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TOOL FOR CUTTING FIBRO-CEMENT SHEETS OR LIKE MATERIAL

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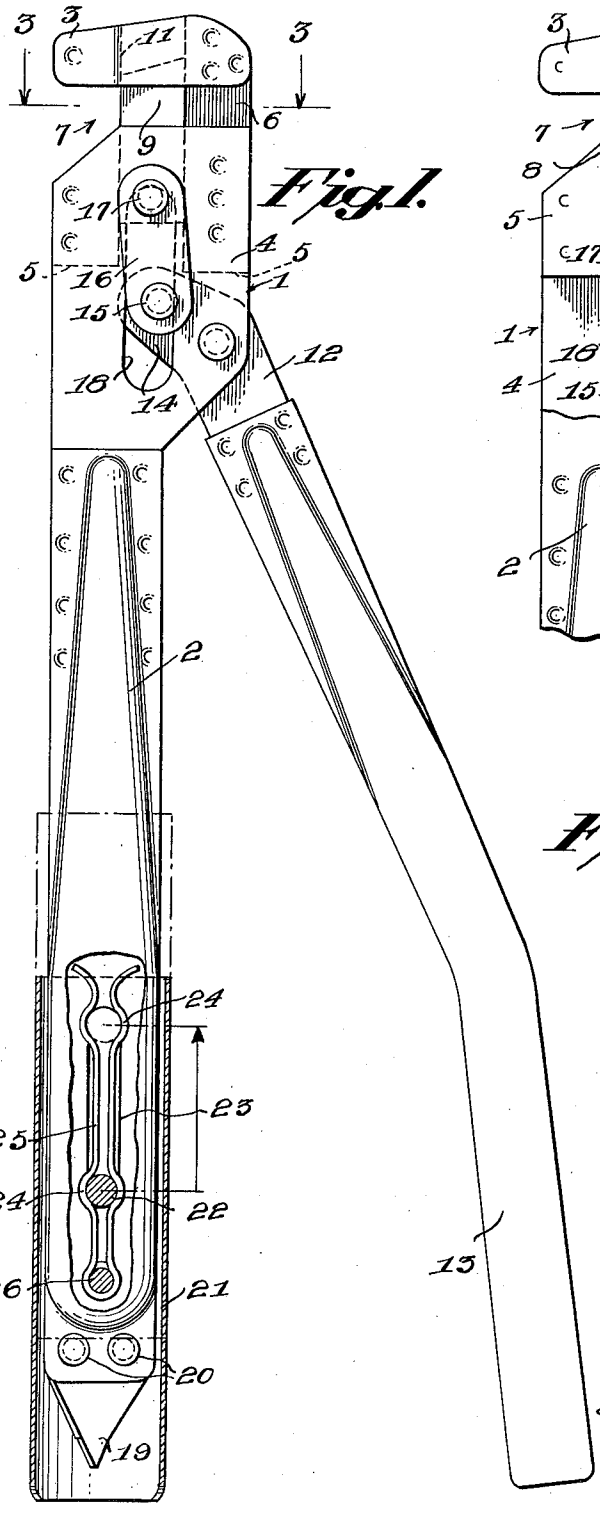



Fig. 1.

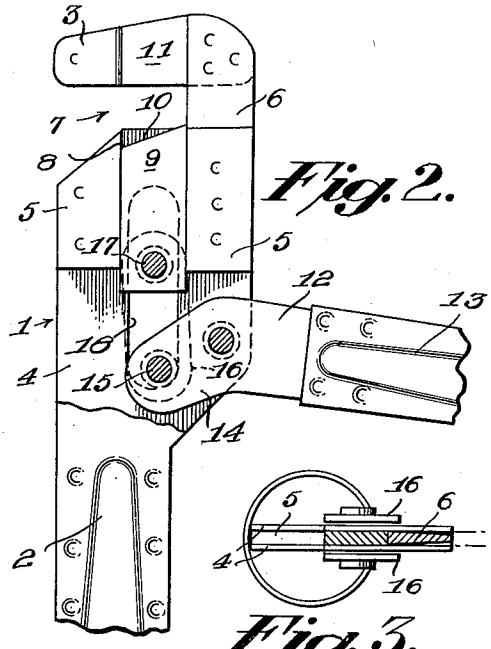



Fig. 2.




Fig. 3.

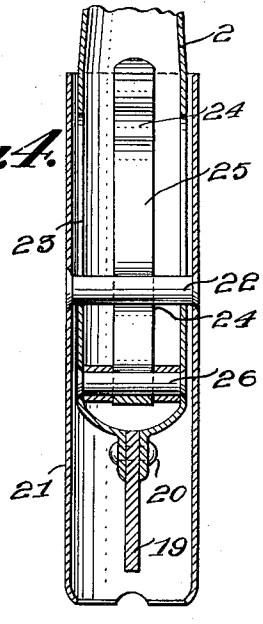



Fig. 4.

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# TOOL FOR CUTTING FIBRO-CEMENT SHEETS OR LIKE MATERIAL

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Claims priority, application Australia December 1, 1954

1 Claim. (Cl. 30—242)

This invention relates to an improved tool intended mainly for cutting fibro-cement sheets, but usable also for cutting other sheet material such as composition board, fibro-plaster sheets, pressed thermosetting plastic building panels or the like.

Sheet material of the above character is often difficult to cut, particularly when the cuts are curved or are in the nature of apertures or shaped holes cut within the perimeter of the sheets. Usually such cuts are made by the use of narrow-bladed saws or like tools but these are not very efficient and the cuts made are often jagged. The cutting operation is also slow and laborious.

The present invention has for its object to overcome these disabilities and provide an improved form of tool by means of which curved and internal cuts in sheet materials as mentioned above can be made more expeditiously and with greater facility than at present.

According to the invention, the improved tool comprises a body member, a holding handle attached thereto, a cutting blade slidably mounted in the body member, a fixed jaw supported from the body member to provide a mouth and having a slotted portion through which the cutting blade operates with a shearing action to shear a narrow strip from the sheet engaged in the mouth, an operating handle pivoted at an intermediate point to the body member, a pivot pin on the end of the operating handle, a pivot pin on the end of the cutting blade and links connecting said pivot pins so that the blade is operated by pivotal movement of the operating handle.

Preferably, a spike or pointed piercing blade is provided on the end of the holding handle for use in forming an initial hole in the fibro-cement or other sheet to enable the tool to be inserted for use, and said spike or blade is normally covered by a slidable cover.

The invention is more fully described aided by reference to the accompanying drawings wherein:

Fig. 1 is a side view, partly in section, of the improved tool.

Fig. 2 is a part side view with portion in section illustrating the operation of the tool.

Fig. 3 is a horizontal section on line 3—3 of Fig. 1.

Fig. 4 is a sectional side view of the lower end of the holding handle.

As is shown in these views, the tool comprises a body member **1** attached as by spotwelding to the holding handle **2** and having at its upper end a fixed jaw **3**. The body member comprises two side plates **4** spaced apart by spacers **5** and also having an extended member **6** which supports the jaw **3**. The parts are shaped to provide the mouth **7** and are all preferably secured together by spot-welding to form a rigid structure of comparatively narrow width.

The spacers **5** form a vertical slideway **8** in which is fitted the cutting blade **9**, the latter having an angularly formed upper end **10** co-acting with an open-topped slot **11** in the fixed jaw **3**.

Pivoted to the body member **1** at an intermediate point is an operating handle **12** having a handle part **13** attached thereto as by spot-welding. The handle **12** has an offset portion **14** extending between the side plates **4** and pivotally connected by the pivot pin **15** to the lower ends of a pair of links **16**. The upper ends of the links are pivotally connected by a pivot pin **17** to the lower end of the blade **9**. The pins **15** and **17** are freely slidable in slots **18** in the side plates **4** of the body member.

The operation of the tool will be obvious. The sheet to be cut is engaged in the mouth **7** and the handle **12** operated to cause the blade **9** to be reciprocated to shear a narrow strip from the sheets, the tool, of course, being advanced as each cut is made. The width of the angularly formed end **10** of the blade is comparatively small so that only a relatively small portion is sheared from the sheet on each operation of the blade by the handle **12**. This nibbling-like cutting action enables curved and internal cuts to be conveniently formed in the fibro-cement or like sheet material without causing unduly jagged edges and with greater speed and facility than previously. Moreover, as the portion sheared from the sheet on each operation is forced by the blade upwardly out through the open-topped slot **11** in the fixed jaw **3**, the cutting blade is always maintained clear.

The gripping or hand portions of the handles **2** and **12** may be of tubular form made from sheet metal.

The lower end of the handle **2** may be provided with a spike or pointed piercing blade **19** for use in forming an initial hole in the fibro-cement or other sheet to enable the tool to be inserted for use. Said spike is preferably secured as by means of rivets **20** to the lower end of the handle and has a slidable cover **21** for protecting it when not in use.

The cover is tubular to embrace the lower end of the handle and may be retained in either of its two slidable positions by means of a pin **22** passed through slots **23** in the handle and engaging holding notches **24** in a U-shaped spring **25** secured to the handle by a pin **26**. The pin **22** engages in either notch **24** at the end of the sliding movement of the cover to either expose or cover the blade **19** and the cover is thereby frictionally retained in either position by the closing action of the U-shaped spring **25**.

What I claim is:

A tool for punching fibro-cement sheets or like material, comprising an elongate body member, a holding handle rigidly extending from one end of said body member, a fixed jaw rigidly fixed at the other end of said body member and spaced therefrom to provide a material receiving mouth between said jaw and the adjacent end of said body member, said body member having a rectangular section slideway longitudinally therein opening through the end thereof perpendicular to said mouth and a slot in each side wall opening longitudinally into said slideway, said jaw having a slideway therethrough in alignment with and corresponding in size and section to said body slideway, a punch blade of rectangular section snugly slidable within said slideways and having a flat punch end facing said mouth, said punch end being inclined to the transverse plane of said blade and from the inner end toward the opening of said mouth, said body member having an opening in one edge thereof and in communication with said slideway and side wall slots, an operating handle having an operating end inserted in said opening and pivoted to said body member at an intermediate point with said operating end interposed between said slots, a pivot pin carried by said operating end and extending laterally from both sides thereof through the respective slots, a pivot pin on the inner end of said blade and extending laterally from both sides thereof and through the respective slots, and a pair of links respectively on each side of said body member and connected at their respective ends to said handle and blade pivot pins, whereby opera-



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tion of said operating handle will slide said blade longitudinally of said slideways and transversely of said mouth to punch a section from material inserted into said mouth and expel the punched section through the open end of said jaw slideway.

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