

(No Model.)

J. P. HALPIN.

SHEAR BLADE FOR POWER SHEARS.

No. 376,087.

Patented Jan. 10, 1888.

Fig. 1

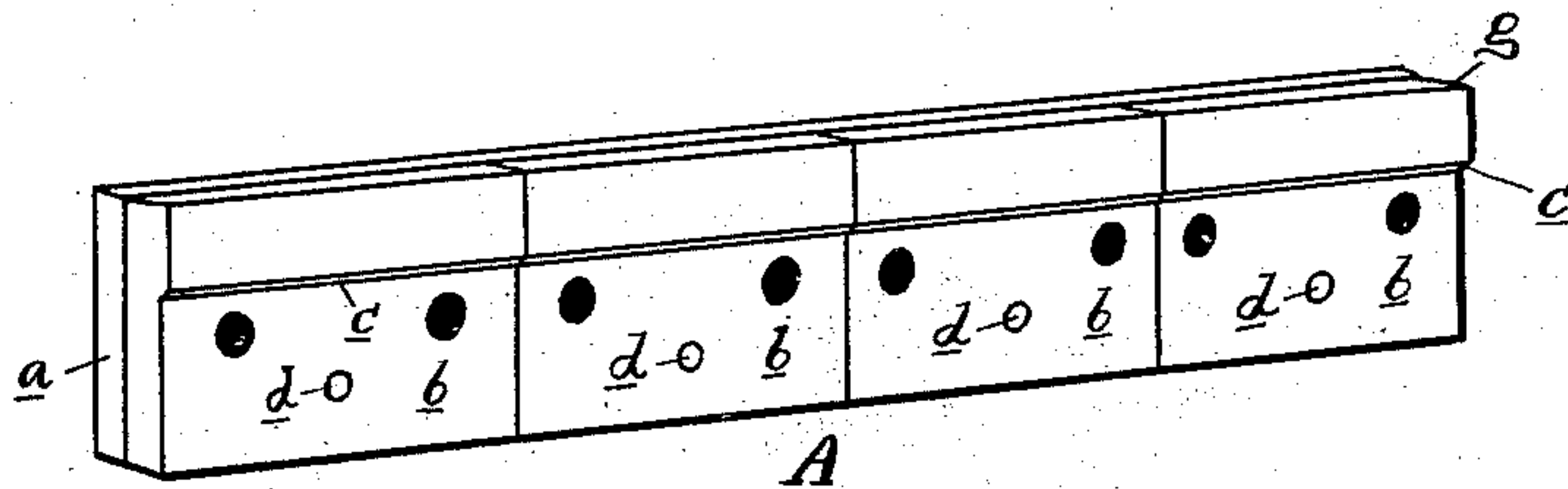
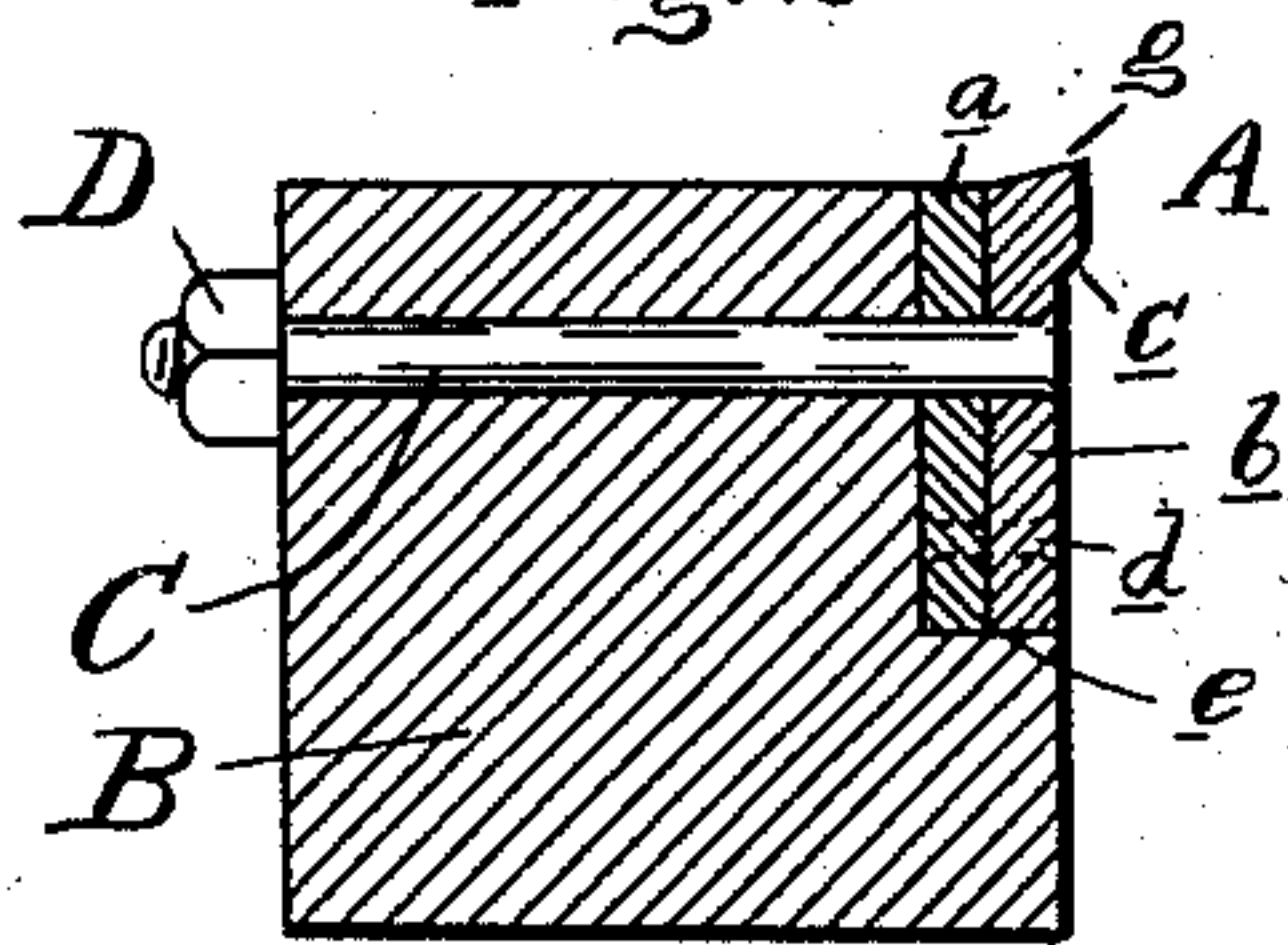


Fig. 2



Witnesses:

P. M. Hulbert.
[Signature]

Inventor:

Joseph P. Halpin

By Thos. L. Sprague & Son
Att'y.

UNITED STATES PATENT OFFICE.

JOSEPH P. HALPIN, OF WYANDOTTE, MICHIGAN.

SHEAR-BLADE FOR POWER-SHEARS.

SPECIFICATION forming part of Letters Patent No. 376,087, dated January 10, 1888.

Application filed October 18, 1887. Serial No. 252,670. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. HALPIN, a citizen of the United States, residing at Wyandotte, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Shear-Blades for Power-Shears, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in the construction of shear-blades for power-shears. It is a well-known fact that in the manufacture of such cutting blades or knives, where they are of great length—say more than thirty inches—difficulty is experienced in evenly tempering them, and especially is this the case where large blades are formed from one piece of steel, say, seven or more feet in length. Portions of the blades will then often be soft and after short use break out, and the blade has to be thrown away. Another difficulty in the employment of such long blades is experienced in grinding; but the greatest objection is the cost.

The object of my invention is to construct a blade for the purpose wherein the objections above stated are entirely obviated; and to that end the invention consists in the peculiar sectional construction and arrangement of the parts, all as more fully hereinafter set forth.

Figure 1 is a perspective view of my improved shear-blade. Fig. 2 is a vertical cross-section of the "chuck" of a power-shear with my blade secured thereto.

In the accompanying drawings, which form a part of this specification, A represents my improved shear-blade, which is constructed as follows:

To form a blade, say, seven feet in length, six inches in width, and two inches thick, I take a wrought-iron plate, *a*, of the length and width stated, but of less thickness—say three-quarters of an inch thick. To the face of this plate I rigidly secure, by means of the countersunk rivets *d*, the sectional steel plates *b*, the combined length of which is equal to the required length of the blade, and the thickness of which, added to the thickness of the wrought-

iron plate *a*, gives the required thickness of shear-blade. In the drawings I show four steel plates *b*; but more or less may be used, according to the length of the blade. These plates *b* are closely fitted together by ground joints or otherwise, and the outer edges of the plates *b* are flush with the edges of the bed-plate *a*. In forming the plates *b* one face is formed with a slight shoulder or offset, as at *c*, and in grinding the upper or so-called "cutting" edge, *g*, of the plates *b* is left very slightly projecting above the corresponding edge of the bed-plate, as in the blade in common use. The blade thus constructed is secured in the chuck B of the shears by the countersunk bolts C, of which there are preferably two for each of the plates *b*, and these bolts are rearwardly secured by the nuts D on a shoulder, *e*, of the chuck.

By this construction of a blade I am enabled to temper the various sections separately, and can easily produce an even temper in all of them. Should one of the plates *b* be broken, it may be readily removed and a new one inserted in its place, while at the same time the blade as an entirety may be removed and ground as a whole.

With my composite blade I effect not only a great economy while in use, but also greatly reduce the first cost.

What I claim as my invention is—

1. A shear-blade for power-shears, consisting of a single wrought-iron plate, forming a backing, and of sectional steel face-plates riveted thereto, substantially as described.

2. In power-shears, the combination, with the chuck B, having shoulder *e*, of the shear-blade consisting of the wrought-iron plate or backing *a* and the sectional steel face-plates *b*, riveted thereto, and the bolts C, all substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 3d day of October, 1887.

JOSEPH P. HALPIN.

Witnesses:

JOHN J. TILMANN,
JOHN LUCKNER.