

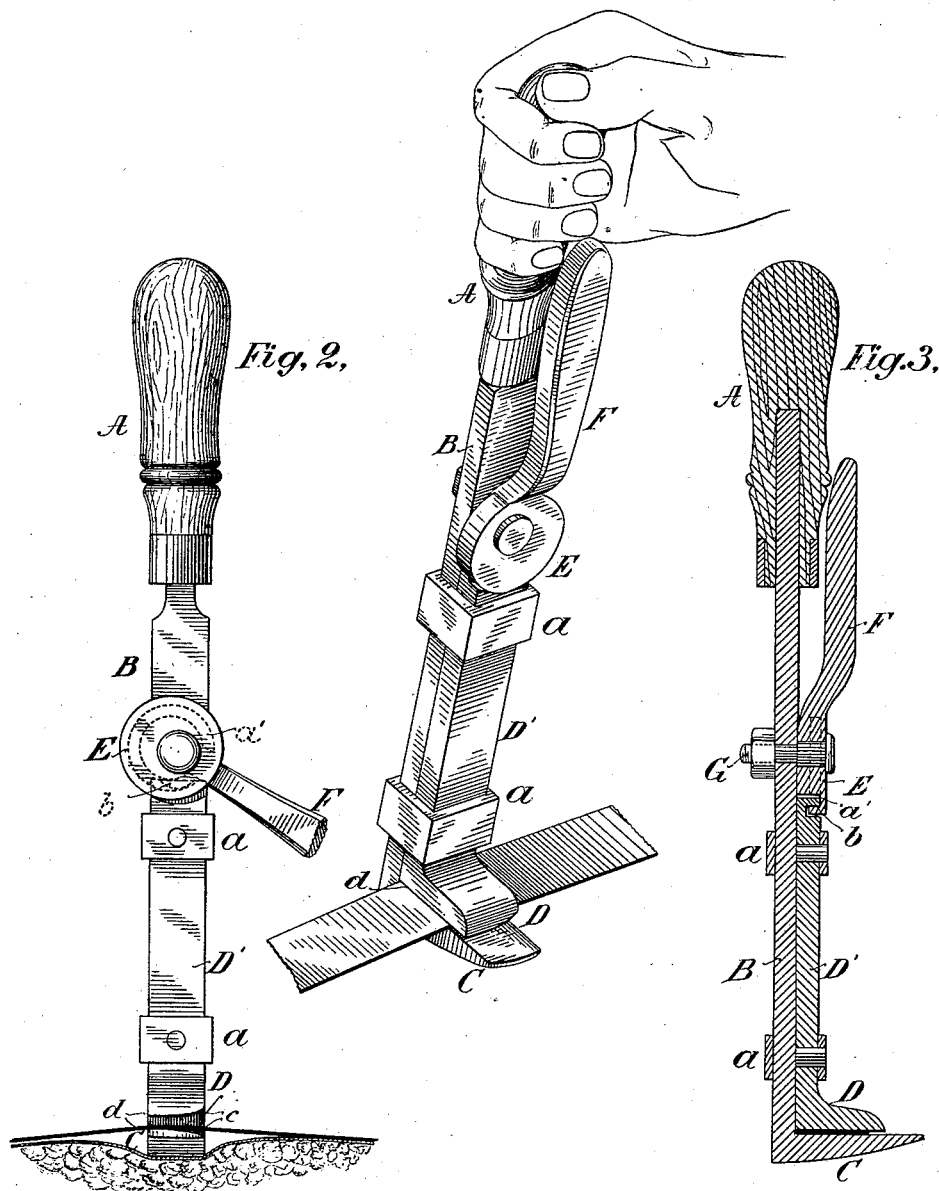
(No Model.)

J. P. HILLARD.
COTTON BALE OPENER.

No. 264,696.

Patented Sept. 19, 1882.

Fig. 1.



WITNESSES

Wm A. Skinkbe.
Ernest Ashagen.

INVENTOR

INVENTOR
James P. Hillard
By his Attorney
M. Bailey

UNITED STATES PATENT OFFICE.

JAMES P. HILLARD, OF FALL RIVER, MASSACHUSETTS.

COTTON-BALE OPENER.

SPECIFICATION forming part of Letters Patent No. 264,696, dated September 19, 1882.

Application filed December 31, 1881. Renewed August 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. HILLARD, of Fall River, in the State of Massachusetts, have invented a certain new and useful Cotton-Bale Opener, of which the following is a specification.

One great source of danger of fires in cotton-mills is the method usually adopted of opening cotton-bales. The common method is to break the bands by a heavy blow from an ax, and it frequently happens that in this operation a spark is produced and the loose cotton thereby ignited. In some cases shears are used; but the operation of thus opening a bale is slow and tedious, and for this reason is not generally followed.

The object I have in view is to provide some means whereby the operation of opening cotton-bales can be conducted rapidly and at the same time with entire safety; and to this end I have devised the appliance termed by me a "cotton-bale opener," which I shall now proceed to describe by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of the tool with the jaws closed upon a bale hoop or band. Fig. 2 is a front elevation of the same with the jaws open. Fig. 3 is a transverse longitudinal central section of the tool with jaws closed.

The tool in its general appearance resembles a wrench. It is composed of a handle, A, and metallic shank, B, terminating in a jaw, C, which I call the "lower jaw." Upon the shank B is the sliding jaw D, which I term the "upper jaw," whose shank D' has fixed to it guide-straps *a*, which encircle the shank B. The shank D' can thus slide lengthwise of the tool, and in this way the jaws are made movable to and from one another. The sliding jaw need have but a limited range of movement, and can be actuated to move by any of the known instrumentalities usually employed for a like purpose in wrenches. I prefer, however, to control it by means of an eccentric, E, provided with a lever-handle, F, and mounted on a pin or axle, G, secured to the shank B. In the face of the eccentric that adjoins the shank is an annular groove or slot, *a'*, and into this groove extends a pin or lug, *b*, formed on or attached to the end of the shank D'. The eccentric can be readily turned by the handle

F, and, according to the direction of its movement, the jaws can be made to approach or recede from one another. The interior opposite faces of the jaws are beveled off toward one side, as indicated at *c*, and terminate at the opposite side in biting-edges *d*. To use the tool the lower jaw is inserted under the bale band or hoop, the upper jaw is brought down tightly upon the band, and then the tool is twisted or tilted to one side. The object of the above-described configuration of the acting faces of the jaws is to permit a slight play of the band on the beveled side while the jaws at the other side nip the band tightly. The effect is that when the opener is twisted or tilted to one side the iron band is as cleanly broken along a line determined by the edges *d* as though cut by shears. The whole is the work of an instant and involves but little labor or expenditure of force.

To facilitate the insertion of the lower jaw between the bale and the iron hoop or band, it is made wedge shape or tapering, so as to have a thin outer end, and is prolonged so as to project some distance beyond the upper jaw, as indicated in the drawings. When thus formed it can be easily and quickly pushed under the iron hoop of the bale.

What I claim as of my invention is—

1. The combination, substantially as hereinbefore set forth, of the two jaws, movable to and from one another and formed with interior opposite faces beveled toward one side and terminating at the opposite side in biting-edges.

2. The combination, substantially as set forth, with the upper jaw, of the lower jaw, formed with a wedge-shape or tapering outer end which is prolonged so as to project beyond the upper jaw.

3. The lower jaw and its shank, in combination with the upper jaw, mounted and adapted to slide on the said shank, and the eccentric and lever handle for operating said upper jaw, under the arrangement and for joint operation substantially as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 21st day of December, 1881.

JAMES P. HILLARD.

Witnesses:

A. T. ATHERTON,
E. E. RIPLEY.