(No Model.) R. J. P. SPENCE & R. STORRAR.

INSTRUMENT FOR THE MEASUREMENT OF HORSES' NECKS FOR FITTING COLLARS.

No. 365,873. Patented July 5, 1887.

Fig. I.

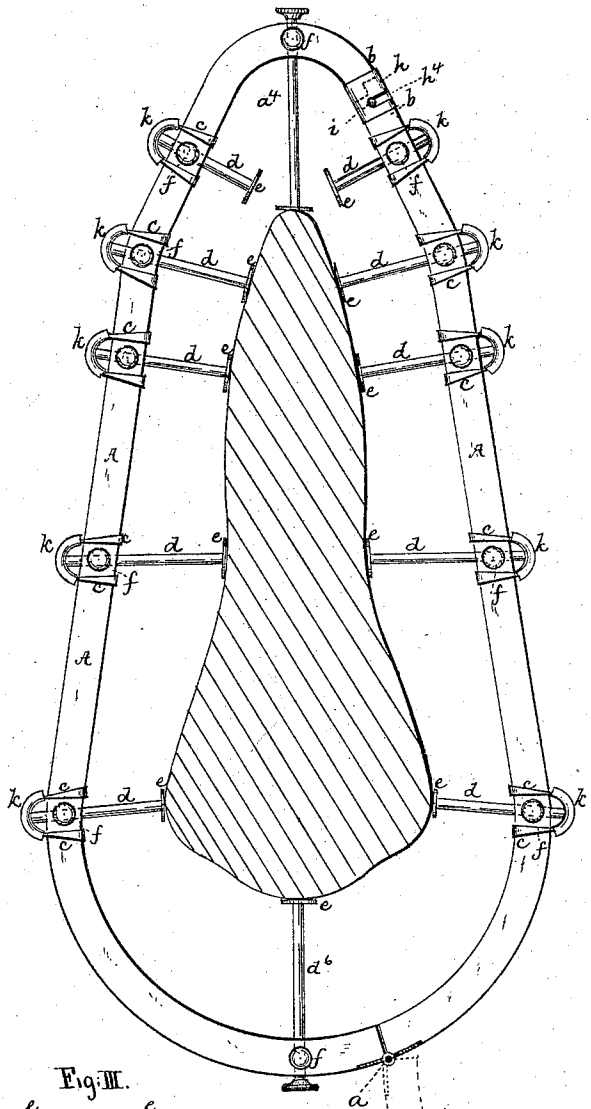


Fig. II.

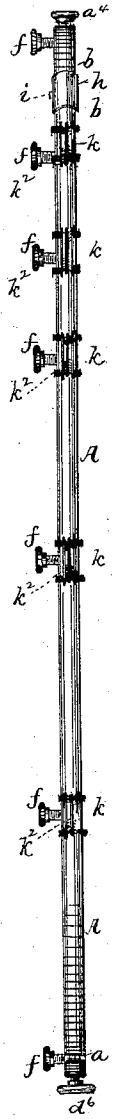
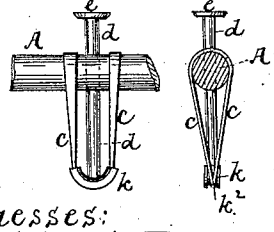


Fig. III.



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UNITED STATES PATENT OFFICE.

ROBERT J. P. SPENCE AND ROBERT STORRAR, OF LETHAM, LADYBANK, COUNTY OF FIFE, SCOTLAND.

INSTRUMENT FOR THE MEASUREMENT OF HORSES' NECKS FOR FITTING COLLARS.

SPECIFICATION forming part of Letters Patent No. 365,873, dated July 5, 1887.

Application filed December 3, 1886. Serial No. 220,558. (No model.) Patented in England September 26, 1885, No. 11,470.

To all whom it may concern:

Be it known that we, ROBERT JOHN PEAT SPENCE and ROBERT STORRAR, subjects of the Queen of Great Britain, and residents of Letham, Ladybank, in the county of Fife, Scotland, have invented a certain new and usful Instrument for the Measurement of Horses' Necks for Fitting Collars, (for which we have obtained a patent in Great Britain, No. 11,470, dated September 26, 1885,) of which the following is a full, clear, and exact specification thereof.

The object of our invention is to produce an instrument for measuring horses' necks for fitting collars which is simple in construction and easily applied and operated.

Referring to the drawings, Figure I is a front elevation of our improved measuring-instrument. Fig. II is a side view of the same. Fig. III are enlarged detached views of the elastic band-stretcher.

Similar letters refer to similar parts throughout the several views.

A is the frame, constructed of tubing and of any metal, and about one-half an inch in diameter. It can, however, be made of wood. This frame is made in two parts hinged together on a pin, which is so secured to the frame as to permit its easy removal, in order to allow the two parts to be separated for easy packing. The free ends *b b* of the frame are fastened together by ferrule *b*, into which a small pin, *i*, works, the pin being fixed into the lower portion of the frame just below the joint *b*. When the frame is closed, the ferrule is pushed up so as to overlap the other portion of the frame, and it is then turned around, so that the pin passes into the small offset from the main slit, and is thus kept fast.

d are slides with the buttons *e* and heads *k*. These heads *k* are segments of hollow rings with concave grooves k^2 on their outer edges, which may be clearly seen in Fig. 3. These slides work in a hole cut through the frame, and are pushed in either by hand or by the elastic bands *c*, which constantly and gently press the button *e* against the horse's neck. These elastic bands (for each slide) are continuous, and are first passed over the portion of the slide within the frame, then around the frame on each side of the slide, and then both portions on each side of the frame are separately passed through the slit in the head of the slide. It is thought better that the uppermost, a^4, and lowermost slides should not be provided with elastic bands. The use of these elastic bands is to draw in the slides equally all round. These slides are locked fast to the arms by pinching-screws *f*. By now unfastening the instrument and closing it again after it has been removed from the horse's neck an exact copy of the outline of the neck where the collar is meant to bear is obtained. This can be transferred to paper by laying the instrument on the paper and drawing a curve to pass by the surface of each plate or button, as shown by the curved boundary of the shaded portion in the drawings, Fig. I, which represents the smallest size of neck.

Although we show elastic bands to press outward the slides, we are aware that a spiral spring can be used to accomplish the same result.

Although horses are mentioned in the title of this invention, it is evident that the neck of any beast of burden requiring a collar can be measured by this instrument.

Having thus described our invention, we desire to claim—

1. In an invention for measuring necks of animals for fitting collars, the frame A, made in two parts, hinged at *a* and locked together by ferrule *b*, and having slides *d*, with buttons *e* and heads *k*, pressed inward by elastic bands *c c*, and held in position by pinching-screws *f*, substantially as and for the purpose set forth.

2. In an instrument for measuring the necks of animals for fitting collars, the combination of the frame A, made in two parts, hinged at *a*, and locked by ferrule *b*, the slides *d*, with button *e* and head *k*, pressed inward by elastic bands *c c*, and locked in position by pinching-screws *f*, all arranged substantially as and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 7th day of September, 1886.

ROBERT J. P. SPENCE.
ROBERT STORRAR.

Witnesses:
MEMING WANNER, Jr.,
DAVID STURROCK.