J. W. CHAUNCEY.

SHEARS.

APPLICATION FILED OCT. 11, 1909.

976,121. Patented Nov. 15, 1910.

Fig. 1.

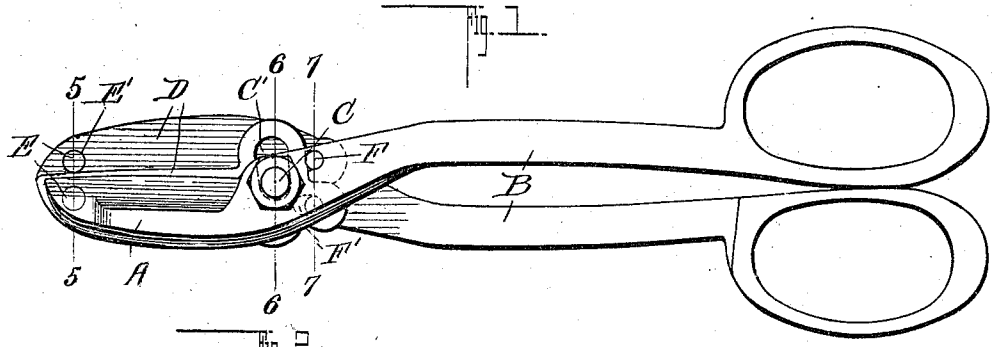


Fig. 2.

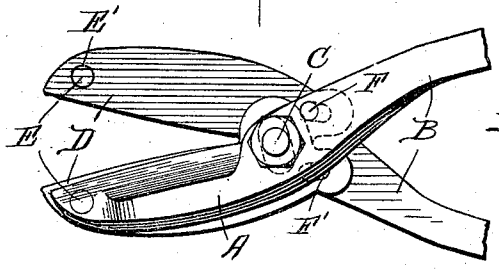


Fig. 3.

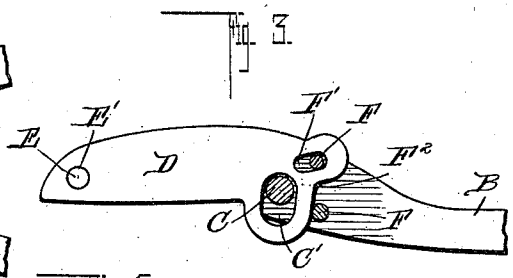


Fig. 4.

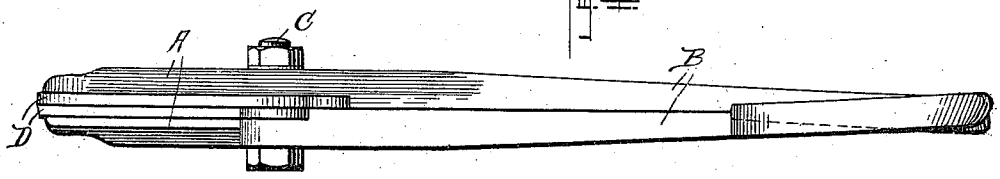


Fig. 5.

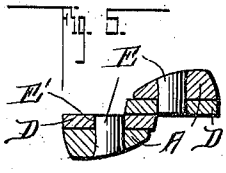


Fig. 6.

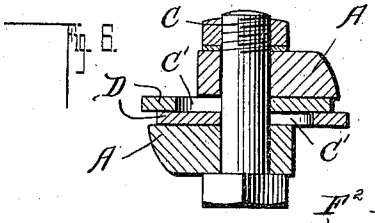


Fig. 7.

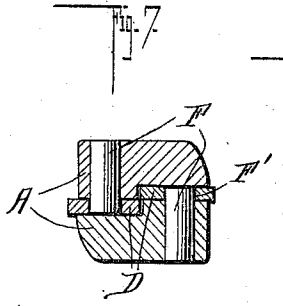
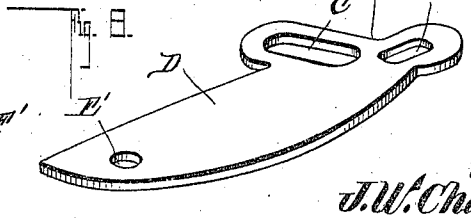


Fig. 8.



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SHEARS.

976,121. Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed October 11, 1909. Serial No. 521,990.

To all whom it may concern:

Be it known that I, JAMES W. CHAUNCEY, a citizen of the United States, residing in Alexandria, in the county of Alexandria and State of Virginia, have invented a new and useful Improvement in Shears, of which the following is a specification.

This invention relates generally to shears, and more particularly to certain improvements therein, whereby the cutting power of said shears is greatly increased, and a still further object is to so improve the ordinary construction of shears that the greatest power of the cutting blades will be at the point instead of at the pivot or crotch, as heretofore and by this means of this improvement, I am able to quickly and easily cut metal along any desired line either curved or straight, and without the loss of any metal whatsoever.

Another object of the invention is to increase the power of the shears materially, so that sheet metal of extraordinary thickness can be quickly and easily cut, and a still further object is to provide improvements of such a character that the principle can be applied to any and all classes of shears or cutters.

With these various objects in view, my invention consists essentially in the employment of a pair of cutting blades, pivotally connected at their forward ends to the forward ends of the jaws of the shears or cutters, the rear ends of said cutting blades being operated upon by studs or bolts carried by the handles of the shears at points to the rear of the pivotal bolt of said shears, whereby said cutting blades are caused to move past each other upon their pivots, and whereby a compound leverage is obtained, thereby greatly increasing the cutting power of the shears.

The invention consists also in certain details of construction, and novelties of combination and arrangement, all of which will be fully described hereinafter, and pointed out in the claims.

In the drawing forming a part of this specification:—Figure 1 is a side view of a pair of shears provided with my improvement. Fig. 2 is a view showing the jaws opened. Fig. 3 is a face view of one of the jaws with the cutting blade arranged thereon, the pivot and operating bolt being shown in section. Fig. 4 is an edge view of the shears. Fig. 5 is a section on the line 5—5 of Fig. 1. Fig. 6 is a section on the line 6—6 of Fig. 1. Fig. 7 is a section on the line 7—7 of Fig. 1, and Fig. 8 is a detail perspective view of one of the cutting blades, the said Figs. 5, 6, 7 and 8 being upon a larger scale in order to more clearly bring out the novelties of construction.

In carrying out my invention I employ an ordinary pair of shears consisting of the jaws A integral with the handles B, and pivotally connected by means of a pivotal bolt C, all of said parts being of the usual or any approved pattern.

I do not employ the jaws A as cutting members, but on the other hand I provide cutting blades D which are arranged on the inner face of each jaw, said blades being pivotally connected at their forward ends to the forward ends of the jaws, and for this purpose I provide pivot pins E upon the jaws, which enter holes E′ produced in the cutting blades D, and in order to operate the said cutting blades, I employ studs or pins F, upon the handles which engage and work in elongated openings F′ produced adjacent the ends of the cutting blades, it being understood that the stud carried by one handle enters the slot of the opposite cutting blade, and inasmuch as these studs or pins F are to the rear of the pivot-bolt C it will be understood that as the handles are opened and closed for the purpose of opening and closing the jaws, the cutting blades will be simultaneously operated also, each blade having an opening C′ through which the pivot bolt C passes, said openings being quite large in order to permit the blades to operate freely.

Inasmuch as the cutting blades are pivoted at their forward ends, and have the power applied to their rear ends, and furthermore as the handles carrying the operating stud are pivoted together, it is obvious that I provide a compound leverage for the cutting blades and that the point of final cut is adjacent the point of the blade and furthermore, that the greatest power is exerted at that point instead of at the crotch, as heretofore, and by means of this construction, I am able to cut sheet metal in the form of a perfect circle, either large or small, and furthermore am able to accurately cut upon any line either curved, straight or angular, and all of these advantages I accomplish by pivoting the cutting blades at their forward ends and applying

the power at their rear ends, said blades being shaped to have free movement at their rear ends, as it will be noted that one end of the blade is cut away as shown at F^2, in order to provide room for the operating stud carried by the contiguous handle. It will also be noted that the handles are slightly thickened in order to bring their inner faces flush with the rear ends of the cutting blades. These cutting blades are readily detachable from the shears proper, and can be quickly and easily removed for sharpening whenever desired, and furthermore, by providing one or more extra sets of blades for each pair of shears, I provide an economical and highly desirable tool.

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

1. In a device of the kind described, the combination with a pair of pivoted members pivoted intermediate their ends, of a pair of cutting blades pivotally connected at their forward ends to the forward ends of said pivoted members, and means carried by said pivoted members at the rear of their pivotal point adapted to engage the rear ends of said cutting blades for the purpose of operating them, as described.

2. In a device of the kind described, the combination with a pair of pivoted members, pivoted intermediate their ends, of supplemental shearing blades pivotally connected to the forward ends of the pivoted members, the rear ends of said blades being slotted, and means carried by the pivoted members adapted to engage said slotted ends whereby said blades are operated with the opening and closing of the pivoted members, as set forth.

3. In a device of the kind described, a pair of pivoted members, in combination with a pair of cutting blades pivotally connected at their forward ends to the forward ends of said members, the rear ends of said blades having slots therein, and studs carried by said pivoted members to the rear of their pivot, said studs being adapted to engage the slotted ends of the cutting blades, for the purpose described.

4. In a device of the kind described, a pair of pivoted members in combination with a pair of cutting blades pivoted at their forward ends to the forward ends of the pivoted members, said blades being slotted adjacent their rear ends, and studs carried by said pivoted members adapted to engage said slotted ends of the cutting blades, the stud of one member engaging the cutting blade of the opposing member, as set forth.

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