

A. B. CAMPBELL, JR.

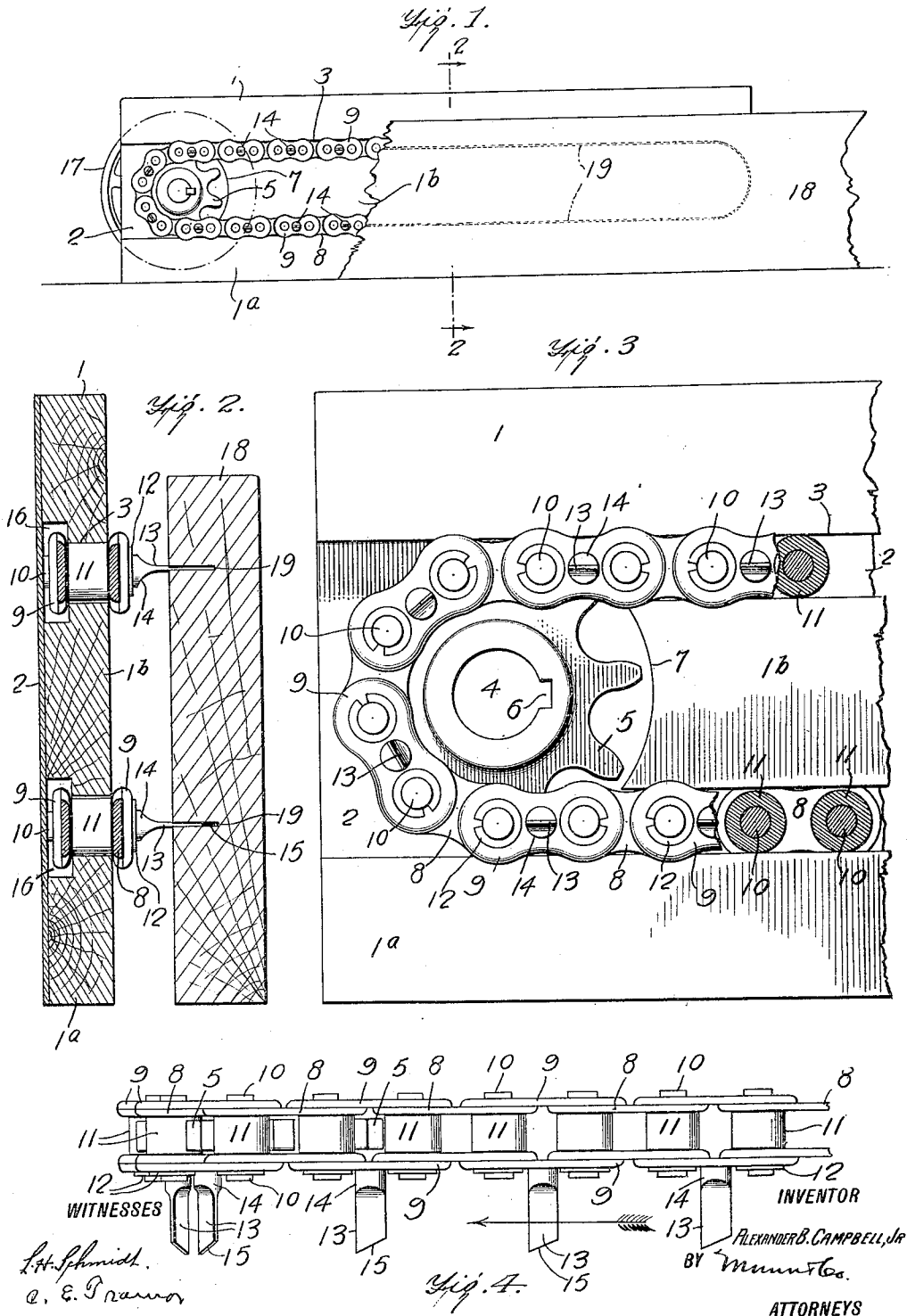
POCKET CUTTER.

APPLICATION FILED MAY 10, 1913.

Patented Apr. 27, 1915.

2 SHEETS—SHEET 1.

1,137,459.

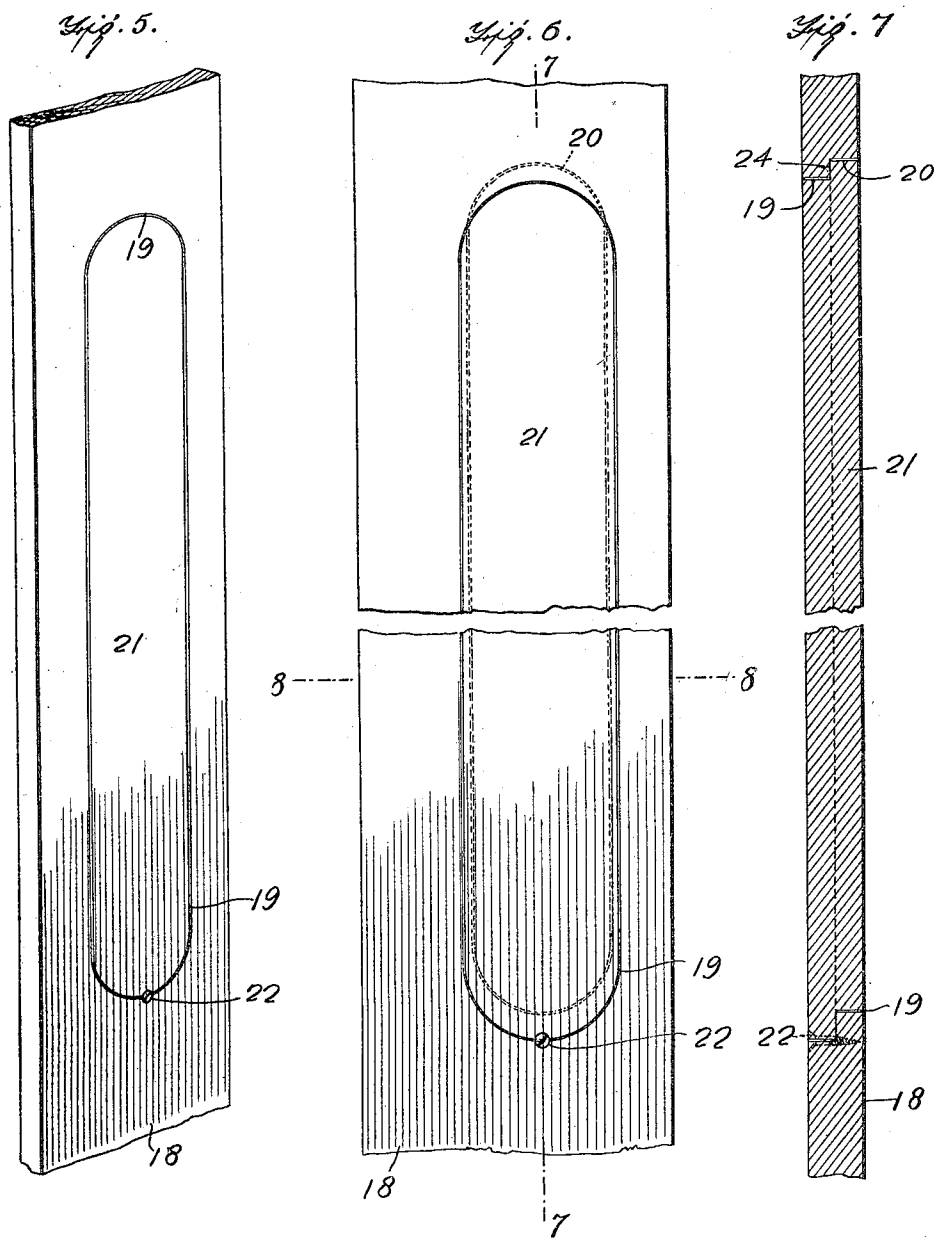


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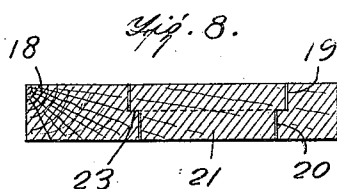
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WITNESSES
L. H. Schmidt.
O. E. Harris



INVENTOR
ALEXANDER B. CAMPBELL, JR.
BY *Mum* Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALEXANDER BRONSON CAMPBELL, JR., OF JACKSONVILLE, FLORIDA.

POCKET-CUTTER.

1,137,459.

Specification of Letters Patent.

Patented Apr. 27, 1915.

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To all whom it may concern:

Be it known that I, ALEXANDER B. CAMPBELL, Jr., a citizen of the United States, and a resident of Jacksonville, in the county of Duval and State of Florida, of the United States of America, have made a new and useful Improvement in Pocket-Cutters, of which the following is a specification.

My invention is an improvement in pocket cutters, and has for its object to provide mechanism for quickly and easily cutting pockets in the jambs of window frames, for receiving balanced sashes, wherein the cutting is done by a continuous moving chain. In the drawings Figure 1 is a front view of the improved cutter, Fig. 2 is an enlarged section on line 2—2 of Fig. 1, Fig. 3 is an enlarged front view of one end of the cutter with parts of the chain in section, Fig. 4 is a partial top plan view of the cutting chain, Fig. 5 is a perspective view of a portion of the jamb showing the pocket cut, Fig. 6 is a front view of a portion of the jamb showing the manner in which the pocket is cut, and, Figs. 7 and 8 are sections on the lines 7—7 and 8—8, respectively of Fig. 6.

The present embodiment of the invention comprises a supporting frame, consisting of lateral guides 1 and 1^a and an intermediate guide 1^b. The said guides are held together by a connecting plate 2, in such manner that a recess is formed on one face of the supporting frame at each end thereof and grooves or channels 3, the said grooves or channels connecting the recesses, and the outer side of each groove or channel is continuous with the adjacent outer side wall of the recesses. A shaft 4 is journaled in each of the recesses, at the center thereof, and midway between the opposite side edges of the support, and a sprocket wheel 5 is keyed to each shaft by means of a key 6. The inner end of each of the recesses 2 is arc-shaped as indicated at 7, the circle upon which the arc is formed having the shaft 4 as its center. An endless chain is supported on the sprocket wheels, said chain being composed of links 8 and 9, connected by pins 10. The links 8 and 9 are arranged in series, and in pairs, and an arbor 11 is arranged on each pin 10 between the links. From an inspection of Fig. 4, it will be noticed that the links are arranged in inner and outer series, the innermost links at the

side of the chain being in alinement and arranged with their adjacent ends spaced apart from each other, and the outermost links lap upon the meeting ends of the innermost links. The outermost series of links at one side of the chain is composed entirely of the links 9, before mentioned, and washers 12 are arranged between the heads of the pins 10 and the outer face of the said links. Each of the said links 9 is provided intermediate its end with a laterally extending cutting blade 13, each of the said blades having a cylindrical shank 14 which is connected to the link 9 in any suitable manner. The free end of the blade 13 is beveled as indicated at 15, from front to rear, with respect to the direction of motion of the chain, this direction being indicated by the arrow in Fig. 4. All of the blades 13 are similarly arranged, and each blade provides a cutting point at the front end thereof because of the manner in which the blades are beveled. The blades 13 are of the same length, so that the point of each blade is in the same plane with the points of all the other blades. The teeth of the sprocket wheels 5 are of a length and size to extend between adjacent arbors 11, and the washers 12 are split washers as shown in Fig. 3.

The guides 1, 1^a, 1^b are so arranged, that the channels 3 are just of sufficient width to permit the free passage of the arbors, and the opposite faces of the said guides from the blades 13 are recessed on each side of the grooves 3, as indicated at 16, to permit the free passage of the links 8. The said recesses 16 are adjacent the connecting plate 2, so that the said links move between the said connecting plate and the bottoms of the recesses. The links at one side of the chain move in the recesses 16, while the links 8 and 9 at the opposite side of the chain are on the opposite face of the supporting frame formed by the guides. A pulley 17 or the like is secured to one of the shafts 4, for engagement by a belt, to connect the said pulley with a suitable source of power, in order to rotate the same. The plate 2 is arranged on the opposite face of the support from the blades, to connect the three portions of the frame; namely, the upper and lower guides 1 and 1^a and the intermediate guide 1^b. In operation the supporting frame formed of the guides 1, 1^a and 1^b is arranged adja-

cent to the jamb 18, as shown in Fig. 1, with the blades 13 in position to engage the adjacent face of the jamb. The pulley 17 is then rotated in any suitable manner, to cause the chain to move longitudinally on the sprocket wheels. The blades engage the adjacent face of the jamb, and cut a continuous channel 19 in the said jamb, the said channel corresponding in outline to the outline of the chain. As the blades cut, the supporting frame is moved toward the jamb until the blades have cut approximately half through the jamb. The jamb is then reversed, and a similar cut is made on the opposite side of the jamb, as indicated in Fig. 6 in dotted lines. The jamb and the supporting frame are so arranged with respect to each other during the making of the second cut, that the area of that portion of the jamb inclosed by the cut is staggered or off-set longitudinally with respect to the portion of the jamb inclosed by the first named cut. That is, the jamb and the supporting frame are moved longitudinally slightly with respect to each other, so that the first cut 19 and the second cut 20 are not in registry with each other. The cut 20 is the same depth as the cut 19, so that the aggregate depth of the cuts is equal to the thickness of the jamb. After the second cut has been made, a blow from a hammer or the like will dislodge that portion 21 of the jamb inclosed by the cuts 19 and 20 and the said portion may be removed. After the weights have been placed, the said portion 21 may be replaced, and a screw 22 may be inserted to engage the jamb and the portion 21, whereby to hold the said portion in place, as shown in Fig. 7. Lips or ledges are thus formed to prevent dislocation of the portion 21, the said portion forming a door or cover. The cut or kerf 20 may be so arranged on the reverse side of the jamb, that the portion of the jamb between or within the cut is of lesser width than the portion within the cut 19. Ledges or shoulders 23 will thus be formed at the sides of the said portion, and the longitudinal staggering of the said cuts provides a lip 24 at the top of the portion 21 to prevent outward movement of the said portion.

I claim:

1. A cutter of the character specified, comprising a supporting plate, lateral guides connected to the plate at the opposite side edges thereof, said guides being spaced apart at their adjacent edges, a central guide arranged longitudinally of the plate between the first named guides and in spaced relation to the said guides, said central guide being of lesser length than the lateral guides and having its ends spaced apart from the ends of the plate, a shaft journaled in the plate at each end of the central guide, a sprocket wheel keyed to each shaft, an endless chain supported by the sprocket wheels,

said chain comprising spaced inner pairs of oppositely arranged links, and spaced outer pairs of oppositely arranged links, the pairs of outer links lapping on the adjacent ends of the inner links, pins connecting the said lapping ends and extending across the space between the pairs of links, an arbor on each pin between the members of each pair of innermost links, a cutting blade secured to each of the outermost links at one side of the chain, each blade having a shank connected with the link, said blades being arranged with their wide dimension parallel with the direction of motion of the chain between the sprocket wheels, and the free end of each blade being beveled, said blades being similarly arranged, and means for rotating one of the shafts.

2. A cutter of the character specified, comprising a supporting plate, lateral guides connected to the plate at the opposite side edges thereof, said guides being spaced apart at their adjacent edges, a central guide arranged longitudinally of the plate between the first named guides and in spaced relation to the said guides, said central guide being of lesser length than the lateral guides and having its ends spaced apart from the ends of the plate, a shaft journaled in the plate at each end of the central guide, a sprocket wheel keyed to each shaft, an endless chain supported by the sprocket wheels, said chain comprising connected links, each link having a laterally extending blade at one side of the chain, said blades being arranged with their wide dimension parallel with the direction of motion of the chain between the sprocket wheels, each blade having its free end beveled, said blade being similarly arranged, and means for rotating one of the shafts.

3. A cutter of the character specified, comprising a supporting plate, lateral guides connected to the plate at the opposite side edges thereof, said guides being spaced apart at their adjacent edges, a central guide arranged longitudinally of the plate between the first named guides and in spaced relation to the said guides, said central guide being of lesser length than the lateral guides and having its ends spaced apart from the ends of the plate, a shaft journaled in the plate at each end of the central guide being of lesser length than the shaft, and endless chain supported by the sprocket wheels, said chain comprising connected links, each link having a laterally extending blade at one side thereof, and means for rotating one of the shafts.

4. A cutter of the character specified, comprising an endless chain composed of spaced pairs of links, the adjacent pairs overlapping at their ends and being pivoted together, and a blade connected with each alternate pair intermediate the ends of the

links, all of the said blades extending laterally from the links in the same direction, and means for supporting and guiding the chain, said last-named means comprising
5 a central and lateral guides, the central guide being of less length than the lateral guides, a shaft journaled in the support at each end of the central guide, and a sprocket wheel keyed to each shaft, the chain engaging the sprocket wheels.

ALEXANDER BRONSON CAMPBELL, JR.

Witnesses:

J. B. WELLBORN,

J. D. POWELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."