(No Model.)

W. R. DANNALS.

SEPARATOR FOR SQUARING SHEARS FOR CUTTING SHEET METAL.

No. 253,986. Patented Feb. 21, 1882.

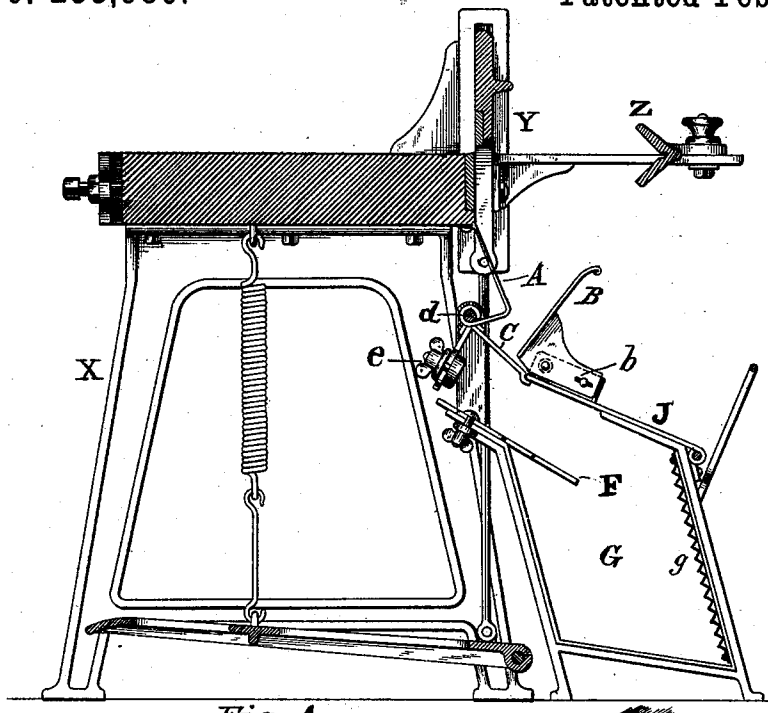


Fig. 1

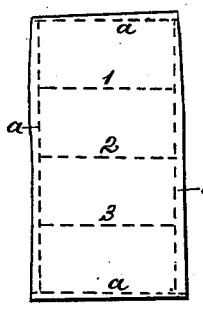


Fig. 5.

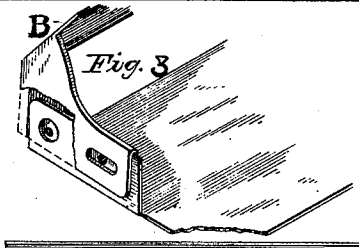


Fig. 3

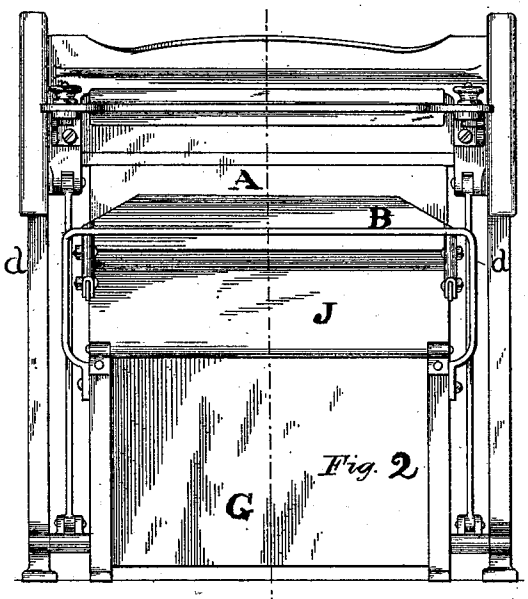


Fig. 2

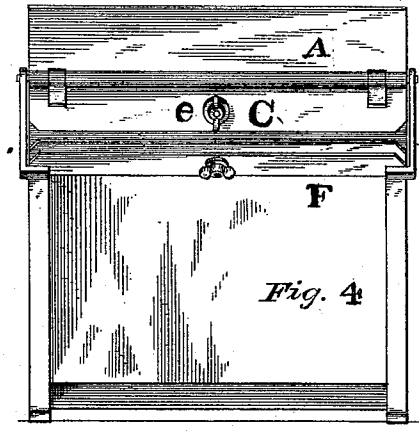


Fig. 4

Attests:
J. H. Templin.
Harry B. Yerger

Inventor.
William Reese. Dannals
Mowls & Cuni's
Attys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM R. DANNALS, OF PHILADELPHIA, PENNSYLVANIA.

SEPARATOR FOR SQUARING-SHEARS FOR CUTTING SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 253,986, dated February 21, 1882.

Application filed May 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM REESE DANNALS, of the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Attachment for Squaring-Shears, to be used in separating the scrap or trimmings from those parts of sheet metal used in manufacture as such parts are cut to the required form and size.

The object of this invention is to furnish a device to be used in connection with a squaring-shears in cutting sheet metal, to facilitate the separation of the outside cuttings or scraps from those parts, commonly termed "bodies," used in the manufacture of cans and various articles, and, further, to deposit such parts as they are cut out in regular order in a suitable receptacle, the pieces falling successively into such receptacle and being deposited in the same position therein.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a vertical central section of a squaring-shears with my improvements applied thereto. Fig. 2 is an end view of the same. Fig. 3 shows in perspective a portion of the fender herein referred to. Fig. 4 is a side view of the separating attachment, showing the side toward the frame of the shears. Fig. 5 represents a plan of a sheet of metal with the cutting of the shears indicated thereon.

In the said drawings, X designates a frame supporting the squaring-shears Y, provided with a guide, Z.

A indicates an apron usually constructed of sheet metal, and secured in position below the blades of the shears, as shown.

B is a fender, supported in an inclined position over an inclined plane, J, a short distance from the apron A, and somewhat lower than the apron, the fender being adjustable in position, as shown at *b*.

C is a trap hung on a pivot at *d*, so as to close the passage to the receptacle below, the trap being regulated by a sliding weight, *e*, in such a manner that as the sheets of metal are cut and fall, impinging against the apron A and fender B, the trap yields to their weight and is tilted open, so that the pieces cut in proper size descend edgewise to an inclined plane, F, and from thence into the angular box or frame G below.

In Fig. 5 is shown a plan of a sheet of metal with dotted lines indicating the cutting of the shears. The lines *a* indicate the cuts made in trimming, and the lines 1 2 3 indicate the cuts made in dividing the sheet into parts of uniform size. In operation both the trimmings or scraps and the sized parts when cut fall from the same point and take the same course downward to the trap C, and the scraps, not being heavy enough to open the trap, pass along over the inclined plane J.

The receiving box or frame G is usually constructed with bottom and sides somewhat inclined, as shown, and with one corrugated inner surface, *g*, against which the cut sheets of metal strike as they are deposited in the box. The ribs formed by the corrugated surface *g* prevent the falling cut pieces, as they are guided forward by the inclined plane F, from becoming inserted and wedged between pieces lying in the receiver G and the front casing of the receiver.

As one piece follows another, they will strike against the inside of the angular box or frame, the inclined adjustable plane F carrying them against the side that is corrugated; and it will be understood that the corrugated surface against which the bodies or pieces of sheet metal that are to be used must all strike as they are so deposited will prevent them from standing up edgewise and disarranging those that follow. The scrap or trimming, always being of too light weight to tilt the trap C, will pass under the adjustable fender B and slide down the inclined lid J of the box or frame, and be deposited outside of said box or frame.

The device shown in the guide indicated by Z in the drawings is hereby reserved for a separate application.

I claim—

1. In combination with a sheet-metal shears, Y, an apron, A, fender B, and pivoted trap C, constructed substantially as and for the purposes described.

2. In a separating attachment for squaring-shears, the fender B, pivoted trap C, and inclined plane F, in combination with the box or frame G, having inclined bottom and sides and corrugated surface *g*, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I sign my name in presence of witnesses.

WILLIAM REESE DANNALS.

Attest:

WM. PEASE,

HARRY B. YERGER.