

No. 616,552.

Patented Dec. 27, 1898.

S. M. NEELY.

BALE TIE.

(Application filed Mar. 31, 1897.)

(No Model.)

FIG. 2.

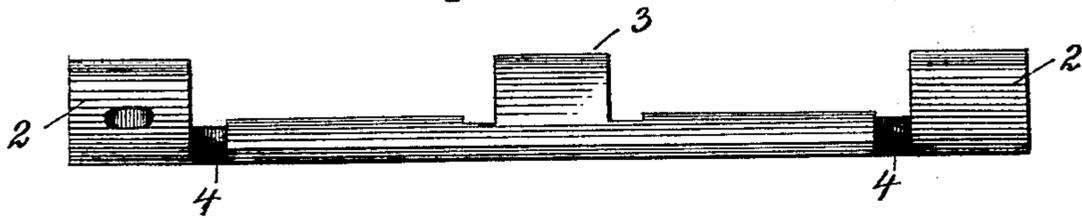


FIG. 1.

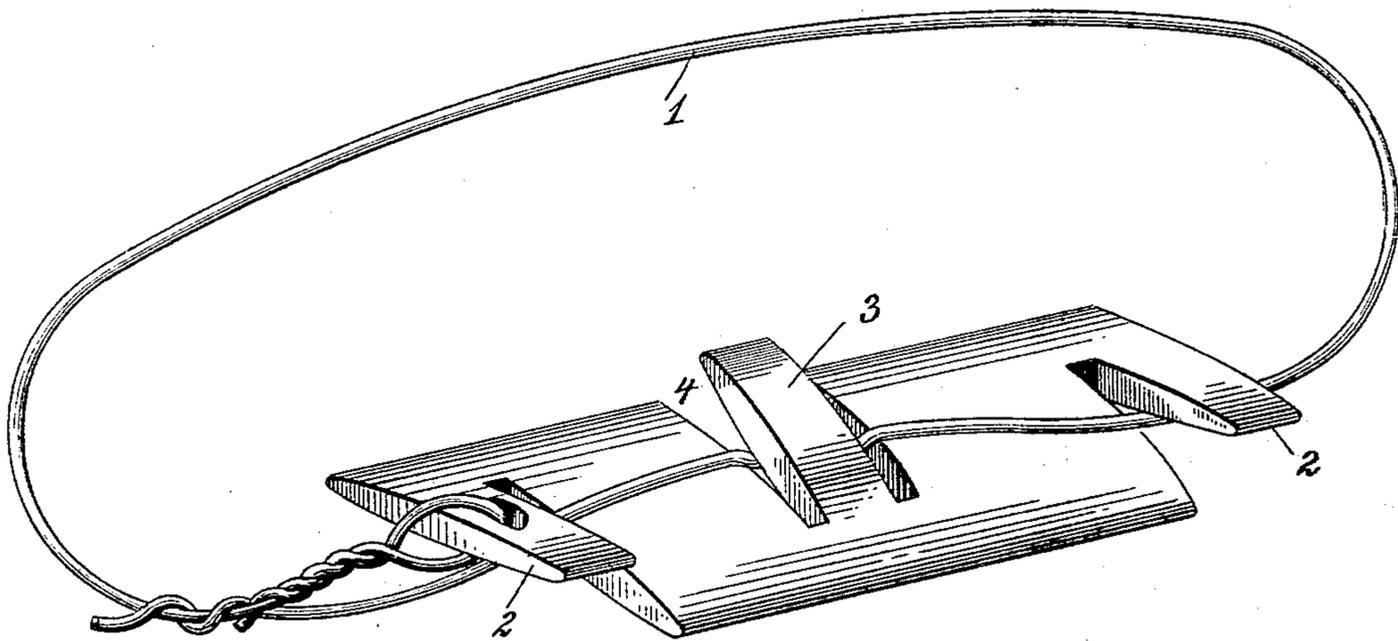
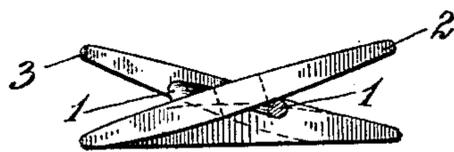


FIG. 3.



Inventor

Witnesses

*John F. Deuffermel*  
*[Signature]*

By his

Attorneys,

*Samuel M. Neely.*

*C. Snow & Co.*

# UNITED STATES PATENT OFFICE.

SAMUEL M. NEELY, OF ROCK HILL, SOUTH CAROLINA.

## BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 616,552, dated December 27, 1898.

Application filed March 31, 1897. Serial No. 630,148. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL M. NEELY, a citizen of the United States, residing at Rock Hill, in the county of York and State of South Carolina, have invented a new and useful Bale-Tie, of which the following is a specification.

My invention relates to bale-ties, and has for its object to provide a simple and efficient form of clutch for securing the free end of a tie-wire or its equivalent, the same being so constructed as to adapt the tie-wire to be interlaced with a plurality of alternate oppositely-extending tongues by the vibration of the wire, the clutch being designed to be upstruck from a flat sheet of metal.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a bale-tie constructed in accordance with my invention. Fig. 2 is an edge view of the clutch-plate to illustrate the deflection of the tongues. Fig. 3 is an end view of the same.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a tie-wire, to one end of which is preferably attached the means for securing it at the desired tension after it has been extended around the bale or other package, and in the construction illustrated the securing means consists of a clutch-plate struck from a single flat plate of metal and having terminal tongues 2 and an intermediate oppositely-extending tongue 3. These tongues, being integral with the plate and being in the plane thereof at their bases, are separated from the same at their outer ends by transversely slotting the plate, as shown at 4, said slots extending into the plate from opposite side edges and being of greater width than the thickness of the tie-wire which is to be used in connection with the device. The tongues are deflected toward their free ends from the plane of the plate to facilitate the engagement therewith of the free end of the tie-wire, said engagement being accomplished by vi-

brating the end of the wire alternately in opposite directions to first engage it with the terminal tongue at the opposite end of the plate from the point of attachment of the fixed end of the tie-wire, then pass it in rear of the intermediate tongue, subsequently under the other terminal tongue, and finally engage the extremity of the wire under the main body of the wire contiguous to the plate, as clearly shown in Fig. 1. This final step conceals the extremity of the wire to prevent contact with adjacent objects and also to avoid accidental disengagement. When it is desired to release the bale or package, it is simply necessary to oppositely vibrate the wire after disengaging its extremity.

The slots are cut squarely in the plate to form abrupt contiguous angles both on the tongues and the body of the plate, whereby when the wire is passed therethrough to engage the tongues it is engaged by said angles, which bite firmly thereinto and prevent relative displacement.

Various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention; I claim—

1. In combination with a tie-wire, a clutch for the same, comprising a plate having terminal tongues and an intermediate tongue which are rigid and extend laterally of said plate respectively in opposite directions, with their side edges respectively contiguous to adjacent edges of the plate, proper, all of said tongues being deflected slightly, in a common direction, from the plane of one side surface of the plate, substantially as specified.

2. The combination with a tie-wire, a clutch for the same, comprising a plate having terminal upstruck tongues and an intermediate upstruck tongue which are rigid and approximately straight and extend laterally of said plate respectively in opposite directions, and are deflected slightly in a common direction from the plane of one side of the plate toward their free ends, with their side edges contiguous to edges of the plate, substantially as specified.

3. In combination with a tie-wire, a clutch  
for the same, comprising a plate, having ter-  
minal upstruck tongues and an intermediate  
upstruck tongue, which are rigid and approxi-  
5 mately straight and extend laterally of the  
plate respectively in opposite directions, and  
are deflected slightly in a common direction  
from the plane of the plate toward their free  
ends, with their side edges adjacent to edges  
10 of the plate, but spaced therefrom a distance

greater than the diameter of the tie-wire,  
substantially as specified.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

SAMUEL M. NEELY.

Witnesses:

W. G. REID,  
MORRIS COBB.