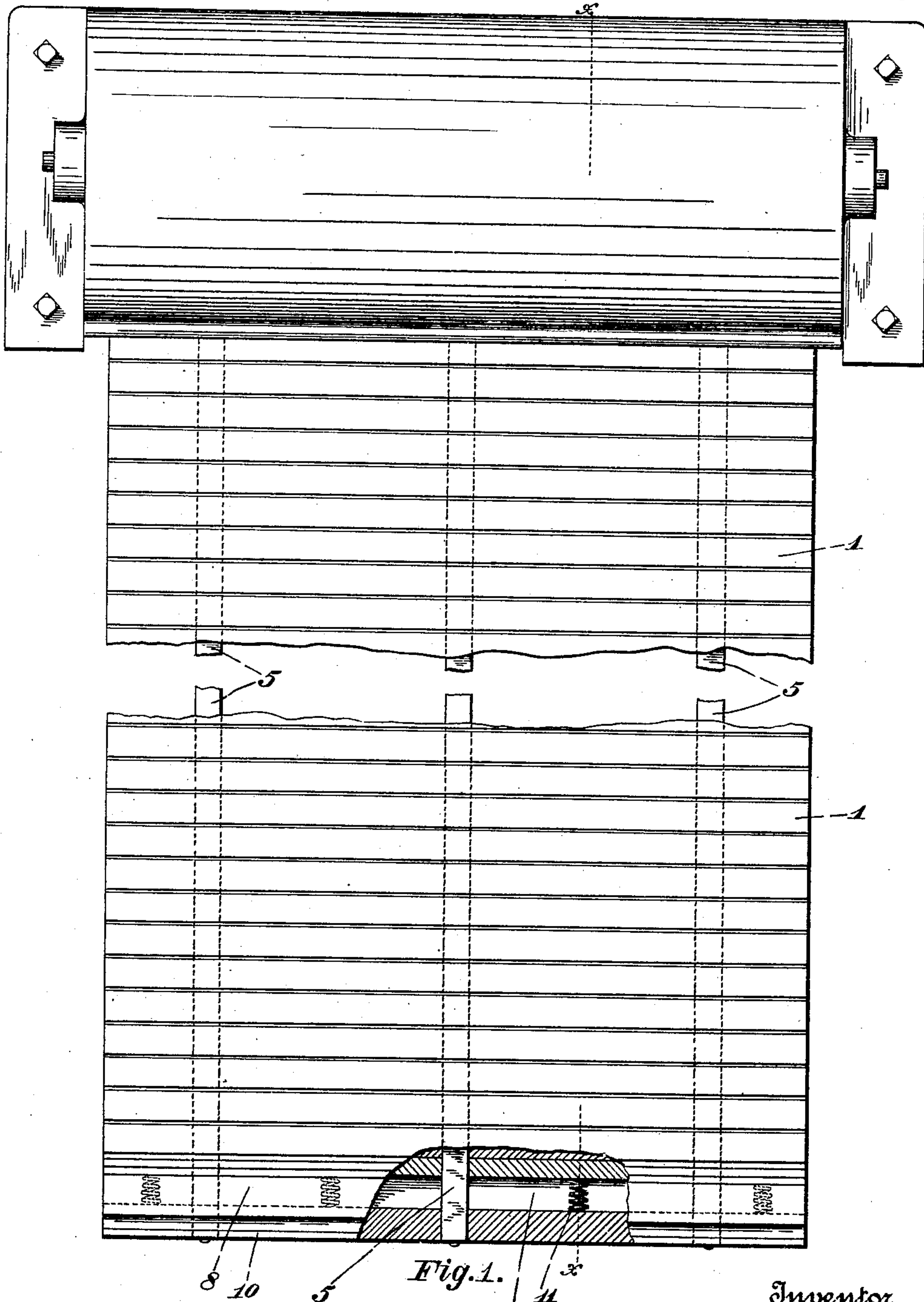


No. 863,741.

PATENTED AUG. 20, 1907.

E. H. McCLOUD.
FLEXIBLE CURTAIN.
APPLICATION FILED MAY 9, 1906.

2 SHEETS—SHEET 1.



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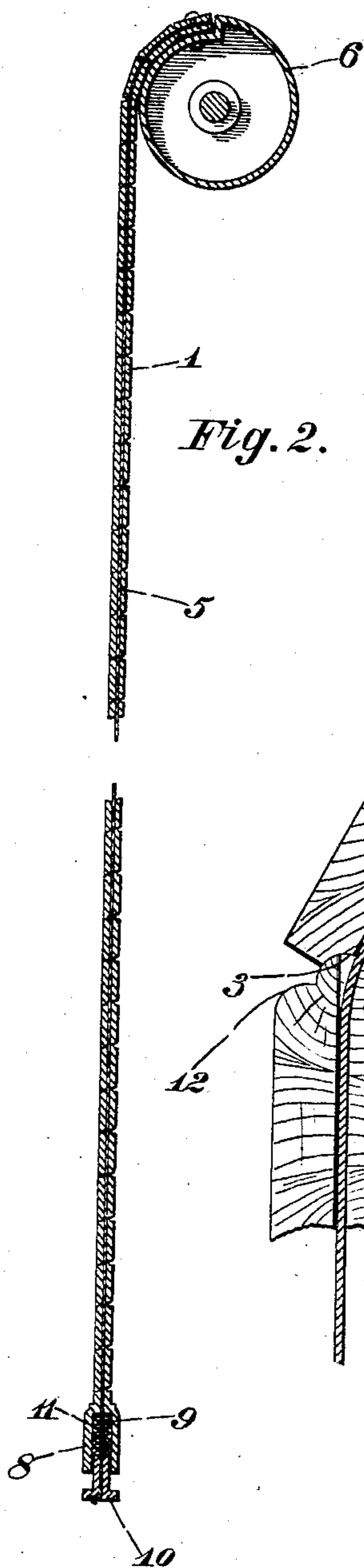


Fig. 2.

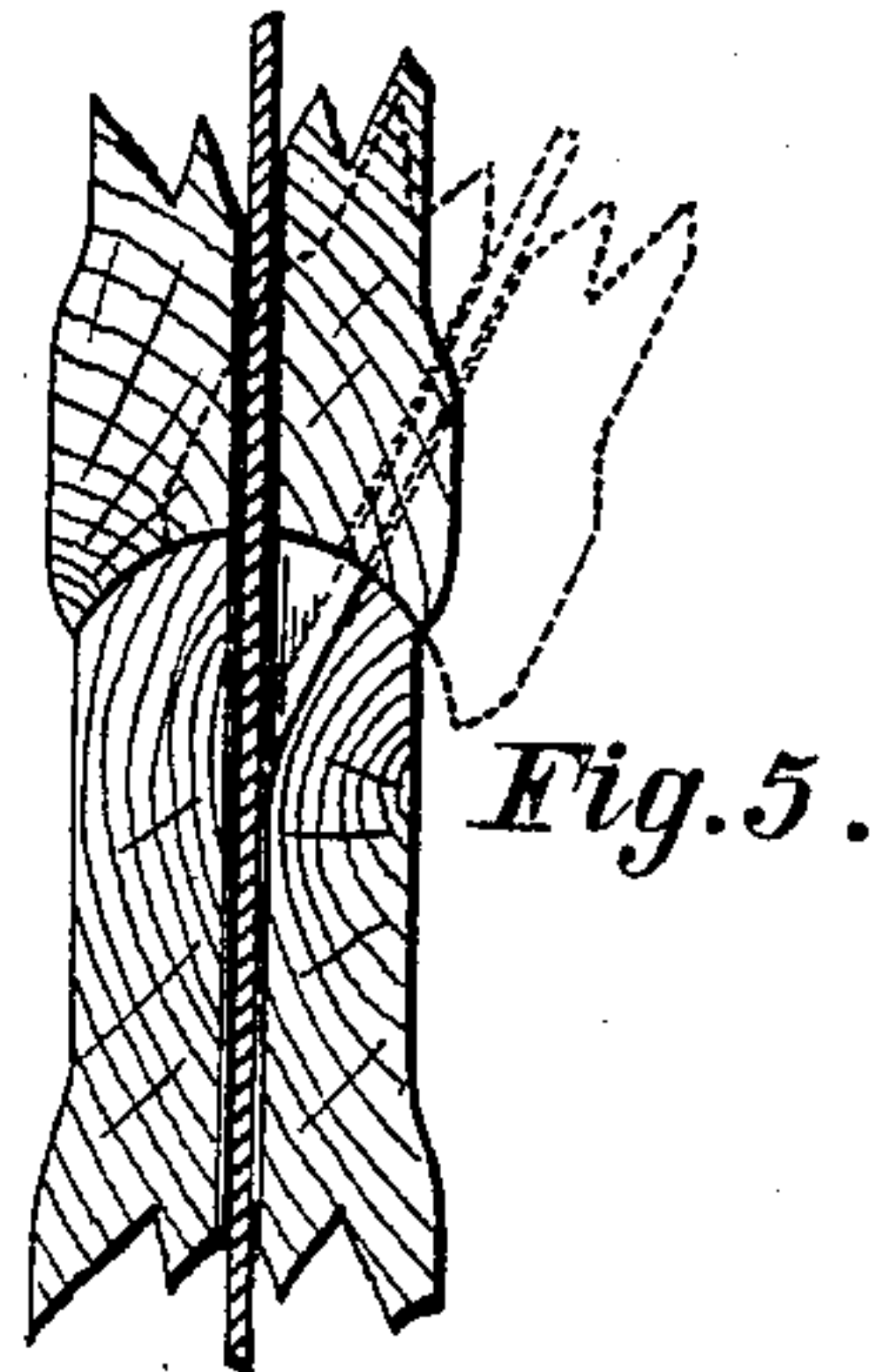


Fig. 5.

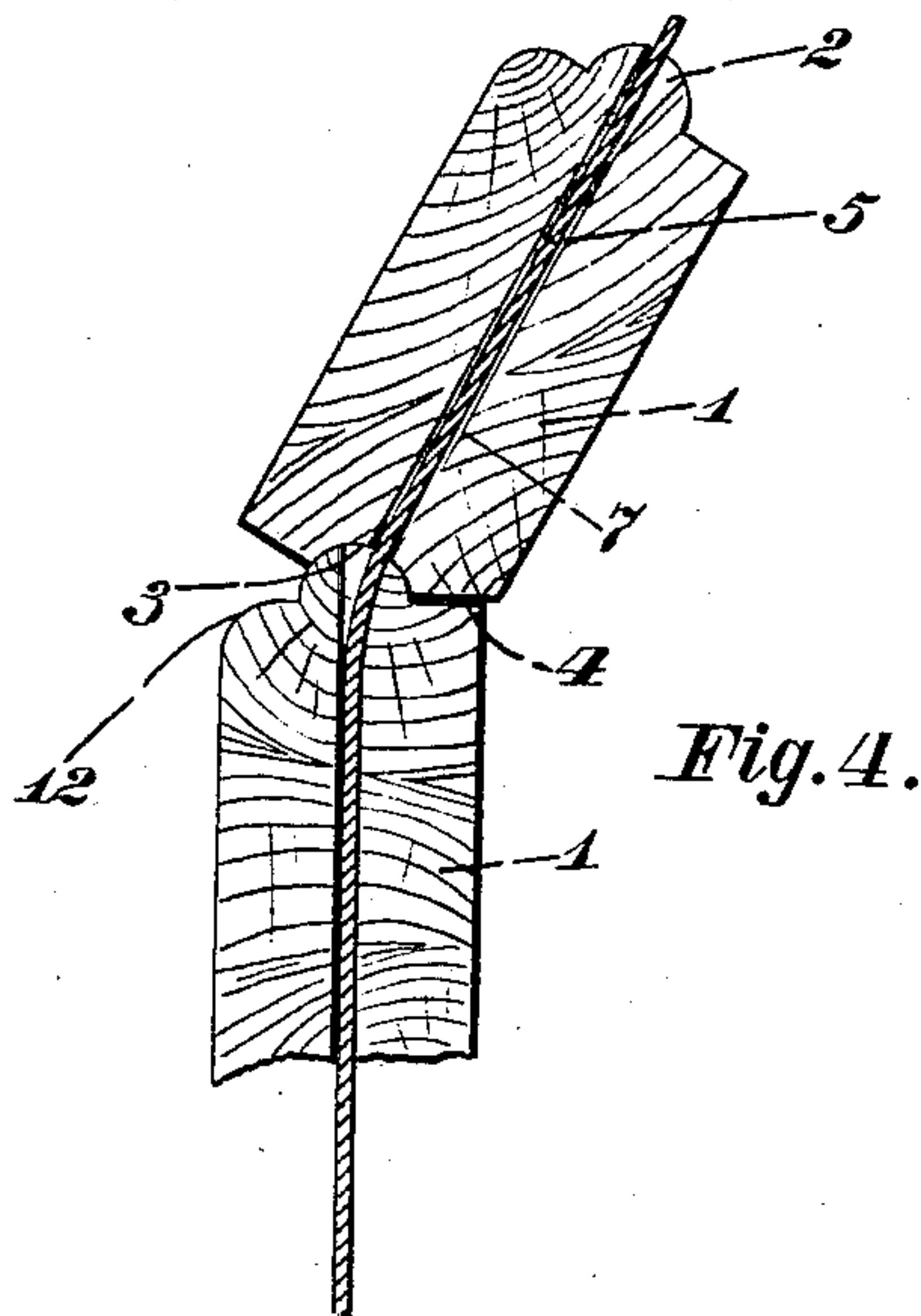


Fig. 4.

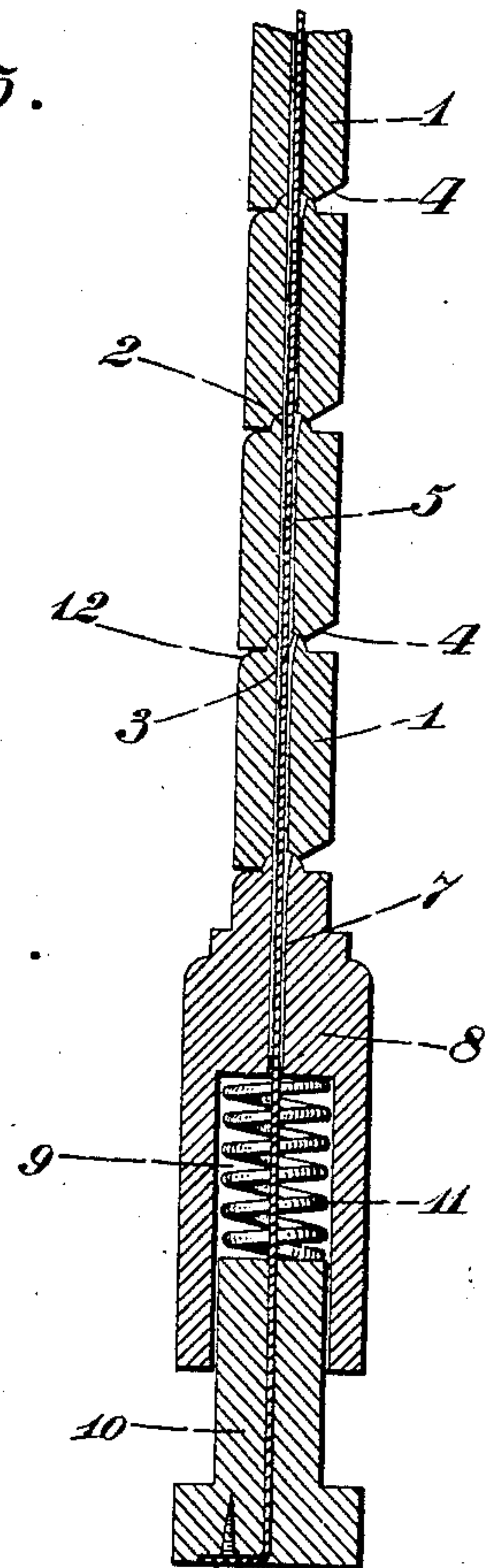


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD H. McCLOUD, OF COLUMBUS, OHIO, ASSIGNOR TO THE KINNEAR MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF WEST VIRGINIA.

FLEXIBLE CURTAIN.

No. 868,741.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed May 9, 1906. Serial No. 315,898.

To all whom it may concern:

Be it known that I, EDWARD H. McCLOUD, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented
5 certain new and useful Improvements in Flexible Curtains; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

10 The object of this invention generally is to provide an improved construction of rolling curtain comprised of wooden sections or slats, but the special object of the invention is to reduce or eliminate entirely the tendency of the curtain to lengthen when rolled or flexed.

15 The invention consists in the construction hereinafter described and claimed, the invention not being confined to the precise shapes shown and described.

In the accompanying drawings—Figure 1 is a side elevation of the curtain, parts being broken out and
20 omitted for the purpose of illustrating details; Fig. 2 is a vertical sectional view of the curtain and roller taken on, say, line $x-x$ Fig. 1; Fig. 3 is an enlarged sectional view of the lower portion of the curtain; Fig. 4 is an enlarged section to show one form of joint between the slats; Fig. 5 is a sectional view showing a
25 modification of what is shown in Fig. 4.

Referring first to Figs. 1 to 4, inclusive, the character 1 in the views designates the slat. These slats have along their upper edges tongues 2, and along their
30 lower edges grooves 3. The tongue of one slat projects into the groove of the adjacent slat, and the corners of the slats are beveled or cut away, as seen at 4, so that the slats can rock upon each other without materially increasing the length of the axis of the curtain. To
35 permit this rocking of the slats upon each other the slat may be beveled or cut away either at its tongued edge or at its grooved edge, as shown in Fig. 4, or it can be cut away at both edges. The slats are shown to be held together to form the curtain by means of flexible
40 metallic tapes 5. These tapes are passed vertically through holes 7 in the slats, and in the construction as illustrated in Fig. 2, secured to the roller 6 by appropriate fastening devices passed through the uppermost slat and the end of the tape. To prevent interference
45 of the tape with the flexing of the curtain the hole 7 is enlarged at its upper end toward the side to which the curtain is flexed.

It will be observed from an inspection of the views that the enlarged end of the passage is of wedge form
50 and that the smaller end of the enlarged portion coincides substantially with the center of the arc upon which the contacting edges of the slats are drawn. By leaving the tape or cord opening unenlarged at one edge of the contiguous edges of adjoined slats and en-

larged at the other, as shown and described, I obtain a 55 joint in which the tape or cord opening is less likely to be exposed upon flexing of the slat at such joint, and at the same time I avoid material elongation of the axis of the curtain upon such flexing. This hole can be enlarged towards both sides of the curtain if desired; 60 and by beveling both corners of the slat in the way indicated at 4 the curtain can be flexed in either direction. With this construction the tapes can be secured at their lower ends to the lowermost slat, but to compensate for such appreciable elongation or contraction 65 in the length of the curtain as might be due to defects in workmanship, atmospheric effects, or other causes, I may construct the curtain at its lower end as best seen in Figs. 1 and 3. In this construction the bar 8, which has at its upper edge a tongue to fit in the groove of the 70 lowermost slat, is recessed at its under side, as seen at 9, and within this recess snugly fits the bottom bar 10. The tapes 5 are passed through the recess of the bar 8 and through the bottom bar and secured to the under side thereof, as clearly seen in Fig. 3. But in the recess 75 9 and between the bar 8 and the bar 10 are placed expansion springs 11 tending at all times to thrust and hold the slats snugly but yieldingly together. Any appropriate number of tapes and springs can be employed, such number being largely determined by the 80 width of the curtain.

In Fig. 5 I have illustrated a modified form of joint between the slats. In this form the entire contacting edges of the slats are formed as a tongue and groove preferably on the arc of a circle of which the inner end 85 of the enlarged portion is the center, but I prefer that the lower portion of each slat be slightly expanded so as to provide a water-shedding overhang and to permit the lower corner of the slat to move without obstruction by the slat next below, as indicated by dotted 90 lines Fig. 5.

In the form of slat shown in Figs. 1 to 4 inclusive, the shedding of water and the prevention of access of water to the joints can be provided for in any suitable and appropriate way, for example, the outer upper 95 corner can be cut away and rounded as seen at 12. The springs 11 need not be used, and such springs can be used on curtains formed without my special kind of joint between the slats or sections.

What I claim and desire to secure by Letters Patent 100 is:

1. A flexible curtain made up chiefly of slats each of which has a transverse cord or tape opening enlarged at one end only, said slats having curved contacting surfaces, with the smaller end of the opening of one slat registering 105 with the larger end of the opening of the adjacent slat, said openings forming a passage through the curtain, and a tape or cord passing through said passage.

2. A flexible curtain made up chiefly of slats each of

which has a transverse cord or tape opening enlarged at one end only and towards one face only of the slat, said slats having curved contacting surfaces, with the smaller end of the opening of one slat registering with the larger end of the opening of the adjacent slat, and a cord or tape

5 passing through said openings.

3. A flexible curtain having a transverse tape or cord opening enlarged at one end only, said slot being longitudinally grooved at one edge and longitudinally tongued at the other, said tongue and groove being formed on a curve having for its radius a point approximately coinciding with the inner end of the enlarged portion of the aforesaid tape or cord opening.

4. A flexible curtain made up chiefly of slats each of which has a transverse cord or tape opening enlarged at one end only and towards one face only of the slat, said slats having curved contacting surfaces, with the smaller end of the opening of one slat registering with the larger end of the opening of the adjacent slat, and a cord or tape passing through said opening, said tape being fixed against lateral movement in the smaller end of said opening and having a lateral movement in one direction in the larger end of said opening whereby said curtain may be flexed in

one direction in rolling and prevented from flexing in the opposite direction in the unrolled position of the curtain. 25

5. A flexible curtain made up chiefly of slats each of which has a transverse cord or tape opening enlarged at one end only and toward one face only of the slat, the contiguous slats being curvedly tongued and grooved longitudinally on an arc the center of which is approximately the inner end of the enlarged portion of the cord or tape opening. 30

6. In combination with a curtain made up chiefly of slats connected by a tape or cord, the lowermost slat thereof being provided with a recess at its under side, a bottom bar slidably projecting into said recess, a tape or cord connected with said bottom bar, and a spring between the said bottom bar and the lowermost slat tending to press said bottom bar and lowermost slat asunder. 35

In testimony whereof I affix my signature, in presence of two witnesses. 40

EDWARD H. McCLOUD.

Witnesses:

BENJ. FINCKEL,

SAMUEL W. LATIAM.