J. PFEFFER.

BUNDLE WIRING PINCERS.

APPLICATION FILED FEB. 4, 1908.

914,182. Patented Mar. 2, 1909.

Fig. 6.

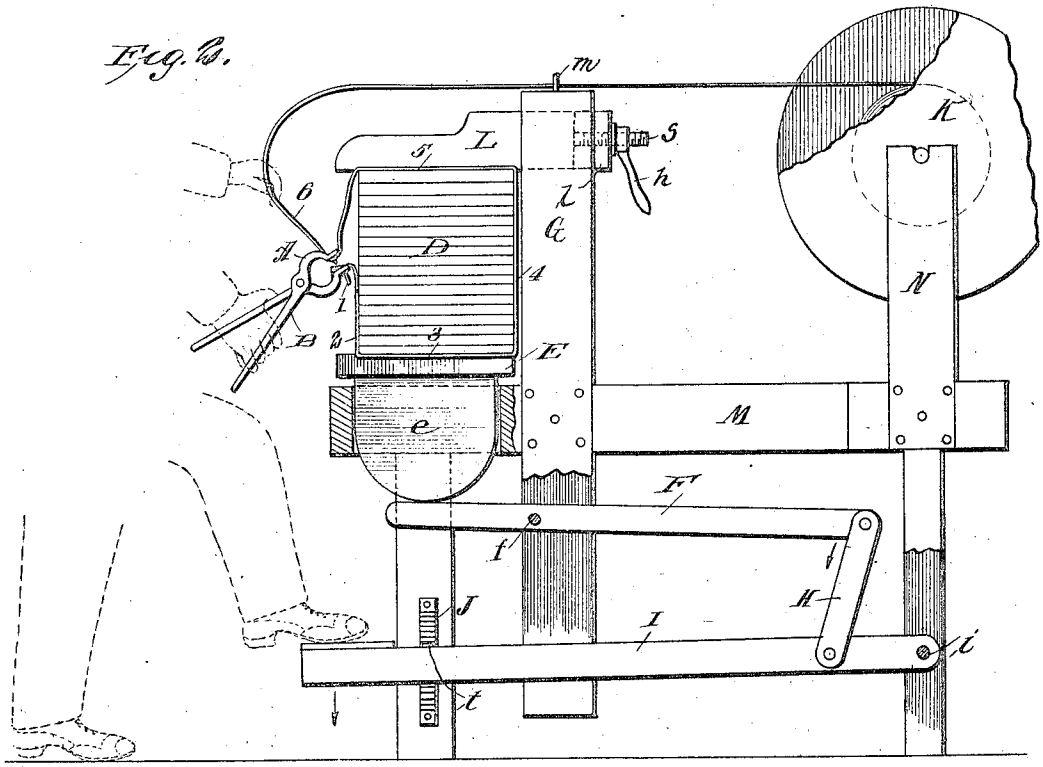


Fig. 5.

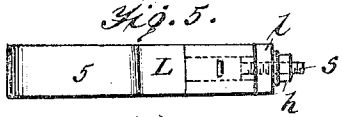
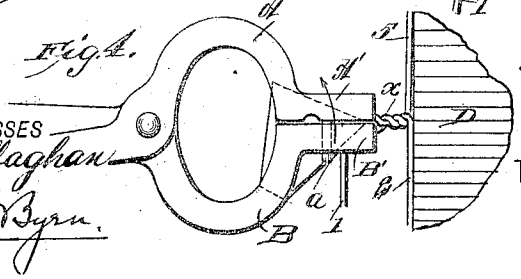


Fig. 1.

Fig. 3.

Fig. 4.



WITNESSES

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BUNDLE-WIRING PINCERS.

No. 914,182. Specification of Letters Patent. Patented March 2, 1909.

Application filed February 4, 1908. Serial No. 414,236.

To all whom it may concern:

Be it known that I, JOHN PFEFFER, a citizen of the United States, and a resident of Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Bundle-Wiring Pincers, of which the following is a specification.

My invention is in the nature of a machine to be used in fastening together by wire, bundles of small boards, such for instance, as are used in making boxes, and for fastening together shingles into bundles, and other similar uses, and it consists in the novel construction and arrangement of a pair of pincers for cutting and twisting the wire about the bundle, as hereafter more fully described with reference to the drawing, in which—

Figure 1 is a perspective view of the pincers showing the application of the wire thereto in forming the loop around the bundle. Fig. 2 is a side elevation of the clamping machine partly in section showing the method of manipulating the bundle in tying the same with a wire through the agency of the pincers. Fig. 3 is a cross-sectional view through the two jaws of the pincers, Fig. 4 is a side view of the pincers showing the same in connection with the wire after the same has been fastened around the bundle by twisting its ends, and Fig. 5 is a plan view of the adjustable clamping arm showing the means for its attachment to the upright standard.

Referring to Fig. 1, A and B are two jaws having lever handle extensions, which jaws are pivoted together upon a fulcrum bolt after the manner of ordinary pincers. The ends of both jaws are formed with flat-faced extensions A′, B′, between which the ends of the wire are held. The faces of these jaw extensions are especially fashioned to meet the conditions of holding and twisting the wire as follows. The upper jaw extension A′ is formed with the longitudinal groove a' and the transverse groove a^2 at right angles thereto, and near the intersection of these two grooves there is rigidly attached a downwardly projecting pin a. The lower jaw extension B′ is formed with a longitudinal groove b^2 registering with the groove a' of the jaw above and said lower jaw extension is also formed with a hole b through the same adapted to receive pin a of the upper jaw. A hole b^1 is also formed in the lower jaw extension from the bottom groove b^2 entirely through said lower jaw extension. C is an inclined steel cutter blade secured firmly to the lower jaw extension B′, and having its upper inclined edge arranged to register with the sharpened edge C′ of the upper jaw extension so as to act therewith like the two jaws of a pair of shears.

Referring now to Fig. 2, M is a main frame upon the back end of which are erected standards N, in which are mounted the journals of the spool K carrying the coil of wire. G denotes upright standards securely fastened to the frame M on either side thereof. An adjustable clamping arm L is arranged for movement up and down between the standards G and may be clamped in any position by means of a clamping block l which is forced up against the rear side of the standards G by means of the handle k, threaded on the end of a tightening bolt s. E is a vertically adjustable table having a pendent plate portion e, which extends through the horizontal frame M, the plate e being of the shape of a half moon, about two inches in thickness and one foot long at its longest, or upper side, fastened rigidly to the bottom of plate E, and working up and down through a groove in frame M and with the lower and round end resting unfastened upon the end of a lever F fulcrumed at f in the upright standard G, and the back end of this lever F is connected by a link H to a treadle lever I whose back end is fulcrumed at i to one of the legs of the main frame, and whose outer end is fashioned into a treadle adapted to receive the foot of the operator. The treadle lever I is provided with a tooth t, which is adapted to engage one of a series of ratchet teeth J attached to one of the front legs of the machine.

D represents the bundle of boards to be fastened by the wire, which bundle is placed upon the vertically adjustable table E, the upper clamp arm L being adjusted to suit the size of the bundle. When the wire is placed around this bundle resting upon the table E, the operator compresses the bundle to its smallest dimensions by thrusting downwardly upon the treadle lever I, which causes the supporting table E to compress the bundle between such table and the superposed clamp arm L. When thus compressed the treadle lever I is given a lateral motion to cause its tooth t to engage the teeth of the

ratchet bar J, and thus hold the bundle under compression while being tied.

The operation of tying the bundle by means of the wire will be best understood by reference to Fig. 1. The end of the wire 1 is drawn from the spool through the eye *m* and is extended downward through the hole *b'* of the lower jaw of the pincers. After the end is pushed through the hole *b'* the wire is then given a bend outward from the pincers at 2 so that the wire lies flat in the groove b^2. It is then drawn in a loop around the bundle to be tied, as indicated by the numbers 2, 3, 4 and 5. The operator then draws the wire under the pin *a*, holding it loosely at the spot on the wire designated by the number 6 and at the same time forcing the pincers closed with the other hand. As he does this the wire fits into the groove *a'* and as the pincers are closed more the blades C and C' cut that part of the wire designated by number 6 and which extends from the spool K. Further compression of the handles of the pincers brings the two jaw extensions tightly together, pinching and holding the severed end of the loop 2, 3, 4, 5, which is now around the bundle, and the pincers are then given a rotary motion about the longitudinal axis thereof, as indicated by the arrow in Fig. 4, which causes the ends of the loop around the bundle to become closely twisted together at *x*, thereby completing the tying of the bundle.

With reference to the function of the pin *a* of the upper jaw extension and its registering hole *b* of the lower jaw extension, I would state that this pin serves as a pivot or post upon which to hold and stretch the wire during the act of closing the pincers and also holds the two cutting jaws together against lateral displacement during the act of cutting, insuring also the registration of the jaws.

I claim—

1. A wire twisting pincers having two flat coöperating jaw extensions, one being formed with a pin projecting toward the other, and the latter being formed with a hole to receive the pin and also a hole to receive the wire, and being provided with a cutting blade arranged to coöperate with the other jaw.

2. A wire twisting pincers, consisting of a jaw having on its inner face two rightangularly arranged grooves and a pin located near the intersection of said grooves, and another jaw having a hole adapted to receive the pin of the first named jaw, and a cutter blade alongside it and being formed also with a longitudinal groove in its face, and a transverse hole extending through said jaw extension in the line of the longitudinal groove.

3. A wire twisting pincers consisting of a flat jaw having a central longitudinal groove and a central transverse groove, and provided with a pin near the intersection of said grooves, and an opposing jaw having a central longitudinal groove and being provided with an opening adapted to receive the pin of the opposing jaw, and a cutter blade arranged to coöperate with the opposing jaw for severing a wire before the jaws are fully closed.

4. A wire twisting pincers consisting of a flat jaw having on its inner face two grooves at right angles to each other, and a pin located near the intersection of said grooves, and an opposed jaw having on one side thereof a cutter blade projecting above the face of said jaw and arranged to coöperate with the other jaw for cutting off a wire before said jaws are fully closed.

JOHN PFEFFER.

Witnesses:
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