No. 777,366. PATENTED DEC. 13, 1904.

C. O. BERGMARK.

SHEARS.

APPLICATION FILED MAR. 29, 1904.

NO MODEL.

FIG. 1.

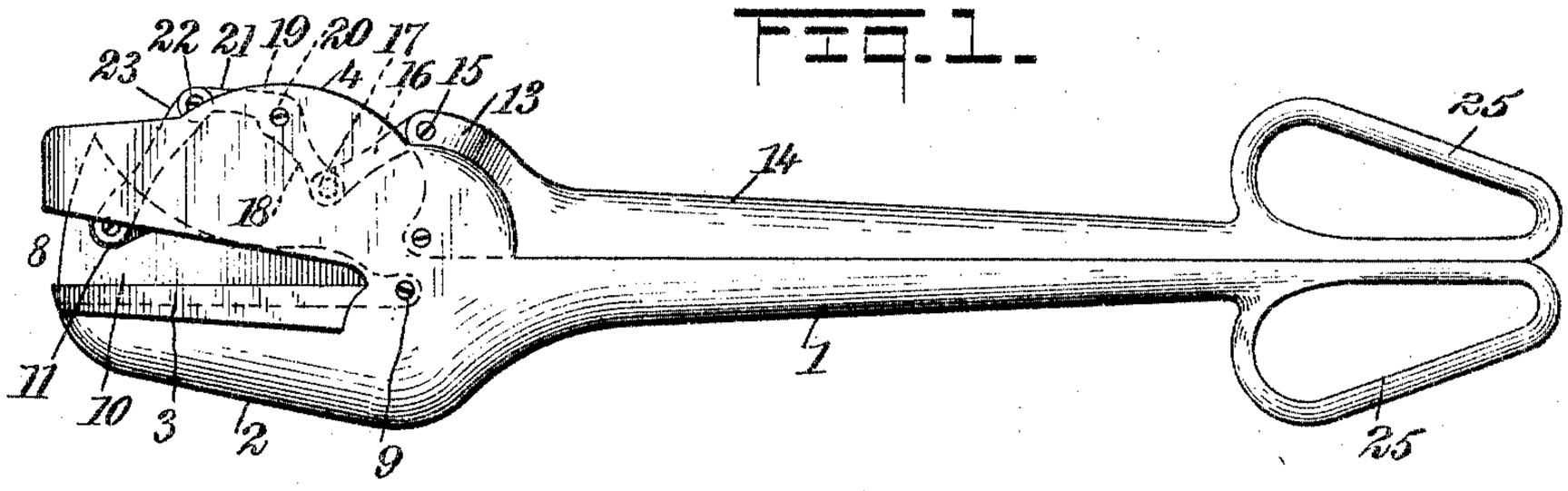


FIG. 2.

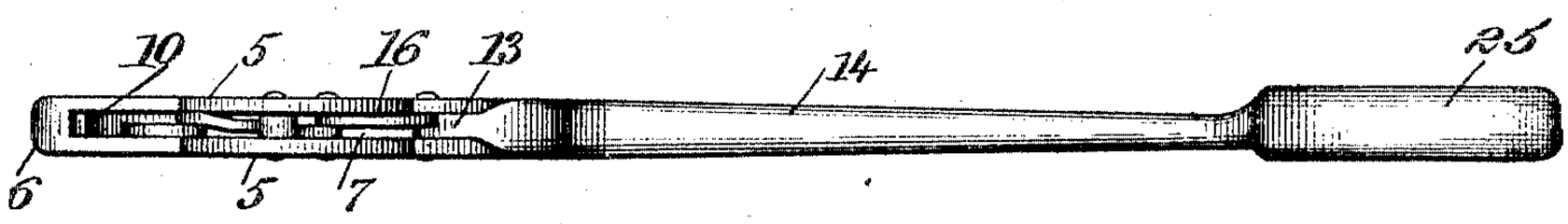


FIG. 3.

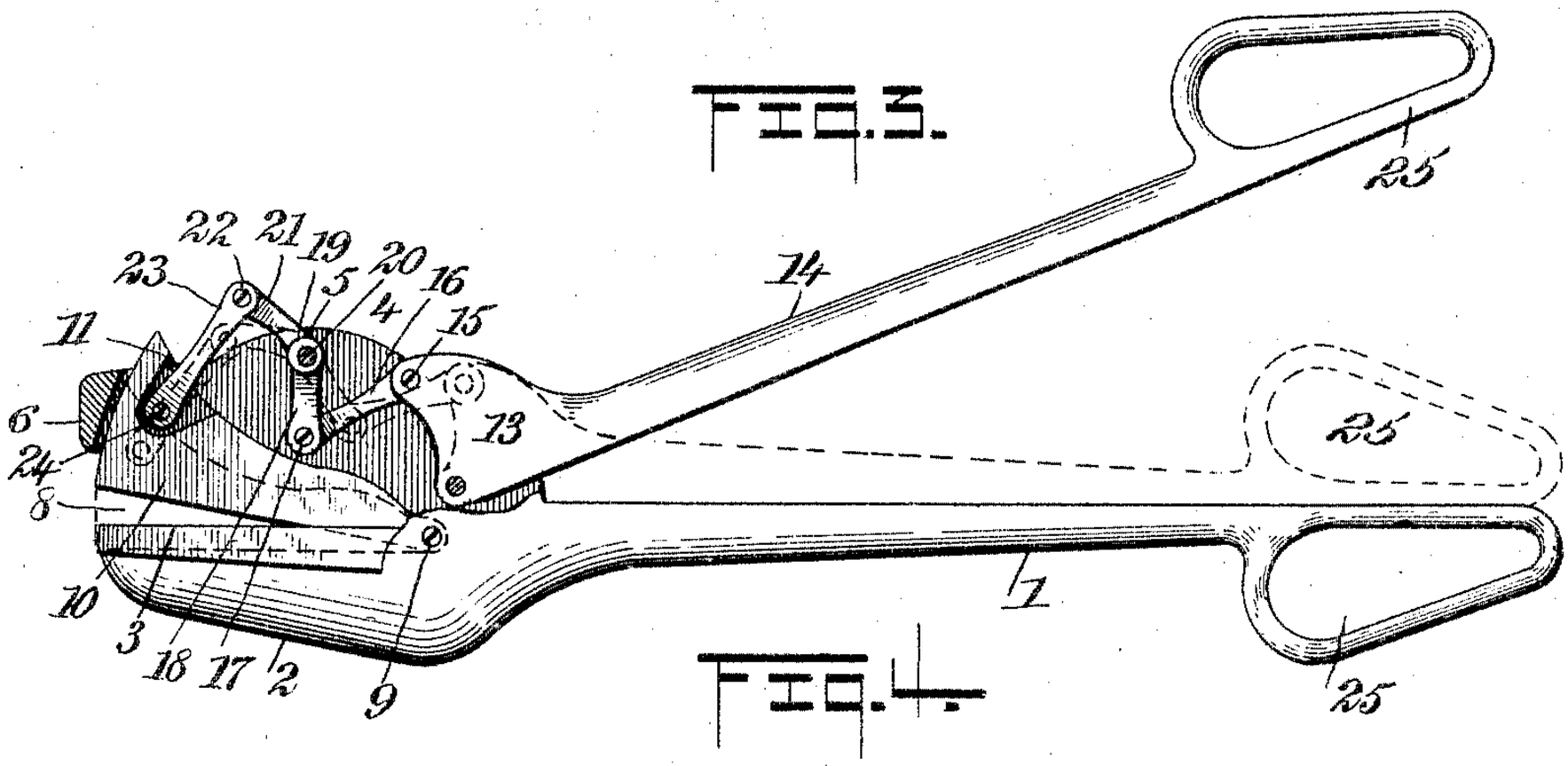
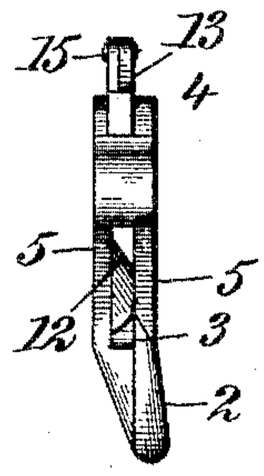


FIG. 4.



WITNESSES:

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No. 777,366. Patented December 13, 1904.

UNITED STATES PATENT OFFICE.

CHARLES OSKAR BERGMARK, OF CHISHOLM, MINNESOTA.

SHEARS.

SPECIFICATION forming part of Letters Patent No. 777,366, dated December 13, 1904.

Application filed March 29, 1904. Serial No. 200,539. (No model.)

To all whom it may concern:

Be it known that I, CHARLES OSKAR BERGMARK, a citizen of the United States, and a resident of Chisholm, in the county of St. Louis and State of Minnesota, have invented a new and Improved Shears, of which the following is a full, clear, and exact description.

This invention relates to shears; and it consists, substantially, in the construction and combinations of parts hereinafter particularly described, and pointed out in the claims.

The invention has reference more especially to shears for cutting sheet metal; and one of the principal objects thereof is to overcome numerous disadvantages and objections common to many other contrivances hitherto devised for similar purposes and also to provide a device of this kind which is simple in construction and comparatively inexpensive to manufacture, besides being effective and reliable in use and possessing the capacity for long and repeated service.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of my improved shears, showing the movable blade as closed with respect to the stationary blade. Fig. 2 is a top plan view. Fig. 3 is also a side view, parts being broken away and in section to show the construction and operation of the shears, the movable blade being open with respect to the stationary blade; and Fig. 4 is an end view looking from the left in Fig. 1.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown I employ a relatively stationary handle provided with a jaw and a frame of special construction, the jaw being formed with a cutting-blade, coöperating with which is a relatively movable cutting-blade mounted in the frame, special devices being also employed for actuating the movable blade through the instrumentality of another and relatively movable handle, also mounted in the frame, and while I have herein represented my improvements in a certain selected embodiment it will be understood, of course, that I am not limited to the precise details thereof in practice, since immaterial changes therein may be made coming within the scope of my invention.

Specific reference being had to the drawings by the designating characters marked thereon, 1 represents a handle having rigid therewith at one end an elongated jaw 2, the inner or upper edge of which is beveled or planed down to form a cutting-blade 3, the inner end of said jaw being formed at or near the intersection thereof with said handle 1 with an overhanging frame 4, having duplicate side members 5, connected together at their outer ends, as at 6, said side members being each substantially of equal thickness with the jaw 2 and one of them being in alinement with said jaw and the other lateral thereto, thus providing a space 7 between the two, as shown. Between the blade 3 and the adjacent or inner edges of the side members of the frame 4 is a throat 8, at the base or inner extremity of which and between the said side members is a pivot 9, on which is mounted the inner end of a relatively movable cutting-blade 10, which is preferably formed in its outer edge with a notch or recess 11, the inner longitudinal edge of this blade being beveled or planed down at 12 oppositely to the adjacent edge of the jaw or cutting-blade 3. Pivoted between the said side members 5 of the overhanging frame, preferably beyond the pivot 9, is the inner angle or corner of a knuckle-plate 13, formed rigidly with the inner extremity of a relatively movable handle 14, the outer angle or corner of such plate having pivoted thereto at 15 one end of a link 16, the other end of which is in pivotal connection at 17 with one arm, 18, of an angle-lever 19, mounted at 20 between the side members 5 of the frame, the other arm, 21, of said lever being pivoted at 22 to the outer end of another link, 23, having its inner end received by the notch or recess 11 and pivoted at 24 to the side of the latter, as clearly shown in Fig. 3, it being noted that the said movable blade 10 is of gradually-decreasing width inwardly, so as to accommodate the working of the said link-and-lever

organization just described. The other ends of each handle may be provided with a loop 25 to be grasped by the hands in manipulating the shears, it being understood that the normal relations of said handles, as well as the other parts, are indicated in full lines in Fig. 3, while the dotted lines in said figure represent the positions to which the parts of the shears are brought in cutting therewith. Sheet metal or other material to be cut or severed is placed in the throat 8, and then the two handles are tightly grasped and the movable handle forced toward the stationary handle with pressure, which action operates the knuckle-plate and link-and-lever devices to carry the edge of the movable cutting-blade past the edge of the said relatively stationary cutting-blade. It is thought the construction and advantages of my improvements will be fully understood without further elucidation thereof.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. Shears, comprising a handle having a jaw provided with an integral blade and an integral overhanging frame, a relatively movable blade supported by the frame, a relatively movable handle, and means operated from the latter to actuate said movable blade, said means being independently pivoted upon the frame.

2. Shears, comprising a handle having a jaw provided with an integral blade and an integral overhanging frame, a relatively movable blade supported by the frame, a relatively movable handle, and means operated from the latter to actuate said movable blade, said means consisting of a pivoted angle-lever, and pivoted links connecting the same with the movable handle and movable blade.

3. Shears, comprising a handle having a jaw provided with an integral blade and an integral overhanging frame, a relatively movable blade supported by the frame, a relatively movable handle, and means operated from the latter to actuate said movable blade, said means being also supported by the frame, and consisting of a pivoted angle-lever, and pivotal links connecting the same with the movable handle and movable blade.

4. Shears, comprising a handle having an integral jaw formed with an integral blade and an integral overhanging frame, a relatively movable blade supported by the frame, a relatively movable handle fulcrumed in the frame, and operating connections between this handle and the movable blade for actuating the latter, said connections being mounted in the frame.

5. Shears, comprising a handle having an integral jaw formed with an integral blade and an integral overhanging frame, a relatively movable blade supported by the frame, a relatively movable handle fulcrumed in the frame, and operating connections between this handle and the movable blade for actuating the latter, said connections being mounted in the frame, and said movable blade being of gradually-decreasing width inwardly to accommodate the working of the connections.

6. Shears, comprising a handle having an integral jaw formed with an integral blade and an integral overhanging frame constructed of duplicate side members, a relatively movable blade mounted between said members, a relatively movable handle, and operative connections from the latter for actuating the movable blade, said connections being also mounted between said members, and one of the members being in alinement with the jaw and the other lateral thereto.

7. Shears, comprising a handle having a jaw formed with a blade and an overhanging frame comprising duplicate side members, a relatively movable blade mounted between said side members, a relatively movable handle, a lever fulcrumed between the side members, and links connecting the lever and the last-named handle to the movable blade.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES OSKAR BERGMARK.

Witnesses:
A. H. GRIESEN,
C. EDGAR LIBBITT.