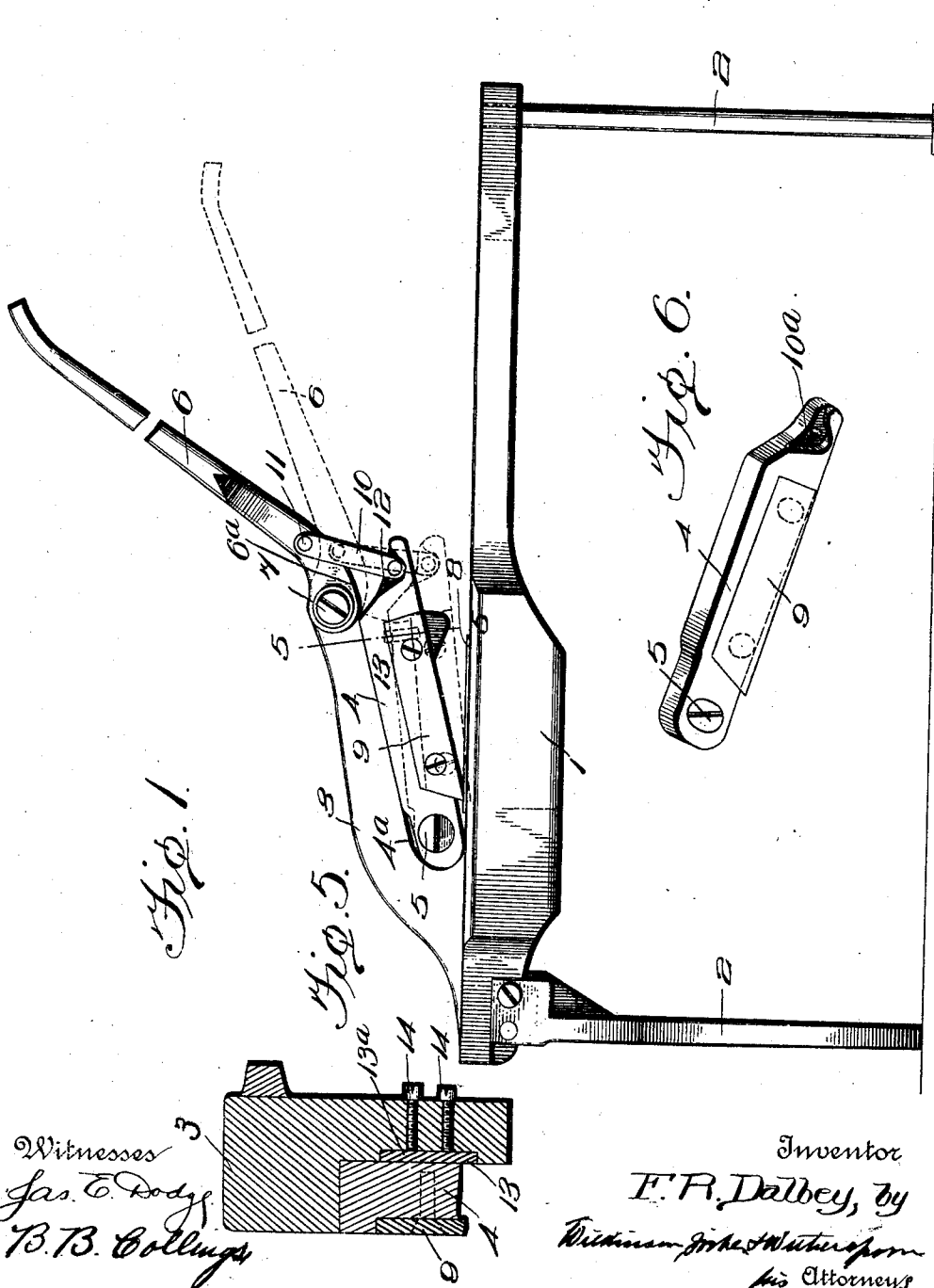


F. R. DALBEY.
METAL CUTTING SHEARS.
APPLICATION FILED JAN. 12, 1910.

990,636.

Patented Apr. 25, 1911.

2 SHEETS—SHEET 1.



Witnesses
Jas. E. Dodge
B. B. Collings

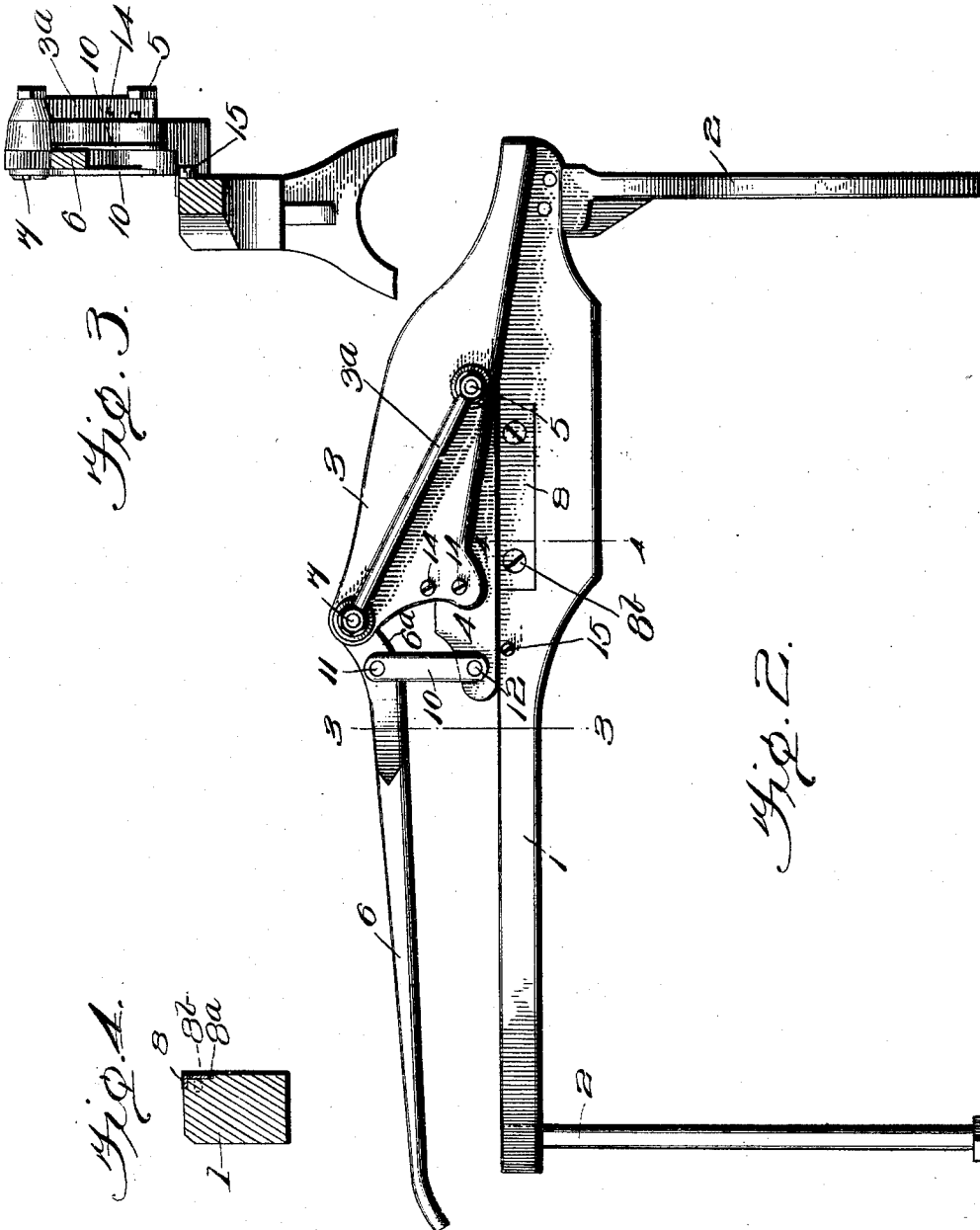
Inventor
F. R. Dalbey, by
William J. H. & W. H. H.
his Attorneys

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his Attorneys.

UNITED STATES PATENT OFFICE.

FRANK R. DALBEY, OF WEBSTER CITY, IOWA.

METAL-CUTTING SHEARS.

990,636.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed January 12, 1910. Serial No. 537,771.

To all whom it may concern:

Be it known that I, FRANK R. DALBEY, a citizen of the United States, residing at Webster City, in the county of Hamilton and State of Iowa, have invented certain new and useful Improvements in Metal-Cutting Shears; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in metal shearing machines, the object being to provide a simple and durable machine operating to effectively shear the work operated on, a further object being to provide means for adjusting the movable shearing member toward a stationary bed shear.

To more fully illustrate the invention reference is had to the accompanying drawings forming a part of this application, in which drawings like characters designate the same parts in the several views, and in which—

Figure 1 is a view in side elevation looking toward the face of the movable shear. Fig. 2 is a similar view looking from the opposite side of the machine. Fig. 3 is a cross section taken on the line 3—3 of Fig. 2. Fig. 4 is a cross section through the bed and stationary shear taken on the line 4—4 of Fig. 2. Fig. 5 is a cross section through the head block and movable shear on the line 5—5 of Fig. 1, and showing means for adjusting said movable shear toward the stationary shear, and Fig. 6 is a perspective view of the pivoted arm carrying the movable shear.

1 designates a suitable base or bed supported by the legs 2, and having formed integral therewith the head block 3 extending upwardly and forwardly of the machine, the head block being provided with a reinforcing rib 3^a, if desired. The head block is offset longitudinally of the bed or base 1, and is recessed at its inner face, as at 4^a, to receive the arm 4 pivoted at 5 to the head block. 6 is an operating lever for said pivoted arm 4, the lower end of said lever being curved, as at 6^a, and fulcumed, as at 7, to the uppermost portion of the head block.

8 designates the stationary or bed shear, inset within a recess 8^a formed on the inner face of the bed 1, and held in place by any suitable means, such for instance as the screws 8^b. This shear plate may be of angular construction, in which event its top rests within

a recess in the top of the bed, as clearly shown in Fig. 4.

9 designates the movable shearing blade inset within the elongated recess formed on the inside face of the arm 4, so that the adjacent faces of the shearing blades 8 and 9 lie substantially flush.

The outer end of the movable or swinging arm 4 is recessed on its inner face, as at 10^a, Fig. 6, to receive the end of a short link 10 pivoted therein as at 12, the other end of the link 10 being pivotally connected at 11 to the lower or bent end of the lever 6 in a position below a line drawn from the fulcrum 7 to the end of the lever 6. There is a similar arrangement on the opposite side of the lever and arm, there being two connecting links 10, if desired.

From the foregoing description, taken in connection with the drawings, it will be seen that the shearing blades are inset on their respective supports so that their inner faces will be substantially flush, but it is often necessary that the one plate be adjusted relatively to the other in such manner that they will lie in close contact to make the shear more effective, and to this end I provide a smaller recess 13^a, Fig. 5, on the inside face of the head block opposite the arm 4, and in this recess is disposed a follower plate 13, which may be resilient if desired, lying snugly against the adjacent face of the arm 4, and provided with set screws 14 passing through the head block and engaging said follower plate to force same, together with the arm 4 and the movable shearing blade 9, inwardly toward the stationary or bed shearing blade 8, insuring closer contact between the shearing members.

The upward swing of the arm 4 is limited by the upper edge of the elongated recess 4^a, and the downward swing of the arm may be limited by a suitable stop, shown in the drawings as comprising a projecting head of a screw.

From Fig. 1 it will be seen that when the cutting is about to commence the lever and movable shear with its connecting links 10 will be in the position shown in dotted lines, and it will be observed that in this position, the links being pivoted to the bent portion 6^a of the lever, the parts are at such angles with relation to each other as to give substantially the maximum force at the end of the shearing action.

Having thus described a practical and preferred embodiment of the invention, the particular features of novelty will now be pointed out more succinctly in the following claims:

1. In a shearing machine, the combination of a suitably supported bed having a head block thereon offset to one side of said bed, said head block having an elongated recess on its inner face and a smaller recess within said elongated recess, and said bed being provided with a shearing edge, a swinging arm pivoted at its inner end within said elongated recess and having a shearing blade secured flush with its inner face to cooperate with said shearing edge, a follower member disposed within said smaller recess and engaging the adjacent face of said swinging arm, set screws threaded in said head block and engaging said follower member, a lever pivoted to said head block, and a link pivotally connected to said lever and the free end of said swinging arm, substantially as described.
2. In a metal shearing machine, the combination of a suitably supported bed having

a head block provided with an elongated recess lying in a plane substantially flush with the inside face of said bed and a smaller recess within said elongated recess, a stationary shearing blade secured to the inside face of said bed and lying flush therewith, a swinging arm disposed in said elongated recess and pivoted therein at its inner end, a follower member disposed within said smaller recess and abutting against said swinging arm, set screws threaded in said head block and contacting said follower member, a shearing blade secured to the inside face of said swinging arm and lying flush therewith, a lever having a curved lower end pivoted to said head block, and a link connection between the curved lower end of said lever and the free end of said swinging arm, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

FRANK R. DALBEY.

Witnesses:

CLAUDE M. MCGUIRE,
GEO. S. BARNER.

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