

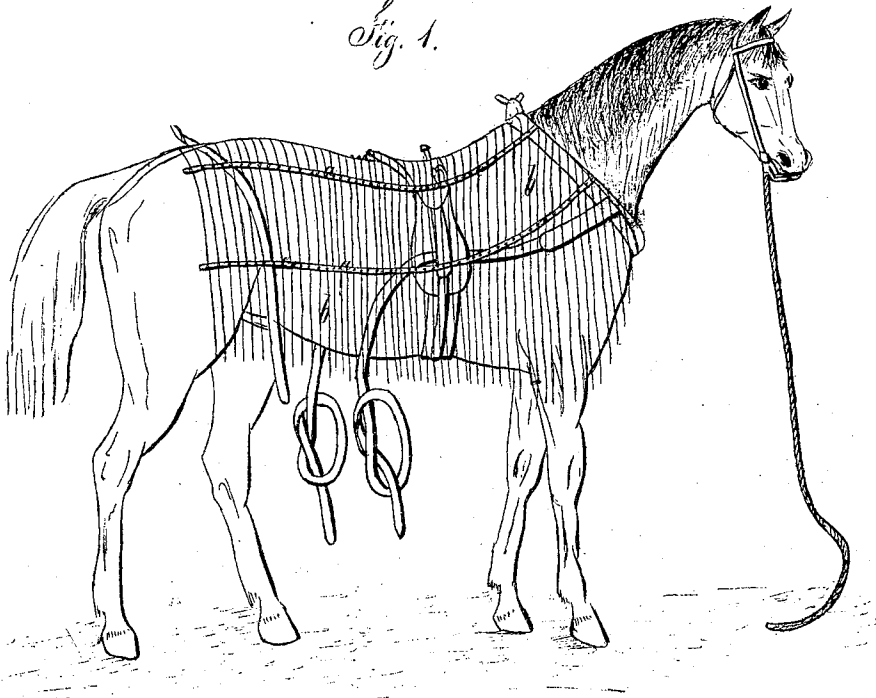
*J. Graham,*

*Fly Net.*

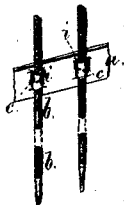
*No. 102,113.*

*Patented Apr. 19. 1870.*

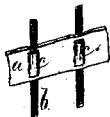
*Fig. 1.*



*Fig. 3.*



*Fig. 4.*



*John Graham*

*per L. W. Perrell. atty.*

*Witness,*

*Chas. H. Smith*

*Geo. S. Walker*

# United States Patent Office.

JOHN GRAHAM, OF NEW YORK, N. Y.

Letters Patent No. 102,113, dated April 19, 1870.

## IMPROVEMENT IN FLY-NETS FOR HORSES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known I, JOHN GRAHAM, of the city and State of New York, have invented an Improvement in Fly-Nets for Horses, &c.; and the following is declared to be a correct description thereof.

This invention relates to an improvement in securing the cords to the longitudinal tapes or straps.

Heretofore it has been usual in the manufacture of fly-nets to employ leather straps through perforations in which the leather cords are drawn, so that the net may hang over the horse's back and at his sides for keeping off flies.

These leather nets are objectionable for carriage harness, on account of the appearance; hence it is usual to employ cotton-nets made of cords tied together, and forming an open network.

My invention allows for the manufacture of cotton or linen fly-nets, with longitudinal straps and transverse cords, so that the net will be more handsome in appearance, and there will be no chance for the straps and cords to slip at the points of intersection.

In the drawing—

Figure 1 shows a net applied upon a horse; and

Figure 2 represents the mode of securing the tapes and cords at the points of intersection.

The tapes or straps *a a* are to be of suitable width to insure the required strength, and they are to be of woven material.

The cords *b b* are twisted or braided. I prefer the latter, and employ metallic tags at the ends to prevent them raveling. These tags also form small weights to the ends of the cords.

The fly-net is to be made with the desired number of longitudinal straps and transverse cords, and buckles

or other usual means for attachment are to be provided.

The straps and cords are united at the points of intersection by sheet-metal clasps *c c*, shown in fig. 2. These clasps are made with penetrating points that are bent or clinched to hold the cords to the tapes.

These metal clasps are of any of the forms employed in the manufacture of ladies' hoop-skirts that may be available for uniting the tapes and cords; and, as an additional security, the tapes may be woven with pockets, through which the cords may be passed, the tags acting as needles in threading the cords through the pockets *i*, (see Figure 3.)

The net made in this manner is much more durable than those heretofore made of cotton or linen, and is superior in appearance.

The tags at the ends of the cords cause them to hang vertically, and prevent said cords becoming entangled in use, as is the case frequently with cords in which a knot is tied to prevent the cord raveling.

I claim as my invention—

1. The fly-net for horses, made of longitudinal straps and transverse cords united by metal clasps, as specified.

2. The fly-net for horses, made of longitudinal straps and transverse cords, at the ends of which cords metallic tags are applied, as and for the purposes set forth.

Dated this 23d day of December, 1869.

JOHN GRAHAM.

Witnesses:

CHAS. H. SMITH,  
GEO. T. PINCKNEY.