H. Z. YOUNG.

Bale-Tie Clamps.

No. 166,491. Patented Aug. 10, 1875.

Fig 1

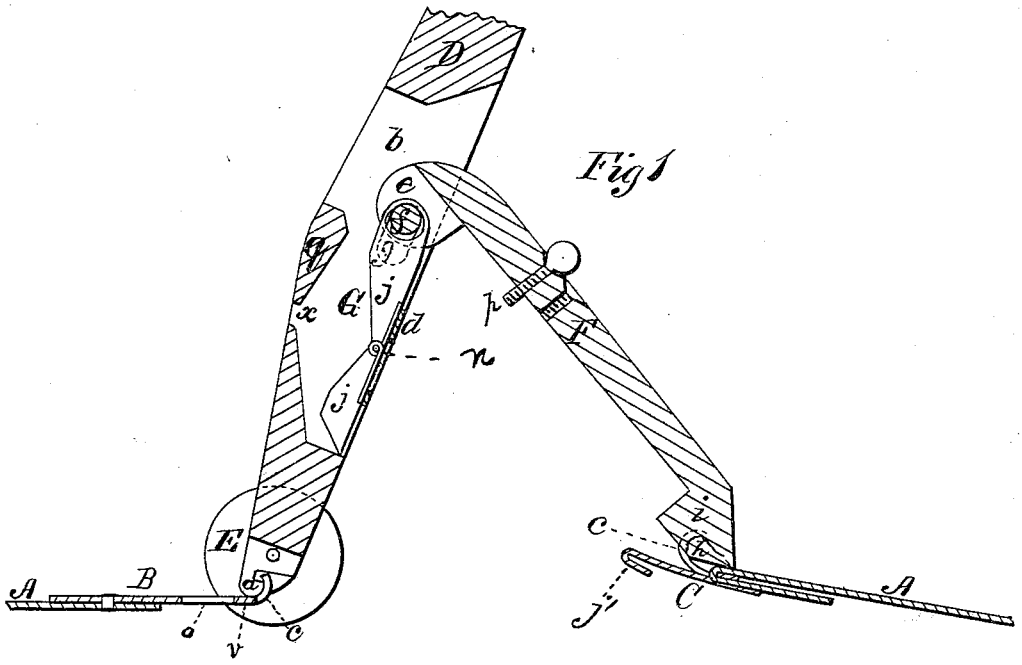
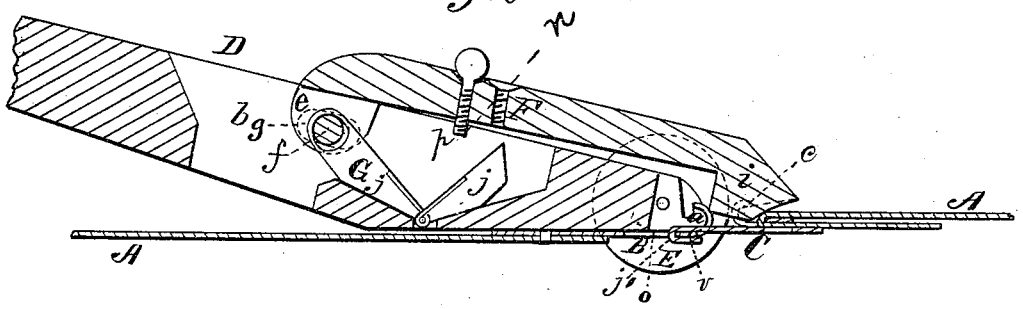


Fig 2



WITNESSES

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HENRY Z. YOUNG, OF VICKSBURG, MISSISSIPPI.

IMPROVEMENT IN BALE-TIE CLAMPS.

Specification forming part of Letters Patent No. **166,491**, dated August 10, 1875; application filed January 9, 1875.

To all whom it may concern:

Be it known that I, HENRY Z. YOUNG, of Vicksburg, in the county of Warren and State of Mississippi, have invented a new and valuable Improvement in Bale-Tie Clamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal section of my clamp open, and Fig. 2 is a longitudinal sectional view of the same closed.

This invention has relation to bale-tie stretchers, which are designed for conveniently and effectually bringing the two ends of a strap-iron binder together for the purpose of uniting them around a compressed mass.

The nature of the invention consists in combining, with an actuating-lever having lugs upon its lower end, a vibrating arm hinged thereto, and likewise provided with lugs, which arm has its bearings in longitudinal slots cut into the said lever, and is thereby made endwise movable in relation to the actuating-lever for the purpose of locking the two ends of the binder and releasing the stretcher from the same. It also consists in combining with a main actuating-lever and an arm hinged thereto with its journals in slots, both having lugs upon their lower ends, a trigger arranged within the former, whereby the journals of the hinged arm will be held up into the upper end of the slots in the lever until the former is vibrated against the latter, when the trigger will flex, allowing the journals of the hinged arm to descend into the lower end of their slotted bearings, causing the two ends of the binder to be united, and the lugs on the lower ends of the lever and its arm to be disengaged from hooks upon the ends of the binder, as will be more fully understood from the following description.

In the annexed drawings, A designates a strap-iron binder, having upon one end, *a*, a slotted plate, B, and upon its other end a slotted and hooked plate, C, in connection with which I propose to show the use and construction of my improved stretcher, the object of which is to engage the hook *j'* upon plate C with the slot *o* in plate B, both of the said plates having upturned hooks *c*, by means of which the stretcher is attached for the purpose above mentioned.

While using the above briefly-described tie as a means of exemplifying the use of my improved hereinafter-described stretcher, I do not propose to confine myself to using the implement only in connection with it, as the device may be used with equal advantage in approximating the ends of many varieties of ties.

D indicates the main actuating-lever of my improved stretcher, the same being preferably of metal, either cast, malleable, or wrought. The lower rear surface of this lever is beveled, and its end bifurcated, the extreme end of each fork or prong being provided with a lug, *a*, of rounding form, transverse to the length of the lever, as shown in Fig. 1, for a purpose hereinafter made clear. The body of this lever is slotted from front to rear, as shown in Figs. 1 and 2, at *b*, the lower front and rear parts of the said slot being closed, respectively, by a plate, *q*, and a plate, *d*, which may be detachable, the inner surface of plate *q* forming, with the corresponding surface of the rear wall of the lever, an obtuse angle, *x*. E designates anti-friction wheels, rotating on journals or spindles at the lower end of lever D, for the purpose of diminishing friction. F designates an arm, also of metal, having a bifurcated upper end, *e*, through which are cut registering perforations adapted to receive a detachable pin, *f*, passing through oblong slots *g* cut registering through the sides of the said lever, as shown in dotted lines, Figs. 1 and 2. The lower end of arm F is angularly enlarged, and is provided with lugs *h* projecting a suitable distance beyond its lateral surfaces, the said arm being of such a length that when it is hinged inward upon the lever D its angular enlargement *i* shall fit snugly against the heel of lever D, with its lugs in close proximity to those of the said lever. Within slot *b* of lever D a trigger, G, is arranged, consisting of two parts, *j j*, hinged together, which trigger is provided with an eye, by means of which it is pivoted to the detachable pin *f* of arm F, as shown in Fig. 1.

Lever D, arm F, and trigger G constitute the essential parts of my improved clamp, and these having been sufficiently described, I now proceed to explain its application.

Lugs *a* of lever D and those *h* of arm F are engaged with hooks *c* on plates B and C. The said plates not being in contact, the lever and its arm will straddle the space between the same, as shown in Fig. 1, and trigger G will be in the position shown therein, lying against the lower flat surface of the hollow portion of the said lever, thereby holding the pivot-pin *f* of arm F in the upper part of the slots *g*. If the power end of this lever be now brought into the position shown in Fig. 2, this actuation, by causing the lower ends of the arm and lever to approach each other, will also approximate the ends of the tie, and when the two parts, D F, of the stretcher are in the position shown in Fig. 2, close against each other, the hook *j'* on plate C will be forced down into slot *o* of plate B by the enlargement *i* of arm F to an engagement with the front bar *v* of the said plate B. At the same moment that this engagement takes place, consequent upon the coming together of arm F and lever D, an adjustable pin, *p*, on the former, passing through an aperture, *n*, in lever D, will strike against trigger G, causing it to flex, thereby allowing pivot-pin *f* to descend into the lower end of oblong slots *g*, disengaging lugs *h* from hooks *c* of plate C, and allowing the implement to be detached from the tie without effort on the part of the operator.

By means of the anti-friction wheels E, on the end of lever D, the operation of uniting the two ends of the binder is greatly facilitated, as the friction of the same upon the bale is almost entirely done away with.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a bale-tie clamp or stretcher, the vibrating arm F, combined with the main lever D, its pivot-pin *f* being arranged in slots *g* of the said lever, substantially as and for the purpose specified.

2. The combination, with lever D and the arm F, endwise movable with relation thereto, of the trigger G, arranged within the said lever, and adjustable pin *p* on arms F, substantially as specified.

3. In a bale-tie clamp, the trigger G, consisting of parts *j j*, hinged together and adapted to flex downwardly, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HENRY Z. YOUNG.

Witnesses:
R. ADAMS,
PATTERSON SHARP.