

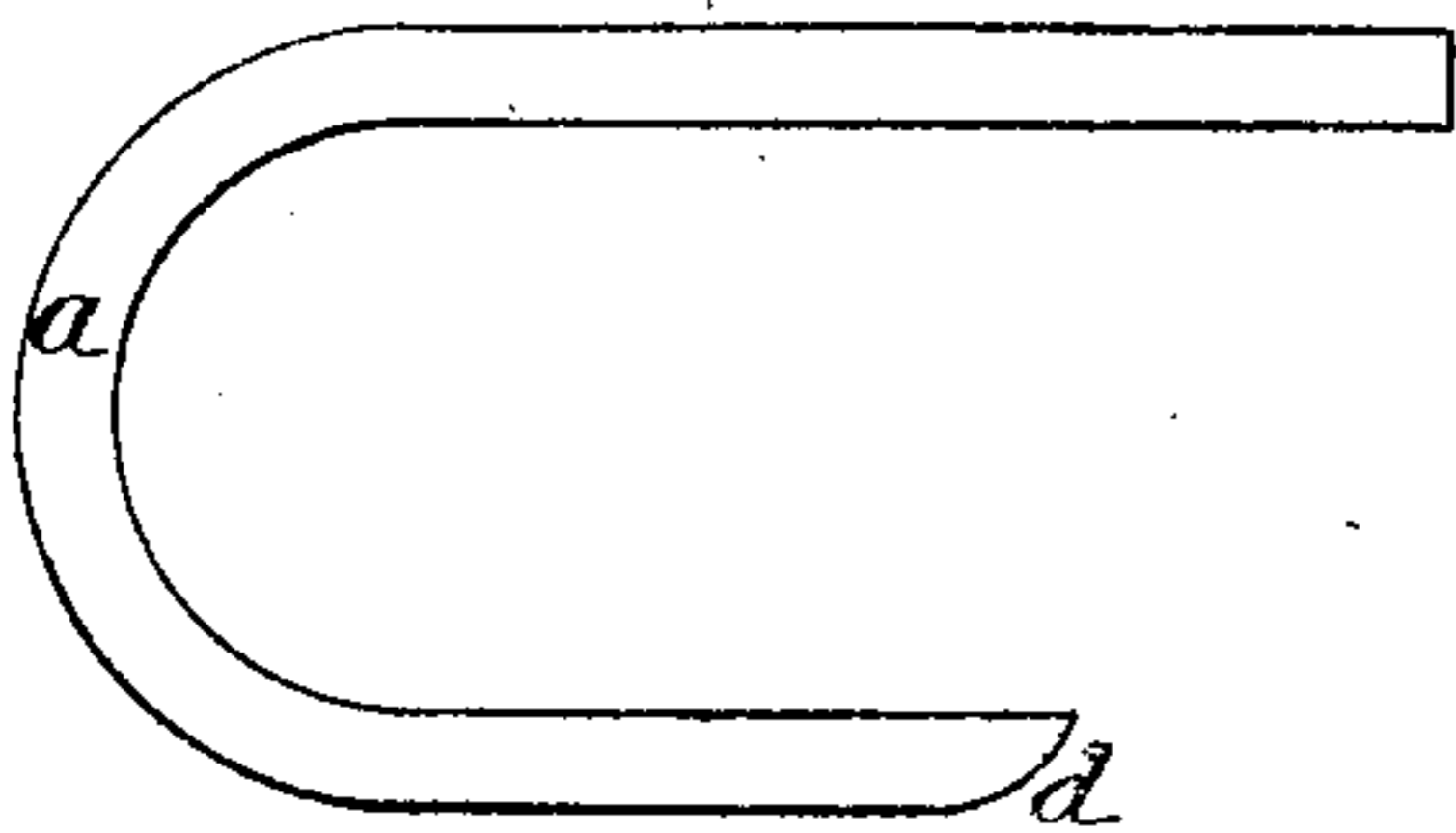
G. BRODIE.

Improvement in Cotton Bale Ties.

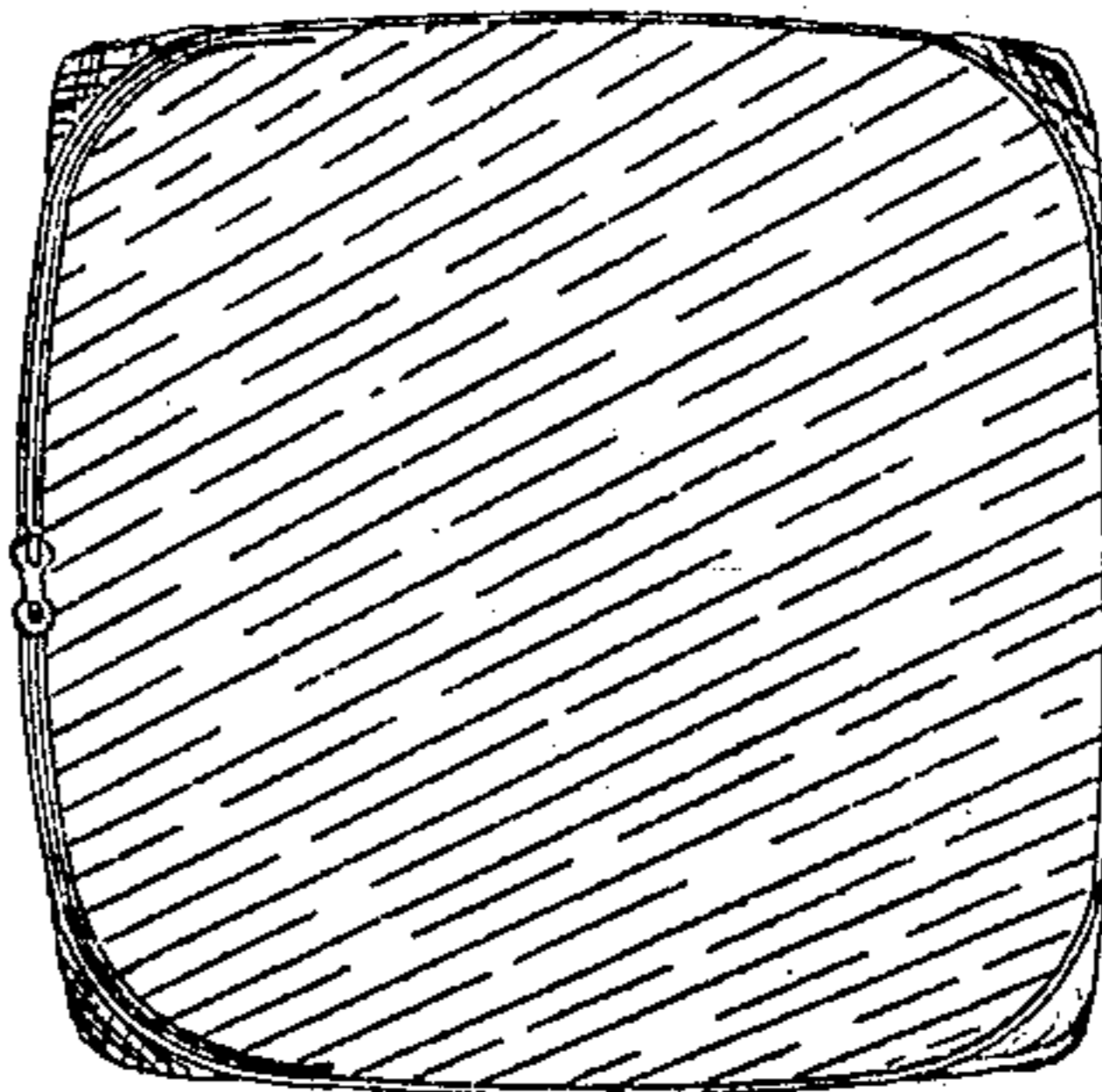
No. 123,976.

Patented Feb. 27, 1872.

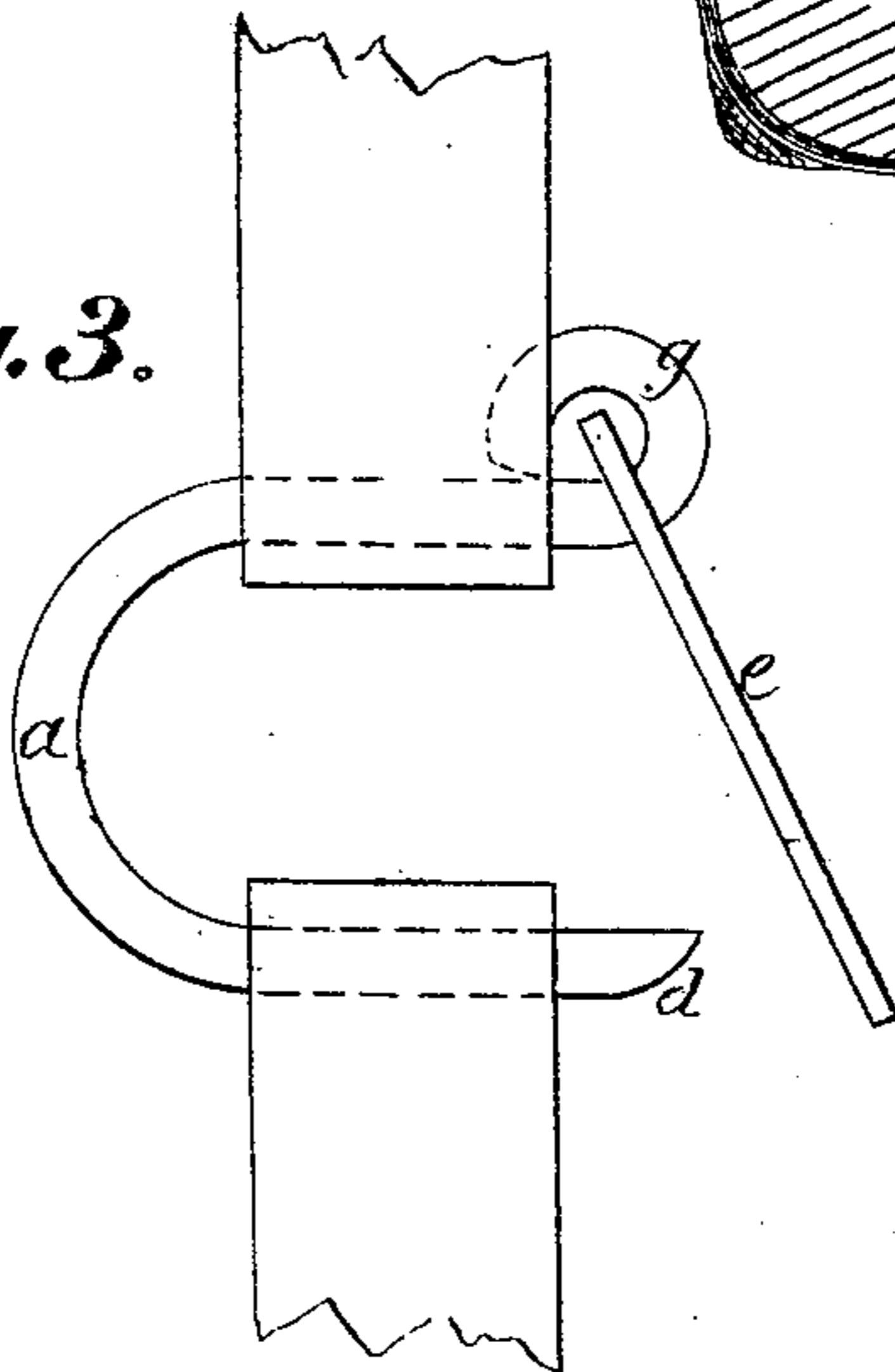
*Fig. 1.*



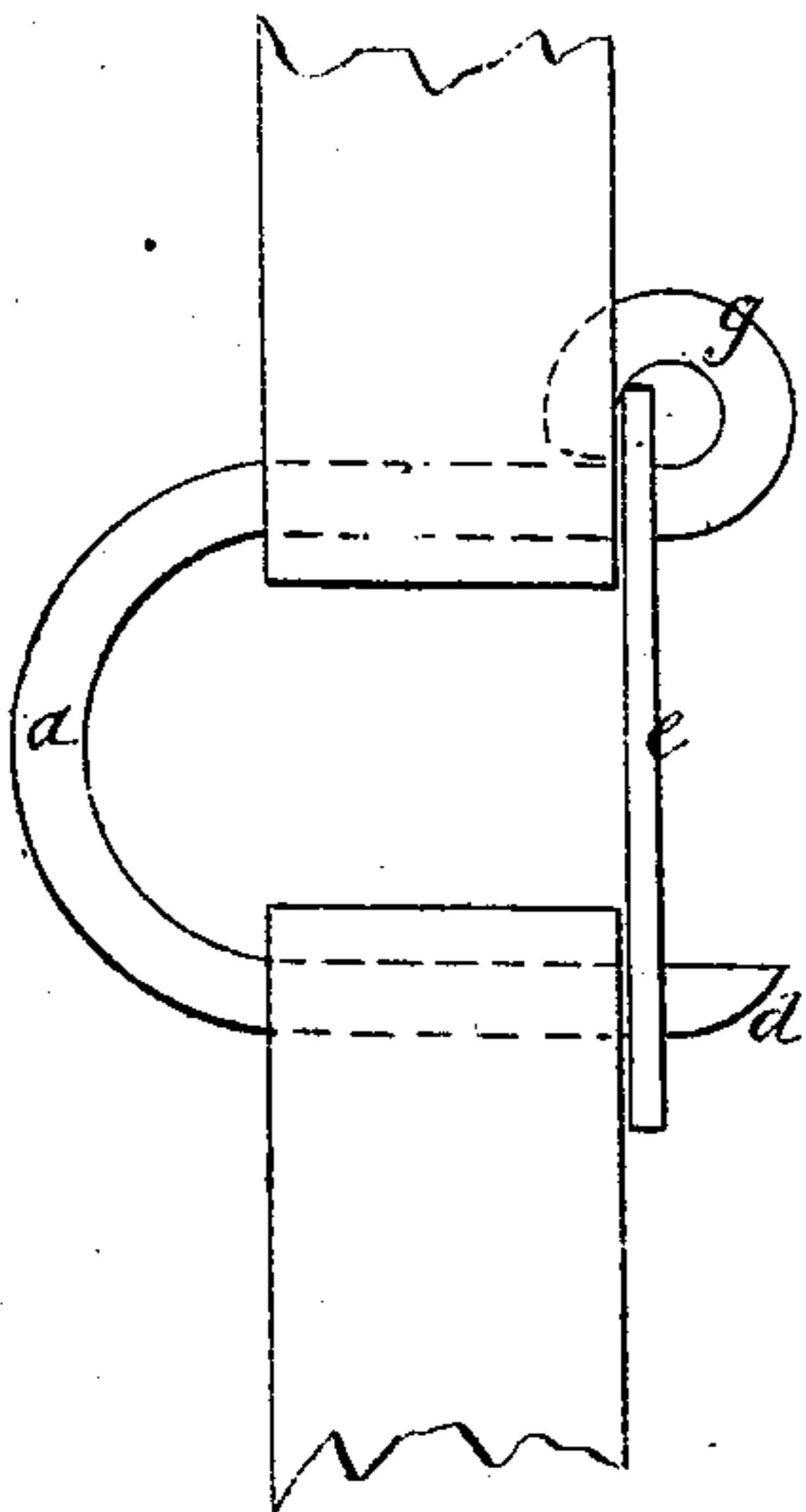
*Fig. 6.*



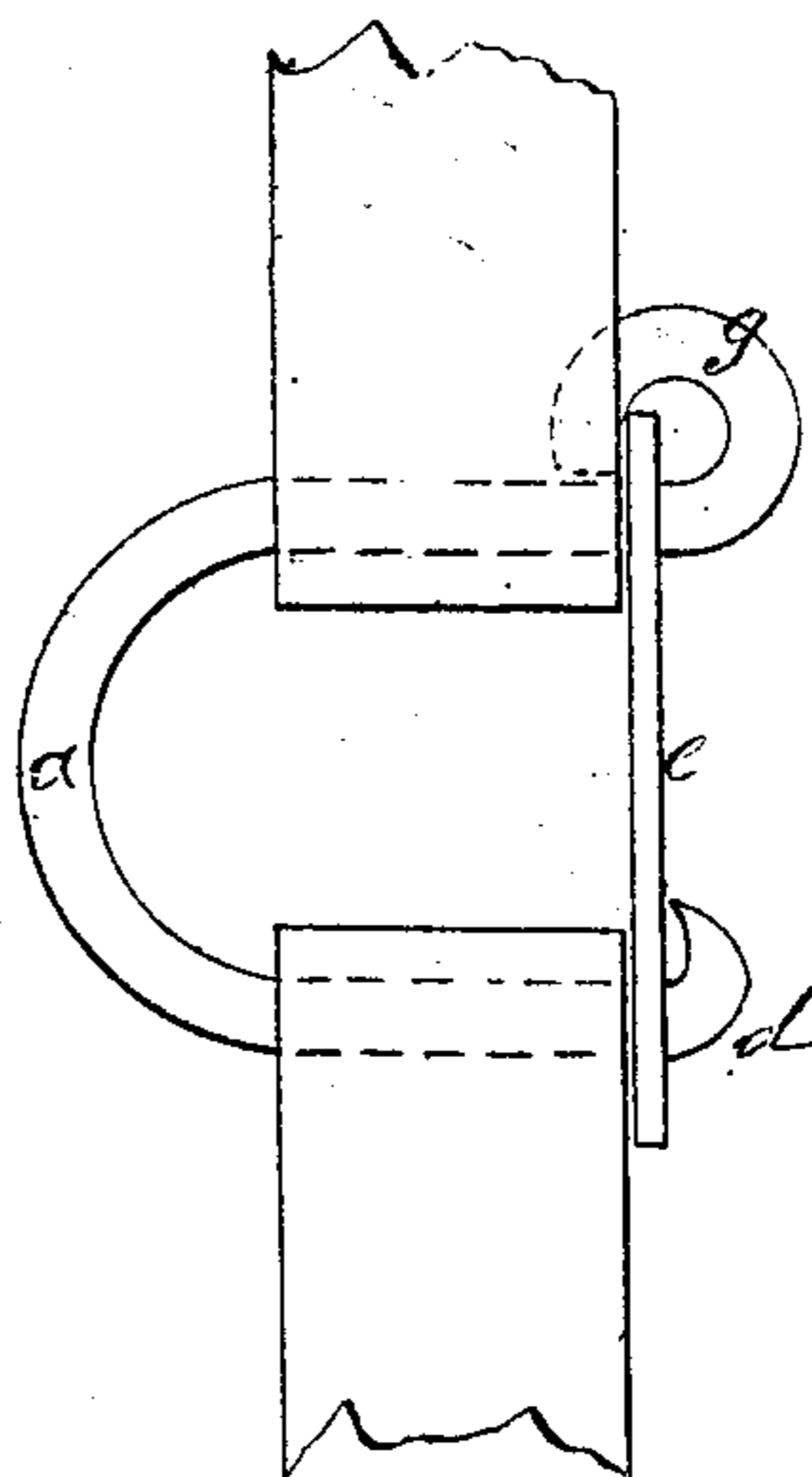
*Fig. 3.*



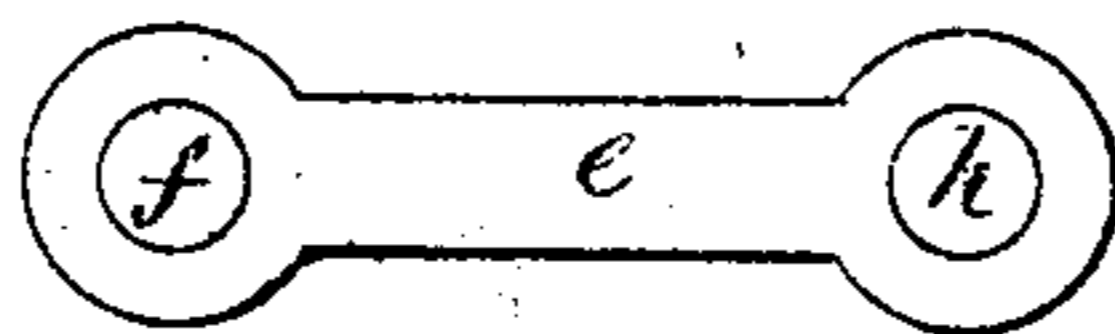
*Fig. 4.*



*Fig. 5.*



*Fig. 2.*



**Witnesses:**

*Parker H. Sweet, Jr.*  
*Lewis H. Wayne, Jr.*

**Inventor:**

*George Brodie*  
*by Johnson, Klauke & Co.*  
*his attorneys.*

# UNITED STATES PATENT OFFICE.

GEORGE BRODIE, OF PLUM BAYOU, ARKANSAS, ASSIGNOR TO HIMSELF AND JAMES SANGSTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. 123,976, dated February 27, 1872; antedated February 8, 1872.

I, GEORGE BRODIE, of Plum Bayou, in the county of Jefferson and State of Arkansas, have invented a useful Improvement in Cotton-Bale Ties, of which the following is a specification:

The object of my invention is to furnish a tie or buckle that can with the utmost facility be attached to the hoop, and at the same time possess the requisite strength to resist the action of the bale through the expansive force of the cotton when freed from the compress.

It is well known to those familiar with the cotton trade that those ties having a lateral slit or cleft to allow of the insertion of the bands edgewise are now in most general use. The only objection to ties of this class, however, is found in the fact that, after the band has been secured, the tie has to be turned around so as to cause one of the looped ends of the band to cover the slit or cleft. This is to avoid the injurious effect of the opposing draft on the walls of the tie, which are at right angles to the one having the cleft.

In ties of the class to which my present invention appertains this is all avoided. The body of the tie, being in the form of an open link or staple, is attached to one end of the band in the usual manner, and then at the proper time one of the prongs is pushed through the loop on the free end of the band and fastened by means of a hinged link or tie-plate. This renders unnecessary any movement of the tie after it has been introduced, while the tie-plate renders it equally as strong as those heretofore formed with an unbroken wall; and said tie-plate in my improvement, being hinged to the outer end of the staple, not only renders it impossible for said tie-plate to become detached and lost, but also keeps the same always in place and ready for immediate application.

In the accompanying drawing, Figure 1 represents the blank or staple of which the tie is made; Fig. 2, a view of the perforated link or tie-plate. Fig. 3 represents the tie complete and applied to the loops of the hoop, but not secured. Fig. 4 represents the tie when secured. Fig. 5 represents a similar view, showing, besides, the link or tie-plate permanently locked to both ends of the staple. Fig. 6 represents a cross-section of a cotton bale with my improved tie applied thereto.

In constructing my improved tie, the staple *a* is cut of suitable length from a wrought-iron rod, about a quarter of an inch in diameter, and bent so that one limb will be longer than the other. The end of the short limb is slightly pointed, as shown at *d*. The object of the greater length of one of the limbs is to allow of its being bent or upset, as shown in Fig. 3, to form the eye *g* in which to hinge and lock the tie-plate *e*. This tie-plate is provided with perforations *h* and *f*, one to receive the long limb of the staple upon which the eye is afterward formed, and the other the short limb after the tie has been attached to the bands around the bale; and which short limb, when so passed through said opening, may have its pointed end upset either against the outer side of the tie-plate or over its edge, as shown in Fig. 5, thus firmly locking the free end of said tie-plate to the staple. This tie *e* is about one-sixteenth of an inch thick, and is stamped, with its holes *f* and *h*, from a plate. The space between the limbs of the staple should be about an inch wide, so that in applying the staple there will be sufficient space between its limbs to allow the short limb to be passed through the loop of one end of the hoop from one side, and through the other loop of the hoop from the other side, like a bent hook, so that the loops of the hoop will inclose the limbs of the staple, the back of which will form one closed side and the tie-plate the other.

In this position of the limbs, it will be observed, the tie-plate *e* can be brought into position with the short limb with the greatest ease and dispatch.

In applying the tie to the bands, it is grasped by its longest or bent end, so that its shortest limb will be uppermost and its longest limb down, but when looped with the hoops these limbs are reversed; or the open ends of the staple with their tie-plate attached, as in Fig. 3, may be passed through the loops of the hoop from one side only. Moreover, the staple, being easily and quickly made, and the tie-plate hinged to its longest end, is readily managed to engage with the short limb of said staple, and the whole operation requires little or no labor in making and securing the connection of a very cheap and convenient bale-tie; and one embodying the three great desiderata, viz.,

strength, facility of attachment, and perfect security.

Having described my invention, I claim—

The improved bale-tie herein described, consisting of the staple *a*, provided with the eye *g*, and hinged perforated link or tie-plate *e*, constructed and applied substantially in the manner described and shown.

In testimony whereof I have hereunto signed the above specification of my improvement in cotton-bale ties this 1st day of July, A. D. 1871, in the presence of two subscribing witnesses.

GEORGE BRODIE.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.