Detective Badge
Facts that we know:

1. The fire occurred in March 1900.
2. To illuminate the light fixtures in the church gas was used.
3. Angel in the Lilies is the only stained glass window that was not destroyed during the fire.
Floor Plan (Map)

The North Parlor, the kitchen, and the library were added after the 1900 fire.
Power of Observation

One of a detective’s most important skills is the ability to watch people and situations. Find the differences in the 1874 sanctuary with the one you see today. Discuss with your fellow scouts to find 7 differences. What looks the most different? Could that have something to do with the fire?

Photo of church pre-1900 fire
List the differences you see:

1. _________________________________________
2. _________________________________________
3. _________________________________________
4. _________________________________________
5. _________________________________________
6. _________________________________________
7. _________________________________________
Now that you have had some practice using your power of observation it is time to start solving that mystery as to who or what lit the fire. We will be using old photographs and a newspaper article recently found in the church library from the Chicago Tribune published on March 9th 1900 right after the fire.

Use the historic photos and to figure out what the fire left behind. It is important to know where to start in your search.
Current photo of church

What parts of the church are left? The roof, any columns, the organ, or the basement? The new architect who designed the new interior tried to reuse everything that he could. Sometimes small details are the most important.
Try Out Detective Science

So a comparison of the what was most left behind in a solid state? The limestone of the building is what the robber refers to. Solve if it really was the weather that day and if the stone caught the roof on fire. IF YOU WORK THE STEPS AND FIGURE OUT THE QUESTION; A MESSAGE WILL APPEAR WHERE AN ADDITION NEVER DISAPPEARED.

Was it a thunderstorm that day, snow, or high winds. Compare how water, vinegar, and fire react to the limestone.

Write your observations below.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Did limestone start the fire? Discuss with your fellow scouts.

Circle the one you believe  YES or NO
Fingerprinting

A witness and a pickpocket have one thing in common, a fingerprint. The right index fingerprint below is Frances Glessner Lee’s, a woman from Chicago who was the first female police captain in the United States and helped solve cases by recreating a crime scene in doll houses. Her doll houses are still used today in police academies to help officers learn how to solve cases.
Before creating our own fingerprints, we will examine Frances Glessner Lee’s first. Below you will the information to identify the uniqueness of her fingerprint.

CLASSIFYING FINGERPRINTS

The police and the FBI group all fingerprint patterns into whorls, which go in circles or swirls; loops, which have a single hairpin or upside-down U shape; and arches, shaped like a hill or a pointed tent.

These patterns are then divided into eight types:

ARCHES (about 5% of all fingerprints):

1) Plain Arch, shaped like a low, rounded hill.
2) Tented Arch, shaped like a high, pointed hill.

LOOPS (about 65% of all prints):

3) Ulnar Loop, a loop that slants toward the little finger side of the hand. Named after the ulna, the arm bone on that side of the arm.
4) Radial Loop, a loop that slants toward the thumb side of the hand. Named after the radius, the arm bone on the thumb side of the arm.

WHORLS (about 30% of all prints):

5) Plain Whorl, a pattern of circles or ovals, like a target.
6) Central Pocket Loop, looks like a whorl tucked inside a loop. It’s classified as a whorl, even though it’s called a “loop”.
7) Double Loop, an S-shape.
8) Accidental Whorl, a catchall name for odd patterns that don’t quite fall into the more common groupings. An accidental whorl may contain two or more of the other patterns.

Try classifying the fingerprints on your own fingers. Use your lens to look at them carefully, and write down what each one is:

Write your observations below:
It is time to examine your own fingerprints.

If you are having a hard time examining your fingerprint on the classification card you can take your magnifying glass to take a look at your actual finger.

Use ink to create the same fingerprint above to compare to the fingerprint you lifted.
Crack the Code!

Do the following four steps to crack the code to catch the culprit.

1. Solve the clue below:

   *P is your first letter; it is also for pew. Count the pews on your map or in the sanctuary.*

   When you counted the pews the number goes in the table below.

<table>
<thead>
<tr>
<th>Number</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter</td>
<td>P</td>
<td></td>
</tr>
</tbody>
</table>

2. Find three more pairs of letters and numbers.

   Two pairs in are your booklet. One is in the clues. Look for pairs that do not fit and perhaps a number is in the place of a letter.

3. Cut out and build your cipher.

4. Listen to the instructions on how to use the cipher.

Before Continuing Let’s Review

Who or what started the fire that burned the church? Read your clues, review your findings before confirming below using the code.

Who do you think did it? Discuss with your fellow scouts before proceeding.
Time to crack the first code! Each letter will always have two numbers.

2241502151101768708920181517: 9117096225235810

But wait someone in this room stole the article you used to solve the crime. This person left a thumbprint on a clue. Use your new knowledge of fingerprints to find the burglar.

Who did it? Discuss with your fellow scouts before confirming below.

257013850924557710402168. Were you correct?

GOOD WORK SCOUTS
YOU HAVE SOLVED TWO MYSTERIES!

CONGRATULATIONS!!!!!