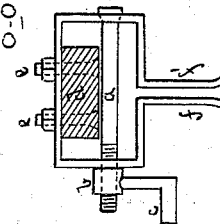
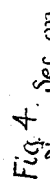
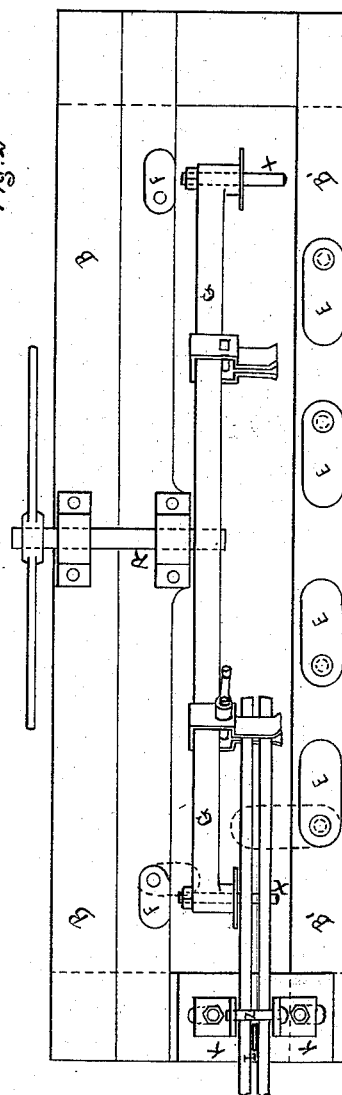


Patented Sept. 9, 1879.



Mr. Dummer.  
Harry Smith

INVENTOR  
William Stubblebine  
by his Attorneys  
Howson and Son

# UNITED STATES PATENT OFFICE.

WILLIAM STUBBLEBINE, OF BETHLEHEM, PENNSYLVANIA.

## IMPROVEMENT IN MACHINES FOR BUNDLING HOOP-IRON.

Specification forming part of Letters Patent No. 219,540, dated September 9, 1879; application filed April 28, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM STUBBLEBINE, of Bethlehem, Northampton county, Pennsylvania, have invented certain Improvements in Bundling Hoop-Iron; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of my invention is to rapidly and neatly fold into bundles the long strips of hoop-iron delivered from the finishing-rolls of a hoop-mill; and this object I attain in the manner and by the mechanism described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my machine for bundling hoop-iron; Fig. 2, a plan view; Fig. 3, a transverse section on the line V V, Fig. 1; and Fig. 4, a section, drawn to an enlarged scale, on the line O O, Fig. 1.

I may remark here that the usual mode of bundling hoop-iron is to lay the strips on a suitable surface and fold them by hand—a tedious operation, which my invention entirely dispenses with.

The frame of the machine consists of horizontal beams B B', suitably connected together at their opposite ends, and supported by legs C, which rest on a suitable foundation. To the beam B of the frame are secured suitable bearings for the shaft R, to one end of which is secured a hub having any desired number of arms, to enable the operator to turn the shaft; or, if desired, the shaft may be driven by power through the medium of suitable gearing. To the opposite end is secured a bar, at a point midway, or thereabout, between its opposite ends, so as to present two arms, G G, projecting to an equal extent from the shaft.

A pin, *x*, is secured to the end of each arm, at right angles to the same, and to each arm, at a point between the pin and the shaft R, is secured a clamping device, which I prefer to make in the manner shown in the enlarged view, Fig. 4, in which the clamp consists of wrought-iron or steel bent to the quadrangular form shown, and having two jaws, *f f'*.

The clamp is secured at the rear to the arm G, and possesses such inherent elasticity that the jaws have a tendency to open, but may be closed by a bolt, *a*, which is furnished with a handled nut, *b*.

To the beam B of the frame are pivoted two arms, F F, and to the beam B' are pivoted four or any other suitable number of arms, E. The object of these arms and plates will be rendered apparent hereinafter.

To the top of the frame, at the front end of the same, are secured two guide-plates, K K, in such a manner that they can be adjusted from or toward each other and secured after adjustment. These guide-plates carry the pins *z z*, and in a central position, between the two plates, and a short distance in front of the same, is a central guide-pin, L.

In operating the machine, the arms G G are adjusted to a horizontal position, and are there held by the pivoted arms F F, which are so adjusted as to project over the said arms G, the pivoted plates E occupying the position shown in Fig. 2.

A number of long strips of hoop-iron having been delivered onto the floor from the finishing-rolls of the hoop-mill, two sets of these strips (two or more in each set) are passed between the two pins *z z*, where they are maintained in their proper position laterally by the guide-plates K K, and at a proper distance apart by the central pin, L.

The strips are passed over the pin *x* at the end of one of the arms G, and between the jaws *f f'* of the clamping device, after which the jaws are made to gripe the strips by operating the nut of the bolt *a*.

The pivoted arms F are now moved to one side, and the attendants turn the shaft R, so that the arms G G will rotate in the direction of the arrow, Fig. 1, until the two sets of strips of hoop-iron have been folded by the two pins into two bundles, after which the arms G G are again brought to a horizontal position, and then retained by the arms F F, and the pivoted plates E E are turned inward, so as to receive the bundles, when they are withdrawn from the pins *x* of the arms G G. Here the bundles are properly wired, and then conveyed to any desired locality, the machine being then at liberty to be used for the bundling of other strips of hoop-iron.

The guide-plates K K may be readily adjusted to suit hoop-iron of different widths.

I claim as my invention—

1. The combination, in a hoop-iron-bundling machine, of the shaft R, arms G G, and

pins  $x x$ , attached one to each arm, and clamping-jaws  $f f'$ , attached to each or only one of the said arms, between the pin  $x$  and shaft  $R$ , all substantially as set forth.

2. The combination of the arms  $G G$ , the pins  $x x$ , and the clamping device with the adjustable guide-plates  $K$  and pins  $z z$ .

3. The combination of the adjustable guide-plates  $K K$  and their pins with the central guiding-pin,  $L$ .

4. The combination of the arms  $G G$ , se-

cured to the shaft  $R$ , and the pivoted retaining-arms  $F F$ .

5. The combination of the arms  $G G$  and pins  $x x$  with the pivoted plates  $E$ .

6. The combination of the arms  $G G$  with the clamping device, consisting of the quadrangular piece having jaws  $f f'$  and the bolt  $a$ .

WILLIAM STUBBLEBINE.

Witnesses:

GEO. ZIEGENFUSS,

JAS. M. MAHON.