

J. W. CLIFF.
Broom-Binders.

No. 199,412.

Patented Jan. 22, 1878.

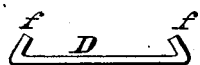
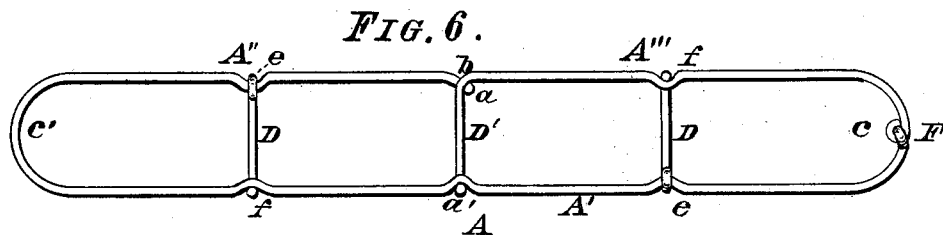
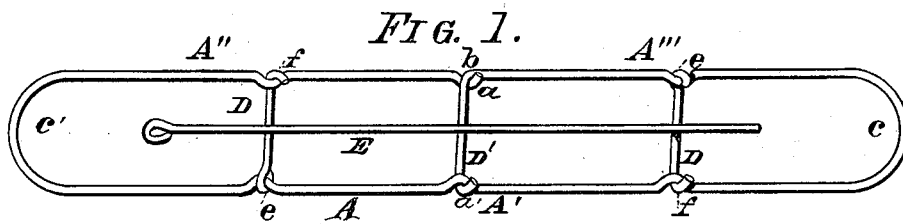


FIG. 3.

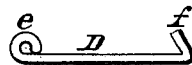


FIG. 4.

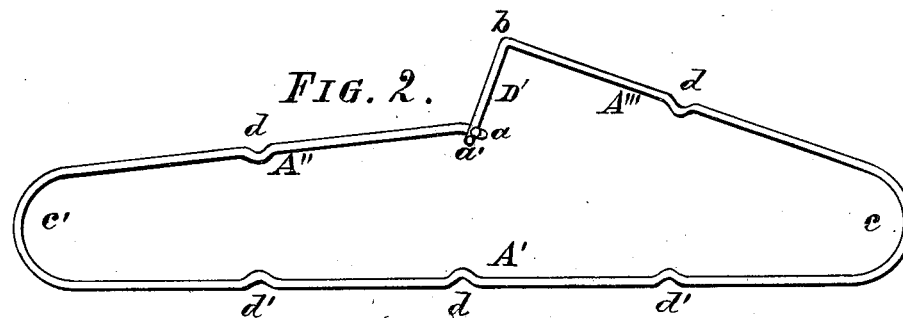


FIG. 5.

Witnesses:

Frank Bissch
Lewis P. Baker

Inventor:

John W. Cliff,
by Michael J. Stark,
his atty.

UNITED STATES PATENT OFFICE.

JOHN W. CLIFF, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO LEWIS P. BAKER, OF SAME PLACE.

IMPROVEMENT IN BROOM-BINDERS.

Specification forming part of Letters Patent No. **199,412**, dated January 22, 1878; application filed
July 31, 1877.

To all whom it may concern:

Be it known that I, JOHN W. CLIFF, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Broom-Binder; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has special reference to a new article of manufacture—a broom-binder for corn and other brooms; and it consists of a wire guard formed of a single piece of wire bent into an oblong shape, and provided with hooks or clamps, said guard to be applied around the broom-brush, and the clamp or clamps to pass through the same, thereby retaining the device in proper position, as hereinafter more fully set forth and described.

In the drawings heretofore mentioned, Figure 1 is a perspective view of my improved broom-binder. Fig. 2 is a plan of the same when ready to be applied to a broom. Figs. 3 and 4 are detail views of the clamps. Fig. 5 is a section through a broom, showing the device in position. Fig. 6 is a plan of a slightly-modified form of my broom-binder.

Like letters of reference indicate corresponding parts in all the figures.

A is a metallic guard, constructed of wire in the shape of an oblong, whose long and short sides correspond to the average width and thickness, respectively, of a broom-brush, &c. This guard I form of a single piece of wire, having on both extremities barbs or hooks *a* *a'*, respectively, and near the hook *a* a right-angled bend, *b*, which wire I bend so that the hook *a* will be about midway between two semicircular bends, *c* *c'*, and the arm *A''* nearly parallel with the side *A'*, while the arm *A'''*, having the double bends *a' b*, forms an acute angle with said side *A'*. In the guard I further provide notches *d d'* at suitable places, and clinch around the same clamps *d*, consisting each of a piece of wire, having on one end an eye, *e*, and on the other end a hook, *f*, as shown in Fig. 4.

The guard I apply to a broom-brush, &c., in

the following manner: I first place the bend *c'* over the broom-brush where the binder is to be applied, springing arm *A'''* sufficiently open for this purpose, so that the side *A'* and arm *A''* will embrace the broom. Now I press the arm *A'''* toward the side *A'*, passing the bend *D'* through the broom, so that its catch *a'* engages the central notch *d*, whereby the arm *A''* will be locked by the arm *A'''* behind the hook *b* by the catch *a*. In this manner the guard is clamped in position by the part *b a'*, forming the clamp *D'*, crossing the broom-brush; but it may be further secured by passing the separate clamps *D* through the brush, so that their catches *f* engage with the notches *d'*, and the whole assumes the shape illustrated in Fig. 1. Any number of these clamps *D* may be applied, and instead of clinching them to the guard, they may be made, as shown in Fig. 3, by having two catches, *f*, and passing them through the broom-brush after the guard is properly adjusted.

To prevent the guard from moving upward toward the head, I pass a rod, *E*, through the broom above the clamps *D*. This rod may be provided with a hook, an eye, or similar means to enable its withdrawal when desired. In ordinary cases, however, I shall not apply this rod, since the catches or clamps *D* hold the guard sufficiently tight.

It will be observed that to place the guard onto the broom-brush the wire must be sprung open in the bend *c*, which springing may have a tendency to rupture the wire on that part if often repeated. Although the elasticity of the wire is such as to allow this to be done many times before breaking occurs, and very likely oftener than the guard is removed from a worn-out and placed onto a new broom, I may find it advisable to guard against this breakage by forming the guard of two pieces of wire, of which one makes the part *A'* with the bend *c'* and the arm *A''*, and the other the arm *A'''*, uniting both pieces by the eyes *F* at the bend *c*, as illustrated in Fig. 6, whereby said eyes form a hinge around which the arm *A'''* can freely turn.

In guards or binders for brooms, it is objectionable to have metallic portions thereof, particularly those having sharp angles, &c.,

project over the face of the broom-brush, which, in sweeping, mar or deface furniture when coming in contact therewith. To prevent this I have formed the notches $d d'$ in the guard where the hooks a, a' , and f engage, so that these hooks do not project over the brush after the device is attached.

A binder, as described, when placed on a broom, will effectually prevent the same from wearing uneven, and preserve its usefulness for a longer space of time than otherwise.

Having thus fully described my invention, I claim—

1. As an improved article of manufacture, a broom-binder formed of a single piece of wire, with the side A' , bends $c c'$, arm A'' , with the hook a , and the arm A''' , with the bends b and a' , substantially as described, for the purpose specified.

2. As an improved article of manufacture, a broom-binder consisting of the guard A , formed of a single piece of wire, with the side A' ,

bends $c c'$, arm A'' , with the fastening a , and the arm A''' , with the bends b and a' , said guard having the clamps D , provided with the hooks f , engaging the notches $d d'$, as and for the use and purpose specified.

3. The binder for a broom-brush or similar article, consisting of the guard A , adapted to tightly embrace said broom, the clamps D , passing transversely through the same, and connecting the parallel sides of said guard, and the rod B , arranged above said clamps, the whole constructed and arranged substantially as and for the use and purpose stated.

In testimony that I claim the foregoing as my invention I have hereto set my hand and affixed my seal in the presence of two subscribing witnesses.

J. W. CLIFF. [L. S.]

Attest:

MICHAEL J. STARK,
FRANK HIRSCH.