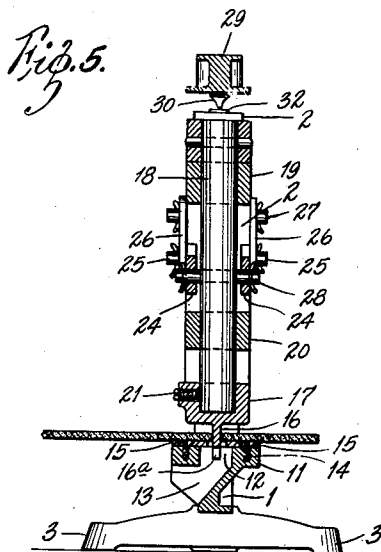
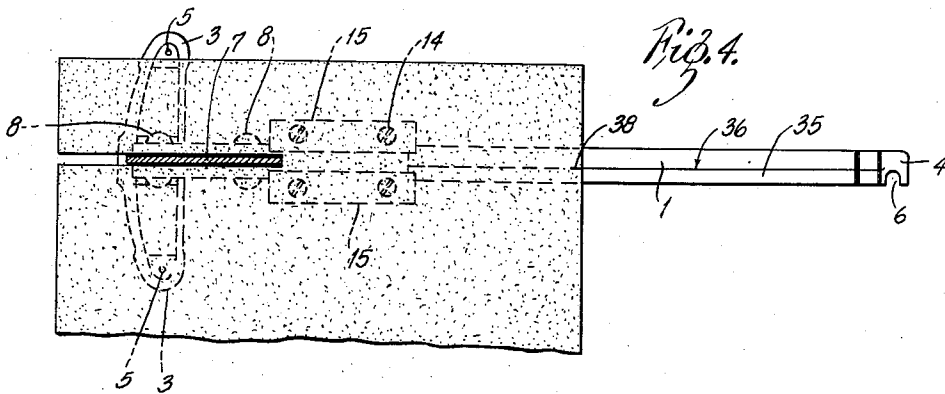
S. N. GUNDLACH

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SHINGLE CUTTER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,260,972

SHINGLE CUTTER

Severin N. Gundlach, Belleville, Ill.

Application December 27, 1938, Serial No. 247,748

6 Claims. (Cl. 164—15)

This invention relates to cutting devices, particularly portable shingle cutters. The objects of the present invention are to provide a powerful and easily operable light weight shingle cutter which can be easily carried about, to provide for simplicity and cheapness of construction, compactness of design and easy assembly of the parts and to provide means operated by the knife operating lever for punching holes in the shingles. The invention consists in the combined shingle cutter and punch and in the construction, combinations and arrangements hereinafter described and claimed.

In the accompanying drawings, which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a side elevation of a shingle cutter and punch embodying my invention, with the knife and punch shown in operative position,

Fig. 2 is a view similar to Fig. 1, showing the knife and punch in inoperative position,

Fig. 3 is a horizontal section on the line 3—3 in Fig. 1,

Fig. 4 is a view similar to Fig. 3, showing the shingle with a cut started therein,

Fig. 5 is a vertical section on the line 5—5 in Fig. 1,

Fig. 6 is a vertical section on the line 6—6 in Fig. 2,

Fig. 7 is a fragmentary vertical section on the line 7—7 in Fig. 2,

Fig. 8 is a fragmentary vertical section on the line 8—8 in Fig. 2; and

Fig. 9 is a fragmentary horizontal section on the line 9—9 in Fig. 2.

My cutting device is particularly adapted for cutting and notching shingles and for punching nail holes therein, although it may be used for other purposes. Said cutter comprises an elongated horizontally disposed work supporting base or bed 1 provided at one end with a centrally disposed upright or standard 2 and outstanding lateral foot flanges 3 and at the other end with an outstanding longitudinal foot flange 4, the foot flanges 3 having holes 5 therethrough and the foot flange 4 having a notch 6 in one side thereof, whereby said cutter may be held against movement by nails (not shown) engaged with said holes and notch. For convenience in packing and shipping the upright 2 is detachably secured to the base member 1 by means of a vertically disposed plate 7 having its lower marginal portion permanently secured by rivets 8 in a central vertical longitudinal groove in the top of said base member and having its upper mar-

ginal portion removably secured by means of bolts 9 in a central longitudinal groove in the underside of said upright, said upright being spaced above said base and cooperating therewith and with said plate to form outwardly opening longitudinal channels 10 on opposite sides of the cutter.

The upper portion of the base 1 is widened, as at 11, in front of the upright supporting plate 7 and has a central longitudinal slot 12 therein that opens outwardly, as at 13, through one side of said widened portion below the top thereof. Secured flatwise by means of countersunk cap screws 14 to the top of widened portion 11 of the base 1 on opposite sides of the slot 12 therein is a pair of steel plates 15 whose opposing longitudinal edges are adapted to form resisting edges against which a vertically movable steel knife blade 16 works.

The knife 16 has its cutting edge 16a sheared, that is, beveled off from one end to another to give a gradual sloping cutting action which reduces the pressure required to make the cut. This vertically movable knife is preferably formed integral with a member 17 having a central upwardly opening socket therein adapted to receive the lower end of a plunger 18, which is mounted for vertical sliding movement in aligned holes provided therefor in the vertically spaced outstanding lugs 19 and 20 on the front edge of the upright 2. The knife supporting member 17, which is rigidly secured to the lower end of the plunger 18 by means of set screws 21, is provided with an upstanding lug 22 that has a loose fit in a vertical slideway 19a provided therefor in the front face of the lowermost plunger guiding lug 20 of the upright 2.

The plunger 18 is reciprocated by means of a lever 23 that is disposed above and longitudinally of the base 1 and extends from the upright 2 to the front end of said base. This lever has a forked end 24 which straddles the plunger 18 between the vertically spaced guide lugs 19 and 20 therefor and is pivotally supported for vertical swinging movement on a horizontal pivot pin 25 that is disposed transversely of the cutters with its ends supported in openings provided therefor in the lower ends of a pair of links 26 disposed one on each side of the upright or standard 2. The upper ends of the supporting links 26 are pivotally supported on the ends of a pivot pin 27 mounted in an opening that extends horizontally through the upright 2 from side to side thereof adjacent to the uppermost plunger guiding lug 20. The lever 23 is secured

to the plunger 18 by means of a horizontal pin 28 which passes through registering holes provided therefor in the plunger and in the forked end 24 of said lever.

Pinned or otherwise rigidly secured to the plunger 18 above the uppermost lug 20 is a member having a rearwardly extending arm 29 which is spaced above the upper end of the plunger 18 and overhangs the upper end of the upright 2 and has a vertical hole extending therethrough adapted to receive a punch member 30. This punch member is removably secured in position by means of a set screw 31 and its lower or work engaging end is adapted to cooperate with a die member in the form of a hardened steel sleeve 32 that is pressfitted in an opening provided therefor in the top of the upright. The upright 2 is provided below the die receiving opening with an opening 33 through which the punchings are discharged.

The punch 30 is accurately centered with reference to the die 32 by means of a pair of set screws 34 that are threaded through the opposite walls of the slideway 19 for the lug 22 on the knife carrying member 17 with their ends in abutting relation to the opposite sides of said lug, whereby said screws may be adjusted to rotate the plunger 18 on its axis and thereby bring the punch 30 carried by the jaw member 29 fixed to the upper end of the plunger into axial alinement with the die member 32 in the top of the upright 2. The base 1 is provided on its upper surface with a longitudinal rib 35 that extends from the forward end thereof to the slot 12 therein with one side edge 36 disposed in alinement with one side edge of the knife 16 and forming a guiding line or straight edge for use in feeding the shingle to the knife.

By the arrangement described, the shingle to be cut is placed on the longitudinal rib 35 on the base 1 of the cutter with one end abutting against the front edge of the plate 7 which connects the upright 2 to said base. The knife 16 is then forced downwardly into engagement with the portion of the shingle located therebelow by means of the lever 26 and the cut is made therein by the gradual cutting action of the sheared edge 16 of the knife against the resisting edges of the plates 15 located on opposite sides of said knife. The shingle is then fed forward step-by-step and the knife is operated after each feed to obtain the desired length of cut. After the first cut, the plate 7, which connects the upright 2 to the base 1 is disposed within the cut and thus prevents side play of the shingle in the cutter. The cuttings drop through the elongated blade receiving slot 12 and are discharged through the opening 13 in the side of the base. When it is desired to make a long cut in the shingle, marks 38 are placed on the shingle at opposite ends thereof to indicate the line of cutting and the shingle is placed on the bed with one mark in line with the edge 36 of the rib 35 and with the other mark in line with the corresponding edge of the knife 16. The mark on the front end of the shingle is kept in line with the guide line or edge 36 during the step-by-step feed of the shingle while the other end of the shingle is held in position by the plate 7, thereby producing a straight line cut.

When it is desired to punch a nail hole in the shingle, the plunger 18 is raised and the shingle inserted between the arm 29 carried by the plunger and the upper ends of the plunger and upright 2. The long knife operating lever

26 is then swung downwardly to engage the punch 30 with the die 32, and the punchings pass downwardly through the die and are discharged through the opening 33 located therebelow. The parts may be quickly and easily assembled, the knife accurately alined with the shearing edges of the two plates 7 and the punch accurately alined with the die, and the knife and plates may be readily removed for sharpening or replacement.

Obviously, the hereinbefore described construction admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise construction shown and described.

What I claim is:

1. A cutting device comprising an elongated base member having a work supporting surface, an opening extending downwardly from said surface and opening through one side of said base member and an upright at one end of said opening, plates secured to said base member on opposite sides of said opening at the upper end thereof, a plunger mounted for vertical reciprocating movement in said upright above said opening, a knife secured to the lower end of said plunger and adapted to work against the opposed edges of said plates, the thickness of said upright corresponding substantially to the thickness of said knife immediately above said base member, a member secured to the upper end of said plunger and having a portion overhanging the upper end of said upright, a punch mounted on and depending from the overhanging portion of said last mentioned member, a die in the upper end of said upright in position to receive said punch, said knife having an upstanding lug and said upright having a vertical slideway for said lug, and a pair of screws threaded into said upright in abutting relation to the opposite sides of said lug, the upper work supporting surface of said base member having a longitudinal guide line thereon disposed in substantial alinement with one longitudinal edge of said knife.

2. A portable cutting device comprising an elongated base having a longitudinal slot in the upper work supporting surface thereof and an upright extending above said base, a plunger mounted for vertical reciprocating movement in said upright above said slot, means for reciprocating said plunger, a knife fixed to the lower end of said plunger with its cutting edge disposed longitudinally of said slot and adapted to work against a longitudinal resisting edge thereof, a member rigid with said plunger and having an arm spaced above the upper end thereof and overhanging the upper end of said upright, and cooperating punch and die members located one on the underside of said overhanging arm and the other on said upper end of said upright.

3. A portable cutting device comprising an elongated horizontally disposed base having a longitudinal slot in the upper work supporting surface thereof and an upright extending above said base at one end of said slot, a plunger mounted for vertical reciprocating movement in said upright above said slot, means for reciprocating said plunger, a knife fixed to the lower end of said plunger with its cutting edge disposed longitudinally of said slot and adapted to work against a longitudinal resisting edge thereof, a die in the upper end of said upright, a member rigid with said plunger and having an arm spaced above the upper end thereof and overhanging said upper end of said upright, and a punch rigid with and

depending from said overhanging arm in position to cooperate with the die in said upper end of said upright.

4. A portable cutting device comprising an elongated base having a longitudinal slot in the upper work supporting surface thereof and an upright extending above said base, a plunger mounted for vertical reciprocating movement in said upright, means for reciprocating said plunger, and a knife secured to the lower end of said plunger for angular adjustment relative thereto to position the cutting edge of said knife longitudinally of said slot for cooperation with a longitudinal edge thereof, a member fixed to the upper end of said plunger and having an arm overhanging the top of said upright and spaced above the upper end of said plunger, a punch rigidly mounted on and depending from said overhanging arm, a die rigidly mounted in the upper end of said upright in position to receive said punch, said knife having an upstanding lug rigid therewith and said upright having a vertical slideway therein for said lug, and a pair of screws threaded into said upright with their ends extending into said slideway in abutting relation to the opposite sides of said lug.

5. A portable cutting device comprising an elongated base member having a longitudinal slot in the upper work supporting surface thereof and an upright at one end of and in line with said slot, a plunger mounted for vertical reciprocating movement in said upright above said slot, means for reciprocating said plunger, and a knife fixed to the lower end of said plunger with its cutting edge disposed longitudinally of said slot

and adapted to work against a longitudinally resisting edge thereof, said upright having the portion thereof immediately above said base reduced to a thickness corresponding substantially to the thickness of said knife, whereby said portion of said upright is disposed within the cut made by said knife in the work when the latter is moved in the direction of said upright during the cutting operation.

6. A portable cutting device comprising an elongated base member having a longitudinal slot in the upper work supporting surface thereof and an upright at one end of and in line with said slot, a plunger mounted for vertical reciprocating movement in said upright above said slot, means for reciprocating said plunger, and a knife fixed to the lower end of said plunger with its cutting edge disposed longitudinally of said slot and adapted to work against a longitudinal resisting edge thereof, said upright comprising a main upper section and a lower section removably secured to said base and to said upper section, the thickness of the lower section of said upright immediately above said base corresponding substantially to the thickness of said knife, whereby said lower section of said upright is disposed within the cut made by said knife in the work when the latter is moved in the direction of said upright during the cutting operation, the work supporting surface of said base having a longitudinal work guide line thereon disposed in substantial alignment with one longitudinal edge of said knife.

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