tf.scatter_sub

```
scatter_sub(
    ref,
    indices,
    updates,
    use_locking=False,
    name=None
)
```

Defined in `tensorflow/python/ops/gen_state_ops.py`.

See the guide: Variables > Sparse Variable Updates

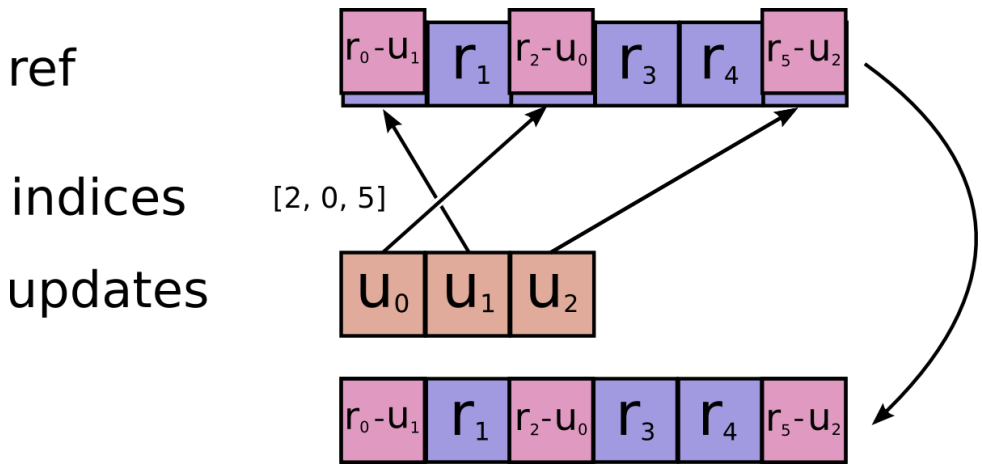
Subtracts sparse updates to a variable reference.

```
    # Scalar indices
    ref[indices, ...] -= updates[...]

    # Vector indices (for each i)
    ref[indices[i], ...] -= updates[i, ...]

    # High rank indices (for each i, ..., j)
    ref[indices[i, ..., j], ...] -= updates[i, ..., j, ...]
```

This operation outputs `ref` after the update is done. This makes it easier to chain operations that need to use the reset value.

Duplicate entries are handled correctly: if multiple `indices` reference the same location, their (negated) contributions add.

Requires `updates.shape = indices.shape + ref.shape[1:]`.



Args:

- `ref`: A mutable `Tensor`. Must be one of the following types: `float32`, `float64`, `int64`, `int32`, `uint8`, `uint16`, `int16`, `int8`, `complex64`, `complex128`, `qint8`, `quint8`, `qint32`, `half`. Should be from a `Variable` node.
- `indices`: A `Tensor`. Must be one of the following types: `int32`, `int64`. A tensor of indices into the first dimension of `ref`.

- `updates`: A `Tensor`. Must have the same type as `ref`. A tensor of updated values to subtract from `ref`.
- `use_locking`: An optional `bool`. Defaults to `False`. If True, the subtraction will be protected by a lock; otherwise the behavior is undefined, but may exhibit less contention.
- `name`: A name for the operation (optional).

Returns:

Same as `ref`. Returned as a convenience for operations that want to use the updated values after the update is done.

Last updated November 2, 2017.